CFRR

Centre for Financial Reporting Reform

WORLD BANK GROUP

IMPLEMENTATION GUIDE

STAREP

COMPETENCY-BASED ACCOUNTING EDUCATION AND ASSESSMENT MATERIALS

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FOREWORD

Professional accounting organizations (PAOs) play a central role in developing and supporting the framework and capacity for reliable financial reporting in the countries they serve. Central to this task is to ensure that professional accountants are provided with a relevant and sustainable education – both initially and over their careers - that meets the expectations of business, regulators, and the wider public interest. To be relevant, accounting professionals must display the skills and attitudes that underpin the integrity of financial information that so many sectors of the economies of the world rely on. To be sustainable, there must be embedded capacity to support the development of accounting professionals. Sufficient resources should be made available to allow educators to design programs that can meet the high expectations of PAOs and the professionals they represent. The World Bank is supporting PAOs to ensure accounting professionals remain relevant and effective, now and in the future. The World Bank Centre for Financial Reporting Reform published a key document in 2019, the *Competency-Based Accounting Education, Training and Certification (CBAETC) Implementation Guide*. This new publication helps action that Guide by offering teaching and assessment resources to help put the theory into practice.

The *Competency-Based Accounting Education and Assessment Materials (CBAEAM) Implementation Guide* provides key educational training resources that reflect modern practice in competency education. It also includes example assessment materials that respond to the International Educational Standard's (IES) requirement that accounting professionals must demonstrate their competencies. The focus of the CBAEAM Implementation Guide is on initial professional development that meets with the requirements of IESs 1, 2, 3, 4, and 6 which address the entry requirements, contents, and requirements for assessment of Professional Accounting Education Programs. The goal is to ensure that when an individual qualifies as a professional accountant and offers services to the public or an employer, they are competent to do so. This means more than just learning technical accounting knowledge and skills - it means demonstrating the knowledge, skills, values, ethics, and attitudes required to perform the role to the standard expected by clients, employers, regulators, and the public. This involves the development of competencies to demonstrate: technical expertise in a broad range of accounting, audit, and general business domains; excellent communications skills; business advisory skills; solid financial analysis capabilities; strong values and ethics; a high degree of integrity, objectivity, and resilience; and an ability to adapt quickly to a changing environment.

The resources offered in the CBAEAM Implementation Guide reflect best educational practice with a strong focus on helping educators teach competencies and support aspiring professionals to learn new skills. The Guide provides resources that are adaptable to local requirements to maintain the relevance of professional qualifications to the key stakeholders . It offers engaging, and tried and tested, methods that are likely to be successful in achieving the goals set out for it. The need for the Guide and the resources it represents should provide an investment short-cut to educators that saves time and avoids duplication of effort.

The guide will be also useful to PAOs and regulators who monitor the development of professional accountants. The very practical focus of the guide should support measurable achievements and, with that, enhance the relevance and sustainability of education that creates competent professional accountants, trusted and respected by the communities they serve.

I warmly commend this guide to you.

– Ed Olowo-Okere
Director, Governance Global Practice
The World Bank

PREFACE

This Guide is intended to support capacity development by making available a collection of resources to help guide PAOs, and those responsible for educating professional accountants, to implement and adapt to competency-based education and assessment. The Guide approaches this task by:

- explaining the rationale for competency development for professional accountants,
- providing a toolkit for educators to adopt and adapt to their own circumstances to support competency development, and
- making available a range of resources and examples of best practice to show how competency-based education and assessment can be effectively implemented.

The Guide has been developed in response to demand from PAOs and will be made available to PAOs, public sector bodies, and those with an interest in competency-based education for accountants across the world.

It is expected to be most useful as a resource for:

- senior staff in PAOs responsible for training, development, and certification,
- public sector organizations wishing to enhance training and development programs for their staff,
- university staff seeking to align courses and programs to meet with professional standards of education as a means to enhance the prospects of creating alliances with PAOs, and
- tuition providers responsible for delivery of training to aspiring professional accountants.

ACKNOWLEDGEMENTS

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The Guide was developed by a team from the World Bank's Centre for Financial Reporting Reform, led by Alfred Jean-Marie Borgonovo, Senior Financial Management Specialist, and including Brian Friedrich and David Brookfield, consultants. Editorial assistance was provided by Ecaterina Gusarova. The project was supervised by Adenike Sherifat Ayeyiola, Practice Manager. Anara Tokusheva, Program Assistant, and Nouf Alazmi, Financial Management Specialist, provided support throughout the project.

An outstanding group of peer reviewers provided invaluable guidance and feedback that markedly improved this publication: World Bank colleagues Rajat Narula, Lead Financial Management Specialist, Denis Nikolaev, Education Specialist, Bonnie Ann Sirois, Kolie Ousmane Maurice Megnan, and Patrick Piker Umah Tete, Senior Financial Management Specialists; Alta Prinsloo, Executive Director, IFAC; Khalid Hamid, Director of International, CIPFA; Omair Jamal, Senior Director Education and Training, ICAP; Rebecca Pratt, Capability Framework Manager – Education, CPA Australia; and Yvonne L. Hinson, Academic-in-Residence, Academic & Student Engagement, AICPA.

The team would also like to extend special thanks to Brian Blood, Executive Director, CAPA, and David McPeak, Principal, IAESB for their support and assistance throughout the project.

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ACRONYMS

CAPA	Confederation of Asian and Pacific Accountants
CBAEAM	The Competency-Based Accounting Education and Assessment Materials Implementation Guide
CBAETC	Competency-Based Accounting Education, Training and Certification Implementation Guide
CPA Australia	Certified Practising Accountants of Australia
CPA Canada	Chartered Professional Accountants of Canada
CPD	Continuing Professional Development
FIFO	First in, first out
FOB	Freight on board
FV	Fair value
IAASB	International Auditing and Assurance Standards Board
IAESB	International Accounting Education Standards Board™
ICE	Integrative Capstone Examination
ICT	Information and Communications Technology
IES	IAESB's International Education Standards
IESBA	International Ethics Standards Board for Accountants®
IESBA Code	International Code of Ethics for Professional Accountants™ (including International Independence Standards™)
IFAC	International Federation of Accountants®
IFRS	International Financial Reporting Standards
IPD	Initial Professional Development
ISA	International Standards on Auditing
LCNRV	Lower of Cost or Net Realizable Value
MCQ	Multiple Choice Question
NPV	Net present value
PAO	Professional Accountancy Organization
PPE	Property, plant, and equipment
PV	Present value

STRUCTURE OF THE GUIDE

At its core, the CBAEAM Implementation Guide pays tribute to the old adage:

Give a man a fish and you feed him for a day; Teach a man to fish and you feed him for a lifetime.

In the context of accounting education, the adage would be written:

Give an educator quality course materials and you prepare them for a semester; Teach an educator to develop quality course materials and you prepare them for a career.

This Guide is intended more to support capacity development than to provide static resources. It is designed to be used as a companion to the CBAETC Implementation Guide authored by Borgonovo, Friedrich, and Wells[1]. The CBAETC Implementation Guide provides guidance across the broad range of education, assessment, training, and certification, including pre-and post-certification. This CBAEAM Implementation Guide takes a narrower scope, focusing on providing in-depth direction to educators on how to develop quality education and assessment materials within the context of a competency-based accounting education program.

The CBAEAM Implementation Guide is organized into a number of parts to make navigation and cross referencing easier for users.

Part 1 provides information on the layout and scope of the Guide to ensure that it can be used efficiently and effectively.

Part 2 presents a summary overview of competency-based accounting education and assessment concepts and standards, as well as resources for further review in this area.

Part 3 contains the pedagogical toolkit to be used by educators to develop their own expertise in competency-based education and assessment methodologies (the Education & Assessment Pedagogical Toolkit).

Part 4 is made up of sample accounting education and assessment materials that illustrate the concepts and best practices discussed in, and referenced from, the Education & Assessment Pedagogical Toolkit.

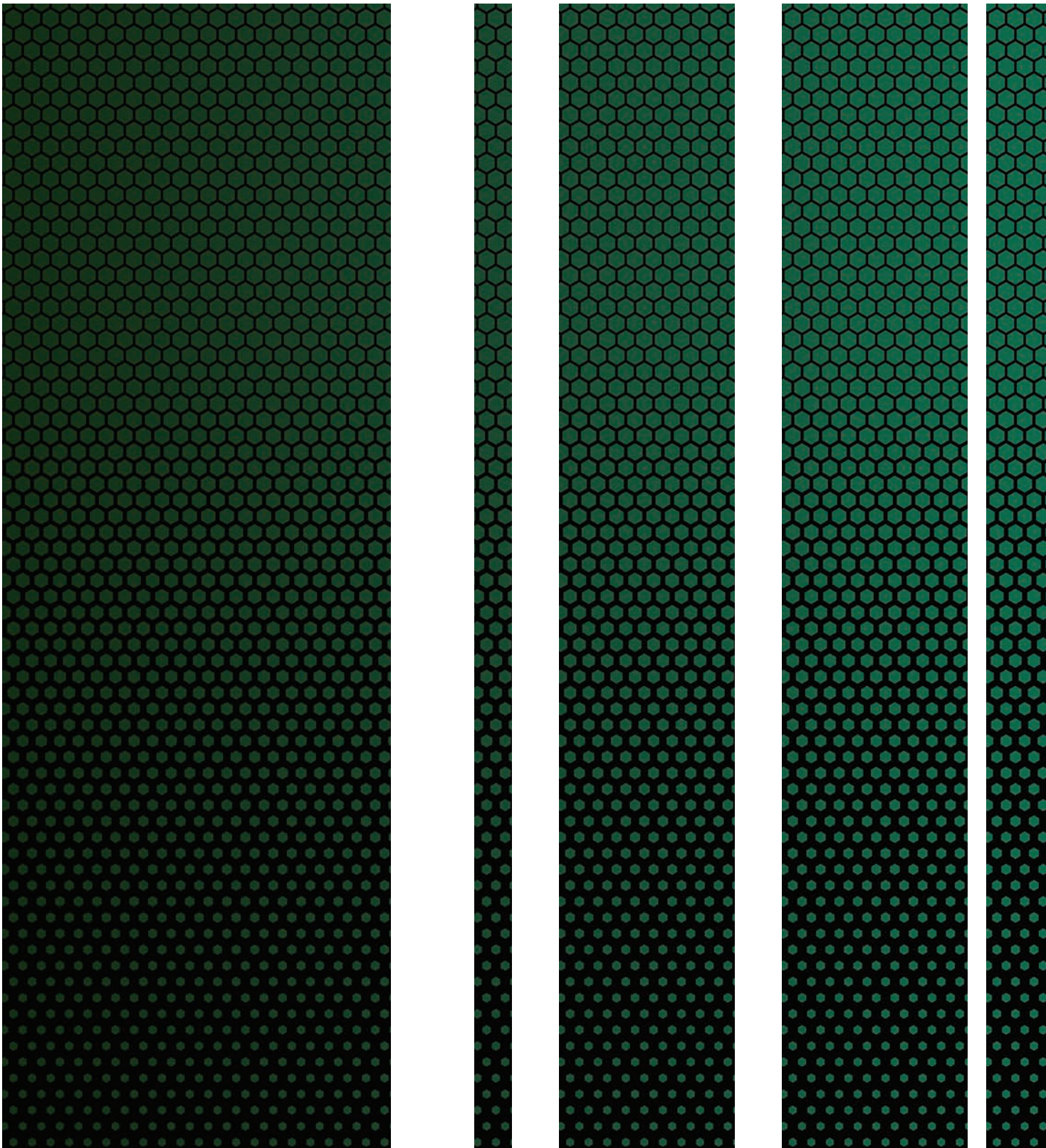
Part 5 provides an overview of the processes and procedures required to implement Integrative Capstone Examinations.

Part 6 contains a sample Integrative Capstone Examination (ICE), to serve as an illustration of the concepts and best practices described in Part 5.

[1] Borgonovo, Friedrich, & Wells. *Competency-based Accounting Education, Training, and Certification: An Implementation Guide* (Vienna: World Bank, 2018) [*CBAETC Implementation Guide*].

PART 1

HOW TO USE THIS GUIDE



1.1 Introduction

The project to develop this CBAEAM Implementation Guide encompasses all of the components shown in Figure 1.

This publication contains:

Education & Assessment Pedagogical Toolkit

The Pedagogical Toolkits are really the core of the project, as they help teach educators how to develop and use high-quality, competency-based materials. Educators and organizations that are new to the concepts of competency-based education and assessment will benefit greatly from the guidance offered in the Education & Assessment Pedagogical Toolkit, while more experienced educators can use the Toolkit as a means of honing their skills and as a source of new ideas.

The Education & Assessment Pedagogical Toolkit:

- Helps educators gain proficiency in developing and using competency-based materials.
- Includes guidance on aligning materials and assessments with the International Education Standards.
- Explains how to develop competency-based education and assessment materials including Lesson Notes, classroom activities, assignments and exams.

The Education & Assessment Pedagogical Toolkit is provided in Part 3 of this Guide.

Table 1. Glossary: Key education and assessment terms

Term	Definition
Action verbs	A verb used to describe the tasks a competent student should be able to do at a specified level of proficiency. Action verbs are related to Bloom's Taxonomy.
Competence	The ability to execute, in the real world, relevant tasks to a specified level of proficiency.
Competency area	Within the IESs, learning outcomes are grouped into competence areas that have required levels of proficiency - foundation, intermediate, or advanced.
Competency statements	Competency statements reflect the knowledge, skills, understanding, and application required for a specified competence area.
Discrimination index	This measures the relationship between a test writer's performance on the given multiple-choice question (correct or incorrect) and their overall score on the exam.
Distractor	An incorrect option that forms parts of the number of options used in multiple choice questions.
Learning objective	Learning objectives state what a student should learn and be able to demonstrate.
Learning outcome	Learning outcomes, which express the "content and the depth of knowledge, understanding, and application required for a specified competence area.
Multiple choice question (MCQ)	A question in which the correct answer is chosen from a limited number of options. One option is correct, the others are known as distractors.

Term	Definition
Practice analysis	The goal of the practice analysis is to ensure that the resulting Competency Framework reflects the full range of competencies essential for professional accountants, in order to meet the needs and expectations of the public, clients, employers, and regulators. Competence is expressed and required.
Professional competence	Ability to demonstrate the necessary technical and professional skills, values, ethics, and attitudes at sufficient levels of proficiency to fulfil the role of a professional.
Proficiency level	Proficiency is the level of competence that a student might be expected to achieve. Proficiencies are defined over 3 levels in this Guide (foundation, intermediate, advanced) and the detail of what the proficiency means is expressed in terms of action verbs.

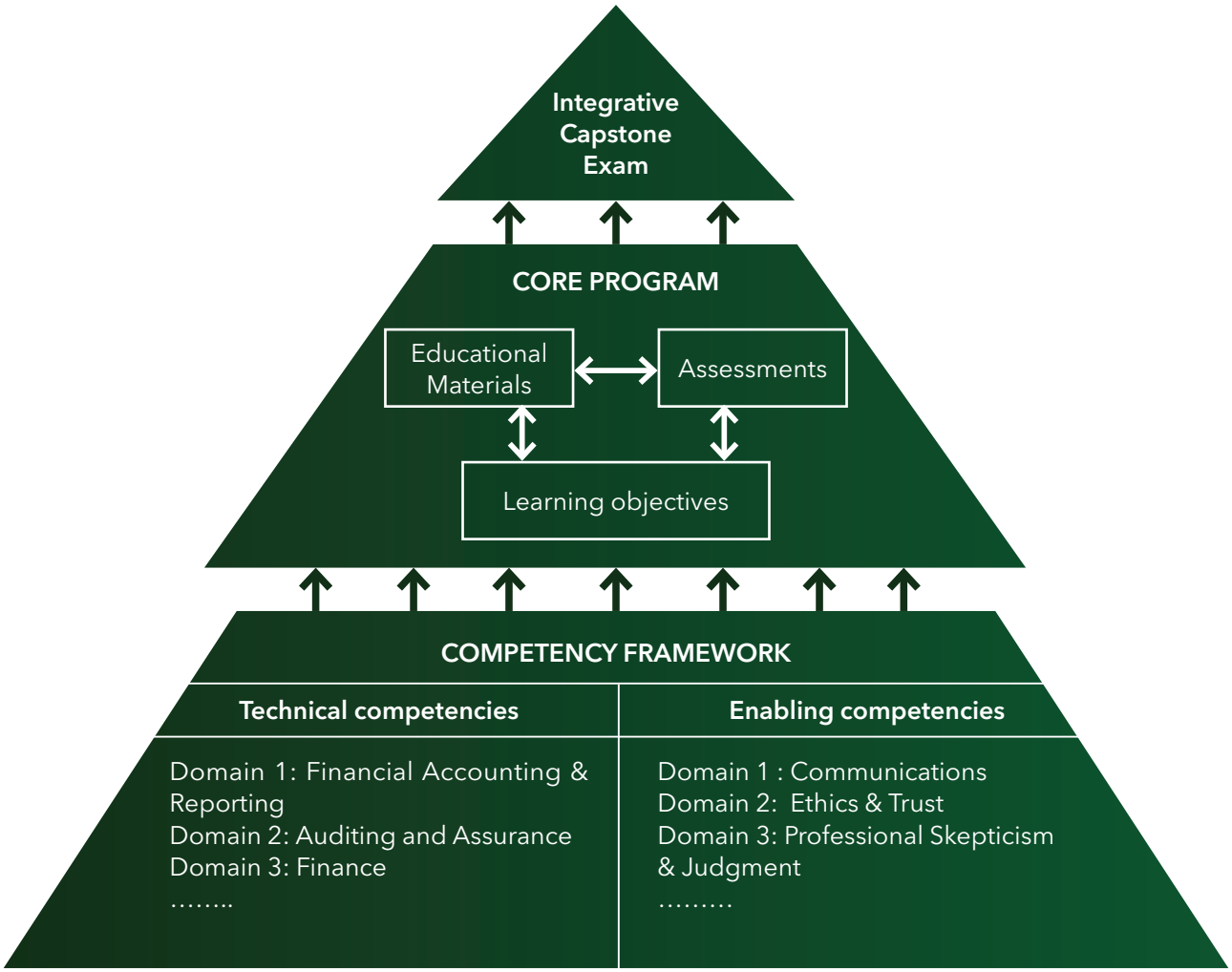
Sample course materials

Sample course materials include:

- Lesson Notes, activities, presentation materials.
- Assessments (assignment and exam questions in addition to marking guidance).

These materials are drawn from the relevant technical domains, presented in Figure 1, as well as integrating non-technical, enabling skills throughout the materials. Individually, they reflect best practices and illustrate key concepts. Collectively, they support the sample ICE for PAOs and universities, as introduced in Part 5 and illustrated in Part 6. **The sample course materials are presented in Part 4 of this Guide.**

Figure 1. Competency-based Accounting Education and Assessment Materials



Training materials

These are the supporting materials used for seminars and, more importantly, for hands-on workshops with direct feedback on development issues.

1.2

Icons used in the guide

To support practical application of the guidance provided, the following features are included:

- **Key terms** used in the Guide are selected to conform with international standards, to promote consistency in language when using the Guide. These terms are initially highlighted using a pencil icon.
- **Important resources** for research and future reference are denoted using a book icon. Links to these resources are included, where possible, for ease of use.
- **Important tips** and guidance notes are highlighted using a lightbulb icon. These tips emphasize the key points to be considered when designing, delivering, and maintaining a quality education program for individuals.

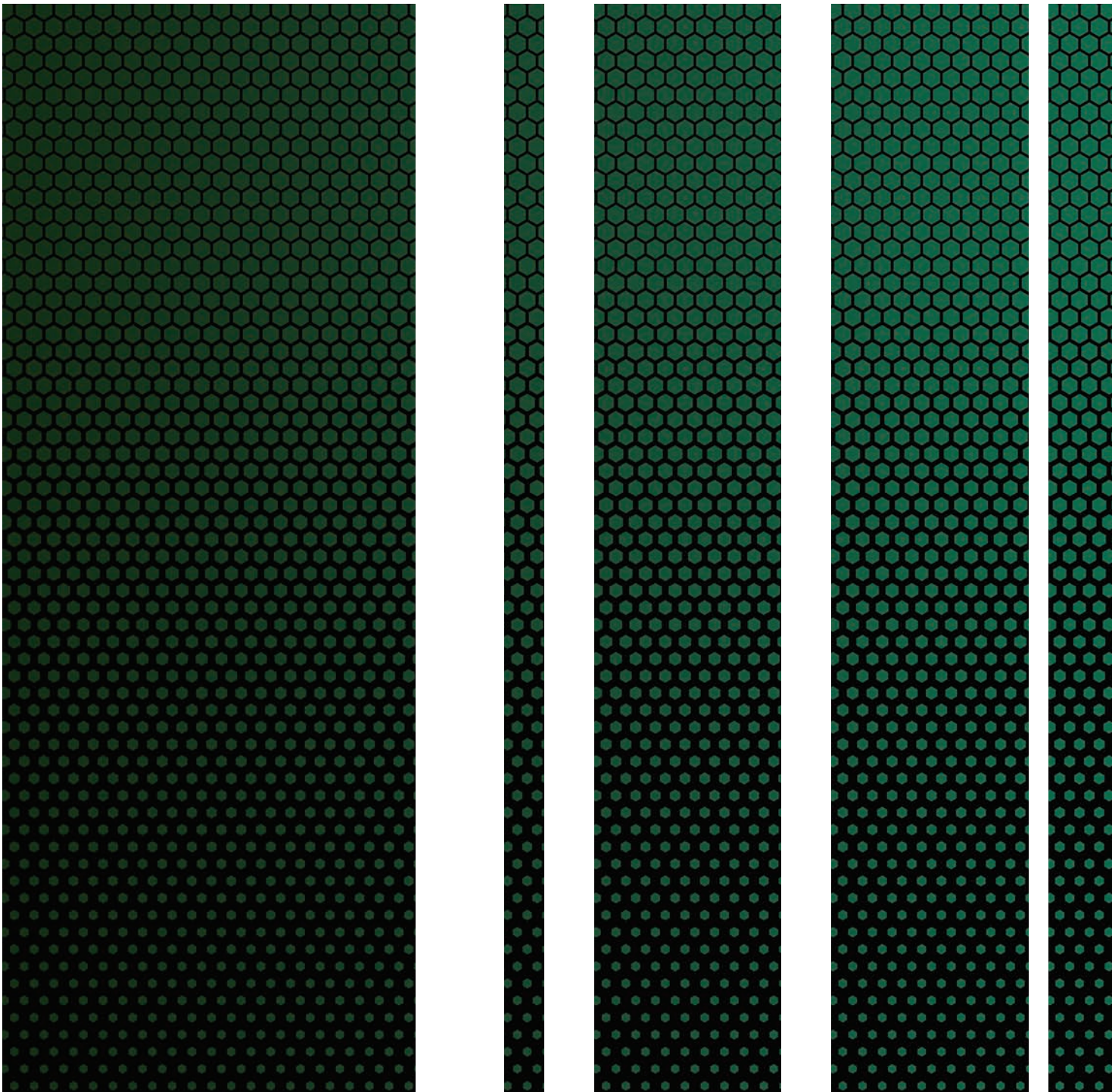
KEY TERMS

IMPORTANT RESOURCES

IMPORTANT TIPS

PART 2

COMPETENCY-BASED ACCOUNTING EDUCATION: REVIEW OF FOUNDATIONAL CONCEPTS



The effectiveness of this Guide rests on readers having a solid understanding of the foundational concepts of competency-based education and assessment. This part presents a summary overview of these concepts, as well as resources for further review in this area.

2.1

Professional competence and competency frameworks

2.1.1

Professional competence

This review of foundational concepts begins with excerpts from the CBAETC Implementation Guide.[2]

What is professional competence?

Competence is the ability to execute, in the real world, relevant tasks to a specified level of proficiency. Knowledge and understanding alone do not result in competence. Competence requires the effective application of relevant skills and particular attributes, which is usually only possible after undertaking specific practical experience.

In an accounting context, **professional competence** is the ability to demonstrate the necessary technical and professional skills, values, ethics, and attitudes at sufficient levels of proficiency to fulfill the role of a professional accountant in a manner that meets the needs and expectations of employers, clients, peers, and the public. Technical knowledge is necessary, but not sufficient, to the accountant's role – professional accountants bring value to society not just by knowing how to account for transactions or determine tax compliance, but more importantly through exercising **professional judgment** by, for example:

- helping to evaluate risk;
- monitoring and ensuring quality and transparency of financial reporting;
- providing leadership in ethical decision-making;
- evaluating complex transactions and emerging issues to ensure financial reporting remains relevant and useful for users;
- interpreting and applying relevant standards and regulation;
- approaching information with a critical and questioning mindset; and
- participating in strategic planning and, increasingly, information technology implementation.

It is through the application of professional judgment and competence that professional accountants support business decision-making that fosters public trust, as well as economic stability and growth.[3]

Competence is much broader than knowledge, and generally requires practice, which is why the CBAETC Implementation Guide covers not only education and examinations, but also training as a mandatory prerequisite for professional certification. As an example of the distinction between competence

[2] *CBAETC Implementation Guide, supra* note 1.
[3] *Ibid* at 17-18.

and knowledge, imagine that you've never skied but you watch a dozen instructional videos and study the techniques for turning and stopping and maneuvering on skis. The first time you actually get on the ski hill, the knowledge you have gained will help you become a good skier faster than if you hadn't studied, but it will still take time until you are a competent skier who can maneuver efficiently, especially on steep hills and with obstacles, or in varied snow conditions.

The same is true with respect to professional competence – the relevant knowledge of concepts from accounting, auditing, tax, and other relevant domains are fundamental, but a student only becomes a competent professional by applying the concepts and learning to interpret and manage actual situations, especially ones that are increasingly complex and uncertain.

The public and other stakeholders expect more from professional accountants than just box-checking and transaction recording – they expect judgment and decision-making that adds value and supports businesses and organizations and, ultimately, the economy. This means that, when developing and certifying professional accountants and auditors, it's not enough that they **know** what the standards require. Professionals need to be able to **perform their roles** competently, to the level expected by the public, clients, employers, and regulators. Through professional judgment and competence, professional accountants support business decision-making that fosters public trust, economic stability, and growth.

The achievement and practice of professional competence is relevant, of course, to both the private and public sectors. Whilst the task focus in each sector is different, core values and objectives are similar. This is most obviously expressed in terms of competency frameworks. A Competency Framework that is applicable to the public sector, following localization and adaptation, has been developed by the World Bank and explains how to support Governments in implementing and sustaining reforms toward the adoption of accrual based accounting by defining the necessary competencies required by finance professionals to carry out such reforms.[4]

2.1.2

Knowledge-based versus competency-based education and assessment

As noted above, relevant on-the-job training is essential in building competence, but so too are the formal education and assessments that require students to master concepts and build proficiency in applying their skills, evaluating information, and developing high-quality outcomes and deliverables.

As this Guide focuses on accounting education and assessment, it is imperative that readers understand the distinction between a knowledge-based approach to education and assessment and a competency-based approach[5]:

Knowledge-based approach	Competency-based approach
Tests "Do you know how to…?"	Tests "Can you…?"
Focuses on what principles, concepts, facts, or procedures need to be **learned**.	Focuses on what tasks or outcomes need to be **demonstrated**.
Focuses on **theory and concepts**.	Focuses on **practical application** of theory.

[4] The Accrual Based Accounting Core Competency Framework for Public Sector Finance Professionals (Framework) was prepared under the Public Sector Accounting and Reporting (PULSAR) Education Community of Practice Program, from December 2017 to September 2018. See https://cfrr.worldbank.org/publications/accrual-based-accounting-core-competency-framework-public-sector-finance-professionals

[5] *Ibid* at 18.

Knowledge-based approach	Competency-based approach
Sets **minimum pass marks** for percentage of knowledge that needs to be learned and conveyed in assessments.	Sets **minimum proficiency levels** to be attained and demonstrated in order to be deemed sufficiently competent for a role.
Often includes rote learning and tests memory.	Includes hands-on learning and active engagement and tests application of knowledge and skills in relevant contexts.

Knowledge-based approaches typically reward "textbook" answers that are of limited practical value when dealing with uncertainty and complexity. Competency-based approaches recognize that the best assessment of competence happens when the aspiring professional accountant is faced with a real situation on the job, and the role of education is to prepare them to excel in their future roles. To this end, they attempt to simulate "real world" situations and problems. They teach students to solve problems that are typical of what they will actually encounter in their career, by relying heavily on case studies, role-playing, group work, and other active learner-centred approaches. Simulations reflect "real" work situations, but in a controlled learning environment. The more realistic and applied the content and evaluation questions/cases/scenarios, the better we can predict competence in the workplace.

2.1.3

Benefits and challenges of competency-based approaches to accounting education

Traditional approaches to education focused on transferring knowledge. Knowledge-based systems are still prevalent in many regions around the world, however, this approach is severely limited as it doesn't prepare individuals for the judgment-rich work context that they will face throughout their careers. By contrast, a competency-based approach more closely reflects the actual needs of the public, future clients, and employers, and equips individuals with the professional competencies (knowledge, values, skills, and attitudes) needed to perform their roles to the level expected by key stakeholders.

Competency-based approaches also place much greater emphasis on strengthening and integrating non-technical skills that are pervasive to the role of a professional accountant and enable them to be effective in their careers. These programs recognize that technical knowledge will become outdated, and that professional skills are needed to stay up-to-date and continue adapting to changes, in order to achieve long-term success.

A significant challenge in developing a competent professional accountant is to ensure that all the elements of their education and skill development are understood and applied holistically. Recognition of the integration of skills and knowledge is vital to meet the demands of the role of accounting. This is specifically true in ensuring that the competencies achieved in acquiring technical knowledge are expressed and applied in the workplace through key professional skill development in a manner that upholds the professional values expected by stakeholders. It is only at the end of Initial Professional Development (IPD) where this perspective is possible; but developing these qualities must be a goal for educators throughout the education process. As will be seen, the progressive and cumulative nature of knowledge, skills, and values education can assist new professionals in achieving this overall perspective.

Professional skills put into practice the technical knowledge that competent accountants are required to master and maintain. There are specific requirements for professional accountants to engage in keeping up to date with the demands of both the profession and the public. IES 7 requires that PAOs ensure they assist professional accountants in meeting their personal responsibility for Continuing Professional Development (CPD) and maintenance of professional competence.[6]

2.1.4

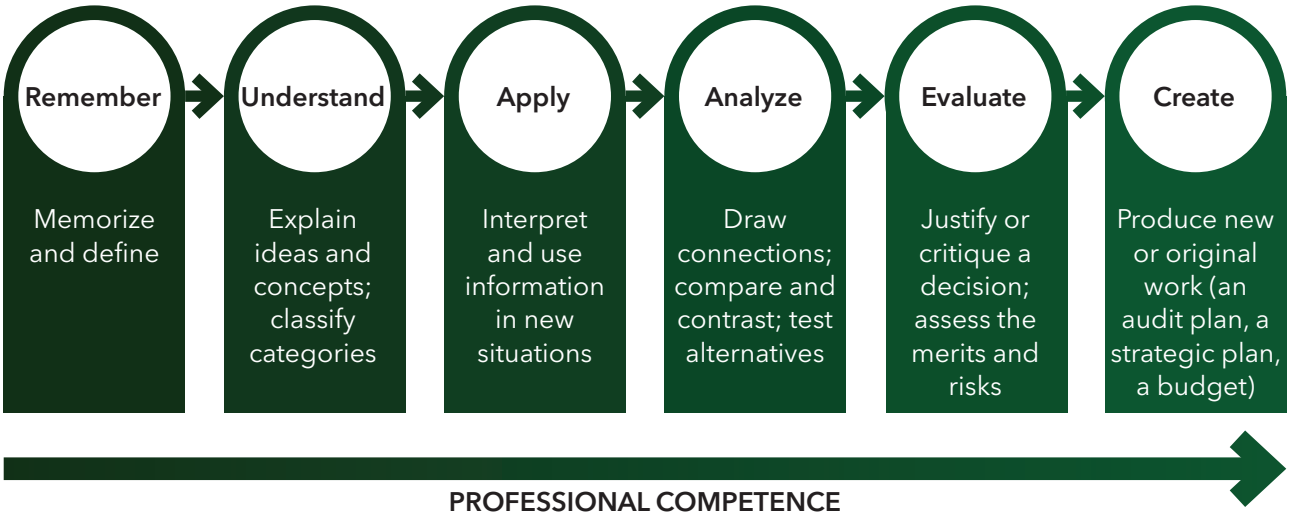
Cognitive levels

The difference between knowledge-based and competency-based approaches can be more fully appreciated by considering the cognitive levels being targeted. One of the most common models for classifying progression in cognitive levels is Bloom's Taxonomy.[7] The Revised (2001) Taxonomy is presented in Figure 2.

All levels of the taxonomy have a valuable place in education, as students must start at the lowest level and progress upward. But recall that competence is the ability to perform relevant tasks to a specified level of proficiency. In order to be able to perform tasks, we must move beyond rote memorization and understanding, and must apply knowledge, analyze situations, evaluate alternatives, and create valuable outcomes and deliverables.

A key limitation of knowledge-based approaches is that they tend to focus on the **remember**, **understand** and, to some extent, **apply** cognitive levels, rather than on moving students further up the cognitive taxonomy and challenging them in a meaningful way to reach the highest levels that correspond to competence. Competency-based approaches, by contrast, seek to develop students beyond these lower levels, and require them to achieve – and demonstrate in assessments – the **analyze** to **create** levels. The required proficiency level dictates how far along the taxonomy a student will be required to progress in order to satisfactorily meet the requirements of a course or assessment. In this way, Bloom's Taxonomy is a useful foundation for discussing competence and proficiency levels, and provides a common reference point for the education and assessment of individuals.

Figure 2. Bloom's Taxonomy: Cognitive domain



[6] Para 11, IES 7. https://www.iaesb.org/publications/2019-handbook-international-education-standards

[7] Anderson, L W & D R Krathwohl. *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives* (New York: Longman, 2001).

2.1.5

Focusing on assessment

When evaluating program materials to determine if they are supporting knowledge or competence, it can be particularly instructive to look at sample assessment questions from assignments or examinations.

Knowledge-based questions can usually be answered **without** context. They may involve calculations or application of known standards, but they do not require judgment (applying knowledge to a specific fact pattern or context). Competence-based questions, on the other hand, require context, critical thinking, and judgment to be able to answer. At the same time, however, the distinction of knowledge versus competence is a continuum, not finite states, as depicted in Figure 3.

To illustrate, consider the exam questions described in Table 2 below.

Figure 3. The knowledge: Competence continuum

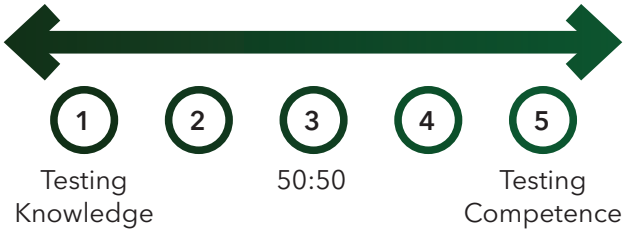


Table 2. Illustration of the knowledge: Competence continuum

Description of question	Testing knowledge or testing competence?
The student is asked to explain inherent and control risks, including characteristics or situations that would increase or decrease the risks.	Primarily testing knowledge – the student can memorize the two types of risk, what they mean, and the common indicators of risk being lower or higher. No context is needed to answer the question.
A student is given a balance sheet and is asked to recommend audit procedures for the key balances.	Somewhat competency-based – the answer will depend on the specifics of the company, and some judgment may be required, but audit procedures for many accounts are fairly standard.
The student is given a description of a company and comparative financial statements and is asked to evaluate the inherent risk and control risk and identify which balances and/or cycles of transactions are the most concerning for this particular company from an audit perspective.	Much more competency-based – the answer will depend on the specifics of the company and changes from the prior year, and judgment will be required to prioritize audit issues.

As discussed above, there is a valid place for the testing of knowledge by assessing a student's ability to remember and understand concepts and facts. Foundational knowledge is an essential first step towards competence. Students must, however, be required to progress beyond remembering and understanding knowledge. In lower-tier courses, that will typically mean requiring students to demonstrate their ability to apply their knowledge to new situations, and to analyze situations and information (the middle levels of Bloom's Taxonomy). In upper-tier courses and professional programs, students should also develop and be assessed on their ability to evaluate alternatives, ideas and proposals, and should be able to create new deliverables, at least on a preliminary basis.

Educators often use two types of assessments in educating and examining accounting students.

Formative assessments are designed to support student learning. Such assessments are therefore part of the process of learning and can be used as frequently as needed. Any grades are used for feedback only and do not count towards the course grade. Summative assessments are a test of what has been learned against the benchmarks set out for the course program. They provide a grade for the student and determine assessed performance.

The key difference and benefit of formative assessments is that they provide feedback to students on the progress of their learning. Summative assessments are not designed to do this since they represent a final outcome.

The role of feedback in the use of formative assessments affects both teaching and learning. For educators, a variety of formative assessments can be used to help the student achieve a realisation of their learning progress at a particular point in time. Formative assessments may be tests, quizzes, conversations, or observations. For students, formative assessments provide a semi-formalized view on their learning progress. For both educators and students, the outcomes of formative assessments can be used to identify areas of both teaching and learning that may need attention if current practice is not achieving the desired outcomes.

Within the Guide, there are important practice questions, contained in the Review Materials of Part 4, that can be used as formative assessments.

2.1.6

Competency frameworks

Underlying any accounting program is a set of requirements that students must achieve in order to successfully complete the program. In knowledge-based approaches, these are usually listed as knowledge topics that are detailed in a program curriculum and broken out into course curricula or syllabi. In competency-based approaches to accounting education, the requirements are stated as competency statements, which are presented with their associated, required proficiency levels.

Competency statements (or simply "competencies") are statements that reflect the knowledge, skills, understanding, and application required for a specified competence area . They are written with a fairly broad scope. Examples are:

- Evaluates the organization's risk management processes
- Keeps project stakeholders apprised of progress toward achieving objectives

Competencies are used to develop the knowledge topic lists that form the course curricula/syllabi and the specific learning objectives that provide structure to each course. Non-technical (or enabling) competencies are also included, to help ensure that sufficient development of critical thinking and communication skills are built into courses.

So where do these frameworks of competencies come from? The most robust and defensible competency frameworks are developed through a process known as a **Practice Analysis**, typically conducted on behalf of a PAO. A Practice Analysis includes an inclusive survey of:

- Members of the PAO (professional accountants) – both new and more experienced
- Employers
- Academics
- Regulators
- Professional recruiters
- Tuition providers or trainers.

The goal of the Practice Analysis is to ensure that the resulting Competency Framework reflects the full range of competencies essential for professional accountants, in order to meet the needs and expectations of the public, clients, employers, and regulators. Competence is expressed and required at certain levels of proficiency. Among the technical competency domains, financial accounting and reporting, management accounting, taxation, audit, and information technology are generally ranked highest in terms of importance. It is significant to note, however, that the importance of technical

competencies is generally surpassed by that of the non-technical, enabling competencies that ultimately differentiate a professional. Most stakeholders regard the competencies most essential to a newly designated professional accountant as being related to professionalism, ethics and trust, leadership, and communications.

Enabling competencies are those outlined in IESs 3 and 4 that specify the skills, values, ethics, and attitudes that support the professional accountant in applying their technical knowledge. Generally speaking, many of the skills referred to in IESs 3 and 4 are best assessed in the workplace as part of the experience requirement. The detail of the requirements of IESs 3 and 4 and what is needed to support educators is dealt with in sections 3.5.1 and 3.5.2. For work experience specifically, assessment of IESs 3 and 4 competencies should be the subject of a separate analysis if they cannot be assessed in a formal, examination based way.

The CBAETC details how knowledge of which competencies are performed in practice should be obtained through a survey of stakeholders as part of a Practice Analysis. The competency requirements and their measurement will need to be responsive to the requirements of IES 5. The following key questions would help determine criteria for assessing workplace experience and provide clarity over the division between those criteria that can be assessed in a formal examination compared to the workplace. A Practice Analysis survey might involve ascertaining information on:

- The extent to which competencies are performed in practice, and whether competency statements may be missing.
- The extent to which knowledge topics are applied in practice, support the competencies, and whether knowledge topics may be missing.
- Which competencies are most important to protecting the public and/or responding to the needs of clients and employers.
- Which competencies are considered essential to becoming a newly-certified professional accountant.
- When a competency or knowledge of a topic should be acquired (before or after certification).
- How a competency is best developed and assessed (through education, exams and/or practical experience).
- The proficiency level required for each competency.[8]

Consistent with IESs, PAOs typically specify three proficiency levels that relate to working environments characterized by progressively higher levels of ambiguity, complexity, and uncertainty. The specific competencies required in the workplace will be identified during a Practice Analysis and agreed with key stakeholders. The cut-off for pass or fail in the work place is a competency assessment that answers the question: did the individual demonstrate the proficiency level required for the task assigned? This is necessarily a judgment call, as with all competency assessments. In the ICE section below (Section 5.8), a description of assessment of competencies is provided that indicates how cut-off score are determined and would be appropriate for a workplace situation. A summary of what is written in that section shows how the assessment of candidate competence is performed through a three-step process:

- PAO determines the descriptive profile of a passing candidate. This profile is reviewed regularly, but may stay the same from exam to exam.
- Keeping the profile in mind, candidate papers are marked using the scoring grids developed with the cases.
- Based on the profile and considering the exam results, a cut score (passing mark) is set for the exam, and papers are rated based on the cut score.

Because of the complexity and potential for inherent bias of performing a Practice Analysis, independent consultants are usually hired to assist, provide expertise, and objectivity. Once completed, Practice Analyses should be periodically updated (normally at least every 5 years) to reflect the changing needs of stakeholders and the changing environment that professional accountants are practising in.

For more detailed discussion on developing a Competency Framework, please see the CBAETC Implementation Guide. Stage 0 in the CBAETC Implementation Guide explains the process of evaluating an organization's readiness and available resources to undertake the development of a full, competency-based accounting education, training, and certification program. Stage 1 provides detailed guidance on developing a Competency Framework, including direction on using a robust Practice Analysis approach, as well as describing an option for a condensed approach. The condensed approach is a less resource-intensive method of building a Competency Framework using existing standards and/or frameworks and adjusting them to local needs.

[8] Refer to *CBAETC Implementation Guide*

2.1.7

Summary

Competency-based approaches result in higher-quality programs that better equip students to take on meaningful roles in society, but these programs require increased resources to develop and implement. This includes not only financial resources, but also greater skill and effort on the part of the educators involved in designing, developing, and delivering such programs. The goal of this Guide is to help educators develop and enhance their ability to meet this challenge.

2.2

The International Education Standards

2.2.1

Introduction to the IESs

Every accounting educator should be familiar with the *International Education Standards* (IESs) that have been developed and maintained by the International Accounting Education Standards Board™ (IAESB). The IESs set the benchmarks that are required to be followed by member bodies of the International Federation of Accountants® (IFAC).

In 2018 IFAC and the IAESB announced a new way forward for advancing accountancy education at the global level. The new approach, which was approved by the IFAC Board in 2019, is currently being implemented. The IAESB ceased to exist in 2019 with the completion of its work plan.[9]

The IESs promote consistency and convergence in high quality accounting education around the world. The overall goal of standardization is to promote the development of competent professional accountants worldwide. Over an individual's career, their professional skills, values, ethics, and attitudes are more important than the professional knowledge base obtained at the point of qualification because current knowledge can become obsolete relatively quickly. As a result, aspiring professional accountants must develop skills to identify and solve problems, manage uncertainty, and adapt to change. To this end, the IESs aim to help aspiring professional accountants develop an attitude of lifelong learning. Instilling a commitment to lifelong learning is, in the long run, more important than any piece of technical knowledge.

Regardless of whether an organization is an IFAC member, the IESs and the associated guidance and information papers provide a wealth of valuable resources on generally-accepted good practices in the education and training of professional accountants. Using these standards as a framework can help organizations move forward systematically in pursuing international best practices. For those organizations that are IFAC members, it is important to focus on effective and efficient implementation of competency-based education and assessment, as opposed to pursuing compliance for compliance's sake.

The IESs focus on learning outcomes, which express the "content and the depth of knowledge, understanding, and application required for a specified competence area.[10]" This is very similar to the definition of competency statements presented above; as is often the case, the use of terminology differs from organization to organization. Although

[9] Source: https://www.ifac.org/system/files/publications/files/Handbook-of-International-Education-Standards-2019.pdf

[10] IAESB, *Handbook of International Education Pronouncements*, 2019 Edition, page 10.

there may be nuanced distinctions between the terms, this Guide uses competency statements/ learning outcomes somewhat interchangeably unless referring specifically to the IESs or a particular organization's Competency Framework.

The IESs set the minimum standards for:

- entry to professional accounting education programs,
- education, examinations, or other assessments, and professional training/experience that make up the IPD of aspiring professional accountants,
- ongoing learning activities and systems for CPD of professional accountants to maintain and further their competence and allow them to seek more advanced roles, and
- competence requirements for engagement partners responsible for audits of financial statements.

In this way, the IESs provide guidance for the education, assessment, and training of professional accountants throughout their careers both pre-and post-qualification, as depicted in Figure 4.

The full titles of the IESs and their effective years are provided in Table 3.

Figure 4. IESs though a Professional Accountant's career

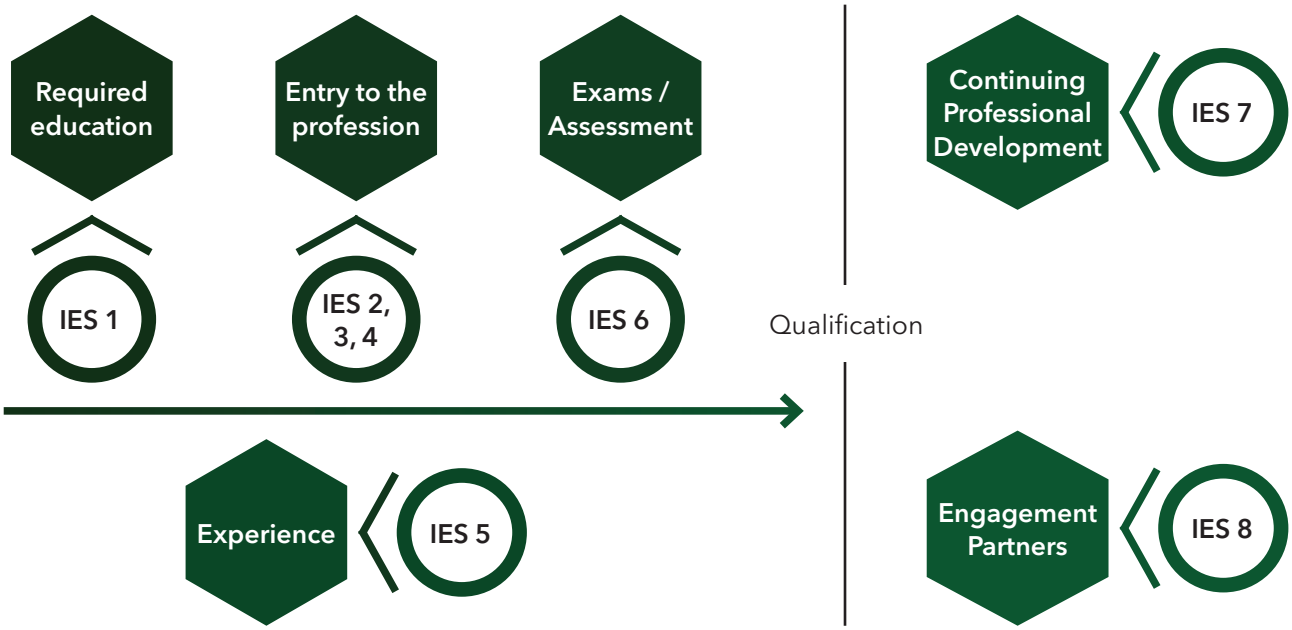


Table 3. IAESB International Education Standards

Number	Title (Date)
IES 1	Entry Requirements to Professional Accounting Education Programs (2014)
IES 2	IPD – Technical Competence (2021)
IES 3	IPD – Professional Skills (2021)
IES 4	IPD – Professional Values, Ethics and Attitudes (2021)
IES 5	IPD – Practical Experience (2015)
IES 6	IPD – Assessment of Professional Competence (2015)

Number	Title (Date)
IES 7	Continuing Professional Development (2020)
IES 8	Professional Competence for Engagement Partners Responsible for Audits of Financial Statements (2021)

The eight IESs form a set of interlinked standards covering pre- and post-qualification. IESs 1 to 6 cover pre-qualification requirements, whereas IESs 7 and 8 relate to post-qualification requirements.

The materials provided in this document support the education of professional accountants to achieve certification by qualifying through a professional program. Certification represents the point at which professionals are recognised for their competence by meeting the requirements of education, examination, and experience. The education requirements are laid out in the curriculum or syllabus and are expressed in terms of competencies to be achieved. Examinations attest the achievement of competencies throughout the process of qualification. Work experience requirements ensure that competencies are applied and extended over a specified period of time, typically 36 months. That is, competencies are applied in a work context and are extended through professional accountants being able to demonstrate achievement in a way that cannot be attested by examination, such as in the development of verbal communication skills, personal and organizational behaviours, and professional conduct including ethical skills. An example of a certification process is provided in Exhibit 1 in section 4.2.2.[11]

The overall goal is to produce competent professional accountants by combining the parts of a professional program in a suitable way. When looking to implement or improve an existing accounting education system, IES 2 (the technical areas) is where one tends to focus, but the standards are designed as a complete set, and are intended to be implemented as a whole, not individually. Whereas IES 2, for example, sets out the expected technical content of a pre-qualification education program, IES 3 sets out the professional skills needed to complement that technical knowledge, and IES 6 establishes requirements for assessing the competence of individuals seeking to qualify as professional accountants.

The goals of IESs 3 and 4 stand by themselves as requirements for high standards of professional skills and behaviors that competent accountants should demonstrate in their day to day work. Professional skills, values, ethics, and attitudes also inform how competent accountants implement their technical knowledge to support clients in their requirements. There is therefore a clear integration in the acquisition of competencies over IESs 2, 3, and 4 and the achievement of these competencies is reflected in IFAC's approach to accounting education – and the requirements of IESs - that reflects a wider integration of perspectives.[12]

The requirements are not necessarily acquired in the order presented (IES 1 to IES 8). For example, practical experience (IES 5) may be obtained concurrent with a program of study, after the program of study, or by some combination of these methods as long as the quality meets IES 5. As another example, professional education may be gained at the same time as general education, that is, while pursuing a university degree or other program of study leading to a professional accountancy qualification. Alternatively, professional education may be obtained by advanced study after completing another program of study.

IES 5 has particular impact when experience is obtained before completion of the ICE. This examination seeks to test competencies in scenario (case) environments that are intended, as far as possible, to mimic the experience encountered in the work place. Real world experience, recorded and attested under IES 5, can only help achieve good assessment outcomes in the ICE.

This Guide concentrates on IESs 1, 2, 3, 4, and 6, as these are the standards most applicable to pre-certification education and assessment. These IESs outline the education and assessment requirements for IPD, through which aspiring professional accountants first develop professional competence leading to performing a role of a professional accountant. For detailed guidance on setting up and maintaining CPD systems, please see the World Bank CFRR's *Implementation Guide to Continuing Professional Development Programs for Accountants*.[13]

[11] There are many examples of certification processes available online to view. See for example, CPA Australia at https://www.cpaaustralia.com.au/become-a-cpa

[12] IFAC's Multi-Stakeholder Engagement Framework seeks to ensure that the pressures and rapid advances of the challenges facing professional accountants are used to inform accounting education. See Preface to IAESB Handbook of International Education Pronouncements, 2019 Edition.

[13] *Implementation Guide to Continuing Professional Development Programs for Accountants* (Vienna: World Bank, 2019) [*CPD Implementation Guide*].

IESs stress the importance of focusing on learning outcomes, rather than inputs, although inputs – for example in terms of minimum years of study or work experience – are sometimes included. The emphasis on learning outcomes requires educators to ensure that individuals studying to become professional accountants actually **have developed** the knowledge, skills and values, ethics and attitudes they need. The goal is to ensure that when an individual qualifies as a professional accountant and offers their services to the public or an employer, they are competent to do so. This means more than just learning technical accounting knowledge and skills – it means demonstrating the knowledge, skills and values, ethics and attitudes required to perform the role to the standard expected by clients, employers, regulators, and the public, such as:

- technical expertise in a broad range of accounting, audit, and general business domains
- excellent communications skills
- business advisory skills
- solid financial analysis capabilities
- strong values and ethics
- high degree of integrity, objectivity, and resilience
- ability to adapt quickly to a changing environment

Additional skills are required to handle pressures relating to globalization, digitization, and the expansion of stakeholder groups, including regulatory and oversight bodies. This reinforces the need for education programs to go beyond traditional knowledge-based approaches of education to more modern competency-based systems.

Within the IESs, learning outcomes are grouped into competence areas that have required levels of proficiency – foundation, intermediate, or advanced, as detailed in Table 4.

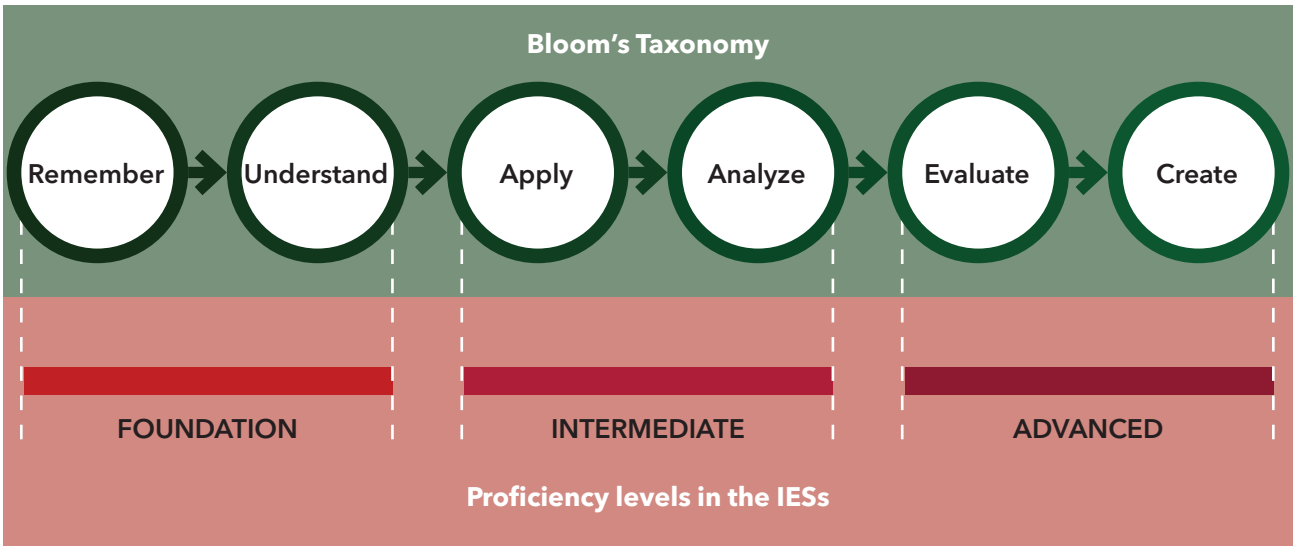
These levels of proficiency in the IESs relate closely to Bloom's cognitive levels. There is not a direct 1 to 1 match, but generally, higher-order Bloom's levels are needed for higher proficiency levels.

Table 4. Levels of proficiency[14]

Proficiency level	What it means
Foundation	• **defining, explaining, summarizing** underlying principles • **recognizing** the importance of professional values, ethics, and attitudes • providing information and explaining ideas in a clear manner Work situations are characterized by **low** levels of ambiguity, complexity, and uncertainty.
Intermediate	• **independently applying, comparing, and analyzing** underlying principles • **combining** technical competence and professional skills to work assignments • **applying** professional values, ethics, and attitudes • providing information and explaining ideas in a clear manner to **both** accounting and non-accounting stakeholders Work situations are characterized by **moderate** levels of ambiguity, complexity, and uncertainty.
Advanced	• **integrating** technical competence and professional skills to manage and lead projects and work assignments • **making recommendations** • **making judgments** on professional values, ethics, and attitudes • assessing, researching, and resolving complex problems with **limited supervision** Work situations are characterized by **high** levels of ambiguity, complexity, and uncertainty.

[14] Summarized from IAESB, *Handbook of International Education Pronouncements*, 2017 Edition, pages 16 – 17.

Figure 5. Bloom's Taxonomy vs proficiency levels in the IESs



2.2.2

Overview of the IESs

The IESs discussed below are available on the IAESB website, as part of the *Handbook of International Education Pronouncements,* and contain the latest pronouncements for IESs 1, 5, and 6.[15] The latest pronouncements for IESs 2, 3, and 4 (with effective dates from 2021) are available separately.[16]

In the following discussion of the IESs, references to the relevant paragraphs of the standards are provided in the margin.

IES 1: Entry Requirements to Professional Accounting Education Programs (2014)

Professional accounting education programs differ around the world and can include both formal education within an academic environment and workplace training.

The IAESB recognizes that education systems around the world differ in, for example, the balance between formal education and practical experience, or the balance between academic and professional education. The standards are therefore written to take account of this – they are not trying to impose a standardized education **system** on the profession; rather, they are trying to promote consistency and convergence in global education.

Objective and scope

Para. 7

IES 1 seeks to establish "entry requirements to professional accounting programs that are fair, proportionate, and protect the public interest."

For clarity, these entry requirements are the requirements that need to be met **to become a student or candidate** in a program of studies that leads to certification as a professional accountant. Entry requirements to the profession itself are the subject of IESs 2 to 6.

The starting point of a program of professional accounting education can vary. It can, for example, begin during university or can be contained within a professional program that follows university studies. Given that all programs aim to have a similar end-point (to produce qualified and competent professional accountants), however, the lower the requirement at the point of entry, the more the program of professional accounting education has to cover itself.

[15] https://www.iaesb.org/publications/2019-handbook-international-education-standards
[16] https://www.iaesb.org/publications/revisions-ies-2-3-4-and-8-1

Requirements

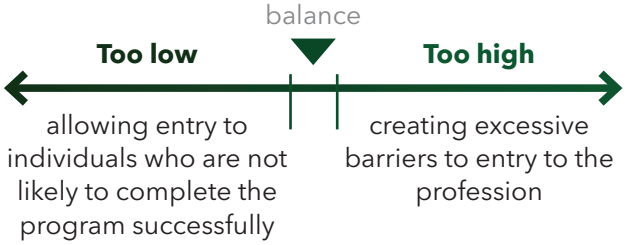
IES 1, Para. 8, 9, 10

IES 1 requires IFAC member bodies to:

- Specify educational entry requirements
- Explain the rationale to stakeholders such as educators and potential students, and
- Make information publicly available so potential students can assess their probability of success

IES 1, Para. A5

Setting appropriate entry requirements is a balancing act . Entry requirements should be neither too low nor too high:



Entry requirements help ensure that students have a background that enables them to have a reasonable probability of success in their education, exams, and experience, without setting up excessive barriers to entry. Prior education has to provide them with the foundation necessary to acquire the professional knowledge, skills, values, ethics, and attitudes needed to become a professional accountant. Some programs, for example, will require an undergraduate degree as a condition for entry into a professional program of studies. Other programs require completion of certain business and accounting courses, and some recognize a certain amount of work experience as being sufficient to prepare an aspiring professional accountant to succeed in the program. In some jurisdictions, the only entry requirements may be a sufficient level of literacy and numeracy and the program then provides a comprehensive education pathway to certification.

The education pathway to certification that involves a university program would normally require the PAO to make an assessment of the university program to ensure that standards of education meet the requirements of the PAO. This may be in terms of ensuring that graduates undertake a specified accounting program, for example. The attestation of standards of education at universities is typically done through a recognition process. Such processes involve varying degrees of scrutiny dependent on the extent of reliance that the PAO places on the university program. The scrutiny would involve, at least, a review of the syllabus and may extend to ensuring that programs and courses are competency based, that assessments meet professional standards outlined in IES 6 and also to reviewing the performance of candidates from specific universities to see how well they do in the professional programs as an output-based measure.

IES 1, Para. A6

IES 1 aims to ensure that PAOs provide sufficient information and transparency so that those who are considering enrolling in the program are able to make an honest assessment of their chance of success. Such information may include pass rates, expectations and costs, and self-diagnosis tools.

IES 2: Initial Professional Development – Technical Competence (2021)
IES 3: Initial Professional Development – Professional skills (2021)
IES 4: Initial Professional Development – Professional values, ethics and attitudes (2021)

For context

IPD is the learning and development through which aspiring professional accountants first develop professional competence leading to performing a role as a professional accountant.[17]

The definition of professional competence provides the context for IESs 2, 3, and 4, and goes beyond knowledge of principles, standards, concepts, facts, and procedures; it is the integration and application of:

- technical competence (IES 2),
- professional skills (IES 3), and
- professional values, ethics, and attitudes (IES 4)[18]

IESs 2 to 4 are parallel in structure and are discussed together next. Readers should refer to the standards in conjunction with this Guide. The revisions to IESs 2 to 4, with an effective date of 1 January 2021, implemented important changes by adding to the learning outcomes contained in the IESs in order to better reflect the outcomes needed in relation to information and communication technologies (ICT) and professional skepticism.

Objectives and scope

IES 2 Para. 6, IES 3 Para. 6, IES 4 Para. 8

IESs 2 to 4 establish the technical competence (IES 2), professional skills (IES 3), and professional values, ethics, and attitudes (IES 4) that aspiring professional accountants need to develop and demonstrate by the end of IPD in order to perform a role as a professional accountant.

[17] *Ibid* at page 11, para 30.
[18] *Ibid* at page 9, para 18.

Learning outcomes

The required technical competence, professional skills, and professional values, ethics, and attitudes are established by way of sets of required learning outcomes for:

- In IES 2, technical competence areas, such as financial accounting and reporting, audit and assurance, economics, business laws and regulations
- In IES 3, professional skills (intellectual, interpersonal and communication, personal and organizational)
- In IES 4, professional values, ethics, and attitudes (professional skepticism and professional judgment, ethical principles, and commitment to the public interest)

These learning outcomes need to be achieved by the time an aspiring professional accountant completes their IPD. IFAC member bodies are expected to prescribe a set of learning outcomes that includes, but can go beyond in terms of proficiency, those prescribed in each of the standards.

Learning outcomes are relevant to all aspiring professional accountants, regardless of their intended future role or specialization. The learning outcomes "provide the base to enable professional accountants to develop specializations in different accounting roles, for example an audit engagement partner or taxation specialist."

See Table 5 for examples of learning outcomes from IESs 2 to 4. One example is given for each competence area within each of the three standards, based on the most current wording available.

IES 2 Para A8, IES 3 Para A9, IES 4 Para A17

IES 2 Para 7, IES 3 Para. 7, IES 4 Para. 11 and Table A in each standard

Table 5. Sample learning outcomes from IESs 2 to 4[19] Table A

Competence area	Sample learning outcome
IES 2: Initial Professional Development – Technical Competence (2021)	
Financial accounting and reporting (intermediate proficiency)	"Apply International Financial Reporting Standards (IFRS) or other relevant standards to transactions and other events."
Management accounting (intermediate proficiency)	"Apply appropriate quantitative techniques to analyze cost behavior and the drivers of costs."
Finance and financial management (intermediate proficiency)	"Analyze an organization's cash flow and working capital requirements."
Taxation (intermediate proficiency)	"Prepare direct and indirect tax calculations for individuals and organizations."
Audit and assurance (intermediate proficiency)	"Assess the risks of material misstatement in the financial statements and consider the impact on the audit strategy."
Governance, risk management, and internal control (intermediate proficiency)	"Analyze the components of an organization's governance framework."
Business laws and regulations (intermediate proficiency)	"Explain the laws and regulations that govern the different forms of legal entities."
Information and communications technologies (intermediate proficiency)	"Use ICT to enhance the efficiency and effectiveness of communication."
Business and organizational environment (intermediate proficiency)	"Analyze aspects of the global environment that affect international trade and finance."

[19] See https://www.iaesb.org/publications/revisions-ies-2-3-4-and-8-1

Competence area	Sample learning outcome
Economics (foundation proficiency)	"Describe the effect of changes in macroeconomic indicators on business activity."
Business strategy and management (intermediate proficiency)	"Analyze the external and internal factors that may influence the strategy of an organization."
IES 3: Initial Professional Development – Professional Skills (2021)	
Intellectual (intermediate proficiency)	"Apply critical thinking skills to solve problems, inform judgments, make decisions, and reach well-reasoned conclusions."
Interpersonal and communication (intermediate proficiency)	"Communicate clearly and concisely when presenting, discussing, and reporting in formal and informal situations."
Personal (intermediate proficiency)	"Manage time and resources to achieve professional commitments."
Organizational skills (intermediate proficiency)	"Apply leadership skills to influence others to work towards organizational goals."
IES 4: Initial Professional Development – Professional Values, Ethics, and Attitudes (2021)	
Professional skepticism and professional judgment (intermediate proficiency)	"Apply an inquiring mind when collecting and assessing data and information."
Ethical principles (intermediate proficiency)	"Evaluate the significance of threats to compliance with the fundamental principles of ethics and respond appropriately."
Commitment to the public interest (intermediate proficiency)	"Analyze the consequences of unethical behavior to the individual, the profession, and the public."

IES 2 Para. 9, IES 3 Para. 9, IES 4 Para. 14

IES 2 Para. 8, IES 3 Para. 8, IES 4 Para. 12

Program review and competence assessment

All of the IESs require IFAC member bodies to regularly review and update their professional accounting education programs that are designed to achieve the prescribed learning outcomes. Normally, reviews would be done every 3 to 5 years, or more often where legislation, regulation, or standards change.

Similarly, all of the IESs require IFAC member bodies to establish appropriate activities to assess the competence of aspiring professional accountants. Assessment of competence may include: short answers, case studies, essays, objective testing, workplace assessment, and exemptions based on prior learning. Refer to the discussion of IES 6 for further information on assessment.

Additional requirements and guidance in IES 4

With respect to professional values, ethics, and attitudes, IES 4 includes a few additional requirements that are not mirrored in IESs 2 and 3:

- Professional accounting education programs need to "provide, through professional accounting education programs, a framework of professional values, ethics, and attitudes for aspiring professional accountants to (a) apply professional skepticism and exercise professional judgment, and (b) act in an ethical manner that is in the public interest."
- Relevant ethical requirements must be "integrated throughout" the program.
- Learning and development activities must include "reflective activity that is formalized and documented."

IES 4 Para 9

IES 4 Para. 13

IES 4 Para 10

IES 4 Para A4

Professional values, ethics, and attitudes include a commitment to:

- technical competence and professional skills
- ethical behavior
- professional manner
- pursuit of excellence, and
- social responsibility.

IES 6: Initial Professional Development – Assessment of Professional Competence (2015)

Objective and Scope

Para 1

IES 6 prescribes the requirements for assessing the professional competence that aspiring professional accountants need to demonstrate by the end of IPD.

Para 7

The standard establishes "whether aspiring professional accountants have demonstrated an appropriate level of professional competence by the end of IPD in order to perform a role as a professional accountant."

As noted previously, IESs 2 to 4 all require assessment of competence.

Requirements

Para 8

IES 6 requires IFAC member bodies to formally assess whether aspiring professional accountants in their program have "achieved an appropriate level of professional competence by the end of IPD." The standard requires that a range of assessment activities undertaken during IPD be used to assess the level of competence achieved.

Para A6

Examples of assessment activities may include, but are not limited to:

- written and/or oral examinations
- objective testing
- computer-assisted testing
- workplace assessment of competence by employers
- review of a portfolio of evidence on completion of workplace activities

Para A2

Assessment is the responsibility of IFAC member bodies, but other stakeholders such as employers, regulators, licensing bodies, universities, colleges, and private education providers may provide substantive input into assessment activities.

Para 9

Assessment activities should be designed to have high levels of:

- Reliability
- Validity
- Equity
- Transparency
- Sufficiency

Table 6 provides guidance on what these characteristics mean and how they can be achieved.

Para 10 and A21 to A22

Assessment activities need to be based on verifiable evidence that is objective and capable of being proven. This evidence should be stored in written or electronic form in order to maintain it for future reference (such as providing certificates or degrees to verify successful completion and maintaining transcripts of student grades). Verifiable evidence over assessments can help satisfy oversight bodies and regulators and increase stakeholder confidence in the program and its new professionals.

Table 6. Characteristics of assessment activities

What it means	How we achieve it
RELIABILITY	
The assessment consistently produces the same result, given the same set of circumstances. The majority of assessors, acting independently, consistently come to the same judgment, given the same set of circumstances.	• Make sure assessors are competent (including instructors, exam developers, workplace assessors, etc.). • Ensure assessments are consistently developed and adequately reviewed. • Avoid language ambiguity. • Ensure there are enough scoring opportunities on assessments (don't put too much weight on a single question or a single test). • Ensure consistency between assessors (e.g., if an exam is graded by a team of assessors, ensure they all grade the same and that they stay consistent over time and don't "drift" to marking harder or easier). • Adjust results if a particular exam is much more difficult (or easier) than other exams have been (e.g. the final exam of a course should stay relatively the same in terms of difficulty, but if a particular session's exam is much harder, adjust the score required to pass).
VALIDITY	
The assessment measures what it is intended to measure (e.g., the competence of a new or aspiring professional accountant).	• Include comprehensive, relevant, and realistic information in exam questions. • Cast the student in the roles they will likely take on (i.e., auditor in a public accounting firm, Controller or Chief Financial Officer (CFO) in a smaller company…). • Ensure questions tie to the Competency Framework or required learning outcomes. • Assess non-technical skills (e.g., leadership, communication) by observing candidate in the workplace rather than only on an exam.
EQUITY	
The assessment is fair and without bias.	• Ensure authors are aware of potential for bias. • Include a review for bias to ensure that language avoids slang or terms that would not be familiar to non-native speakers and that questions reflect diversity and avoid stereotypes. • For high-stakes exams, do not have names on candidate papers, so that markers won't be influenced by knowledge of the candidate (consciously or sub-consciously).
TRANSPARENCY	
Details of the assessment are disclosed publicly, such as: • content or competence areas to be assessed, • expectations of performance required to succeed, and • timing of the assessment.	• Ensure students know what is required of them to succeed. • Tie assessments to a published Competency Framework or set of required learning outcomes. • Make exam blueprints (design specifications) available to candidates so they know the scope and coverage (but not specific topics that will appear on a specific exam). • Provide sample and/or past exams and practice materials. • Provide information on how the assessments are developed, scored, and managed.

Para A11 Para A12 Para A13 Para A14 Para A15 Para A16 Para A17 Para A18

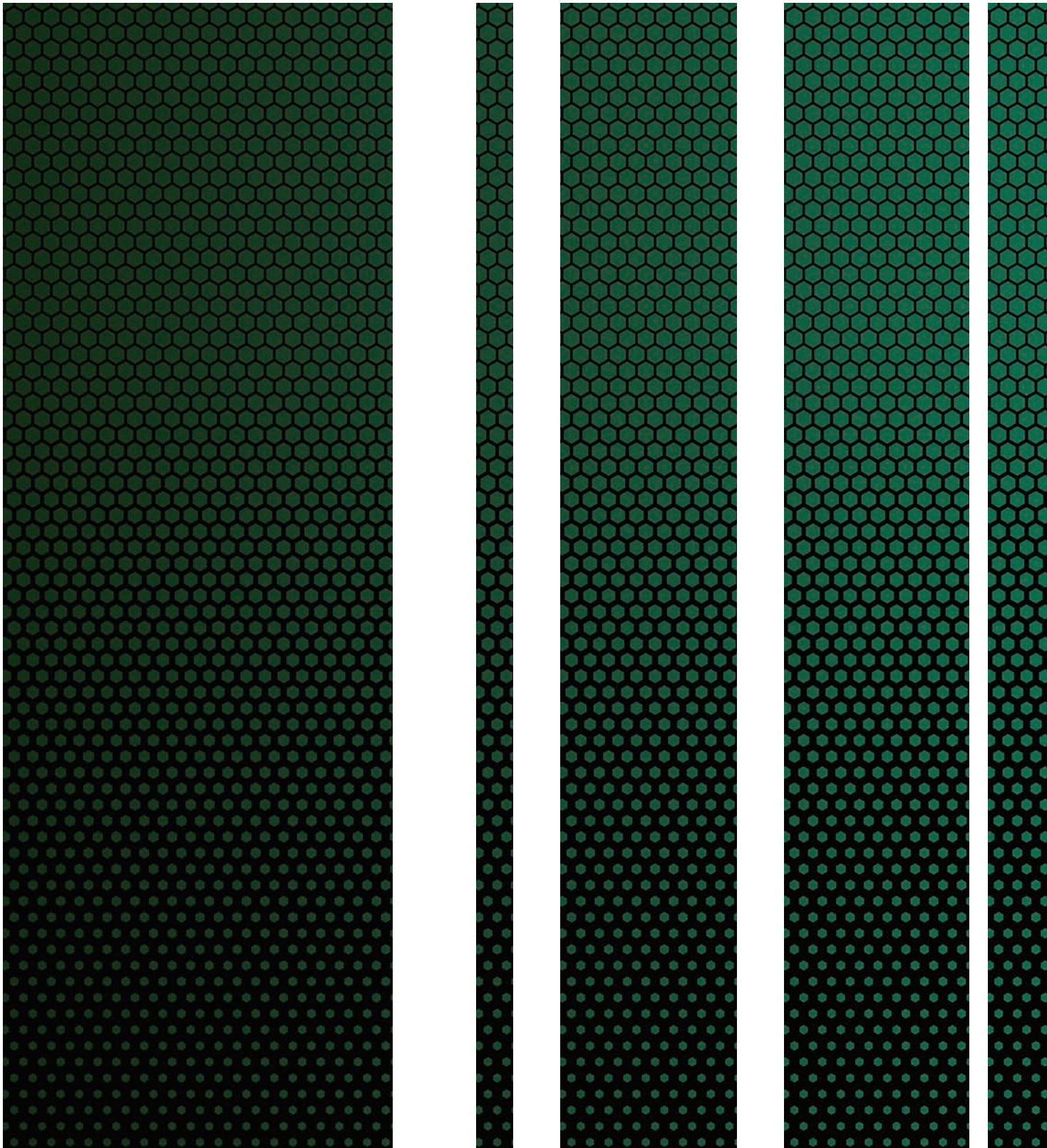
What it means	How we achieve it
SUFFICIENCY	
The assessment: • has a balance of depth and breadth, knowledge and application, and • combines material from different areas applied to a range of situations and contexts. The assessment process has to test "enough" to be able to determine if sufficient competence has been achieved.	• Ensure adequate coverage of competencies over the set of assessments used. • Assess technical and non-technical competencies. • Use proficiency levels to determine appropriate breadth and depth of various competencies. • Consider the extent to which pre-requisite exams can help cover breadth, depth, and knowledge areas.

Para A19

Para A20

PART 3

EDUCATION AND ASSESSMENT PEDAGOGICAL TOOLKIT



This part contains the pedagogical toolkit to be used by educators to develop their expertise in competency-based education and assessment methodologies.

Illustrative examples in this part refer to the sample education and assessment materials contained in Part 4. These sample materials should be referenced in conjunction with this part's guidance.

Read Part 4.1 now, which introduces the sample materials that form an important part of this Guide.

The E & A Pedagogical Toolkit roughly follows a chronological sequence that is typical of education and assessment material development. The Toolkit is divided into four main steps as presented in Figure 6, and explained throughout the rest of this Part.

A note on terminology

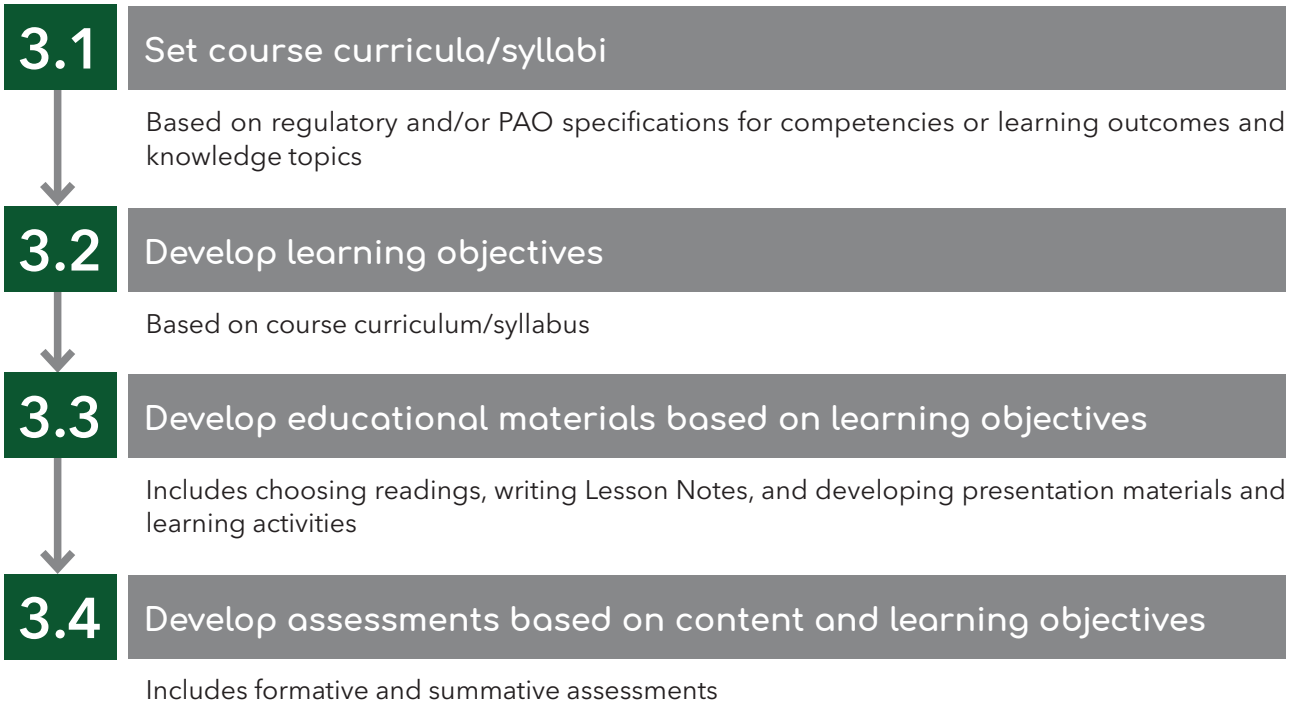
This guide uses the following terms:

Instructor - a generic term for the teacher, professor, or other educator presenting educational content to a group.

Course developer – an individual who authors educational materials for a course (this could be the course instructor or another individual).

Student or candidate – an aspiring professional accountant participating in a relevant program of studies (*there is a tendency for "student" to be used to describe those in tertiary education or lower and "candidate" to refer to an individual who is studying in a professional program*).

Figure 6. Sequence of education and assessment material development



3.1

Set course curricula/syllabi based on program specifications

3.1.1

Development of program specifications

In any program of studies, there is an underlying set of specifications that dictates what will be taught in the program and what students will be expected to achieve in order to successfully complete it; these specifications guide the education and assessment activities. In some jurisdictions, the specifications may be set in law or regulation by a government or ministry. In other situations, a PAO sets the competency requirements based on the results of a Practice Analysis (as discussed in Part 2.1.6). The process to determine program-level specifications may have included a variety of sources including government ministries, PAO education administrators, subject matter experts, and professional accountants. It may have looked something like this:

PAO completes Practice Analysis to determine competency requirements for the profession and related knowledge topics

Results of Practice Analysis are used to design PAO's Professional Program (education, exams, experience)

Program design is used to develop program curriculum with competency/ knowledge topic requirements

Blueprint for ICE is developed[20]

Or like this:

Government mandates a list of knowledge topic areas to be covered in professional accounting program and exam(s)

University sets program curricula for accounting degree, benchmarked against other programs

PAO sets exam blueprint for certification exam to enter profession

The documents that contain program-level specifications are typically referred to by organizations as "curricula" or "syllabi." Often, "curricula" will refer to design specifications at the program or course level that are used by decision-makers, designers, and developers, and "syllabi" will be documents developed by instructors and provided to students to denote the course outline, schedule, requirements, and resources. These definitions are not, however, universal, so consider the context of a document and not just its title.

The accountancy environment is changing rapidly over a number of fronts but particularly so in relation to the developments in technology and its impact on business that professional accountants must understand and also in relation to the continuing and developing demands of accountants to exercise professional scepticism and adopt and display ethical behavior. The outcome of the education of professional accountants is the need to have a range of perspectives on what would be the best educational outcomes and how these are to be achieved. In gathering this information a multi-stakeholder perspective is essential and Practice Analysis will have a role to play in relation to this. In fact, for many PAOs, a multi-stakeholder perspective

[20] An introduction to capstone/certification exams is provided in Part 5.

approach is already adopted in that 82% of IFAC member PAOs have shared responsibilities in relation to the adoption of IESs.[21] The stakeholders typically involved in this shared responsibility range over government, audit oversight authorities, financial market regulators, other PAOs, and regional economic communities. The outcome for educational purposes is that there is now a pressing need to consider multiple stakeholder perspectives that are determined by local circumstances.

The myriad of potential ways that program-level specifications come to be is beyond the scope of this Guide but there is a detailed example of a program-level guide to an accounting qualification contained in sections 4.2.2 and 4.2.3. Our focus here, however, is on demonstrating the process of designing and developing quality education and assessment materials that meet the specifications and follow international good practice.

Once program-level requirements for competencies/knowledge topics have been specified, decisions need to be made regarding how those requirements will be met by the set of courses that make up the program. If, for example, a PAO is setting up a professional program and has specified a set of competencies that students need to demonstrate before qualification, decisions that need to be made include:

- the number of courses needed in each domain (such as financial accounting, management accounting, auditing, and taxation)
- the ordering of courses and prerequisites (for example, which financial accounting courses need to be completed before the first auditing course can be taken)
- which courses are mandatory and which are elective

A key challenge in the development of professional programs is to ensure that knowledge, skills, values, and behaviors are integrated and the individuals are tested on the acquisition of related competencies. The assessment of competencies – both formative and summative – is, in fact, directly related to competencies since assessments rely on learning objectives (or performance criteria) to connect the competencies to assessments. The assessments are therefore a deep part of the program of learning and not merely a final hurdle to the achievement of a qualification. The combination of assessments, overall, will be designed to ensure that the program-level objectives are met.

Many strategic and operational decisions need to be made in terms of laddering courses within programs and aligning courses within accreditation systems. For example, two different universities may have developed very similar program-level curricula for their accounting undergraduate degrees that require effectively the same set of competencies to be developed by students. Despite the similarity, the two universities may develop quite different course streams to address those competencies, depending on larger decisions related to resource allocation, how different programs ladder together (within and external to the department), collaboration with other internal and external programs, and external accreditations being sought or maintained. As another example, most PAOs strive to develop a very similar set of competencies in aspiring professional accountants, but their professional programs may vary greatly in terms of specific education, exam, and experience requirements. Whatever design decisions are made, it's important that the program requirements be communicated clearly to stakeholders, both in terms of program structure and competency requirements.

Figure 7 provides a condensed view of a sample Project Planner. A more detailed version is included in Appendix 2. It is designed to indicate what steps might be taken in developing a competency based program and related resources, and how they might be scheduled. It is indicative and intended for adaptation to suit individual circumstances.

Read Part 4.2.1 and 4.2.2 now. These sections provide excerpts from the international program curriculum (Program of Professional Studies) of one of CPA Canada's legacy bodies. Although this program was superseded by the new CPA Canada Preparatory Courses following the merger of the three Canadian accounting bodies, it provides valuable sample materials to illustrate the concepts in this Guide. As you review the sample curriculum excerpts, note that the program curriculum:

- is a comprehensive document that explains the Program of Professional Studies and how its pieces fit together.
- refers to the Competency Framework as the underlying guide to competence requirements.
- points to the Examination Blueprints for guidance on exam specifications.
- provides both broad program-level information and focused course-by-course information (detailed information for one course is included in Part 4.2.3, discussed next).

[21] IFAC 2019 Global Status Report https://www.ifac.org/knowledge-gateway/supporting-international-standards/discussion/international-standards-2019-global

Figure 7. Snapshot of a sample Project Planner

Description	Plan Start	Plan Duration	Actual Start	Actual Duration	Percent Complete	1	2	3	4	5
1. Design										
1.1 Establish design group										
1.1.1 Identify and detail key stakeholders and members of the design group	1	4	2	5	35%					
1.1.2 Review environment, specify objectives, detail the group's purpose and schedule of activities	1	8	4	6	10%					
1.1.3 Identify resources required	1	2	4	8	85%					
1.1.4 Specify key milestones and approvals required	1	3	4	6	85%					
1.1.5 Additional activity to insert	*0*	*0*	*0*	*0*	*60%*					
1.2. Design Competency Framework										
1.2.1 Specify structure of program (years, modules, progression, credits)	2	2	5	5	60%					
1.2.2 Determine competency domains (subject content over which competencies are defined)	3	2	5	5	60%					

Plan Duration Actual Start % Complete

Actual (beyond plan) % Complete (beyond plan)

3.1.2

From program specifications to course curricula/syllabi

The program design decisions discussed in the previous section will impact what needs to be covered by each course in the program. Developing the curricula/syllabi for the courses making up the program can begin once the overall competency and knowledge topic requirements have been finalized.

The process of developing course-level curricula/syllabi based on the program-level requirements involves educators, subject-matter experts, and administrators, and is achieved differently among PAOs and educational organizations. Setting aside the strategic and operational differences, there is a common set of principles used in designing course curricula to meet program requirements:

- Program requirements for competencies (or learning outcomes) and knowledge topic areas must be adequately covered by the combination of courses offered.
- The competencies (or learning outcomes or topic areas) must be logically allocated to courses within the program, based on competency/topic area.
- There must be a certain amount of overlap between courses to emphasize learning as students progress, but not so much overlap to make courses inefficiently redundant.
- Proficiency expectations should increase as the student moves to higher-tier courses – this is true for both technical and enabling competencies.

To illustrate these principles in action, let's use the sample Program of Professional Studies. The underlying Competency Framework was developed though a Practice Analysis. Assume that in the area of financial accounting and reporting, the Framework includes the following competency statements (with the noted levels of proficiency), among others:

- Formulates, analyzes, and processes transactions in accordance with professional standards and policies (*level 1 – advanced*)
- Researches, evaluates, and advises on the appropriate accounting treatment for complex transactions (*level 1 – advanced*)
- Interprets and advises on the organization's reporting obligations (*level 1 – advanced*)
- Ensures the reliability of financial information (*level 1 – advanced*)
- Prepares financial statements appropriate for the users (*level 1 – advanced*)

The Competency Framework is supported by a list of knowledge topics that was developed during the Practice Analysis. These knowledge topics delineate the scope of the content that needs to be covered in the program. Within the financial accounting and reporting area, the knowledge topics need to be covered by the 5 courses in the financial accounting and reporting stream listed in the program curriculum (see Part 4.2.1):

- Financial Accounting Fundamentals [FA1]
- Intermediate Financial Accounting I [FA2]
- Intermediate Financial Accounting II [FA3]
- Financial Accounting: Consolidations & Advanced Issues [FA4]
- Accounting Theory & Contemporary Issues [AT1]

Table 7 shows an excerpt of a design document that lists the knowledge topic areas and is used to plan out where each knowledge topic area would be covered. Topics are listed alphabetically; note that the list is not complete.

Table 7. Partial list of knowledge topic areas showing coverage in program

Knowledge topic area	FA1	FA2	FA3	FA4	AT1
Assumptions and qualitative characteristics	X	X			X
Accruals and deferrals	X	X			X
Bad debt expense	X	X			

Knowledge topic area	FA1	FA2	FA3	FA4	AT1
Business combinations				X	
Cash	X	X			
Contingencies	X	X	X		
Cost of goods sold		X			
Earnings per share	X	X	X		
Efficient market theory			X		X
Ethics	X	X	X	X	X
Inventory	X	X		X	
Property, plant, and equipment (PPE)		X		X	
Receivables	X	X		X	

As seen in the table, many topics are covered in more than one course. This allows for topic coverage at different levels of depth and complexity, and from different perspectives. The combination of the topics over the range of courses collectively support the development of competence in the required competencies, with the end goal of ensuring that successful candidates have a mastery of the required competencies and underlying knowledge content by the end of the program.

Once knowledge topic areas have been mapped to the courses in the program, the curriculum/syllabus for each course can be set. For example, to set the curriculum/syllabus for FA2, all of the required topics from Table 7 that are marked for FA2 are grouped into topic areas and arranged logically based on the order in which they should be presented to students in a course.

Terminology: Learning outcomes and learning objectives

Although various organizations use different terminology, in this Guide we use these terms as follows:

Learning outcomes are effectively the same as competency statements (recall that these are broad statements that reflect the knowledge, skills, understanding, and application required for a specified competence area).

For example: *Apply accounting principles to transactions and other events* (this is a learning outcome from IES 2 in the Financial Accounting and Reporting competency area).[22]

Learning objectives are more granular and support a specific element (an individual lesson or topic) in a program of studies. Learning objectives state what a student should learn and be able to demonstrate after completing the element.

For example: *Describe the nature of inventory and what goods and costs are included in this asset category.* (This is a learning objective from the sample materials in Part 4)

To clarify the depth of knowledge and application that is expected from students with respect to each topic or section of the learning materials, each topic area should be designated with a level of depth. If the organization is using a Competency Framework (or a set of required learning outcomes), the levels of depth assigned to learning objectives should support the levels of proficiency defined in that framework.

The program curriculum explains in Part 4.2.2 (under the heading "Levels of depth") that required depth levels for learning objectives are based on the following definitions:

- *Level 1 – essential/mastery*: Students are required to attain an in-depth understanding of concepts and principles; develop a sound conceptual

[22] Note that some organizations use the term "learning outcomes" to refer to competency statements that were not developed through a formal Practice Analysis. Other organizations use the term "learning outcomes" to label statements that are more detailed than competency statements, but less detailed than learning objectives.

and comprehensive technical knowledge of procedures; become proficient in the application of knowledge to practice; and become proficient users of reference documents and sources for further study.

- *Level 2 – important/comprehension*: Students are required to attain a sound understanding of concepts and principles; develop a working knowledge of procedures; and become familiar with common reference documents and sources for further study.
- *Level 3 – background knowledge:* Students are required to acquire a general knowledge of broad topic areas and identify common reference documents.

The expectations at each tier of the program include and expand on expectations in earlier studies. In other words, demonstrating *mastery* requires deeper understanding and application in an advanced-tier course than it would in a foundation-tier course.

For each topic, the required level of depth would be set based on factors such as:

- The importance of the topic to the overall competence expected of a new professional accountant;
- The proficiency levels required for the competencies being supported; and
- The extent to which other courses will contribute to the student's development of competence in that topic.

The result will be a course curriculum/syllabus that resembles the one provided in the sample materials.

Read Part 4.2.3 now and notice:

- The course-level curriculum includes a course description that, together with the outline, specifies the scope of the course and its position within the program (by way of specified prerequisites).
- Levels of depth are specified for each topic area.
- Topics have been logically grouped and ordered in lessons.
- Each lesson is roughly balanced in terms of workload, so that each lesson comprises one unit of course time (in the case of the Sample Program, each lesson is covered in one week of study).

3.1.3

A more detailed look at levels of proficiency and levels of depth

As mentioned above, *levels of proficiency* are specified for competency statements, whereas learning objectives are assigned *levels of depth*. Although these levels are related and work together, they are not the same.

For competency statements, levels of proficiency relate to the minimum level of applied knowledge, skills, and abilities that an aspiring professional accountant must achieve and demonstrate before being granted the qualification as a professional accountant.

For learning objectives, levels of depth reflect the expectations placed on students with respect to specific topics or objectives. They reflect the importance and complexity of the material.

As an example of the relationship between proficiency levels related to a competency statement and the depth levels related to learning objectives, consider the following:

A common competency statement relates to the ability of a professional accountant to *record transactions and events in accordance with IFRS* at an *advanced* proficiency level.

This does not, however, mean that the professional accountant is expected to be equally familiar with and adept at recording transactions and events covered by **all** standards within IFRS. Within the courses, many topics (particularly those related to recording more common items such as cash, receivables, inventory, PPE, revenue recognition, depreciation…) are expected to be demonstrated at *level 1 – essential/mastery*, which directly supports the *advanced* proficiency level of the related competency statement. Other topics, however, such as recording complex financial instruments or

more advanced consolidation issues may only be expected at *level 2 - important/comprehension*. It is the overall combination of levels of depth for all of the learning objectives that underlie a particular competency statement that work together to support the statement's overall level of proficiency.

In summary, proficiency is a competence statement and the level descriptor is an explanation of the depth of knowledge over a particular topic that will satisfy the proficiency requirement. The level descriptors then enable an assessment to be made of competence over a particular topic. Without the level descriptors, we are left with competency statements expressed in action verbs only whereas we naturally expect a statement that specifies what those action verbs specifically mean. That is what level descriptors do.

3.2

Develop learning objectives based on course curriculum/syllabus

3.2.1

The purpose and function of learning objectives

As presented in the previous section, the course curriculum/syllabi should provide a complete listing of all of the knowledge topic areas to be covered by the course, grouped and ordered logically into lessons (sometimes called Modules). Each lesson then needs to have learning objectives developed to provide guidance on:

- what students are expected to do to demonstrate their knowledge of the required topics and at the expected level of depth.
- which material within the topics is considered most important in the lesson.
- what students should expect to be assessed on in the assignment and examination in relation to this lesson.

Learning objectives can be presented at the beginning of a lesson or topic. Regardless of where they are presented, it should be obvious to instructors and students which learning objectives relate to which course materials. Each topic area being covered should have at least one learning objective related to it.

Read Part 4.3.1 and 4.3.2 now. Part 4.3.1 presents a sample of the Introduction to the FA2 course and gives it a sense of context for the sample material contained in Part 4.3.2.

Part 4.3.2 provides a sample lesson from the FA2 course. In Part 4.3.2, focus on the learning objectives that are provided at the beginning of the lesson, then scan the rest of the lesson. We'll refer back to other elements within the lesson throughout this Part of the E&A Pedagogical Toolkit. Based on your read of the learning objectives, note that they:

- are specific and descriptive in terms of their guidance;
- provide students with the required level of depth for each learning objective;
- use active, performance-directed verbs to indicate what will be expected of students on assignments and examinations (such as describe, compare, contrast, calculate);
- reflect and are consistent with the cognitive Bloom's levels expected from students to be successful in the lesson (see Part 2 for a discussion of Bloom's Taxonomy); and
- cover the scope of the materials in the lesson and reflect the lesson's structure by providing one learning objective for each topic in the lesson.

3.2.2

How to write learning objectives

To write learning objectives, consider each topic in turn and ask "What do I expect students to be able to **do** after they study this topic?" Use the expected level of depth for the topic area to guide your answer for each topic - the learning objectives related to each topic area should be designated with the same level of depth assigned to the topic, and the wording in the learning objective needs to reflect the depth of understanding and application expected.

For example, look again at the course description and outline provided in the curriculum for FA2 (see Part 4.2.3). The first knowledge topic listed (under Financial reporting and accounting concepts) is "Financial statement users and objectives of financial reporting." This topic is required to be covered at *level 1 - essential/mastery*.

As an educator who is well acquainted with this topic, you would ask yourself "What do I expect students to be able to do after they study this topic?" and you would likely determine expectations such as:

- Explain who reads financial statements and what their needs are in terms of the information different readers are looking for and the decisions they are trying to make.
- Explain the objectives, usefulness, and limitations of financial reporting based on the guidance in the IFRS Conceptual Framework.

You may set these statements as your learning objectives and designate them at level 1. If you wished to use only one learning objective per topic (as is the convention in some programs), you might combine the statements to read:

- Identify financial statement users and their needs and explain how users' needs are typically satisfied (level 1).

3.2.3

Acceptable learning objective action words

A program of studies should provide and define a set of acceptable action words for learning objectives to guide course material authors and ensure consistent messaging of expectations to students. Table 8 provides examples of action words that tie three tiers of accounting courses (foundation/intermediate, advanced, and professional) to the levels of depth based on Bloom's Taxonomy.

In the sample program, developers use the glossary of action words included in the sample materials in Part 4.2.4. This glossary supports the consistent use of terms in learning objectives and in assignment and exam questions. For example, in some contexts the term "Identify" could be used as a low-level skill, such as "Identify three methods of amortization," which is a recall exercise. In the Glossary, however, "Identify" requires students to recognize and distinguish the important issues, factors, or items, usually based on an evaluation or analysis of a scenario, such as "Identify the key risk factors facing the client." Recall questions should instead use the term "List."

Revisit the learning objectives in Part 4.3.2. Focus on the action words being used. You should be able to verify that each learning objective starts with an action word that is consistent with the guidance in Table 8. The FA2 course is a foundation/intermediate tier course, so level 1 learning objectives should begin with words that would reflect Bloom's levels 3 or 4 (such as calculate, compare, contrast, determine, diagram, discuss, explain…). Learning objectives that require a depth level 2 should use action words that reflect Bloom's level 2 (such as describe, give examples, summarize).

Table 8. Bloom's levels and action words for learning objectives

	Level 1 - essential/mastery	Level 2 - important/ comprehension	Level 3 - background knowledge
Professional courses and ICE	**Bloom's levels 5-6:** evaluating/creating **Action words:** criticize, design (e.g., a plan, presentation), evaluate, identify (e.g., risk factors, key threats), justify, prove, recommend, review, state (e.g., whether you agree or disagree, whether a breach of ethical principles has occurred), write (e.g., memo, report)	**Bloom's levels 3-4:** applying/analyzing **Action words:** calculate, compare, contrast, determine, diagram, discuss, explain, illustrate, interpret, outline, prepare (e.g., journal entries, schedules, statements), relate	**Bloom's levels 1-2:** remembering/ understanding **Action words:** define, describe, give examples, list, summarize, trace
Advanced courses	**Bloom's levels 4- 5:** analyzing/evaluating **Action words:** compare, contrast, criticize, determine, diagram, discuss, evaluate, explain, identify (e.g., risk factors, key threats), justify, outline, prepare (e.g., more complex statements, audit plans), prove, recommend, relate, review, state (e.g., whether you agree or disagree, whether a breach of ethical principles has occurred)	**Bloom's levels 2-3:** understanding/ applying **Action words:** calculate, describe, give examples, illustrate, interpret, prepare (e.g., journal entries, schedules, basic statements), summarize	**Bloom's level 1:** remembering **Action words:** define, list, trace
Foundation/ intermediate courses	**Bloom's levels 3-4:** applying/analyzing **Action words:** calculate, compare, contrast, determine, diagram, discuss, explain, illustrate, interpret, outline, prepare (e.g., journal entries, schedules, statements), relate	**Bloom's level 2:** understanding **Action words:** describe, give examples, summarize	**Bloom's level 1:** remembering **Action words:** define, list, trace

Note: Many action words have a variety of meanings, depending on the context in which they are used. For this reason, action words should be defined to ensure consistent understanding by content developers, instructors and learners. Section 4.2.4 provides a table that defines key action words.

3.2.4

How learning objectives support competency statements/ learning outcomes

When designing learning objectives for a course lesson or topic, you'll need to ensure that each learning objective helps to support one or more of the competencies that are required to be addressed. Recall that a PAO's Competency Framework includes both technical competencies (in areas such as financial accounting and reporting, management accounting, assurance, etc.) and non-technical, enabling, or pervasive competencies (such as communication, critical thinking, ethics, etc.). Learning objectives need to support both types of competency statements/learning outcomes.

Competency statements/learning outcomes are worded more generally than learning objectives; they describe a larger area of professional activity. As a result, the relationship between competencies and learning objectives is a "many-to-many" relationship. In other words, a competency may be supported by many learning objectives, and a learning objective may support (or partially support) more than one competency. For example:

A **technical competency** related to assurance might be:

C1: Evaluates risks and business issues and determines their impact on an assurance engagement.

Two **learning objectives** that support this competency would be:

LO1: Determine the inherent risk and materiality for a given client engagement.

LO2: Contrast quantitative and qualitative materiality.

In turn, LO2 also supports at least one **non-technical competency statement**:

C2: Evaluates quantitative and qualitative factors when making decisions.

Because of this many-to-many relationship, the process of developing learning objectives to support competencies is dynamic and iterative, rather than linear.

A learning objective is deemed to support a given competency where:

1. Performance of the action described by the learning objective is an example of how the competency could be demonstrated (e.g., the learning objective satisfies a task related to the competency); or
2. The knowledge or skill underlying at least one component of the learning objective is fundamental in order to demonstrate the competency in a particular situation; or
3. The output of the learning objective represents an important component or prerequisite step to being able to demonstrate the competency in a particular situation.

As well, in all three cases, the requirements and context of the learning objective must be consistent with the context of the competency, or easily transferable to that context.

A key part of supporting competencies is ensuring that the levels of depth assigned to learning objectives are considered in the context of the proficiency levels used in the organization's Competency Framework or required learning outcomes.

For example, look again at the learning objectives in the sample material in Part 4.3.2 FA2 Lesson 5 LOs. From the IESs, the technical learning outcomes supported by these learning objectives would be in IES 2, in the competence areas of *Financial accounting and reporting, Management accounting,* and *Governance, risk management, and internal control*. A mapping of learning objectives in the sample materials to learning outcomes in IES 2 is provided in Table 9. The mapping in Table 9 demonstrates the importance of tracking how and where outcomes are dealt with as objectives in learning materials and also in approaches to teaching. This tracking allows students to learn in a comprehensive and coherent manner when related to learning materials and also facilitates a tracking of responsibility for the teacher who might be required to demonstrate at what point in a program a learning outcome has been dealt with.

Table 9. Learning objectives supporting technical learning outcomes

Learning objectives from sample materials	Learning outcomes from IES 2
Topic 5.1 - Explain the nature of inventory and what goods and costs are included in this asset category (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **i.** Apply accounting principles to transactions and other events. **ii.** Apply IFRS or other relevant standards to transactions and other events.
Topic 5.2 - Compare and contrast the perpetual inventory system to the periodic inventory system (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **i.** Apply accounting principles to transactions and other events.
Topic 5.3 - Contrast specific identification with the first in, first out (FIFO) and average cost formulas and determine when each is appropriate (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **iii.** Evaluate the appropriateness of accounting policies used to prepare financial statements. *Management accounting* (intermediate): **i.** Apply techniques to support management decision making, including product costing, variance analysis, inventory management, and budgeting and forecasting.
Topic 5.4 - Calculate the total cost of items sold using a perpetual inventory worksheet (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **i.** Apply accounting principles to transactions and other events. **ii.** Apply IFRS or other relevant standards to transactions and other events. *Management accounting* (intermediate): **ii.** Apply techniques to support management decision making, including product costing, variance analysis, inventory management, and budgeting and forecasting.
Topic 5.5 - Explain the lower of cost or net realizable value requirement (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **ii.** Apply IFRS or other relevant standards to transactions and other events.
Topic 5.6 - Explain the effect of inventory errors on the financial statements (*level 1 - mastery*).	*Financial accounting and reporting* (intermediate): **iv.** Prepare financial statements, including consolidated financial statements, in accordance with IFRS or other relevant standards.
Topic 5.7 - Describe the gross margin method and retail inventory method for inventory value estimation, identifying the circumstances where each is appropriate (*level 2 - comprehension*).	*Financial accounting and reporting* (intermediate): **iii.** Evaluate the appropriateness of accounting policies used to prepare financial statements.
Topic 5.8 - Describe the features of an effective internal control system for inventory (*level 2 - comprehension*).	*Management accounting* (intermediate): **ii.** Apply techniques to support management decision making, including product costing, variance analysis, inventory management, and budgeting and forecasting. *Governance, risk management, and internal control* (intermediate): **iv.** Analyze the components of internal control related to financial reporting.

Review the mapping in the table and compare the levels of depth assigned to the learning objectives in the sample materials to the proficiency levels of the required learning outcome competence areas in the IESs. The learning objectives are listed at the mastery and comprehension levels. The learning outcomes in IES 2 are in competence areas that are all required at an intermediate level. Reaching an intermediate level of proficiency in a competence area made up of broadly worded learning outcomes (such as "Apply IFRS or other relevant standards to transactions and other events.") requires a student to master fundamental concepts and transactions, as well as having a clear comprehension of some of the more complex or uncertain areas. The learning objectives in the sample materials provide support to the learning outcomes by requiring students to master key inventory concepts and gain a comprehension level of depth of others.

How learning objectives support non-technical competency statements/ learning outcomes

Non-technical competencies (or enabling or pervasive competencies, or soft skills) are referred to in the IESs collectively as "professional skills, values, ethics, and attitudes." These competencies are a critical part of professionalism and must be developed in candidates as they progress through the program of studies.

Demonstrating professional skills, values, ethics, and attitudes are often tied to higher Bloom's cognitive levels (see Part 2.1.4). In advanced and professional-tier courses, these competencies should be reflected directly in the learning objectives for the course. In lower-tier courses, the learning objectives are often more technical in nature and reflect lower Bloom's levels. However, given the importance of professional skills, values, ethics, and attitudes, lower-tier courses should also start building these competencies through the course activities and assessments, even if they are not referenced directly in the course's learning objectives. See Part 3.5 for further guidance on how to build and assess professional skills, values, ethics, and attitudes in students.

Note: all tiers of courses should include learning objectives that support competency statements/ learning outcomes in the areas of ethical principles and Commitment to the Public Interest. This should progress from understanding the importance of ethics in business to applying ethical principles in specific situations, and then on to evaluating complex ethical dilemmas and determining the most appropriate course of action.

To illustrate how non-technical competency statements/learning outcomes can be supported by learning objectives, Table 10 provides a sample of some of the learning outcomes from IESs 3 and 4 and some learning objectives from advanced-tier courses in the sample Program of Professional Studies (refer to Part 4.2.2 Exhibit 2 for the set of courses making up the sample program's advanced tier).

Note that your job as a content developer is to ensure that the learning objectives you develop support the required competencies and meet the overall requirements designated for the course you are developing. From a broader perspective, those responsible for program development will need to ensure that the collective course materials, in aggregate, meet the program's requirements. This is beyond the scope of this document and is discussed in the CBAETC Implementation Guide.

Table 10. Learning objectives supporting non-technical learning outcomes (professional skills, values, ethics, and attitudes)

Learning outcomes from IESs 3 and 4	Learning objectives from sample materials
Professional skills: a. **Intellectual (intermediate)** i. Evaluate data and information from a variety of sources and perspectives through research, integration, and analysis.	**MA2 Lesson 8:** Outline the key concepts in emerging issues of agency theory and management compensation, environmentally sustainable development, and ethics and corporate responsibility, and explain how they affect corporate decision models (level 1). **FA4 Lesson 8:** Describe financial statement translation methods, and explain the difference between economic exposure and accounting exposure caused by fluctuations in foreign exchange rates (level 1). **AT1 Lesson 9:** Outline the complexity of measuring the costs and benefits of information to society (level 1).

Learning outcomes from IESs 3 and 4	Learning objectives from sample materials
iv. Recommend solutions to unstructured, multi-faceted problems.	**MA2 Lesson 8:** Determine how different business units should be evaluated (level 1). Recommend appropriate profitability measures based on an understanding of return on investment, residual income, economic value added, and return on sales (level 1).
c. **Personal (intermediate)** **iv.** Anticipate challenges and plan potential solutions.	**MA2 Lesson 5:** Describe the challenges faced in ensuring that parameters for creating a capital budget support organizational goals (level 2).
v. Apply an open mind to new opportunities.	**AU1 Lesson 1:** Describe the role of a staff accountant on a typical audit engagement, and explain how continuous training on audit engagements prepares staff for future opportunities in the organization (level 2).
vi. Identify the potential impact of personal and organizational bias.	**AT1 Lesson 7:** Explain the manager's motivation to manage earnings and how contracts can be designed to control the manager's opportunistic behaviour (levels 1, 2, and 3).
Professional values, ethics, and attitudes: a. **Professional skepticism and professional judgment (intermediate)** **i.** Apply an inquiring mind when collecting and assessing data and information.	**AU1 Lesson 10:** Identify sources of information to uncover subsequent events of audit significance (level 2). **AT1 Lesson 9:** Explain why standards that allow some reporting flexibility can increase standards efficiency (level 2).
iii. Apply critical thinking when identifying and evaluating alternatives to determine an appropriate course of action.	**MA2 Lesson 8:** Outline the key concepts in emerging issues of agency theory and management compensation, environmentally sustainable development, and ethics and corporate responsibility and explain how they affect corporate decision models (level 1). **AT1 Lesson 1:** Explain why relevance and reliability of accounting information have to be traded off and evaluate historical cost–based accounting in terms of relevance and reliability, revenue recognition, recognition lag, and matching (level 1).
b. **Ethical principles (intermediate)** **i.** Explain the nature of ethics.	**AU1 Lesson 2:** Define ethics, describe the accounting profession's ethical concerns, and explain the fundamental principles in accounting codes of conduct in relation to the International Ethics Standards Board for Accountants (IESBA) International Code of Ethics for Professional Accountants (level 1).
iii. Identify threats to compliance with the fundamental principles of ethics.	**FA4 Lesson 10:** Identify and discuss ethical issues in accounting for not-for-profit organizations (level 2). **AU1 Lesson 2:** Explain the importance of independence for a professional accountant and evaluate situations that may threaten independence (level 1).

Learning outcomes from IESs 3 and 4	Learning objectives from sample materials
iv. Evaluate the significance of threats to compliance with the fundamental principles of ethics and respond appropriately.	**AU1 Lesson 2:** Apply the nine-step approach to resolve ethical dilemmas (level 1).
v. Apply fundamental principles of ethics when collecting, generating, storing, accessing, using, or sharing data and information. **vi.** Apply the relevant ethical requirements to professional behavior in compliance with standards.	**AU1 Lesson 2:** Describe and apply the IESBA International Code of Ethics for Professional Accountants (level 1).
c. Commitment to the public interest (intermediate) **i.** Explain the importance of ethics within the profession and in relation to the concept of social responsibility.	**MA2 Lesson 10:** Outline the key concepts in emerging issues of agency theory and management compensation, environmentally sustainable development, and ethics and corporate responsibility, and explain how they affect corporate decision models (level 1). **AT1 Lesson 9:** Discuss the difficulty of determining the socially correct amount of information to produce (level 1).
ii. Explain the importance of ethics in relation to business and good governance.	**MA2 Lesson 1:** Outline the role of professional ethics in management accounting (level 1). **AT1 Lesson 2:** Outline the ethical issues related to the usefulness criterion in financial statement preparation (levels 1, 2, and 3).
iii. Analyze the interrelationship of ethics and law, including the relationship between laws, regulations, and the public interest.	**AU1 Lesson 2:** Describe the relationship between legal liability and ethical responsibility (level 2). **AT1 Lesson 10:** Describe some ethical issues related to standard setting (levels 1 and 2).
iv. Analyze the consequences of unethical behavior to the individual, the profession, and the public.	**AT1 Lesson 4:** Describe why an accounting policy that produces the greatest share price reaction may not be the best for society (level 2).

Legend

MA Management accounting

FA Financial accounting

AT Accounting theory

AU Auditing

3.3

Develop educational materials based on learning objectives

Once you have developed a course outline and the full set of learning objectives for a course, you can start preparing educational materials to be used by instructors and students.

Within a course, and between courses in a program, the structure and layout of educational materials (such as course syllabi and lesson materials within courses) should be similar so that students can more quickly grasp the expectations of each course and understand how to use the materials effectively. Many organizations use templates to accomplish this, based on their specific requirements and course elements used. Review by a competent colleague is an important quality safeguard for technical and content-related issues (for example, to check if learning objectives have been adequately covered and to make additional suggestions.)

Good practice dictates that you would draft the full set of learning objectives for the course, broken out by course element (lesson, module, or other element such as teaching session), before starting to develop the supporting materials. The process of developing learning materials, however, is an iterative one and it is common for developers to start with a preliminary draft of learning objectives, but to refine the learning objectives as the course materials are drafted and refined.

For the purposes of this Guide, we distinguish between Educational materials (covered in this Part) and Assessment materials (covered in Part 3.4). Educational materials include:

- Textbooks
- Lesson Notes
- Readings and supplemental resources
- Presentation materials
- Learning activities

Depending on the format of the course offering, not all of these materials may be needed, or they may take on different levels of importance. In a traditional classroom-based offering, for example, the instructor may rely heavily on a textbook, and may prepare in-class presentation materials to enhance their lectures, along with learning activities to engage students with the materials. A key part of the learning activities is the use of formative assessments that allow students to track their progress and to provide a vehicle for learning by highlighting when progress is not being made and supporting the creation of responses to such situations. It would therefore be appropriate to use formative assessments - which can take many forms - in as many places as possible in the learning materials. In an online environment, the presentation materials and lecture may be replaced by Lesson Notes along with a textbook and/or supplemental readings, and the learning activities may be a set of on-screen text-based and interactive activities to enhance the learning experience.

This Guide is based on a format where classroom instruction is the norm, using presentations and in-class learning activities. The use of textbooks does vary across the world and depends on the approach taken by the PAO in terms of syllabus design but also on the availability of alternative learning materials. Textbooks are unlikely to be specifically tailored to a PAO syllabus and hence they have to be used in a selective manner. In terms of teaching, an instructor would decide when a reference to a textbook would be appropriate. Textbooks may be used as supplemental readings where available, but the primary learning materials are provided through a set of Lesson Notes. Students are assessed by way of assignments and examinations.

Considerations for distance education through online instruction

When a program is offered through distance education, there are a number of factors that instructors need to take into consideration:

- Program materials need to demonstrate a clear and consistent alignment between the underlying competency statements/learning outcomes, the learning objectives, the course materials and the assessments.
- Students are isolated during their studies. Where possible, online forums and email support from tutors or the instructor should be offered. Assignments requiring online collaboration can

also reduce isolation and help build enabling skills such as communication, teamwork, and leadership.

- Students choosing online learning offerings are often working full-time and may also have significant family commitments. Ensuring that course materials and learning resources are easily accessible and well-organized can help them get the most out of the course in an efficient way.
- Instructors should anticipate the topics and concepts that are likely to be the most challenging for students, and provide additional instruction, examples, and practice materials to compensate for the lack of classroom instruction. Interactive online exercises, videos, and/or synchronous or asynchronous online lectures are beneficial in this regard, as they address different learning styles.

Online instruction typically is a technology-enabled learning process using digital content that allows for physically distant interaction. It has the following features:

- Use of electronic media: networks, computers, smartphones.
- Enables continuous learning as opposed to scheduled learning only (asynchronous versus synchronous learning).
- Facilitates knowledge management through close monitoring of student progress and the personalization of learning through self-pacing and choice of content, subject to a structured program of learning.

One key attribute of online learning is that it can effectively engage learners by allowing different and more creative approaches to teaching such as quizzes, more formative assessments, video content, discussion forums, and so on.

As noted in Part 4.1 the program from which sample materials are drawn was available as either an online or a classroom-based program, depending on jurisdiction. This is why the course materials include extensive Lesson Notes.

3.3.1

Choosing readings and supplemental resources

When you sit down with your course outline and set of learning objectives, the first thing to do is gather the authoritative sources and learning materials available for use in the subject area. Depending on the course, these could include:

- Accounting and auditing standards (IFRSs, International Standards on Auditing (ISA), local accounting and audit standards, etc.)
- Tax laws and regulations
- Textbooks or resources books to be made available to students
- Relevant academic articles from experts in the field
- Case studies of interest
- Current news stories relevant to the subject
- Video content available to students
- Other reference sources to guide your writing

Classify the material as either:

i. to be made available to students; or

ii. for instructor reference only.

The idea is to choose the materials that students will be expected to read and study, based on the coverage of the learning objectives and the fit of the materials. Look for materials that are not only technically correct, but also easy to understand and relatable for students based on their previous studies and experience level. Once materials have been chosen, determine what additional materials you need to find or create to form a complete and logical set of study materials for students. If a textbook is being used for the course, the textbook will provide a large portion of the learning materials, especially if the textbook offers supplemental online tools such as self-test questions, videos, or interactive review and practice activities. If a textbook is not being used, you will need to rely more on other resources and you will need to provide more guidance to students on how to use the resources and the key learning they should take away. This structure and connective matter are typically found in the Lesson Notes (the subject of Part 3.3.2).

Students learn best when they are presented material in a variety of ways, so it is beneficial to use resources that appeal to different learning styles. At the same time however, educators are constrained by limits on

time and funding, so materials must be prioritized. Use your course outline and learning objectives (including levels of depth) to determine how much material is needed, and at what depth of study. Of course, when drawing on external resources, you'll need to be sure to respect copyright in accordance with your jurisdiction's laws.

When choosing readings and other resources for students, pay attention to how you plan to help students develop non-technical (enabling) competencies. Be sure to include resources that support developing skills in critical thinking, communication, ethical decision-making, and so on.

Look again at the table of contents for FA2, provided in Part 4.3.1.

This course offers a simple, self-contained structure. It does not use a textbook, but instead relies on the use of more comprehensive Lesson Notes. Students are required to read sections of the IFRSs, and the Lesson Notes explain the more challenging concepts through examples, including "computer illustrations" performed using Microsoft Excel. Supplemental articles are included as Appendices. In terms of enabling competencies, ethical considerations are included in a number of topics in the course, and case analysis is introduced and practised, to build communication, critical thinking, and other relevant professional skills.

Look next at Part 4.4.1, which includes an excerpt from the sample program's *FN1 Corporate Finance Fundamentals* course. Notice the "Required reading" for this topic, which states "Please read the pages in your text that describe net present value (NPV) and other investment rules, as well as the equivalent annual cost method." Because the sample program is international and meant to be implemented in a variety of jurisdictions, it is designed for local textbooks to be used where possible. As a result, readings are described based on the content and topic rather than explicit page numbers of a particular textbook. Instructors in each jurisdiction are able to assign specific readings based on the descriptions.

Do some research to see what free resources are available in your region to help students learn the key concepts of accounting, auditing, finance, and so on. The University of Cape Town (College of Accounting) in South Africa and its partners, for example, offer a wide range of videos for free on the **learnaccounting.uct.ac.za** website. These videos cover basic to advanced financial accounting and reporting, management accounting, financial management, auditing/corporate governance, and taxation. Ask your colleagues if they know of similar resources in your region.

3.3.2

Writing Lesson Notes

In this Guide, "Lesson Notes" is the term used for the document that guides the student through a course and ties together all other resources. In a traditional classroom setting, Lesson Notes may not be used at all. If a textbook is available to form the "backbone" of course materials, the instructor may simply assign textbook readings, prepare presentation materials and learning activities, and lead the class through the materials.

In many situations, however, textbooks are not available in the desired language or are too expensive to be practical. In these situations, instructors may be called on to prepare Lesson Notes to take the place of a textbook. In the Sample Program of Professional Studies, textbooks were used occasionally, but were often not available in the language and context needed, so the program was heavily reliant on Lesson Notes.

Lesson Notes are often preferable since they can specifically target learning to learning objectives. Lesson Notes are typically more focussed to the environment in which a PAO operates, particularly with respect to jurisdictional issues where law or tax references can be made that are up to date.

For context, review the FA2 course introduction and table of contents in Part 4.3.1. As you work through this section of the E&A Pedagogical Guide, refer to Lesson 5 of FA2, provided in Part 4.3.2. We'll use this lesson (along with the excerpts from other lessons provided in Part 4.4) to illustrate good practices in authoring Lesson Notes. The guidance given applies to all lessons that make up the full set of Lesson Notes for a course you are developing.

Structure and layout

A common saying regarding presentations or education is that, when advising or instructing a group:

1. **Tell them what you're going to tell them**
   Start by summarizing what the material will cover
2. **Tell them**
   Provide the content in a logical fashion
3. **Tell them what you told them**
   Summarize the key points

Depth of content

The depth of content included in the Lesson Notes will depend to a large degree on the extent of other resources available to students. If you are using a textbook as the primary resource for the course, Lesson Notes may not be prepared at all and classroom presentations and activities may be enough to provide the guidance needed. If no textbook is being used, however, you'll need to provide Lesson Notes that guide students through the material and make it more understandable, relevant, and approachable.

The general approach to developing Lesson Notes at the appropriate depth is illustrated in Figure 8.

As you author Lesson Notes, revisit the underlying competency statements/learning outcomes for the program to ensure the learning objectives and course content are adequately covering the competency statements/learning outcomes as intended.

Tell them what you're going to tell them

Lessons should begin with an overview of what the student should expect in the lesson. To achieve this:

- Use a topic outline listing the sections of material.
- Provide an Introduction to the material, describing:
  - the key areas and the order of study
  - how the material relates to previous studies
  - why the material is important to study (how it will be useful to their future role).
- List the learning objectives for the lesson, including the level of depth, either at the beginning of the lesson (as seen in Lesson 5 of FA2 in Part 4.3.2) or at the beginning of each topic.

Tell them

Your Lesson Notes should be ordered logically and structured appropriately. Consider the order in which students are best able to learn and apply concepts.

As an example, verify the logic of the ordering of the sample materials by comparing the "topic outline" for Lesson 5 of FA2 (see Part 4.3.2), to the overall course outline as represented by the table of contents for the course shown in Part 4.3.1. You should see that the topic outline reflects the table of contents. Note that the ordering is also aligned with the outline that was included in the curriculum Part 4.2.3.

Scan through the structure of the materials in the lesson (in Part 4.3.2) and note the logical structure.

As you develop materials, you'll want to take an iterative approach – as you rearrange materials, rearrange the outline in the syllabus/curriculum and wherever else the outline is used.

Tell them what you told them

Every lesson should end with a summary of the key points. A particularly good way to do this is based on the learning objectives. Look at the Summary for Lesson 5 of FA2, at the end of Part 4.3.2. Note that it lists each of the learning objectives systematically along with key points to support each learning objective.

Figure 8. General approach to developing Lesson Notes

Actions to take	Illustrations from FA2 Lesson 5
Consider your audience How well have previous studies prepared students to understand the topic you are presenting? How easy and intuitive will it be for them? Should pre-requisite review material be made available?	FA2 includes a "Foundation Review" (as noted in the FA2 table of contents – see Part 4.3.1) – that walks through a review of the accounting cycle for students. With respect to Lesson 5, students were introduced to inventories in FA1 (as noted in Table 7 in Part 3.1.2), so many of the basics will be familiar.
Consider the learning objectives For each learning objective, what do you want to teach students and what should they be able to do with the material? Use the level of depth to guide your answers.	In Lesson 5, compare the depth of coverage for level 1 and level 2 topics. Level 1 material is in-depth and comprehensive. Level 2 material is less comprehensive, with simpler examples.
Evaluate the assigned readings/ resources Write material that emphasizes concepts essential for students to master. Explain concepts that will be challenging for students in a way they will understand.	Students are required to read IAS 2 and IAS 23. These standards are technical, so explanation and illustrative examples are used to make the material practical. Review the topic headings and subheadings – these indicate the essential topics. Challenging topics are explained through practical, illustrative examples including computer illustrations.
Fill the gaps Write material to cover concepts not in the assigned readings/ resources.	Topics like inventory errors and estimation methods are not covered in the standards, so the Lesson Notes need to provide sufficient instruction in these areas.
Provide practical examples Include examples that illustrate the calculations, journal entries, steps taken, judgments made, etc.	Review the numerous examples, tables, calculations, sample journal entries, etc. throughout Lesson 5.
Connect the dots Provide a logical path between the materials and relate the concepts.	Notice how the reading of the IASs are broken up by topic to make the order of reading logical. Throughout the materials, connections are drawn through the frequent use of phrases such as *because, therefore, note that,* the comparisons between methods used, and the discussions on impacts on the financial statements.

Ensure adequate practice, review, self-test materials

Practice questions

Students learn best through hands-on practice. Practice activities are particularly beneficial if they allow students to apply the tools they will use on-the-job. For this reason, examples and practice questions that incorporate software tools are valuable learning activities to help students become more job-ready. You should research what software can be accessed easily and economically by students either on their own computer, online, or in the institution's computer lab. These software tools should be incorporated to the extent possible.

In the Sample Program, computer illustrations are used to provide students with hands-on practice. Because the program is not specific to a region (and does therefore not access software used in a limited market), Microsoft Excel templates guide students through the process of setting up spreadsheets to frame problems, run calculations, analyze and evaluate the results. Students are guided through the practice exercise based on instructions in the Lesson Notes, and the answer is provided for them in a separate tab for self-review once they are finished.

As an example, review Topic 5.4 in FA2 (Part 4.3.2). The computer illustration demonstrates how to set up a simple database tool to track serialized inventory. The associated data file has been included in your reference materials for this Guide.

Refer also to Part 4.4.1 – the excerpt from the sample program's *FN1 Corporate Finance Fundamentals* course. This includes another, more complex, computer illustration that requires students to set up a spreadsheet to calculate the NPV of a potential project and perform a what-if analysis. As with all of the computer illustrations in the Program, students are guided through the exercise based on instructions in the Lesson Notes, and the answer is provided for them in a separate tab for self-review once they are finished.

Review/self-test questions

Each topic area should have one or more review questions available for students to test and correct their own understanding and competence. The more review questions you can provide, the better the learning experience will be for students, but if resources are limited, aim for quality questions over quantity. Review questions need to be at the appropriate level of depth – use the same Bloom's level of action words in the review questions as used in the learning objectives (refer back to Table 8 in Part 3.2.3 for guidance on action words to support level of depth).

A sample of review questions for FA2 Lesson 5 are provided in Part 4.3.3. Note that:

- solutions are provided for each question
- the questions cover each topic in the lesson (other than Topic 5.4, which contains only the computer illustration)
- the solutions are cross-referenced back to the Lesson Note topics so students can more quickly find the material they should review if they have difficulty with the question.

Writing style and consistency

Maintaining consistent style in the education materials within a course (and between courses in a program) helps students read and understand the materials more easily. This includes not only the structure and layout of the course, but also the writing style and conventions used. Maintaining consistency is difficult to do when preparing the first draft of materials, but as each draft is prepared and reviewed, ensure the conventions are being followed. If you have editorial support, ask them to focus on this as they edit. Ideally, you should have an editorial review performed on all materials for language clarity and consistency, including consistency in the use of formatting and other conventions.

Readability

To make content easier for students to read and comprehend:

- Use shorter sentences instead of longer, more complex ones.
- Break up paragraphs to separate distinct thoughts.
- Use concrete, practical terms where possible to explain abstract theoretical concepts.
- Keep titles and headings concise.
- Use subheadings to separate and emphasize the main points of a topic.
- Use levels of subheadings to indicate how information is related hierarchically.
- Use point-form lists to increase readability of parallel items or steps.

Passive and active voice

In educational materials, some organizations prefer that writers use an active voice instead of a passive voice, as the active voice is seen as more natural and direct. For example:

- Passive: Adherence to a Code of Professional Conduct is required of professional accountants.
- Active: Professional accountants are required to adhere to a Code of Professional Conduct.

Tone, direction, and verb tense

- Keep your tone direct and friendly to engage students in the learning process. (For example: "In this topic, you will learn how to determine whether an asset's value has been impaired" rather than "We will now learn asset impairment concepts").
- Write in the present tense as a default. Of course, past and future tenses are sometimes applicable, but the overall tone of the material should be based on the present.
- Make your content as unambiguous as possible. For example, use "are required to" rather than "should" when describing definitive rules. Avoid phrases such as "it seems" or "it appears to be" unless the ambiguity is intentional.
- If the order of their study is important, direct students as to when they should read or view the supplemental readings and resources. For example: "Now that you understand the purpose of auditing, read the article in Appendix 1."
- Within your content, ask students questions that engage and guide their thinking. For example, "After reading the article in Appendix 1, how would you deal with the challenges faced? You may want to ask yourself questions such as..."

Formatting conventions

A few common formatting conventions are listed below, but be sure to check with your institution or organization for its style guide that lists conventions for capitalization, spelling, use of boldface, italics, parentheses, formatting of mathematical equations, notation of foreign currencies, etc.

Boldface, italics, and underlining

- Use boldface to highlight new terminology or key concepts being taught. Ensure that new terms are defined and sufficiently explained.
- If material is included that is not examinable, be sure to highlight this fact by boldfacing the "non-examinable" label on the material.
- Use italics for titles of reference materials and other documents. Italics can also be used to highlight key words, but this should be done sparingly, to avoid overuse.
- Underlining can also be used to highlight key words, particularly when you want to emphasize a negative word.

Acronyms and abbreviations

- Spell out acronyms before using them. For example:
  - First occurrence: International Financial Reporting Standard (IFRS) 3 Business Combinations
  - Subsequent occurrences: IFRS 3
- Consider the level of student understanding and the immediate context in deciding whether to use common accounting acronyms. If abbreviations are to be used, define them before using them. For example "IAS 2 requires that inventories be valued at the lower of cost or net realizable value (LCNRV)…".
- In educational materials, you may want to use the acronym in places where space is limited (such as in tables or on presentation slides) but in written Lesson Notes it may be best to spell out the term in the first topic where it's covered, and move into the acronym only once you know that students have internalized what it means.
- In other courses or topics that are not directly related, it is usually best to spell out the term to avoid confusion.

Dates

- Keep material current by using dates that are reasonably recent to the time of course offering.
- To avoid having material become dated, consider using Year 1, Year 2, etc.
- Some programs adopt the convention of using generic dates such as 20X1, 20X2 to represent 2001, 2002, or 2011, 2012 or 2021, 2022. See, for example, Exhibit 5-1 in FA2 Topic 5.3 (Part 4.3.2).

Avoiding bias in education materials

It is important that educational materials be inclusive of all students, and reflect diverse backgrounds. This helps ensure that students feel equally supported in their studies, and that performance is based on individual abilities and efforts rather than background or personal characteristics.

To write inclusively:

- Alternate examples with male and female actors.
- Avoid gender role stereotypes – ensure that both males and females are cast in higher-level roles (e.g., Chief Executive Officer (CEO), Vice President of Finance) and lower-level roles (e.g., clerk, junior), and across functions (i.e., your examples should reflect the fact that not all factory workers are male and not all nurses are female).
- Use company and individual names that reflect the variety of linguistic and cultural groups in your region and avoid cultural stereotypes.
- Avoid jargon/slang, euphemisms, or idioms that might not be universally understood.
- Avoid insensitive references that may distract the student from focusing on the objective intentions of the item.
- Avoid (or explain) references to items or facts that may not be as well understood by some groups. For example, don't assume that all students are equally familiar with certain sports, historical events, companies, or other items unrelated to the field being taught. Using these types of references can be very valid to help students understand and relate to the material being taught, but be sure to explain the references enough for the meaning to be clear, and/or allow students to look up references as needed.
- Avoid controversial opinions or issues unless these are the specific focus of the activity or question (such as political positions or religious ideologies, contested geopolitical boundaries, etc.).

Wherever possible, have your materials reviewed for bias. A bias review is particularly useful because some biases are, by nature, unconscious, and we may not realize an issue or reference is insensitive.

3.3.3

Developing presentation materials and learning activities to engage learners

The need for active learning

In a traditional classroom environment, students are assigned readings, the instructor delivers the lecture, and students listen and are expected to absorb the material. Students can ask questions, but are generally not actively working with the material until they do their assignment work outside of the classroom. This approach may support knowledge, but does not help build competence. In order to develop competence, students need to be engaged in active learning. When students simply sit and listen to an instructor, they absorb relatively little and retain even less.

By contrast, in an active learning approach, students are still typically assigned pre-reading before class. During class time, instructors provide background information and introduce the concepts and theories to ensure students have adequate foundation. Once this overview has been provided, instructors switch their attention to facilitating learning by getting students to engage directly with the material. Student participation can range from individual work on problems, online research, collaborative work with their classmates, case discussions, and so on. Students can be required to collaborate to analyze problems and create solutions together. This approach builds technical competence and enabling skills by helping students analyze and apply concepts and discover solutions.

Structuring a class entirely around active learning has been termed the "flipped classroom." Rather than students hearing a lecture in class, then doing individual homework and engaging with peers in groupwork after class, these tasks are reversed or "flipped". Students are provided with resources to watch and/or read before class (including pre-recorded lecture segments), and the entire class time is spent on collaborative and/or individual activities to engage with the content.

There is a significant amount of empirical support for active learning:[23]

- Improved exam scores and lower failure rates
- Increased knowledge of the content

[23] For a sample of relevant research results, see Queen's University: https://www.queensu.ca/activelearningspaces/active-learning/benefits-active-learning

- Improved critical thinking, problem solving, and analysis skills
- Increased enthusiasm for learning
- Improved communications skills
- Greater adaptability

Designing lecture presentations to support varied learning styles

All students need to engage with the material to actually build competence, but the way they absorb material and information best will vary from person to person, with individual preferences for:

- Reading the content,
- Listening to explanations, or
- Seeing visual representations (graphics, pictures, etc.).

Lecture portions of the class should incorporate variety in these formats where possible. Incorporating a range of these formats not only supports different learning styles, but also helps students develop their skills in learning through methods that are not their primary means (i.e., they may get better at absorbing information by listening over time, even if they are naturally visual learners).

Setting up the lecture portion of the class

This section of the Guide will be particularly useful for new instructors, but will offer some tips for experienced instructors as well. For reference, please see the FA2 Lesson 5 lecture slide deck (filename FA2 Lesson 5 Lecture.pptx)

Most of the course materials and resources are static – they will change only a little from year to year based on changes in standards, general observations about what resources are needed to better support students as a whole, and as a result of course feedback. In-class presentations, however, allow the instructor to modify the delivery based on:

- current issues, such as addressing relevant current news stories or discussing companies the students will be familiar with,
- the needs of the specific group, such as by increasing the amount of time spent on a topic area that is causing particular challenges.

One way to determine the needs of a particular group is to begin the session by pre-testing the group on their level of understanding based on the pre-assigned readings, and/or on their ability to apply knowledge that is prerequisite to the topic at hand. For example, if you are about to instruct a class on financial statement ratio analysis, you may find it useful to start by giving a quick in-class quiz to ensure they remember the basic math behind ratios.

In-class presentations should provide students with an opportunity to ask questions and to apply the concepts in the required readings, Lesson Notes, etc.

For most instructors, the main presentation format is a slide deck that provides structure for the lesson. In presentations where the goal is to entertain or inspire the audience, the presentation is more likely to be visual and have minimal words. But in an educational setting, the slides serve as a lasting study tool. One of your goals is to reduce the time students spend taking notes in class, and maximize the time they are actually listening to you and thinking. This means your slides need to contain enough information to be useful as a stand-alone reference after the fact. This is especially helpful for students whose native language differs from the language of instruction.

Having said this, however, you should avoid trying to include too much information on a slide. The text needs to be readable and the slide should not be crowded.

A few other tips to think about when preparing presentations for class lectures:

- Begin with an outline of what will be covered and make it clear within the slide deck when you are changing topics.
- Use stories where appropriate to introduce and illustrate ideas.
- To help students remember material, use mnemonics (acronyms, phrases, or images). For example, if there are four types of something for students to remember, and the first letters spell "TOES", you can add a picture of wiggling toes to jog their memory.
- Add pictures or other visual clues to appeal to visual learners; draw diagrams/flowcharts to explain concepts.
- Where practical, include video or audio clips to draw on different learning styles.
- Avoid repeating everything on the slides verbatim to the class. Read critical passages to reinforce them, and otherwise give students time to read and absorb the content on slides as you go through.
- To keep attention and allow time for material to be absorbed, intersperse the lecture with varied learning activities (see the next section).

- Consider inviting guest lecturers to speak on specific topics. Professionals in practice can offer a different and more practical perspective to augment the classroom theory and also provide an interesting change in activities.

You should see evidence of several of these practices in the sample FA2 Lesson 5 lecture slide deck.

Developing learning activities that engage

Activities that support active learning are those that make students think, get them talking, collaborating, or competing with their colleagues. Engaged students are much more committed to participating and learning.

Students should feel comfortable speaking up in class, and should expect to be treated with consideration and respect by the instructor and their peers. At the same time, however, you need to create accountability for active participation in the classroom, or else students will become distracted and will shirk.

Setting up the classroom to promote active learning

The physical environment that students learn in is an important part of the active learning experience. To make it conducive to collaboration, consider the following:

- Ensure flexible workspaces (tables for group discussions etc.)
- Let students move around to collaborate
- Provide tools for creativity and collaboration (flip-charts, sticky-notes, collaborative tools through a Learning Management System, etc.)
- Provide internet access (but ensure it is used to accomplish the task)

Whether or not to allow internet access in the classroom is a frequent debate topic among instructors. On the one hand, providing access allows for the inclusion of richer learning activities including research. This also reflects the "real world" role and tasks of the professional accountant. The challenge arises, however, because allowing online access introduces new distractions into the classroom and it can be challenging to keep students on task.

To manage internet access in the classroom, use it as an opportunity to teach accountability for actions. Challenge students to stick to the activity at hand, and to hold each other accountable for doing so. Require a tangible outcome that keeps them focused. For example, if you require students to research a topic online, make them present their research results to the class, and give limited time to prepare, so that the stakes are higher and there is no time for distraction. Similarly, consider introducing consequences for mis-use, for example by temporarily removing a team's access if any team member is caught surfing irrelevant websites or communicating with friends not on their classroom team. Where possible and practical, you could also limit access to the times when online activities are being worked on, rather than throughout the entire class. Finally, consider having more frequent, but shorter than typical, breaks to permit students to use their devices for personal reasons as a tradeoff for staying focused during class time.

Questions from the front of the room

The simplest form of engaging students is to pose a question from the front of the room. Too often however, instructors fail to hold students accountable for responding. One of two things commonly happens:

1. No student responds to the question immediately, and the instructor answers their own question, or
2. The same student (or small group of students) answers every question posed.

Instructors should set expectations appropriately, and not look to the same student for answers every time. Just as importantly, instructors should be comfortable waiting an appropriate amount of time for students to respond. If the question is a simple one, randomly calling on a student can draw out answers. If, however, the question posed is challenging (as should often be the case), give students time to think it through. If you don't get a response in a reasonable time frame, reframe the question and suggest that they talk to the classmate beside them about the question for a minute, then ask again for answers.

See, for example, the series of questions in the speakers notes for Slide 9 in the FA2 Lesson 5 lecture. Depending on the class and how well they grasp the basic concepts, the students may be expected to answer all of the questions posed without needing to talk them through with a classmate, or they may benefit from collaborative discussion. The instructor should be flexible enough to draw out a number of students in the discussion without answering the questions for the class.

Table 11 presents a selection of ideas for engaging learning activities that can be done with students working independently or in pairs or small groups.

When assigning activities to the class, it's important to manage the time they spend. You want to give enough time for them to work through the exercise, but not so much time as to have them sitting idle.

One way to manage this is through a red card/green card system . Give each student (or team group) a red card and a green card and instruct them to display the red card if they need assistance and the green card once they have completed the exercise. This can add an element of competition in the room as well, as students can see each others' progress.

Table 11. Engaging learning activities examples

Activity	Description
In-class polling of opinions or multiple-choice questions	Use polling tools or show of hands
Practice questions	Have students complete practice questions individually or collaboratively – these can be particularly beneficial if they mimic the style of questions on assignments and exams. See the activity regarding lower of cost and net realizable value in the FA2 Lesson 5 lecture.
Demonstrating work to classmates	Have students write their solutions on a whiteboard etc., for review by classmates. See the activity regarding inventory cost formulas in the FA2 Lesson 5 lecture.
"Notes on the wall" activity	On a wall, tape up categories as headings (e.g., types of risk), then have students brainstorm ideas that relate to the headings (e.g., characteristics that increase the risks) and post them under the headings. This can be an effective means of showing many examples of categorized items in one place. See the activity regarding internal controls for inventory in the FA2 Lesson 5 lecture.
"Rotating flip charts" activity	Flipcharts are used as "stations" with a question or topic on each chart. Teams of students rotate among the flipcharts and add their unique answers/ideas to those already on the chart.
Case or scenario discussion questions	Provide a real or fictitious case or scenario, along with discussion questions for participants to work through systematically. Debrief as a full class as appropriate.
Group presentations	Have groups of 3 to 5 students prepare and present to the class on a topic.
Role play	Assign roles to participants and have them act out the assigned part using a scenario or situation. Debrief with class as to other/better ways the situation could have been handled.
Debates	Assign teams to support opposing positions (preferably opinions that have strong arguments for each side, with no clear answer); allow each team a fixed time to make their arguments and challenge the other team's arguments; debrief as a class.
Artistic activities	Have students create ways to explain concepts to the class using illustrations, skits, craft materials etc.

Table 12. Common challenges and strategies for overcoming them

Challenges	Possible strategies
Lack of time to develop activities	Collaborate with colleagues and share resources; start slowly and build activity bank
Uncertainty of technology (such as playing a video in class or using polling tools)	Test before class; have a backup plan
Lack of confidence in trying something new	Be prepared and plan well in advance; start slowly and build confidence; consider sitting in on a more experienced colleague using a particular tool in their classroom
Risk of activity "falling flat" (failing to engage students)	Have a back-up activity planned (and have a sense of humour)
Greater requirement to think quickly to answer questions	Think through where discussions might lead; be prepared to say "I don't know – let me look into that"

Overcoming challenges

Using active learning activities can be challenging, particularly for newer instructors. Table 12 provides an overview of some common challenges and strategies for overcoming them.

Activities to develop enabling competencies

A key objective in your in-class activities is to develop enabling competencies (i.e., professional skills, values, ethics, and attitudes). Review the learning outcomes in IESs 3 and 4 now (see Part 2.2).

Classroom learning activities provide a valuable opportunity to develop these non-technical competencies by integrating them with technical competencies. As you plan your learning activities, be sure to plan activities that integrate these types of competencies by, for example:

- Examining ethical issues relevant to the topic to develop ethical thinking (see for example, the Activity on Management decisions and ethics on Slide 46 of the FA2 Lesson 5 lecture).
- Exploring the reasons behind standards and rules by asking students why regulators would have put a particular standard in place.
- Focusing on conceptual frameworks of standards and having students demonstrate how they are applied to make decisions.
- Challenging students to discover the answers through logic and reasoning, rather than being told directly (see for example, the Activity on Effect of inventory errors on financial statements on Slide 62 of the FA2 Lesson 5 lecture).
- Requiring collaborative activities to encourage team work (see for example, most Activities in the FA2 Lesson 5 lecture).
- Requiring students to present their ideas to the class, to build communication skills.
- Using role-playing and debates to build critical thinking, analysis, and persuasion skills (for example, the Activity on Purchase discounts on Slide 27 of the FA2 Lesson 5 lecture could be done as a role play or debate).
- Using rotating flip charts (see table above) to encourage creativity, as only unique answers can be added.
- Asking students to reflect on how they would handle a situation, and sharing ideas with the class. Recall that IES 6 requires that professional skills, values, ethics, and attitudes be assessed in part through self-reflection. Classroom activities can help prepare them for self-reflection requirements on assignments and exams.

We'll look at methods of developing enabling skills in more depth in Part 3.5 that discusses building ethics and critical thinking into accounting education.

3.3.4

Ensuring adequate supporting information

Depending on the format of the course and program you are preparing materials for, you may also need to prepare additional supporting information for students so that they are clear on the course schedule and requirements. In a traditional university class approach, much of this information would be included in a course syllabus prepared by the instructor and distributed to students. In a distance learning approach, this information may be communicated by way of additional linked pages in an online environment.

Supporting information might include:

- Overall course description and purpose
- Course structure and delivery method
- Prerequisites and post-requisites
- Textbook and reference materials
- Class schedule
- Assignment due dates and methods of submission
- Exam dates and locations
- Recommended study approach
- Other optional reference readings, tools, and resources

3.4

Enabling competencies and information & communications technologies

This part of the Guide focuses in on a few key topics that warrant special attention for accounting educators. The IESs (and this Guide) emphasize the importance of including professional skills, values, ethics, and attitudes in the program of studies for aspiring professional accountants. In addition, the inclusion of ICT has become increasingly important due to the rapidly advancing technological environment in which businesses and organizations operate.

3.4.1

Developing professional skills

Recall from Part 2.2 that the professional skills requirements for aspiring professional accountants are provided in IES 3. Review that IES, or the summary in Part 2.2 of this Guide, now.

Within the IES, professional skills are broken into four categories, all of which are required at an intermediate level of proficiency:

- **Intellectual skills** - include the ability to critically analyze data and information and come up with conclusions and solutions.
- **Interpersonal and communication skills** - include teamwork and collaboration, active listening, negotiation, and clear communication/ presentation skills.

- **Personal skills** - include setting high personal standards for learning and growth, managing time and resources, dealing with challenges, and reflecting on experiences.
- **Organizational skills** - include acting in alignment with established practices, meeting quality standards, and leadership/people management skills.

Remember that the IESs require the learning outcomes to be:

- Prescribed as part of IPD leading to qualification; and
- Assessed prior to qualification based on verifiable evidence.

The relationships between IESs 2-4 highlight the position and importance of professional skills. IES 2 presents the body of knowledge (subject domains) over which an accountant is required to develop competencies. This will require intellectual skills to achieve but also interpersonal, communication, personal, and organizational skills to express in the workplace. In addition, the competent accountant requires professional values, ethics, and attitudes as personal attributes to ensure that professional standards are maintained at all times. The skills that IES 3 speaks to are specifically to support the development and application of professional competence.

Helping students develop and demonstrate professional skills requires a coordinated effort between the education program and practical experience. Personal and organizational skills are often more easily developed and assessed through work experience, but intellectual and interpersonal/communication skills can be largely developed through the education program, as long as care is taken to focus on a competency-based approach and include activities and assessments that specifically target these areas of enabling competencies.

Helping aspiring professional accountants develop interpersonal/communication skills

Including activities that require teamwork and collaborative discussion from all students (such as through case studies, presentations, and oral exams) can go a long way in helping students hone their teamwork and communication skills. Similarly, teaching them to communicate using appropriate business language and conventions will help prepare them to communicate appropriately on the job.

In order for students to understand the importance of interpersonal and communication skills, success in the course needs to be tied to the demonstration of these skills. This means that in assignments and on exams, a percentage of the available marks should be allocated to communication. Students should be expected to present answers logically, using clear and concise language.

In addition, focusing on competence requires that activities and assessments simulate realistic workplace roles and tasks. Where possible, questions should be framed as scenarios that require students to respond in a manner that is consistent with what would be expected on the job. For example, student assignments could include a requirement for them to draft an email to a client explaining their analysis and recommendations. This type of assignment should be marked based on both content and style. Students should receive feedback regarding the format and tone of their communication and any inappropriate use of informal or overly technical language or jargon.

Helping aspiring professional accountants develop critical thinking and analysis skills

Critical thinking and analysis require that the student be able to suspend initial judgment, collect, and work through evidence in a way that is thoughtful, logical, and systematic before making a decision. This is at the core of problem solving, decision-making, planning, and risk management.

Professional accountants are required to maintain objectivity and demonstrate due care in making decisions. Specifically, the *International Code of Ethics for Professional Accountants*™ maintained by the IESBA requires professional accountants to:

- **Be objective** - "not to compromise professional or business judgment because of bias, conflict of interest, or undue influence of others." (R112.1)
- **Demonstrate due care** - "act diligently and in accordance with applicable technical and professional standards." (R113.1)

Furthermore, IESBA is undertaking a project to study the expected role, mindset, and behavioural characteristics of professional accountants. Comments suggest that professional accountants

should:[24]

- Make informed challenges of views developed by others.
- Be sensitive to the integrity of information.
- Withhold judgment pending thoughtful consideration of all known and relevant available information.
- Be alert to potential bias or other impediments to the proper application of professional judgment.
- Have the ability and willingness to stand their ground when facing pressure to do otherwise.

These expectations require the ability to think critically. Thus, critical thinking is fundamental to professionalism and underpins the concepts of objectivity, professional skepticism, and due care. Appendix 3 contains further material on critical thinking.

3.4.2

Developing professional values, ethics, and attitudes

Sources of professional conduct standards for professional accountants

Ethics requirements for professional accountants are found in:

- The IESBA's *International Code of Ethics for Professional Accountants (Including International Independence Standards)™ - the "IESBA Code"*
- *IESs*
- Local/regional laws and regulations

The IESBA Code[25]

The IESBA is an independent standard-setting body that serves the public interest and is supported by IFAC. The *IESBA Code* is a robust set of ethics standards designed to be internationally appropriate and applicable. It has recently been revised and restructured, effective June 2019.

The IESBA's vision is for the *IESBA Code* to be "a foundation of strong ethical principles, values, and standards to underpin trust in the global accountancy profession in a dynamic and uncertain world, and to enable the profession to act in the public interest."[26]

The IESBA proactively strives to cooperate, support, and collaborate with key stakeholders. The *IESBA Code* has been adopted directly, converged with, or used as the basis for national ethical requirements in over 120 countries. It has also been adopted by the "Forum of Firms" – the largest 27 international networks of firms for transnational audits.

Overview of the IESBA Code

The architecture of the IESBA Code is as follows:

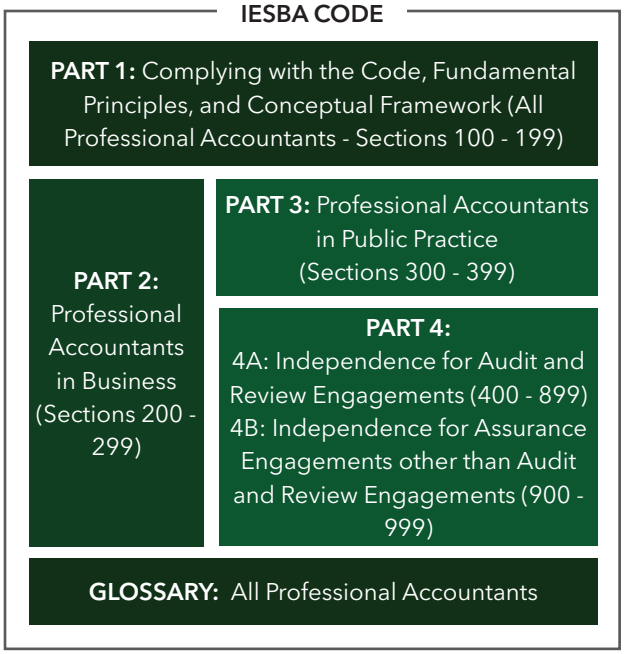


Figure 9. The architecture of the IESBA Code

[24] Professional Skepticism – Meeting Public Expectations: Draft Consultation Paper Agenda Item 2A, IESBA Meeting (March 2018)

[25] The International Ethics Standards Board for Accountants' (IESBA's) *International Code of Ethics for Professional Accountants (Including International Independence Standards)™ ["IESBA Code"].* Online: http://www.ethicsboard.org/system/files/publications/files/IESBA-Handbook-Code-of-Ethics-2018.pdf

[26] IESBA *Strategy and Work Plan*, 2019-2023. Online: https://www.ifac.org/system/files/publications/files/IESBA-SWP-2019-2023-Final.pdf

The parts include:

- **Introductory materials** that provide context in applying the conceptual framework (e.g., 200.1)
- **Requirements** that establish general and specific obligations (denoted "R" - e.g., R120.5)
- **Application** material that provides guidance relevant to an understanding of the Code (denoted "A" - e.g., 120.5 A1)

Parts 2 to 4 start with a discussion on applying the Conceptual Framework in the context of the Part, then provide Requirements.

Within a program of professional studies, students should become familiar with the *IESBA Code* or their national or other local code of ethics, and in particular should practice applying the Conceptual Framework. As an example of how material on the *IESBA Code* can be included in course materials, see Part 4.4.2 Topic 2.2.

Note also the IESBA has developed an eCode – a web-based tool that is designed to deliver the *IEBSA Code* in a digital format. It contains the official text together with links to resources and tools that are prepared by the IESBA Staff (i.e., non-authoritative), as well as features that emphasize the Code's "building blocks" approach. The eCode can be accessed via the IESBA website.[27]

International Education Standards (IESs)

The learning outcomes for professional ethics are found in IES 4. Review that document in conjunction with this Part of the Guide. IES 4 includes requirements for knowing and applying the ethical principles, and for maintaining a commitment to the public interest. All of the competence areas in IES 4 are required at an intermediate level of proficiency.

Recall that the IESs require learning outcomes to be:

- Prescribed as part of IPD leading to qualification; and
- Assessed prior to qualification based on verifiable evidence.

IES 4 also requires that professional accounting education programs need to "include a framework of professional values, ethics, and attitudes for aspiring professional accountants to (a) exercise professional judgment, and (b) act in an ethical manner that is in the public interest." The most efficient and effective way to meet this requirement is to have students study the code of conduct that they are or will be expected to comply with as a student/professional accountant.

IES 4 Para. 9

IFAC member bodies must integrate relevant ethical requirements throughout professional accounting education programs. In addition, remember that IES 4 requires that learning and development activities related to these competency areas must include "reflective activity that is formalized and documented."

IES 4 Para. 10, Para. 13

Local laws and regulations, including PAO Codes of Conduct

In some jurisdictions, the law will mandate ethical conduct for professionals, either by specifying requirements directly, or by giving authority to another body, such as the PAO, to set standards of conduct for members. Oftentimes, these Codes and requirements will be benchmarked against or referenced to the *IESBA Code*. One of the key reasons for harmonization with the *IESBA Code* is that IFAC member bodies are required under the Statements of Member Obligations (SMO) to maintain a code of conduct that is at least as stringent as the *IESBA Code*.

Where local requirements are stipulated, it is obviously important for educators to include these requirements in the education program of aspiring professional accountants. This does not mean, however, that the *IESBA Code* should be ignored from a teaching perspective. The *IESBA Code* and other IESBA resources, such as the eCode, are useful for instructors to call on to help instill professional values, ethics, and attitudes in aspiring professional accountants as required under the IESs.

In particular, Part 1 of the *IESBA Code*, and specifically the fundamental principles and the Conceptual Framework, provide a structured approach to help students develop competence in ethical reasoning. This structured approach can help students develop a deeper understanding of ethical decision-making, regardless of the specific code they follow.

Regardless of which code(s) is/are being used, it is essential that students be given practice in interpreting and applying the requirements. The goal should be to have individuals be as familiar with the ethics standards in their jurisdiction as they are with the accounting, financial reporting, assurance, and tax standards. Ethics standards should be seen to be at least on par with the other standards of the profession.

[27] http://www.ethicsboard.org

Integrating ethics in professional accounting education

A program of studies for aspiring professional accountants should include learning objectives that support the competency statements/learning outcomes related to professional values, ethics, and attitudes. Effective ethics instruction requires that the:

- importance of ethics be instilled early in students
- expectations placed on students be consistent
- learning activities be relevant and practical
- assessments be meaningful and objective

We'll look at each of these objectives more closely next.

Instilling the importance of ethics

Instilling the importance of ethics in students requires that the ethical dimensions of decision-making should be talked about from the beginning of their studies, explicitly and regularly. Some programs choose to include a specific course on business ethics within the program, to ensure adequate depth of coverage. Other programs prefer to incorporate ethics throughout the program, to teach ethical thinking and decision-making in each of the common contexts of the business world. Best practice is given in IES 4, which says, in Para. A15:

> *"Within a professional accounting education program, professional values, ethics, and attitudes may initially be treated as a separate course or subject. However, as aspiring professional accountants progress, the integration of professional values, ethics, and attitudes with other courses or subjects, encourages the recognition and consideration of wider ethical implications."*

In other words, throughout the program, in the same way that course materials present the technical accounting, audit or tax requirements, the materials should also contemplate the ethical aspects. (See, for example, FA2 Lesson 5 in the sample materials. In the materials, the ethical implications of inventory cost formula choice are examined in the Activity on Management decision-making and ethics (slide 46), and ethical considerations of internal controls are discussed in Topic 5.8.

To ensure that students understand the importance of considering the ethical implications, instructors should:

- Encourage students to seek out positive values – many young people place high value on making a positive contribution to society (often ahead of monetary and other measures of success).
- Include the ethics dimension in a wide range of topics (financial reporting, finance, tax, IT, management accounting, etc.).
- Explore how business success is defined, highlighting the trend toward stakeholder expectations for corporate stewardship and sustainability.

- Use examples of companies doing good things and highlight the positive decisions made and the benefits to society and the company.
- Draw on current and recent events and the negative impacts (to the shareholders, the environment, the perpetrator) of ethics failures in business or other organizations.
- Inspire students to be responsible stewards of the future.

Ensuring consistent expectations

Consistent focus on ethics requirements help students recognize that these expectations apply equally to their workplace and their current and future actions as a professional accountant. Ethics should not be seen as an "add-on," but rather as another important facet of being a professional.

To ensure that ethics instruction develops consistent expectations, instructors should:

- Consider ethics standards at the same level of emphasis as other standards (IFRS, ISAs, tax law, etc.) Ethics requirements should be treated as another standard that needs consideration when transactions happen, business decisions are made, and so on.
- Consider the ethics implications of every scenario-based question to ensure consistent messaging. For example, in an accounting class, don't focus exclusively on financial performance in one example, then have students consider ethical implications in another example. Integrate these concepts.

- Teach the Fundamental Principles and the Conceptual Framework from the *IESBA Code*. Use these to anchor discussions across a broad range of topics and examples (focusing on the relevant principles and the threats and safeguards approach).
- At a direct level, students who commit academic ethical violations (such as plagiarism in assignments) should be dealt with promptly and consistently. Students need to see that actions have consequences and that ethical lapses are taken seriously.

Relevant and practical learning activities

Classroom activities that simulate real-world tasks, roles and decisions help students understand ethics within the context of the business world and the role of the professional accountant. Providing tools for them to support ethical decision-making also trains students to use these tools when they face situations in the workplace. Challenging students to analyze and resolve ethical dilemmas further helps them develop other professional skills such as critical thinking and communication.

To ensure that learning activities are relevant and engaging, instructors should:

- Use current events and local stories (including disciplinary cases made public/published by the PAO if applicable – or use examples from another jurisdiction that does publish).
- Use a mix of activities – case studies, small group discussions, role playing, debates, watching news reports, etc.
- Include "reflective activity" as required by IES 4; have students think about what they would do in a situation, or have them critique how they handled a situation in the past.
- Ask students what they think should happen to individuals who violate ethical principals in various scenarios (to get at the nuances of levels of wrongdoing).
- Frame scenarios to cast students in the role of decision-maker ("You are a CFO/Analyst/Auditor…and you need to decide…); often, students will ignore the role and discuss the case in the third person (saying "he should …"), rather than working in the first person ("I would have to…"). To make it realistic, bring them back to the role assigned in the question.
- Explore the "Why" – What are the causes and drivers of these issues; Why did people go along with a scheme?
- Challenge students to think critically – recognize assumptions and biases, evaluate alternatives, draw and defend conclusions.

Assessing ethics competence in aspiring professional accountants

Recall that the IESs 4 and 6 require that:

- Aspiring professional accountants demonstrate learning outcomes at the expected level of proficiency; and
- Evidence of assessment be verifiable.

How can ethics-related learning outcomes and the learning objectives that support them be tested in ways that provide verifiable evidence at an appropriate level of proficiency or depth? Multiple-choice questions are objective, but are often too restrictive to capture the higher-order thinking and judgment required by tough dilemmas. This makes it more difficult to develop strong MCQs related to ethics. Scenario-based short and longer case studies allow more opportunity to demonstrate ethical decision-making and judgment. To get sufficient breadth and help make your assessments reliable, include an ethics component in several questions that integrate with a range of contexts and learning objectives.

When developing scoring grids and sample solutions, cross-review your assessments and solutions with colleagues to ensure that questions and acceptable responses are valid. Cross-review helps ensure questions are clear and unambiguously worded, and that acceptable responses reflect professional judgment. Having different professionals/professors weigh in on response options broadens the scope of acceptable responses.

Obtaining verifiable evidence of an intermediate or advanced proficiency level warrants particular consideration on the part of the instructor. Instructors should:

- Develop learning objectives carefully to support the learning outcomes at the expected level of proficiency, especially in advanced and professional-tier courses.
- Use scenarios that are realistic and sufficiently "grey" and don't have an easy answer.
- Build questions and assessment grids to reflect "stronger" and "weaker" responses, rather than a single "right answer."
- Test and give credit for the reasoning process and not just the final decision (using the 5 Step approach, award marks to each step).
- Formalize and require students to document the results of self-reflection, by having them critique their own actions or ideas, or having them reflect on their own commitment to ethical decision-making.
- Don't forget to include some questions where the ethical scenario presented results in no breach having taken place. In other words, ensure that not every question including an ethics element involves the professional accountant (or someone else) having done something wrong. Sometimes situations should be included that are perhaps grey, but ultimately legal and ethical.

IES 6 Para. 10 IES 4 Para. 11

Tools to help students make appropriate decisions

Analyzing and addressing ethics issues can be particularly challenging for students who lack work experience. They will often come up with a "textbook" or theoretical answer, such as "I would resign" or "I would book the correct entry" without recognizing the pressures and nuances that occur in a real situation. When using scenario or case questions to teach and assess ethics competencies, it is important that students be given tools to help them fully analyze a situation and think in more realistic terms. It is equally important that instructors push students to develop plans of action that are realistic and achievable.

Consider the following example: A student responds to an ethics scenario question by saying "If I were asked to compromise professional standards, I would quit my job." This is a knowledge-based answer, reflecting the fact that a professional accountant may be in a situation where resigning is an option, and in fact, may be the only available option.

The instructor should push students toward more thoughtful, competency-based answers. This can be achieved by challenging the response, asking the student "Would you really? Would that be your first choice in dealing with the situation? What else might you be able to do that would resolve the situation in an ethically appropriate manner, without you losing your job?"

The goal is to get the students talking about how they can educate an employer, supervisor, etc., and convince them as to why following an ethical plan of action would be better.

To equip students to meet these challenges (both in the classroom and in the workplace), it is imperative that they learn and practice tools that support a systematic approach to decision-making, as well as a method of framing their decisions that promotes persuasion. Both of these tools help make individuals more resilient to pressure in the workplace.

Tool #1: 5-Step approach to analyzing ethical dilemmas

This tool guides students through a systematic method of evaluating the situation in terms of alternatives and ethical consequences, and helps determine the best action to take . Each step included a number of questions to guide the student's thought process.

1. **Identify the problem**
   - What are the ethical implications?
   - What Fundamental Principles are being threatened and how?
2. **Consider stakeholder perspectives**
   - Who is impacted by the current situation, and/or by the actions that could be taken?
   - How is each stakeholder impacted?
   - Are there other people who can/should be consulted?
3. **Specify feasible alternatives**
   - What decisions could be made?
   - Are there different short-term and long-term options?
4. **Evaluate ethically significant factors for each alternative**
   - For each alternative, would the actions be compliant with the Fundamental Principles and the Conceptual Framework?
   - What new ethical issues may come up as a result?
5. **Make and defend your choice**
   - Who do you have to communicate your decision to?
   - How do you implement the decision?
   - What documentation will be important?

Teaching students to use a systematic framework for analyzing ethics aspects of a question can add consistency and make learning more relevant and practical. It's important to note that the model may be somewhat iterative as new information emerges, new feasible alternatives are generated, etc.

Tool #2: Framing the discussion

Students can often figure out the right course of action, but carrying through is much more challenging, as they will often need to convince someone else (a supervisor, colleague, or client, for example) that their decision is the appropriate action to choose. To prepare them for ethical dilemmas in their career, we need to teach them how to persuade others to take appropriate action. This requires framing and negotiation skills.

Framing the decision as a business case:

1. Start by determining who you need to convince.
2. Examine their perspectives and motivations – what is important to them?

3. Evaluate how not taking the "right" action will jeopardize what is important to them.
4. Build your arguments based on their perspective.

This allows us to avoid getting into an adversarial debate over "right" and "wrong" and focuses on aligning mutually-beneficial outcomes.

Students should be given plenty of opportunities to practice using these tools to build self-confidence in their decision-making.

Review Part 4.4.2 (in Topic 2.2 under "Tools for ethical decision making") for an example of how these tools are included in the Sample Program External Auditing course.

3.4.3

Integrating information and communication technologies instruction into an accounting program

The integration of technology-related learning materials in accounting education is being given increasing consideration as organizations and society more broadly become more reliant on technology and systems become increasingly integrated.

Similar to ethics content, there are two approaches that can be taken in accounting education programs:

1. separate technology related-topics and teach them within a separate course.
2. integrate ICT topics across the range of relevant technical domains. This would mean, for example, teaching accounting software and the benefits of robotic process automation within an accounting course, audit software and data analytics within an audit course, artificial intelligence and deep learning applications within a business strategy course, and so on.

Given the breadth and depth of this topic area and the speed with which it changes, there is a strong argument to combine both approaches. Individuals can benefit from the combination of:

- a foundation course that provides sufficient depth on information and communications technologies, and
- the inclusion of practical examples of these technologies in use within each course of the program, as well as forward-looking examples and activities to explore where technology might be headed in the future.

The IAESB has undertaken a project to revise the IESs to better reflect competence requirements with respect to ICT and professional skepticism that aspiring professional accountants should be required to attain as part of IPD.

The learning outcomes related to ICT[28] in IES 2 are as follows:

i. Explain the impact of ICT developments on an organization's environment and business model.
ii. Explain how ICT supports data analysis and decision making.
iii. Explain how ICT supports the identification, reporting, and management of risk in an organization.
iv. Use ICT to analyze data and information.
v. Use ICT to enhance the efficiency and effectiveness of communication.
vi. Apply ICT to enhance the efficiency and effectiveness of an organization's systems.
vii. Analyze the adequacy of ICT processes and controls.
viii. Identify improvements to ICT processes and controls.

The ICT competence area is at an intermediate level of proficiency.[29]

Parts 2.1.6 and 3.1.2 discuss the relationship between competency statements/learning outcomes and the lists of knowledge topics that support them. Recall that competencies are used to develop the

[28] *https://www.iaesb.org/publications/revisions-ies-2-3-4-and-8-1*
[29] *Ibid* at Para 7, Table A.

knowledge topic lists that drive the course curricula/syllabi and the specific learning objectives that provide structure to each course.

As an example, CPA Canada has an extensive Competency Framework that encompasses the requirements of the IESs. Competencies related to ICT are integrated within the competency domains rather than being segregated into their own domain. For example, the "Financial Reporting" competency domain includes the following two competencies:[30]

1.1.3 Evaluates reporting systems, data requirements, and business processes to support reliable financial reporting.

1.1.4 Explains implications of current trends, emerging issues, and technologies in financial reporting.

Similarly, instruction in the area of ICT is found throughout the CPA Canada professional program, based on the following knowledge topic list.[31]

Topics

1. Systems concepts
   - **a.** Systems theory
   - **b.** Data organization and distribution (systems and output)
   - **c.** People, hardware/devices, software, data, networks, processes that make up the system
   - **d.** Stakeholders and their interests in systems
2. Presentation of information for decision making
   - **a.** Data visualization of financial and nonfinancial data
   - **b.** Dashboard, graphs, tables, report design
   - **c.** Communication of information for quality decision making
   - **d.** Framing information recognizing uncertainty
3. Value of information and information systems to organizations
   - **a.** What is the value of information in the decision making process?
   - **b.** Transformation of data to decision relevant information
   - **c.** Creation of intellectual property and knowledge development
   - **d.** Business process improvement
   - **e.** Alignment with organizational strategy
   - **f.** Information technology costing, budgeting, and chargeback models
   - **g.** Ethical use of information
4. Types of systems organizations need to provide information to meet their objectives.

   The following list of examples is not a comprehensive list:
   - Accounting information system/Enterprise resource planning/transaction processing systems
   - Business intelligence systems and analytics
   - Supply chain management
   - Customer relationship management
   - Distributed databases/ledgers (blockchain) and digital payment systems/cryptocurrencies
5. Quality of information for decision making
   - **a.** Dimensions of information quality – relevance, ease of use, integrity, timeliness
   - **b.** Types of data and their attributes (nature, sources, format, timing, extent and level of aggregation)
   - **c.** Professional skepticism regarding data
   - **d.** Information quality and the impact of processing models
   - **e.** Data cleansing
6. Data and information modelling
   - **a.** Data structure and standards
   - **b.** Data extraction and import
   - **c.** Data life cycle
   - **d.** Database management systems
   - **e.** Understanding user information requirements
   - **f.** Analytics and model building (descriptive, diagnostic, predictive, prescriptive)
   - **g.** Standards for data tagging and reporting (Xml, XBrl)
   - **h.** Business intelligence, artificial intelligence, and machine learning
   - **i.** Model versus data-driven decision-making
   - **j.** Model validation
   - **k.** Interpretation and professional skepticism of models and analytics

[30] CPA Canada, *The Chartered Professional Accountant Competency Map: Understanding the Competencies a Candidate Must Demonstrate to Become a CPA* (2019) at 22. Online: CPA Canada <https://www.cpacanada.ca/en/become-a-cpa/pathways-to-becoming-a-cpa/national-education-resources/the-cpa- competency-map>.

[31] *Ibid* at 137-138.

7. Management of information systems infrastructure and architecture
    a. information systems architecture alignment with business strategy
    b. information systems planning and management
    c. information technology infrastructure considerations:
        - information technology infrastructure components
        - insourcing vs outsourcing
        - Cloud computing (private, public, hybrid; SaaS, PaaS, IaaS)
        - Vendor relationship management – service level agreements and integration challenges
        - information technology asset management
        - information technology project risk and business case development
        - artificial intelligence
        - robotic process automation
        - internet of things
        - audit implications

8. Systems life cycle
    a. Role of the accountant/business advisor/ auditor and typical steps in the systems life cycle
    b. Acquisition, in-house development, customization, assembly and integration options (buy vs. build)
    c. Vendor selection and management (especially user requirements, testing, change management, and risk management)
    d. Impact on processes and risks of implementation on all users (e.g., external auditor, other vendors)
    e. Systems testing (external and internal audit function) and management of data conversion
    f. System changes and system maintenance (including patch management)

9. Risks and Controls
    a. Impact of Information System risk on enterprise risk
    b. Threat and risk exposure identification (including, but not limited to, cyber and fraud risk)
    c. Fraud detection responsibilities
    d. Risk management objectives and strategies
    e. Systems reliability – privacy, confidentiality, security, integrity, availability
    f. Internal control mix – preventive, detective, corrective, and cost assessment
    g. IT governance and control frameworks (e.g., Coso, CoBiT, iTil)
    h. Compliance with regulatory requirements (e.g., privacy, freedom of information, and anti-spam legislation)
    i. Impact of new/changing technologies on risk exposure

Individuals should gain competence in both the practical application of tools that are currently in common use as well as being familiar with new technologies and innovations that can be reasonably foreseen to impact the profession and the role of accountants.

How to help students build competence in the practical application of current tools:

- Include coursework that teaches students the fundamental concepts related to hardware and software tools and trends (e.g., mobile computing, Software as a Service), network security (physical security, best practices for password maintenance, the use of two-factor authentication, firewalls, etc.), cloud computing, blockchain, deep machine learning, and cybersecurity.
- Provide learning materials that explain how information and communication technologies are used by accounting professionals. For example, when teaching about testing controls, include common access and authorization controls and the benefits of penetration testing.
- Include classroom activities that require the use of common software tools such as Microsoft Excel, accounting, and taxation software packages commonly used within the jurisdiction, and highlight the efficiencies created and benefits for decision-making. Recall, for example, the computer illustrations in the sample program (see Parts 4.3.2 and 4.4.1).
- Include assignment questions that build on the practical classroom activities and allow students to gain more experience with the software.
- Assign group projects that require students to prepare presentations and deliver them to the class using the presentation software typically used in the jurisdiction such as Microsoft PowerPoint.

- Take advantage of the learning management systems available within your institution and ensure that students are comfortable interacting through the various communications means available.
- In assignments and on exams, reflect common communication methods used in business and integrate communication skills. For example, rather than having students simply answer questions, require them to frame their response as an email to their supervisor, client, or colleague.

New technologies and innovations

Including learning materials that cover new technologies and innovations can be challenging for educators, because of the pace of change and the lead time needed for course development. Despite this, it is important that students are equipped with the tools they will need to thrive in the fast-paced business world. Ideas for achieving this include:

- Develop instructional materials that discuss the basic concepts of newer technologies and their uses in accounting and finance roles (such as the use of data analytics by auditors, automating accounting transactions and data entry through robotic process automation, funding through initial coin offerings and cryptocurrencies, and the use of AI to evaluate loan eligibility by banks).
- Use research assignments that require students to explore new technologies, explain them in their own words, and consider them in the context of the profession.
- Integrate enabling competencies such as change management, research skills, and the consideration of ethical implications to challenge students.

3.5

Develop assessments based on content and learning objectives

3.5.1

Characteristics of quality assessments

Best practice in assessment of professional accountants and aspiring professional accountants is provided by the requirements of IES 6. Review the important parts of this Standard, as provided in Part 2.2.2. In particular, revisit the explanations of the following characteristics in Table 6:

Reliability

- The assessment consistently produces the same result, given the same set of circumstances.
- The majority of assessors, acting independently, consistently come to the same judgment, given the same set of circumstances.

Supported by, for example:

- Choosing competent and experienced developers, reviewers and markers
- Ensuring exam security
- Ongoing monitoring of exam marking consistency by having two different markers mark the same paper on a sample basis
- Conducting psychometric analysis of results – statistics used to assess any outliers (e.g., questions that didn't differentiate strong and weak students or effectively contribute to the "pass/fail" decision)

Validity

- The assessment measures what it is intended to measure (e.g., the competence of a new or aspiring professional accountant).

Supported by, for example:

- Covering the range of technical competence, as well as professional skills, values, ethics, and attitudes
- Developing and adhering to exam specifications ("blueprints")

Equity

- The assessment is fair and without bias.

Supported by, for example:

- Performing bias reviews
- Using consistent exams across regions

Transparency

- Details of the assessment are disclosed publicly, such as:
  - content or competence areas to be assessed
  - expectations of performance required to succeed, and
  - timing of the assessment.

Supported by, for example:

- Providing sample and/or past exams or questions as study tools
- Disclosing exam blueprints
- Publishing summary exam information

Sufficiency

- The assessment:
  - **a.** has a balance of depth and breadth, knowledge and application, and
  - **b.** combines material from different areas applied to a range of situations and contexts.
- The assessment process must test "enough" content to be able to determine if sufficient competence has been achieved.

Supported by, for example:

- Having exams occur throughout the program, with one or more ICE that assess competence at the end of the certification program

Assessments should strive to provide high levels of all of these characteristics, and assessment activities need to be based on verifiable evidence that is objective and documented. As we discuss different types of assessment questions, we'll refer back to these characteristics.

An important key to producing quality assessments is that they must evaluate technical competencies as well as professional skills, values, ethics, and attitudes – this supports the validity and sufficiency of the assessments.

In addition, remember the discussion on bias in Part 3.3.2. Bias can be defined as the presence of some characteristic of an assessment item that results in differential performance for individuals of the same ability, but who come from different backgrounds or have different characteristics unrelated to their competence.

Avoiding bias is an important element of the characteristic of equity. This is particularly significant in an exam setting, where distraction can mean a loss in performance, and confusion from unfamiliar terms or language can place students at a disadvantage because they cannot ask their peers or the instructor for clarification, or look up the reference online.

3.5.2

Formative and summative assessments

Formative and summative assessments are both important in professional education. Formative assessment is mainly comprised of assignments, in-class quizzes, exercises, and presentations that allow students to build competence and demonstrate progress, while receiving feedback to help them make corrections and adjustments to their application of concepts. Summative assessments are those that objectively evaluate a student's demonstration of competence at milestones and at the point of completion of a course or of the program overall. To use a metaphor:

"When the cook tastes the soup, that's formative. When the guests taste the soup, that's summative."[32]

Formative assessments

The aims of formative assessments are to:

- reinforce learning
- provide feedback on progress in the course
- encourage self-discipline and good study techniques

Depending on the course design, the assignments may also provide some indication of the form and content of the examination.

The frequency and format of the assignments should be based on the course content. The type of submission can vary. Assignments may range from multiple-choice questions and short-answer questions that test knowledge-based concepts to case problems, integrative case studies, online discussion, or group projects that test higher-order skills such as analysis, synthesis, and critical thinking.

Workload should also be considered when structuring assignments. It is helpful for students if the workload within and across courses in the program are balanced and predictable, avoiding overload to the extent possible. This is especially true if students are expected to be employed (gaining work experience) concurrent with their program of studies. Assignments should also be structured such that there is time for students to benefit from the feedback they receive and can incorporate it into their exam preparation. For example, it may be beneficial for the final submitted assignment not to require complex case reports if the timing is immediately before the final exam – rather, consider an assignment of this nature at about three-quarters of the way through the course.

Technology is playing a role in both formative and summative assessments:

- For formative assessments, technology offers a range of options in what is a relatively low risk environment (that is, any technology failures do not have a major impact when the assessment can be readily repeated or re-set). The options for assessment on-line include tests, quizzes, presentations, and methods of group interaction such as discussion forums.
- For summative assessments, major PAOs offer online examinations using a range of questions (MCQs and beyond). The assessments themselves enable both online input of student answers and online marking. There is now the availability to offer paper-less assessments.

Technology risk is present, however, where the impact can be high for summative assessments. For example, connectivity failure could impact adversely on examination performance and career prospects for the student. Such risk can be managed and mitigated but not eliminated. In practice, the benefits of technology-based assessments outweigh the risks, particularly with respect to improving the reliability of marking through online monitoring of marker performance.

Summative assessments

The primary goal of summative assessments is to ensure that students have developed and are able to demonstrate sufficient progress toward competence before qualifying them to move on to the next course, based on their performance with respect to the course's learning objectives. Ultimately, the collection of summative assessments ensure that an aspiring professional accountant has achieved, and can demonstrate, competence at the required proficiency levels to receive their designation and join the profession.

Exams are the most common form of summative assessment. When developing exams, it is important to prepare sample solutions at the same time that can be used as the basis for marking. Solutions should provide enough detail for the marker(s) to score responses consistently. For open-ended, subjective case questions, a rubric identifying the areas that students should cover in their reports may be more appropriate. Such rubrics also provide guidance on what would be an excellent, good, fair, and unsatisfactory answer. For these types of questions, however, it is also strongly recommended for the assessment developer to draft a full answer in the form that is expected of students. This step helps ensure that the expectations are reasonable and allows for the time requirements to be gauged more accurately. For all assessments, it is also important to have a colleague or teaching assistant review the assessment as if they were a student – using only the tools allowed – to ensure that requirements are clear and that there is obvious linkage to the course content and learning activities.

[32] Robert E. Stake, Professor Emeritus of Education at the University of Illinois
https://resourced.prometheanworld.com/types-of-summative-formative-assessment/

Determining final grades

In some programs, formative assessments count towards the student's final grade. Other programs require successful completion of the assignments in order for a student to qualify to write the final examination, and the examination mark is the final grade. An exam that accounts for 100% of a student's final grade is obviously higher stakes, which also means that it must achieve all of the quality characteristics (reliability, validity, etc.) on its own. Having formative assessments contribute to the final grade allows for a greater number of scoring opportunities for competence to be assessed and a greater range of assessment options across which to meet the quality characteristics.

3.5.3

Exam development and administration processes

Exam development

Exam development processes differ based on the context for the exam. At the university level, exams are typically developed and administered by the instructor for their own cohorts of students. For PAO certification, examinations are normally developed by an exams group that is often different from the organization's education development team. Whilst the development and administration process described below would meet the exacting standards for a PAO, the processes for universities would be similar where the PAO relies on university programs or modules to exempt students from aspects of the professional qualification. Where this reliance is not in place, universities can use the following processes as examples of best practice.

Regardless of the specific development processes in place, there are general steps that all exams follow:

1. Develop the specifications for the exam

Exams need to be properly planned to ensure that student competence and skill is sufficiently tested in the allowable time. This includes planning for sufficient coverage of key areas, appropriate weighting of topics, and appropriate use of various question types. Once determined, the plan is formalized in a specifications document, often referred to as an "exam blueprint." Setting exam specifications can be broken down as follows:

a. **Determine *what* should be assessed** – the content to be assessed will tie to the competencies to be covered in the Competency Framework, the learning outcomes of the IESs, the topic areas required by regulation, and so on. The exam specifications may reflect these competency statements/learning outcomes directly, or the specifications may be written in terms of the learning objectives that support the competencies. Within a course or set of examination preparation materials, any non-examinable content should be clearly identified for students and excluded from the exam specifications.

b. **Determine weightings of competencies/topics** – the extent of coverage of each competence domain or knowledge topic should be specified based on its importance to the role of the professional accountant. The importance may be subjectively determined by an instructor in a university course based on the syllabus, or could be more formally and objectively determined through a PAO's Practice Analysis.

c. **Determine *how* content should be examined** – appropriate assessment types are specified (multiple-choice, short-answer/directed response, case analysis, etc.) Assessment types often change as students progress through the program. In lower tier courses, exams may be entirely multiple choice, because of the Bloom's level that is being targeted, and because part of the students' final mark comes from other types of assessments in their assignments. In the professional-level courses, exams will typically include case analysis as a mandatory component and a more limited percentage of multiple-choice questions.

d. **Determine the appropriate length of examination time** – exam length will depend on the context and the extent to which other assessments are contributing to the determination of competence. University exams commonly range from 1 to 3 hours, while PAO qualification exams might exceed 10 hours over multiple days.

e. **Formalize the specifications in an exam blueprint that is available to students** – the blueprint should include:
    - Competency statements/learning outcomes and/or learning objectives/topic areas that are examinable
    - Weighting based on levels of proficiency or levels of depth (e.g., no more than 20% of the exam will be based on foundation material)
    - Types of questions to be used and acceptable percentage range of each (e.g., up to 30-40% MCQ, 20-30% short-answer, 30-40% case analysis)
    - Minimum and maximum percentage of content coverage from each competence area or lesson
    - For ICE where examinable prerequisite content comes from

2. Determine who will prepare the exam

In university settings, exams will typically be developed by the instructor, potentially with assistance from a teaching assistant. Colleagues may collaborate on exams, and may cross-review exams for each other. For PAO qualification exams, in contrast, an external examiner will likely be selected and contracted. This examiner is required to have extensive subject matter expertise, and will often be an academic (e.g., PhD university professor), but could also be a professional accountant with relevant teaching and assessment expertise. Having professional accountants involved in exam development helps ensure that exams are relevant and realistic, thereby increasing validity of the assessment.

3. Develop the exam

Develop questions and sample solutions in alignment with the Blueprint. To demonstrate adherence to the specifications, questions should be mapped to competency statements/learning outcomes, or learning objectives, as well as to the location of content within the course lessons. Proficiency or depth levels should also be identified. For high-stakes exams such as PAO certification exams, formal documentation may be required to demonstrate compliance with the Blueprint.

Exams may be developed in sets (preferred) or one at a time. For PAO certification exams, exams are often developed in sets, because a different but comparable exam is needed for each session that the course/exam is offered in. Depending on the program, there may be in the range of 1 to 4 exam offerings in a year, and each session requires a unique exam. In some programs, previous exams may be released to students to be used as study tools for future writers – students clearly prefer this approach, but it's costly to create completely new exams each session.

4. Complete review process

Exam reviews check for errors and ambiguity, editorial issues (grammar, wording), cultural bias (to ensure wording is neutral and not confusing) and so on.

PAO exams go through a review process that becomes more extensive at the higher tiers of the program. Various types of reviews are typically undertaken, and any feedback must be cleared before the exam is released. As part of the development and review of the examination by professional committees, the requirements of each question should be checked for validity—to confirm that what the student is expected to demonstrate in terms of outcomes matches the related competency, topic(s), learning objective(s), and level(s) of proficiency or depth.

In a university course setting, the review process is typically less formal, but still important. Reviews may be done by colleagues or teaching assistants.

5. Approve exam and prepare for delivery

Final approval may be through either a formal or informal process. Final formatting and checks are completed, any required signoffs are obtained, and the exam is securely photocopied or prepared for secure electronic transmission, if the exam is computer-based.

Exam administration

Administering exams may be as simple as offering the exam in the classroom or as complex as setting up and administering a fully-secure exam centre. Regardless of the context, security is important, but higher-stakes exams warrant higher security, particularly if the exam questions are non-disclosed and will be reused in future exams.

In university exams held in the classroom, typical security considerations include ensuring adequate spacing between exam writers, using alternate sets of exams (potentially the same questions, but in a different order) so that neighbours are writing different papers, not allowing communications devices at desks, and ensuring adequate supervision.

For professional exams and final university exams held in an examination hall or centre:

- Control over exam papers is carefully maintained until delivery to exam invigilators
- Invigilators administer the exams (may be university/accounting body staff or trusted volunteers)
- Strict standards and processes are used to maintain control of exam questions and blank and completed papers, and serial numbers might be used on exam booklets
- Strict policies are adhered to regarding allowable exam room materials (e.g., calculators, time-keepers, dictionaries, regulations or standards, etc.)
- Exam writers are carefully spaced
- Exam writer identities are verified
- Exam writer responses or completed booklets are identified by student number, rather than name, to avoid potential bias during marking

Exam marking

Exam marking processes also depend on the context for the exam. For university exams, marking is usually done by the instructor, potentially with assistance from teaching assistants. Care must be taken to ensure that marking is consistent, fair, and unbiased, particularly if several markers are involved. Regular reference to marking grids and spot reviews of previously marked papers can help ensure that marking drift is not occurring (where markers inadvertently begin to mark more leniently or more stringently over time).

For high-stakes PAO certification exams, the marking process is generally much more extensive, with marking teams focusing on specific questions, and a lead marker responsible for oversight and quality control. Statistical analysis and psychometric evaluation may be done concurrently to ensure reliability of results. This is particularly true for ICE that are fully competency-based.

Exam marks and the marked papers should be maintained for sufficient periods of time, to serve as objective evidence of the assessments and results.

In the remaining sections of this part, we'll explore the various common assessment question types and discuss their use in achieving quality assessments.

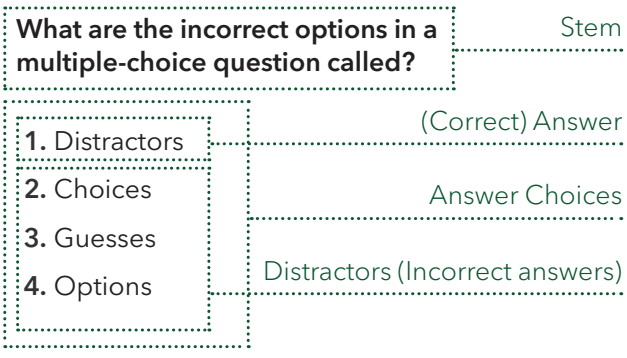
3.5.4

Developing quality multiple choice questions

MCQs are frequently used in accounting education assessments, but are often poorly developed. Too frequently, MCQs test recall rather than higher-level skills. In this section, we'll examine how to develop MCQs that move higher up on Bloom's Taxonomy and achieve the characteristics of quality assessments that we strive for in accordance with IES 6.

To begin, let's lay out the terminology of MCQs. The question itself is the stem. The answer choices include the correct answer and the distractors (incorrect answers).

The architecture of MCQs



The pros and cons of MCQs

MCQs are very good for testing some types of content, but they also have some disadvantages. The primary pros and cons of MCQs are summarized as followed:

+ Pros

- Easy to mark manually
- Able to be used with computer-based testing
- Can cover a wide range of topics in a short time
- Relatively quick to develop lower-to-mid cognitive level questions
- Can take several formats for flexibility

- Cons

- Allow for guessing
- "All or nothing" – no part marks for explanations
- Can be difficult to generate enough plausible distractors
- Harder to test higher cognitive levels (and more time consuming to develop those kinds of MCQs)
- Often poorly developed

In summary, MCQs can be efficient and cost-effective, and assist with exam reliability and breadth, but it requires diligence and practice to create quality questions. Questions are often too easy or too obvious (either the answer or one or more of the distractors), too low a cognitive level, written using confusing wording, and so on.

Achieving quality characteristics through MCQs

Including well-developed MCQs on assignments and exams can be particularly effective in increasing reliability, validity, and sufficiency of the assessment as a whole. When combined with other question types, MCQs can efficiently broaden the range of available scoring opportunities and avoid putting too much weight on a single topic.

When developing MCQs to be used in assignments and on exams, there are a few specific factors that need to be considered to achieve the quality characteristics discussed in IES 6.

Reliability

From a security perspective, assignment and exam questions should change regularly (particularly exams, as they tend to be used for higher-stakes summative assessments). Assuming that a new exam form is used for every session of a course, reliability is achieved if a student achieves the same exam results (i.e., statistically close to the same score) regardless of whether they write "exam version A" or "exam version B." This requires that the MCQs:

- be developed and reviewed by competent professionals
- use clear, unambiguous language
- have a single correct (or clearly best) answer

Validity

Validity refers to questions that test important skills and abilities for new and aspiring professional accountants. In other words, only content from the lesson/course should be tested, and the assessment should be tied to the Competency Framework or required learning outcomes. This might be done either directly or, more likely, through the course's learning objectives that support the competency statements/learning outcomes.

The more judgment required in a question, the harder it is to test via MCQ. Also, competencies like communication and teamwork are best tested through other means, particularly through classroom activities such as presentations and group projects, as well as workplace assessments.

To achieve validity, MCQs should be realistic and test concepts that are relevant to the role of a professional accountant. Assessors should respect the inherent limitations of using MCQs as a question format, and not try to test competencies that do not lend themselves to being tested in this way.

Equity

Fairness and equity in testing require that questions be free of bias. Bias can include any sort of situational context or language that makes it more difficult for one student to answer than another, based on something other than competence. For example, the language should be professional and avoid slang or other words that would be unfamiliar to non-native speakers or those who didn't grow up in the country (or region).

To ensure that assessments are fair and free from bias when using MCQs:

- Avoid using jargon unless it is integral to the subject and is expected to be understood by all students
- Avoid slang or colloquial language that may be unfamiliar to students whose native language differs from the language of instruction, or who grew up in a different country (or part of the country with different customs or dialects).
- Use business contexts that would be expected to be commonly understood (or would be equally uncommon and are explained in the question).
- Ask a colleague or teaching assistant to systematically review for bias, and to ensure that the exam reflects gender and cultural diversity, as appropriate for the context.

Transparency

To achieve transparency, students should know what is required of them to succeed. For MCQs, this requires:

- Clear instructions and information on time allowed.
- Disclosure of marking scheme (e.g., are marks deducted for wrong answers?).
- Specifications regarding weighting of subject matter (i.e., an exam blueprint).
- Sample/practice questions to be provided.

Sufficiency

Assessment processes have to test "enough" to be able to determine if sufficient competence has been achieved. MCQs can play an important role in ensuring sufficient coverage of content material, particularly by offering an efficient way to quickly "fill in the gaps" not covered by other question types, or where the Blueprint only calls for a relatively low weighting of a certain topic.

Using MCQs to help achieve sufficiency requires:

- Testing across a broad range of content.
- Developing questions that test higher cognitive levels and non-technical competencies (to the extent possible and appropriate).
- Recognizing when other question formats should be used (remember that not all competencies can be effectively tested by MCQs).

Sufficiency ties closely to other characteristics, particularly validity, by ensuring that the material to be tested receives adequate coverage. It may not be possible to test all competencies or topics over a reasonable time period, but efforts should be made to reach as much coverage as possible. MCQs can help get fuller coverage, as long as they are planned out correctly to test at an appropriate level. Do not, however, try to do everything with MCQs – sometimes short answer or case questions are much more effective.

Techniques for developing quality MCQs

Set your targets

Achieving the characteristics of assessments that are emphasized in IES 6 requires that MCQs be of sufficient quality. To write well-developed questions, planning is required. It is important that you start by determining the target you are trying to assess. This means pre-determining the target learning objective that the question should cover and using the required level of depth to determine the related Bloom's level (refer back to Table 8 in Part 3.2.3 to translate levels of depth to Bloom's levels, based on the tier of the course). Remember from Part 2.1.4 (Figure 2), that Bloom's Taxonomy is a common way of classifying progression in cognitive levels.

Once you know the targets, you'll design questions with the targets in mind, and have a colleague or teaching assistant review the MCQs and verify that the targets were achieved.

Constructing the stem and answer choices

There are a number of ways to construct MCQs, and we'll look at specific examples later in this section, but first let's cover some general tips for writing stems and answer choices in Table 13.

Table 13. Tips for writing stems and answer choices

When writing the stem	When writing the answer choices
Be consistent with course terminology, but do not copy phrasing directly from the course materials as this encourages rote memorization	Avoid double-negatives, unless it is critical to assess the ability to work through them
Keep it concise, unless creating a short scenario-based question	Use parallel structure and grammar
Avoid irrelevant information, unless testing the ability to distinguish relevant from irrelevant	Keep them roughly the same length
Provide the context or role ("You are an auditor…") or perspective ("From a shareholder's perspective…")	Have 4 or 5 choices to reduce the probability of guessing the correct answer
Do not "teach" by including definitions or explanations the students should be expected to know. (e.g., "The current ratio reflects a company's liquidity. For which of the following…")	Be careful with mutually-exclusive options (having all choices mutually exclusive is fine, but if only two of the choices are mutually exclusive, it could trigger the student to realize the correct answer must be one or the other)
Avoid testing obscure concepts	Avoid overlapping options (may lead to having more than one correct answer, or may give away the fact that neither is correct)
Be especially care to avoid ambiguity in language as students can't explain any interpretation issues they have	Ensure that there is only one correct or clearly best answer

Distractors

In order for MCQs to be effective, the distractors must be plausible so that a student who doesn't know the answer to a question cannot simply eliminate distractors. A good rule of thumb is to base distractors on common student errors and misconceptions, which will tend to attract less competent students. A few other tips to write effective and plausible distractors:

- Avoid absolute terms ("always", "never") – these are usually easy to rule out. Instead, use "often", "generally", etc.
- Ensure distractors are not so close to the correct answer that a competent student would be confused.
- Include statements that are true, but not applicable to the question asked.
- Use statements that are homogenous in content where possible and avoid using options completely unrelated to the other distractors.
- Use technical phrases or references consistently across all options or not at all.
- Present options in a logical order (alphabetically, by size, by dollar value, etc.). If there is no logical order, present them randomly.

Using sets of MCQs on assessments

When using a set of MCQs together on an assignment or exam, it's important to make sure that the set of questions works well together. You'll need to plan the set of questions based on the learning objectives you want to cover. As you develop questions, avoid cueing, where one question's stem provides the answer or assists in solving a different question. Make sure that they are independent of each other.

Within sets of MCQs, distribute the correct answers relatively evenly, and ensure that there's no discernable pattern of answers. There is a known tendency for question sets to end up having "3" or "C" as the correct answer more often than other choices. You should assume that students are aware of common methods of "gaming" exams, so proactively watch for these unintentional issues and prevent them.

Negative marking

When MCQs are used on an assessment, transparency requires that it be disclosed whether wrong answers will be penalized through negative marking. Deducting marks for an incorrect answer has generally lost favor as it has been found to reduce exam reliability. Negative marking also causes problems because competent students who lack confidence are afraid to guess and are penalized as a result. Negative marking also extends the theoretical range of possible scores to -100% to +100%, making statistical analysis much harder.

Measuring quality through psychometric analysis

The quality of MCQs is ultimately tested when the assessment is administered to a group of students. Psychometric analysis of the results can be used to find any questions that did not properly distinguish between sufficiently competent students and those who were not sufficiently competent. This could happen because of an error in the question or in tagging the correct answer, or it could mean that the question was ambiguous, too hard or too easy. Psychometric analysis of MCQs is especially important in high-stakes exams (where the exam determines success or failure on a course, or where it is used for PAO qualification, for example).

An important metric to evaluate the quality of an MCQ is its item discrimination index. This measures the relationship between a test writer's performance on the given question (correct or incorrect) and their overall score on the exam. Discrimination scores can be interpreted as follows:

- **High discrimination score:** Test-writers who performed well overall ("good" students) tended to get this particular question correct, whereas those who didn't score well overall ("poor" students) tended to get it wrong.
- **Negative discrimination score:** Test-writers who performed well overall ("good" students) tended to get this particular question incorrect, whereas those who didn't score well overall ("poor" students) tended to get it correct.
- **Low discrimination score:** There is no strong relationship between how "good" students and "poor" students performed on the question – in other words, the question is not a good discriminator.

Quality MCQs have high discrimination scores, such that in general the test writers who got the question correct also did well on the full exam, whereas students who got the question wrong also tended to do poorly on the overall exam. For low or negative discrimination, further analysis can be used to see if the answer is keyed wrong or if there an error or ambiguity in the question.

In addition to evaluating the discrimination index of each question, psychometric analysis typically includes an analysis of the effectiveness of each distractor. Distractor analysis evaluates the proportion of test writers who chose each answer choice. This can be used to find errors in keying answers, for example if a particular distractor was more frequently chosen than the supposedly "correct" answer. It also helps to highlight distractors that are not plausible (i.e., they are too easy to rule out). Implausible distractors tend to not be chosen even by those who didn't perform well on the exam overall.

Psychometric analysis can be used in advance of an exam, to pre-test questions with a sample group, as well as being used following the administration of an exam. Pre-testing is obviously preferred, but it is logistically more difficult and costly, and can lead to security issues. Other types of psychometric tests are available for advanced analysis.

Once the analysis has been performed, corrections and adjustments can be made:

- Questions that fail to effectively discriminate should be fixed before using, or not counted if already used.
- Problem distractors should be fixed or replaced on future exam forms.

In addition to being important for high-stakes exams, psychometric analysis is also important where a pool of questions is maintained, to ensure quality of the pool.

Variations in format

A number of different MCQ styles are possible. In this section, we'll look at illustrative examples of a variety of questions formats. For more examples of MCQs, see Part 4.5.1. Unless otherwise noted, the sample questions provided here have been drawn or adapted from a variety of course materials in the Sample Program, with permission from CPA Canada.

Sample A: "Full question" format

In this format, the stem includes a full question (as compared with the "finish the sentence" format). This is a well-used and well-supported style.

Note that this question also shows a good example of the parallel format, with answer choices being very similar in length and structure.

question

When posting a journal entry to record the purchase of supplies for cash, a bookkeeper debited supplies €500, but forgot to post the €500 credit to cash. Which of the following statements would be true with respect to the effect of this error on the trial balance?

1. The credit side of the trial balance would be €1000 higher than the debit side.
2. The credit side of the trial balance would be €500 higher than the debit side.
3. The debit side of the trial balance would be €1000 higher than the credit side.
4. The debit side of the trial balance would be €500 higher than the credit side.

answer

Correct answer is 4: The recorded debits were €500 higher than the recorded credits, so the debit side of the trial balance would be €500 higher than the credit side of the trial balance.

Sample B: Scenario format

Scenario-based MCQs tend to be longer and allow you to ask multiple questions from a single stem. This is also a well-used and well-supported format.

question

Theatre Co. is a live theatre company. Each summer, the company sells a season pass for $200 that entitles the holder to attend all five live productions each year. The first play is performed in October and the final play in March. The company recognizes 20% of the revenue of each season pass every time a play has been performed. Theatre Co.'s unearned season pass account appeared as follows on December 31, 20X4:

Unearned revenues of season passes	
Debit	Credit
	52,000 Balance January 1, 20X4
140,000	136,000

Which of the following represents the dollar amount of season passes sold in 20X4?

a. $136,000
b. $140,000
c. $188,000
d. $192,000

answer

Correct answer is a: Season passes sold in 20X4 would be credited to the unearned revenues account.

question

Refer to the information on Theatre Co., above. Which of the following amounts represents the revenue earned in 20X4 from season passes sold in 20X4?

a. $48,000
b. $52,000
c. $56,000
d. $88,000

answer

Correct answer is d: The debits to the account represent the total revenue recognized. To get the amount both sold and earned in 20X4, you would need to subtract the opening balance from the total revenue recognized. $140,000 - $52,000 = $88,000.

When using this format, it is important to show clearly which questions are based on the same set of facts. If possible, related questions should all appear on the same page to avoid having to flip pages. To avoid confusion, facts and/or assumptions should be changed as little as possible between the related questions.

Sample C: "Finish the statement" format

These can be efficient for presenting lists of items and are useful for recall-type questions or low-level application, but harder to use for more complex ideas.

question

A forecast can be best described as a document that

a. is based on the auditor's judgment of the most probable future economic conditions.
b. presents a range of possible future economic conditions.
c. presents possible future scenarios consistent with the purpose of the information.
d. is based on management's judgment of the most probable future economic conditions.

answer

Correct answer is d.

Some institutions do not allow the use of this style, but fortunately they are easy to change by turning the stem into a question ("Which of the following best describes a forecast document?") and adding to each answer choice (for example, in each case adding "A document that…"). Note that this is a low-level recall question of course, so it should be limited to introductory courses, if used at all.

Sample D: "Not" or "least"

These questions use negatively worded stems.

question

Which of the following is not a tangible benefit for a new information system?

a. Increased productivity

b. Improved customer satisfaction

c. Reduced facility costs

d. Reduced rate of growth for expenses

answer

Correct answer is b: Customer satisfaction is a potential benefit, but it would be considered intangible.

These questions are generally thought to be less effective, because students may be able to pick out an incorrect choice but still not know the correct answer that would address the situation. Also, negatively worded stems can make questions unnecessarily complex and difficult because students need to reverse the logic of the relationship being tested.

At times, however, this format can be the only effective way to test situations where judgment is involved. Consider the following question:

question

Which of the following is least likely to be a factor that increases the risk of misstatement in the financial statements of a small business?

a. Unsophisticated employees making errors in recording transactions

b. Accounting policies that are selected solely on the basis of their tax impact

c. Management's significant concern about earnings targets and meeting analyst expectations

d. Economic dependence on major customers or suppliers

answer

Correct answer is c: Small businesses are usually privately-owned, and analysts typically only follow and disseminate expectations on publicly traded companies.

Requiring the student to be able to determine a "least effective" or "least risky" approach can be a good way to test judgment and can be a valuable question formulation – especially for situations where there may not be a clearly "best" option, as would be the case in the following question:

question

You are considering starting up a business and are evaluating your options, in particular whether to launch the business on your own or with a friend. You believe that the business will take several years to become profitable. You therefore plan to continue working in a regular job, and work part-time in the new business. Based on the facts above and considering the related tax implications, which of the following forms of business would you be least likely to consider at this time?

a. Sole proprietorship

b. A corporation

c. A joint venture

d. A partnership

answer

Correct answer is b: the corporation would offer the least options for using the expected tax losses.

Using the "least" format for this question is beneficial, as there are several viable options that could be the "best choice" depending on the specifics, but Corporation is one that would be seen as least attractive.

Sample E: Multi-multi (or "complex" MCQ)

In this type of question, the stem has options built into it, and the choices are combinations of those stem choices.

question

The internal audit activity should contribute to the organization's governance process by evaluating the processes through which:

I. Ethics and values are promoted.

II. Effective organizational performance management and accountability are ensured.

III. Risk and control information is communicated.

IV. Activities of the external and internal auditors and management are coordinated.

a. I only.

b. IV only.

c. II and III only.

d. I, II, III, and IV.[33]

answer

Correct answer is d.

This type of question can be difficult to develop well. A weakness is that a student can use logic to rule out distractors without needing to evaluate each of the stem options (I to IV).

[33] Source: CIA Exam Practice Questions, Internal Audit Foundation, 2017

For example, if the student recognizes that I is valid, they will be able to eliminate distractors b and c. If they determine that any other answer is valid, they'll know that all answers must be valid. There is also the risk that students may spend more time sorting out the verbal logic rather than thinking about the content. As a result, this question type may be seen as less effective.

Sample F: "All of the above" or "None of the above"

These questions include "all of the above" and/or "none of the above" as answer choices.

question

Which of the following would indicate that fraud may be taking place in a marketing department?

a. There is no documentation for some large expenditures made to a new vendor.

b. A manager appears to be living a lifestyle that is in excess of what could be provided by a marketing manager's salary.

c. The control environment can best be described as "very loose." However, this attitude is justified by management because it is needed for creativity.

d. All of the above.[34]

answer

Correct answer is d.

"All of the above" questions are frequently easier and less discriminating because if a student can determine that anything more than one answer is correct, they know the answer is "all of the above." "None of the above" questions can be more challenging, because the correct answer may or may not be among the options. This makes it essential that the wording in each choice is clear and unambiguous. Unless used carefully, these formats can both be less effective.

Testing across various cognitive levels

As previously mentioned, MCQs can – and should – be used for testing higher level cognitive skills. The following series of questions shows increasing levels being tested.

Remember – foundation level

question

Which of the following represents the assertions typically made by management regarding account balances and related disclosures at the period end?

a. Rights & obligations; accuracy, valuation, & allocation; completeness; compliance; presentation & disclosure

b. Existence; completeness; rights & obligations; accuracy, valuation, & allocation; classification; presentation

c. Occurrence; completeness; ownership; accuracy; independence; cutoff

d. Ownership; valuation & allocation; completeness; compliance; presentation & disclosure

answer

Correct answer is b, per ISA 315.

Understand – foundation level

question

An auditor is reviewing the aged list of accounts receivable of an audit client. Which of the following assertions is this procedure most likely used to gather evidence on?

a. Valuation

b. Completeness

c. Presentation

d. Existence

answer

Correct answer is a: Aging supports the allowance for doubtful accounts

Understand or apply – foundation or low intermediate level

question

You are planning an audit of XYZ Company. Which of the following assertions will you most likely test?

a. Existence and valuation of inventory

b. Presentation and completeness of accounts receivable

c. Existence and disclosure of accounts payable

d. Completeness and valuation of property, plant and equipment

[34] Source: CIA Exam Practice Questions, Internal Audit Foundation, 2017

answer

Correct answer is a, because it presents a valid pairing of assertions and accounts. Inventory is primarily tested for existence (attendance at physical count) and valuation. Accounts receivable is most likely tested for existence by sending confirmation then the secondary concern will be the valuation. Accounts payable will most likely be tested first for completeness by verifying the suppliers' statements and subsequent payments. Property, plant, and equipment is most like tested for valuation by verifying depreciation and considering impairment factors and for existence by physical inspection.

Analyze or evaluate – intermediate/advanced level

question

You are auditing a small family-operated business that has no debt and has no need to attract additional investors. When auditing revenues, which of the following audit procedures would be most useful in this situation?

a. Confirm accounts receivable to verify amounts recorded in the accounts receivable subledger.

b. Scan the accounts receivable subledger for unusual amounts and trace them to customer accounts.

c. Vouch amounts recorded in the sales journal to duplicate copies of sales invoices.

d. Trace a sample of shipping documents into the sales journal.

answer

Correct answer is d: The client would be expected to be motivated to minimize taxes, therefore the completeness assertion for revenues is at risk. This means the auditor must test for items outside the recorded population of revenues and Accounts receivable.

Testing non-technical competencies

Remember that a quality exam needs to assess across a broad range of both technical and non-technical competencies. Non-technical competencies can be more challenging to develop MCQs for, but there are many opportunities to include them (e.g., ethics, leadership, change management, etc.).

Developing MCQs for non-technical competencies require particular expertise. Ensure that question developers are experienced and skilled at developing questions, and that questions go through adequate review to confirm that the answer is non-disputed and that wording is unambiguous.

Here are a few examples of MCQs that test non-technical competencies and skills:

Topic: Leadership and change management

question

The head of internal audit for a company plans to make changes that may be perceived negatively by the audit staff. The best way to reduce resistance would be to:

a. Develop the new approach fully before presenting it to the audit staff.

b. Ask the CEO to approve the changes and have the CEO attend the departmental staff meeting when they are presented.

c. Approach the staff with the general idea and involve them in the development of the changes.

d. Get the internal audit activity's clients to support the changes.[35]

answer

Correct answer is c: Involving the staff in the change from the beginning will reduce their resistance to change.

Level - analyze/evaluate – intermediate/advanced

Topic: Ethics and professionalism

question

While auditing a publicly-traded company, you suspect that a member of senior management has been bribing foreign government officials. Which of the following is the most appropriate action to take?

a. Review the assumption of management's good faith.

b. Inform the audit committee or equivalent.

c. Resign immediately from the engagement.

d. Inform the Securities Commission of the illegal act.

answer

Correct answer is b

Level - analyze/evaluate – intermediate/advanced

[35] Adapted from: CIA Exam Practice Questions, Internal Audit Foundation, 2017

Topic: Interviewing techniques

question

When interviewing an individual suspected of a fraud, the interviewer should:

a. Ensure the suspect's supervisor is present during the interview.

b. Lock the door to ensure the suspect's privacy.

c. Pay particular attention to the wording choices of the suspect.

d. Ask if the suspect committed the fraud.[36]

answer

Correct answer is c: Wording choices, such as shifts in the use of pronouns and verbs, may indicate areas of dishonesty or fabrication.

Level - analyze – intermediate

3.5.5

Developing quality short-answer questions

Short-answer (directed response) questions are an essential tool in accounting education assessments. In this part, we'll illustrate what makes a quality short-answer question, in alignment with the characteristics of quality assessments of IES 6, and demonstrate how short-answer questions can be used effectively and efficiently in assessments. We'll follow a format very similar to our discussion of MCQs.

Short-answer questions include a wide variety of question types, lengths, and styles. Essentially, any question type that falls between MCQs and cases can be called a short-answer question. Generally, short-answer questions begin with background information or a brief scenario, which may include data tables, schedules, financial information, or other narrative. One or more directed questions are then posed to prompt the student to provide a written response of anywhere between a few words and several paragraphs. Short-answer questions may also require the student to produce computations, journal entries, tables, schedules, and so on.

Like MCQs, short-answer questions have a number of pros and cons:

+ Pros

- Generally quick to develop (quicker than cases and potentially quicker than those MCQs aimed at high Bloom's levels)
- Can take many different formats for flexibility
- Good for testing higher-level cognitive skills
- Do not allow for random guessing
- Allow for part marks
- Allow students more flexibility to explain their answers (as compared with MCQs)
- Faster to mark than case-based questions

- Cons

- More time consuming to mark than MCQs
- More subjective marking than MCQs
- Harder to test integration of higher cognitive levels (cases are better at this)
- Do not test as much breadth as a combination of MCQs or as much depth as cases

In summary, short-answer questions have limitations, but can provide a good balance of effectiveness and efficiency.

[36] Adapted from: CIA Exam Practice Questions, Internal Audit Foundation, 2017

Achieving quality characteristics through short-answer questions

Short-answer questions are often the main type of question used on assessments, due to their versatility. When developing short-answer questions to be used in assignments and on exams, there are a few specific factors that need to be considered to achieve the quality characteristics discussed in IES 6.

Reliability

Reliability is achieved if a student achieves the same exam results (i.e., statistically similar to the same mark or rating) regardless of which exam form they write. To reach this goal, short-answer questions should:

- Be prepared by competent developers and reviewers
- Use clear, unambiguous language
- Include clear instructions for students
- Include marking grids that give credit for all valid responses
- Not concentrate too many marks on one topic

As also noted with MCQs, security considerations require that assignment, and especially exam, questions must be changed regularly.

Validity

As with every type of question, the requirements of short-answer questions should be tied to the learning objectives (that in turn support the required competency statements/learning outcomes). To ensure that short-answer questions are assessing the important skills and competencies expected of individuals:

- Questions should be relevant and realistic
- Students should be cast in a specific role where appropriate
- Requirements should include realistic outputs, such as memos, emails, schedules, etc., that would be expected on the job
- Questions should assess technical and non-technical skills (e.g., including marks for communications; testing judgement)

Equity

Ensuring that short-answer questions are free from bias and do not unfairly disadvantage any students requires the same considerations as when developing MCQs:

- Avoid using jargon unless it is integral to the subject and can reasonably be expected to be understood by all students
- Avoid slang or colloquial language that may be unfamiliar to students whose native language differs from the language of instruction, or who grew up in a different country or region
- Use business contexts that would be expected to be commonly understood (or would be equally uncommon to all, and be explained in the question).
- Ask a colleague or teaching assistant to review for bias, and to ensure that the assessment reflects gender and cultural diversity, as appropriate for the context.

Another aspect is ensuring that the markers don't know anything about the student whose paper they are marking (for high stakes exams), so that their bias can't impact the process. For example, a marker may be subconsciously swayed by the student having a foreign name, or by gender, or by actually knowing the student or their family. Naturally this risk is not significant for MCQs as correct answers are pre-defined and objective, but it can become a concern for short-answer questions and case questions, where marking involves a subjective element.

Transparency

To ensure that students know what is expected of them on short-answer questions:

- Ensure that the instructions are clear as to what is being asked, the expected format to use in responding, etc.
- Include information on the time (and/or word count) allowed
- Provide specifications regarding the weighting of different topics (i.e., an exam blueprint)
- Provide sample/practice questions for students to learn from and become familiar with question format and style.

Transparency can be increased if there is consistency between classroom activities, assignments, and exams. Assignments can also include similar types of short-answer questions as the final exam will. Although students should not be able to predict the exact content of an exam, of course, they should be confident in their understanding of the types of questions to be prepared for.

Sufficiency

The use of short-answer questions can be very beneficial in achieving quality, as they are able to assess a mix of depth and breadth fairly efficiently, particularly with respect to topics that are heavily weighted on the Blueprint and where in-depth calculations are expected. Short-answer questions should be used to balance depth and breadth on assessments, and also to assess non-technical competencies and higher cognitive levels by having students explain their reasoning and analysis.

In summary, well developed short-answer questions provide the "best of both worlds" by allowing assessment of both breadth and depth:

- **Breadth** – the format allows for testing a broader range of learning objectives efficiently and flexibly, using different formats and requiring a range of realistic deliverables
- **Depth** – short-answer questions can target key learning objectives and test a range of levels of depth by requiring calculations, analysis, interpretation, and evaluation.

Variations in formats of short-answer questions

The possible variations of short-answer questions are effectively limitless and cannot be covered in any single source, but a few illustrative examples follow. Note that some of these examples are excerpts for brevity; more examples can be found in Part 4.5.2.

The sample questions provided here have been drawn or adapted from a variety of course materials in the Sample Program, with permission from CPA Canada. See footnotes for details.

Sample A: Computation questions

Computation questions require calculations to be performed. Outputs may be simple numerical responses, schedules, journal entries, and so on. Computation questions are often combined with requirements to analyze options and evaluate the results.

question / 5 marks

You bought your older sister's car for €22,000, paying her €2,000 down on January 1, 20X1. She agreed to accept monthly payments of €500 starting one month after the purchase. Once the balance drops to less than €500, you'll make a final monthly payment to clear the balance. Interest being charged is 6% compounded monthly.[37]

Required:

a. How long will it be before the loan is repaid? (2 marks)

b. How much will the final payment be? (3 marks)

sample solution

a. The present value (PV) of the payments is €20,000. The value for "n" will be 44.74, which results in a total of 45 payments.

b. The 45th payment will be found by finding the PV of the 44 full payments, deducting that value from €20,000 and then taking the future value of that amount after 45 periods (effectively adding the 45 periods of interest on the partial amount).

Alternative 1:

PV of 44 payments of €500 = €19,704.12.

€20,000.00 – 19,704.12 = 295.88.

Add 45 periods of interest: $295.88(1 + 0.005)^{45}$ (or –295.88 PV, 45N, 0.5I, CPT FV) to give €370.33

OR Alternative 2:

44 N, –20,000 PV, 500 PMT, 0.5 I CPT FV 368.49

€368.49 × 6% × 30 ÷ 365 = €1.82. €368.49 + €1.82 = €370.31.

Sample B: Agree/disagree and why?

These questions test reasoning and communication skills, in addition to technical competence. The "agree or disagree" portion tends to be very objective, whereas the rationale provided is more subjective to assess.

question / 9 marks

The following parts are independent. For each statement, state whether you agree or disagree, and explain your reasoning.[38]

a. When an audit firm issues the correct opinion on the financial statements under audit, it still has business risk. (3 marks)

b. The auditor's business risk increases if the client's business risk decreases. (3 marks)

c. Two weeks after the year-end, XYZ company advises your client that it will be unable to pay its account, which was outstanding at your client's year-end. This is sufficient appropriate evidence for you, as an auditor, to recommend that the client adjust their financial statements. (3 marks)

[37] Adapted from *FA2 Intersyll Assignment 3 Q7*

[38] Adapted from *AU1 Intersyll Practice Exam Q8*

sample solution

a. Agree.

- **Rationale:** Business risk is the risk that the audit firm will have to defend itself, for example, in a lawsuit. It exists regardless of whether the firm issues the correct opinion.
- Source: AU1 Lesson 4.1

b. Disagree.

- **Rationale:** If the client's business risk increases, the auditor's business risk would also increase.If the client's business fails, it is more likely that a creditor or investor would try to hold the auditor responsible.
- **Source:** AU1 Lesson 4.1

c. Disagree.

- **Rationale:** Adjustment is required if XYZ's inability to pay existed at the balance sheet date. Otherwise, only a disclosure note is required in your client's financial statements.
- **Source:** AU1 Lesson 10.6

Note:

- Other reasonable responses would receive marks as well;
- 1 mark for Agree or Disagree and 1 mark for each valid rationale point to a maximum of 3 marks for each part.

Sample C: Interpreting and applying financial information

Depending on the time and marks involved, short-answer questions may provide partial financial information rather than a full set of financial statements, or may include full statements but with less detail than a typical set of financial statements would contain. Requirements often include calculations, analysis, interpretations, and recommendations.

question

The following is a partial trial balance for the public company TC Ltd. for the year ended December 31, 20X1. Each item has its normal debit or credit balance, but the total does not net to €0 as it is a partial trial balance.[39]

TC Ltd. Partial Trial Balance	
Accumulated depreciation, December 31, 20X1	€ 210,000
Cost of goods sold*	€ 4,200,000
Dividends paid	€ 50,000
Loss on sale of BD Division**	€ 90,000
Income taxes expense***	?
Unrealized gain or loss on investments****	?
Other operating expenses	€ 70,000
Sales	?
Dividends received****	€ 9,000
Accumulated depreciation, January 1, 20X1	€ 180,000

Additional information:

* TC's gross profit margin is 40%.
**During 20X0, TC discontinued the operations of its BD Division. It had expected to sell the assets of BD at net book value, but …
*** TC pays income taxes at the rate of 40%. Assume that …
****TC had excess cash available that was used to acquire …

Required: Using the above information, prepare, in good form, a statement of profit or loss and other comprehensive income for the year ended December 31, 20X1 using the multi-step format.

Sample D: Critiquing a news story or article

Short-answer questions can call on a wide variety of materials including readings, news stories, online sources, etc. These types of questions are particularly useful in assessing higher-level cognitive skills, as they involve real-world source materials that tend to be broader in context and not prepared for a student audience.

question / 9 marks

Read the article "Mastering emotional intelligence" provided as Exhibit 5-1 in your course materials.

Required:

a. Explain the concept of emotional intelligence and contrast it with the more traditional view of intelligence (100 words maximum – 3 marks).

b. Evaluate the role that emotional intelligence plays in the ability of a professional accountant to meet the needs of clients or employers and protect the public (200 words maximum – 6 marks).

[39] Excerpt from *FA2 Intersyll Assignment 2*

Techniques for developing quality short-answer questions

Set your targets

As with MCQs, achieving the characteristics of assessments that are emphasized in IES 6 requires adequate planning to determine the learning objectives to be tested, as well as the requisite level of depth and cognitive level. Reviewers should ensure these targets are met, in addition to checking the technical and numerical accuracy of solutions.

Choose your format

When developing short-answer questions, make the most of the flexibility they offer and be creative. At the same time, however, ensure that there is sufficient structure to the required response such that marking will be more efficient.

Regardless of format chosen, be sure to provide all of the information needed to answer the question fully. Specify the role or perspective the student should take, if applicable. Also, if you are testing the students' ability to determine what information is relevant, include plausible but extraneous information as appropriate.

Short-answer questions benefit from being scenario-based, meaning that they present the question in the context of a real-life situation. For example, rather than simply asking students to calculate the appropriate amortization for an asset, the question is structured such that the student is given information about the assets of a particular company and asked to calculate amortization. Contextualizing questions this way is more competence-based, as it helps students better understand and demonstrate their skills in the role of a professional accountant.

Provide sufficient guidance

In order to ensure that students will answer appropriately and in the format you expect, be clear on requirements and avoid ambiguous wording. For example, if the question asks "what is the allowance for doubtful accounts?" students could answer by explaining what the allowance is and does (as in "The allowance for doubtful accounts is management's best estimate of the amount of trade receivables that will not be collected.") They could just as reasonably respond by calculating the amount, if given enough information: "The allowance for doubtful accounts is €42,500." In many situations, the intent of the question and requirements can be accurately inferred from the context and the information provided in the question, but providing explicit instructions and using pre-determined action words (such as define, explain, calculate, and so on) is always preferred for clarity.

Specify the requirements and format the response should be in. For example:

- "Explain in a few sentences…"
- "Prepare a schedule to reconcile…"
- "Provide the journal entries you would book…"
- "Complete the following table…"
- "Evaluate (in 300 words or less) …"

If a particular structure is required, consider providing a template, unless there is a standard structure they should know to follow. You can also consider giving a sample of how the response should be presented by the student.

To make marking more efficient and provide added clarity, consider separating requirements into parts, with clear guidance on the total marks and the breakdown of marks by part. For example:

- "Part a) Provide 3 examples of … (3 marks)"
- "Part b) For each example you provided in part a), explain … (2 marks per example, for a total of 6 marks)"

Including the breakdown of marks will help guide students as to how much time/effort to spend on each requirement relative to the total marks on the full assessment.

Ensure the solution supports effective and efficient marking

In your solutions and marking grids, be specific about how marks are allocated and what is required to earn credit (e.g., "Award 1 mark for each example and up to 2 marks for each well-supported rationale, to a maximum of 9 marks overall"). Prepare the solution to each question in a format that will support efficient marking, by reflecting the format you anticipate students will use. By preparing the solution as if you were a student responding, it is easier to more accurately estimate time requirements and pick out ambiguity issues.

To make marking more efficient and consistent, you should anticipate the various acceptable alternatives students might come up with, and provide alternate, acceptable solutions (calculation methods or examples that students may use). Not all acceptable alternatives will be obvious, however, and ultimately it depends on having markers who are competent themselves and can distinguish between valid and invalid responses – even those not provided in the marking key.

If sample solutions are provided to students, include source references, so that they can look up topics on which they need further study.

Manage errors carried forward

It is important to ensure errors carried forward are not penalized. Students should lose marks for the original error, but further correct calculation methods should be awarded full marks.

For example, assume that a question[40] provides students with a data table, an excerpt of which follows, and are required to solve for the missing numbers, for 3 marks each:

	Company A	Company E
December 31, 20X1:		
Assets	90,000	246,000
Liabilities	47,000	**?**
December 31, 20X2:		
Assets	96,000	225,000
Liabilities	**?**	150,000
During 20X2:		
Owner investments	10,000	9,000
Net income	15,000	36,000
Owner withdrawals	5,000	18,000

For Company A, the answer requires the student to calculate:

Calculation	
Assets on December 31, 20X1	90,000
Liabilities on December 31, 20X1	(47,000)
Equity on December 31, 20X1	**43,000** (1 mark)
Owner investments during 20X2	+ 10,000
Net income during 20X2	+ 15,000
Owner withdrawals during 20X2	(5,000)
Equity on December 31, 20X2	**63,000** (1 mark)
Assets on December 31, 20X2	+ 96,000
Equity on December 31, 20X2	(63,000)
Liabilities on December 31, 20X2	**33,000** (1 mark)

If the student makes one mistake, they shouldn't be penalized three times:

Calculation	
Assets on December 31, 20X1	90,000
Liabilities on December 31, 20X1	(47,000)
Equity on December 31, 20X1	**42,000** (wrong)
Owner investments during 20X2	+ 10,000
Net income during 20X2	+ 15,000
Owner withdrawals during 20X2	(5,000)
Equity on December 31, 20X2	**62,000** (1 mark)
Assets on December 31, 20X2	+ 96,000
Equity on December 31, 20X2	(62,000)
Liabilities on December 31, 20X2	**34,000** (1 mark)

To make marking of calculation questions efficient, prepare solution keys in Excel, so markers can use a copy of the template and plug in errors. This lets markers determine what the answers would be if further calculations were done correctly, but based on an error carried forward.

Review the question and solution:

Review questions and solutions carefully, and where possible, have a colleague or teaching assistant review them as well. Reviewers should cross-reference between the question parts and the solution, working iteratively to be sure that all expected responses are adequately prompted and all stated requirements have documented solutions.

An important part of the review process is checking that the depth levels expected match the action words in the "Required" and that the solution is consistent with that level.

Testing across various cognitive levels

To ensure that students prepare responses that demonstrate the expected depth levels, use "action words" that reflect the Bloom's and depth level you are targeting. Review Table 8 in Part 3.2.3 to refresh yourself on the action words appropriate for assessing cognitive levels across various courses.

[40] Adapted from *FA1 Intersyll Assignment 1 Q3*

The following series of questions shows examples of increasing levels being tested.

Remember or understand

question / 1 mark each

State whether a debit or credit entry would be made to record the indicated change in each of the following accounts:

a. To increase cash

b. To increase owner, withdrawals

c. To increase building

d. To increase accounts payable

e. To increase prepaid rent

f. To decrease unearned fees[41]

answer

a. Debit	**d. Credit**
b. Debit	**e. Debit**
c. Debit	**f. Debit**

Note that "state" can be used across a variety of levels, depending on context. In this question, students do not need to use judgment, and are simply stating facts.

Apply or analyze

question

On April 3, 20X1, Rainbow Studios purchased a patent for €56,000. Its remaining legal life is 7 years, and Rainbow Studios estimates that the patent will be useful for another 4 years. There is no active market for the patent.

a. Prepare the adjusting journal entry to record amortization of the patent on December 31, 20X1

b. The patent manager has suggested that the estimated useful life of the patent be changed to match the legal life. Explain the conditions under which this would be acceptable or unacceptable.[42]

answer

a. 56,000 ÷ 4 years = 14,000 per year × 9/12 = 10,500 amortization expense for 20X1. Dr amort expense; Cr Accumulated amortization

b. Acceptable if justified based on the period of expected benefits; not acceptable if the motivation is to reduce expenses.

question / 8 marks

PND Inc. has been in the network distribution business for a number of years. The company uses a perpetual inventory system and employs the FIFO cost formula to account for its inventory of networks held for resale. During the past three years, the cost of the networks purchased by PND for resale has been declining. Senior management of the company has noted that PND is not as profitable as its major competitors, all of which use the moving average unit inventory cost formula. The senior management of PND is compensated through a combination of salary and bonus based on profit. PND is considering switching its inventory cost formula from FIFO to the moving average unit cost method.

a. Explain why the profitability of PND would be lower than that of its competitors as a result of using FIFO rather than moving average cost. (4 marks)

b. Does the choice between FIFO and the moving average unit cost method make any difference to profit in the long run? Explain. Would there be any impact on the lower-of-cost-or-net-realizable-value inventory valuation from a switch to the moving average unit cost method? (4 marks)[43]

answer

a. The FIFO inventory cost formula matches the cost of the oldest purchases with current revenues. In a period of declining prices, this means that the cost of goods sold will be charged with relatively higher costs, since the older costs are the higher ones. The moving average unit cost method bases the costs of goods sold on a weighted average of all of the units available at the time of sale. Therefore, in a period of declining prices, the moving average unit cost method would give a lower cost of goods sold than the FIFO inventory cost formula. Since PND competitors are using the moving average unit cost method, they would have higher profitability than PND, all else being equal.

b. In the long run, profit will be based on the selling price of the inventory less what the inventory cost. The total cost of the inventory purchased will be assigned to cost of goods sold in the long run. In the short run, the choice of inventory costing methods will have an impact on cost of goods sold of individual reporting periods. However, since the total cost of goods purchased is eventually allocated to

[41] *FA1 Intersyll Assignment 2 Q2*

[42] Adapted from *FA1 Canadian edition, Module 7 Test Your Knowledge question 5*

[43] *FA2 Intersyll Assignment 5 Q4*

answer continued

cost of goods sold, the choice between FIFO and the moving average unit cost makes no difference to profit in the long run.

If PND switched to the moving average unit cost method, the ending inventory would be higher than under FIFO, assuming prices are declining. It is possible that this higher cost of ending inventory could trigger a writedown of inventory under the lower of cost or net realizable value rule. This is because the ending inventory value might now be higher than net realizable value where it wasn't when it was recorded at a lower cost under FIFO.

Note how the questions require students to interpret and explain relationships.

Evaluate or create

Part **a** of the question below will require the student to evaluate and prioritize risks specific to ABC as a new client. In part **b**, the student will need to diplomatically explain to the CFO that for audit quality, only the audit committee is advised of materiality.

question /14 marks

Attached are excerpts from the unaudited draft financial statements for ABC Ltd. for 20X1 and the audited comparative statements for 20X0. Assume that you are the audit manager on the ABC audit for the year ended Dec 31, 20X1. ABC is a new client for your firm.

Required:

a. Review the financial statements and identify four key risk areas for this year's audit. Explain why you chose each item. (12 marks)

b. The CFO has asked you what the materiality will be for the audit. Draft your response to her question. (2 marks)[44]

Example of a question that builds from low to high cognitive levels

question /12 marks

Efficient securities market theory has long been under attack from behavioral finance, which draws on behavioral theories of investor behavior to explain why security prices do not always behave as the economic theories of rational investing and market efficiency predict.

Required

a. List and describe two accounting-related efficient securities market anomalies. (4 marks – maximum 100 words)

b. Explain why prospect theory predicts that security prices will differ from their prices under efficient security markets theory. (4 marks – maximum 100 words)

c. Do you believe that professional accountants should be concerned that the importance of financial reporting may decline if behaviorally biased investors do not use all the information in the financial statements? Justify your opinion. (4 marks - maximum 100 words)[45]

answer

a. Excerpt from solution: Post-announcement drift: When firms report good or bad news in earnings, security prices take time to fully respond to this information

Accruals anomaly: while investors respond to the amount of net income, they do not seem to respond to the proportion of accruals to operating cash flows in that net income.

Note that the level is not directly tied to the complexity of the topic – this is a much more theoretical concept being tested, but this first part of the question is only asking for recall.

b. The reasons that prospect theory predicts that security prices will differ from their prices under efficient securities market theory are:

Disposition effect: This arises from the prospect theory assumption of loss aversion, under which investors dislike even a small loss more that they like a small gain of equivalent magnitude. As a result, investors tend to hold on to losers and sell winners. If investors hold on to loser (that is, bad news) securities, their market prices will not fall as much as is predicted under market efficiency.

Under- or over-weighting of probabilities: If investors under- or over-weight probabilities of future firm performance relative to posterior probabilities under Bayes' theorem, then, unlike rational investors, they are not utilizing all available information. As a result, security prices will depart from their efficient market values.

[44] Adapted from various AU1 questions

[45] Adapted from *Intersyll AT1 Assignment 1 Q3*

answer continued

Note the progression from the previous part of this question: When testing more challenging concepts, it can be useful to "warm students up" to the more challenging parts, to let them earn credit for the level they are able to demonstrate before evaluating a higher-level concept.

c. No, accountants should not be concerned that the importance of financial reporting may decline if behaviorally biased investors do not use all the information in the financial statements. To the extent that investors are behaviorally biased, the importance of high-quality reporting increases, since better reporting can help to reduce the share mispricing that such biases produce. Reporting improvements that can help reduce biases include moving information from financial statement notes to the financial statements proper, full and clear reporting of low-persistence items, and high-quality Management Discussion and Analysis/Management Commentary and risk disclosures. As a result, share prices are closer to fundamental value, and society benefits from better-working capital markets.

Again notice the progression, allowing part marks to be earned along the way and providing structure for students – this also increases the marking efficiency, as students will likely be more clear on what they are being asked based on the question's progression.

Testing non-technical competencies

Short-answer questions provide ample opportunities for assessing non-technical competencies, either in separate questions, or combined in a single question alongside technical competencies. Students can be asked to analyze information, think critically, evaluate different alternatives, respond to ethical challenges and justify their decisions. To ensure appropriate balance, review every technical question and see if and how a non-technical competency can be added. For example, in a question that requires students to calculate an estimate, have them also assess the level of certainty and the implications of the estimate being wrong. Or have students perform calculations and ask them why the results could occur. For example, see short-answer question 7 of the Advanced Management Accounting Practice Exam in Part 4.5.2.

To achieve reliability and sufficiency, it is beneficial to integrate competency domains where possible. Integration is usually easier in a case question format, but some integration can be built in to short answer questions, as long as the areas being integrated have been covered in the concurrent or pre-requisite studies. Where appropriate, for example, students could be asked to assess the tax implications of management accounting decisions, or could be asked to explain audit implications of an accounting policy choice.

Where practical, questions should require a response in a realistic format based on what will be expected in the workplace (such as memos, emails, well-formatted schedules) and a portion of marks should be allocated to the communication and presentation format. For examples, see the short-answer questions in Part 4.5.2.

3.5.6

Developing quality case studies

Case-based questions can range from a few paragraphs to several pages. Like scenario-based short-answer questions, cases have the benefit of presenting realistic stimulus materials for students to work with. These types of question can and should build in the challenges of real-world decision-making, such as incomplete information, risk, and uncertainty.

Terminology

Case-based questions present a realistic situation about an organization and require a student to use the information to provide a response that is specific to that organization and situation.

Case-based questions tend to be longer than the scenario-based short-answer questions we discussed earlier, and typically integrate two or more topics as well as more enabling competencies.

Case-based questions have the following elements:

- Stimulus – the introductory text that provides background to the situation
- Exhibits – schedules, tables etc. that provide detail for analysis
- Required – the explicit instruction to the student about what is required of them and what deliverables are expected
- Sample solution – a full solution in the form expected of the student
- Marking grid or rubric – instructions to markers as to how marks should be awarded or how performance should be graded

A note on commercially prepared case studies

Commercially prepared case studies are available for purchase and use by universities and other educators. These comprehensive cases are complex and extensive, and are accompanied by educator notes that can be used to guide instructors as to using the cases to help candidates explore issues in real-world settings. These case studies are valuable to use in learning activities and in formative assessments in terms of assignments and projects.

Developing these commercial cases follows an intensive development and quality control processes that are beyond the scope of this Guide.

Benefits of case studies: Testing non-technical competencies

Case-based assessments are particularly important in competency-based education programs as they focus on simulating the real world and assessing the skills and abilities that candidates can demonstrate in the role of the professional accountant.

Case studies are among the best tools for developing and assessing critical thinking skills and the ability to integrate across competency domains. These are skills we want to start developing and assessing as early as possible in aspiring professional accountants, but as educators, we need to build students' competence and confidence over time. Full-length case studies are generally too complex and dense for students in foundation and, to some extent, intermediate-tier courses. Smaller "mini-cases" can be a useful tool to test skills using real-life scenarios. These questions typically range from a half- to a full page of background, and have less complexity than their longer counterparts.

In advanced and professional-tier courses, candidates should have stronger critical thinking and analysis skills, and should be able to handle longer cases with added complexity.

Challenges of using case studies

From an assessment perspective, one of the challenges of using cases is that each case takes a significant amount of time to produce. This means that they are resource intensive to develop, particularly if used on exams that are disclosed to students after writing. Case questions also take a long time for candidates to respond to, but have a relatively small set of competencies that are being assessed on any given case. This means that on an exam, including a long comprehensive case study can consume more exam time than is available to assess a relatively small set of competency statements/learning outcomes or learning objectives. For these reasons, most exams use smaller cases rather than full comprehensive ones.

The exception is when a PAO uses an ICE, where the exam tends to be longer and is specifically designed as a final professional assessment, rather than a course-specific, in-depth exam. ICEs and the types of longer case studies used on those exams is the subject of a future publication. For the remainder of this part, we'll focus on the shorter case-based questions.

Achieving quality characteristics through case-based questions

Reliability/sufficiency and validity

Using case studies results in a trade-off between reliability/sufficiency and validity. Case studies tend to produce assessments that are highly valid, as there is significant content that can be included to test real-life situations and decisions that are important to the role of a professional accountant, and can be assessed at a meaningful level of depth. On the downside, however, the concentration on a narrow

set of learning objectives, as compared with other question types, results in fewer opportunities for students to demonstrate competence. The result is that the assessment has more difficulty testing sufficient breadth of coverage, which can make the results less reliable. If too much weight is placed on a particular issue in a case, a candidate who is broadly competent but unable to handle the specific issue raised in the case may be penalized more extensively than they would under an exam with more breadth of coverage.

Equity and transparency

Achieving equity and transparency in case studies follows the same considerations as other question types. Because of the complexity of cases and the inherent ambiguity designed into scenarios, performing a review for bias to ensure clarity of language is essential, especially for cases used on exams.

From a transparency perspective, ensuring adequate guidance regarding expectations is essential. Sample cases can be an effective means of providing more transparency, as can using cases regularly in the classroom so that students become accustomed to the expectations for success. Students should be taught to analyze cases systematically so that they are clear on how to approach cases and perform well on case and scenario-based assessments. As an example, see Part 4.4.3, which provides an appendix used in the Sample Program to guide students on a systematic case analysis approach. This type of approach is used in the Sample Program in both assignments and on exams, and is illustrated in the coursework.

Process for developing scenario/case-based questions

Set your targets

As usual, the process begins by setting your target learning objectives. Specific consideration should be given to integrating topics from different lessons within a course, different technical competency areas where possible, and from enabling competency areas (see the paragraph on integration below).

When setting targets, it is also important to ascertain the time to be allocated to responding to the question. Include sufficient time to read and digest the case, as well as analyze and respond as needed.

Prepare an outline

A challenge in preparing cases is in including the right amount of information for students to work with. There needs to be sufficient information for them to perform a meaningful analysis, and case authors will often choose to include some extraneous stimulus material that students need to determine is irrelevant. It is important, however, not to allow a case to become too ambiguous or vague, as this serves to confuse competent candidates and make it more difficult to respond appropriately.

The best way to ensure that the case is complete, but not over-scoped, is to prepare an outline in advance of drafting the case.

The outline should include the main facts and contexts of the scenario and how the target learning objectives will be assessed. The outline should also answer the following:

- What information, at a minimum, needs to be given to the student in order for them to prepare the expected deliverables?
- How will this information be presented? (as text in the stimulus, as a schedule in the exhibits?)
- What deliverables will the student be asked to prepare – specifically what will they be expected to do? Ensure the deliverables are realistic in terms of time requirements, depth levels and the roles actually expected in the workplace.
- What is outside of the scope, where students will need to be limited from going toward these areas (for example, will the question ignore tax impacts?)

Develop the case

Based on the outline, draft the case elements:

- Build the stimulus as a story, and ensure that the student's role and perspective are clearly presented.
- Use realistic exhibits, and provide depth that is sufficient to perform the required analysis, but not so detailed as to waste response time.
- Ensure the "Required" is clear and unambiguous in terms of the decisions to be made, the questions to be answered, and the form and format of deliverables. The format of the Required should be less directive than in a short-answer question (i.e., not broken out into specific parts), but students should know what is being asked of them. For example, review the "Required" in the sample cases in Part 4.5.3.

- Prepare a sample solution that would cover all of the requirements and demonstrate competence fully.
- Develop a marking grid or rubric to allow markers to grade performance consistently and distinguish between performance. Marking guidance should have enough detail for markers to grade objectively and consistently, and also to be able to explain the grade to candidates who have questions about their results. Rubrics are more general statements of how to mark a student script and take the form of aligning specific grades with a comment of the minimum achievement to be demonstrated. In this sense, they are similar to a marking grid. The difference is that a marking grid enables marks to be built-up whereas a rubric assigns an entire mark to an overall student response based on a more holistic judgement. This type of holistic marking is common in universities but such an approach generally does not provide enough detail of where competencies have been demonstrated.

As you develop the case question, solution, and marking guidance, it is best to work iteratively to ensure that elements stay in alignment.

Integration

As mentioned above, one of the key strengths of case-based questions is the ability to integrate between topics and to include enabling competencies. Integration on a broad scale is more possible with longer cases, but even shorter cases have opportunities for integration, as long as the topic areas being integrated have been covered by students as concurrent or prerequisite studies. For example:

- Audit courses naturally integrate financial accounting and reporting concepts as these are the subject of the audit.
- Management accounting courses can integrate finance topics, as finance concepts are often important determinants of decision-making for management accountants.
- Financial accounting and management accounting decisions often need to consider tax implications.
- Accounting and audit courses can integrate concepts of risk management and governance.
- All courses can integrate enabling competencies such as ethical decision-making, communication, critical thinking, professional judgment.

For examples of short case questions, see Part 4.5.3.

3.5.7

Other types of assessments

Much of Part 3.4 has focused on typical written assignments and examinations, using a variety of question types. As discussed in Part 3.3.3, however, learning activities should be varied to engage students and to allow individuals to develop and demonstrate both technical and non-technical competencies. Many of these learning activities can be used as assessments. For example:

- Students can be assigned research projects and be required to prepare a written report and/or to present results orally to the class. These reports and presentations can be assessed based on technical content as well as research, analysis, and communication skills.
- Marks can be assigned to performance during in-class debates, where performance is assessed on the basis of both technical arguments and persuasion skills.
- Oral exams can be used to assess a candidate's ability to reason, communicate, and think critically under pressure.
- Groupwork can be used to assess collaborative and leadership skills. Consider having students complete peer reviews to inform the assessment process.

Final reports or presentations may be valid choices for summative assessments, particularly in conjunction with written and/or oral final exams. The other assessments suggested above would likely be best suited to formative assessments.

3.5.8

Mixing it up: when to use each type of assessment question

We'll close out this part with a summary of the strengths of each type of assessment question to guide assessment development decisions:

Type	Strengths and notes for using
Multiple-choice questions	Particularly suited to covering breadth of materials and topics; efficient means of testing low-to-mid cognitive levels.
Short-answer questions	Good for balancing breadth and depth in coverage; can assess full range of cognitive levels; testing integration and enabling competencies is possible, but more limited.
Short cases	Good for assessing enabling competencies such as critical thinking and analysis with some integration; most suitable for foundation and intermediate-tier courses where students would be overwhelmed by long cases.
Long cases	Best for assessing higher-level cognitive skills, enabling competencies and extensive integration; best for advanced and professional-tier courses.
Group projects	Important for demonstrating collaborative skills and leadership.
Oral exams and presentations	Effective means of assessing verbal communication skills.

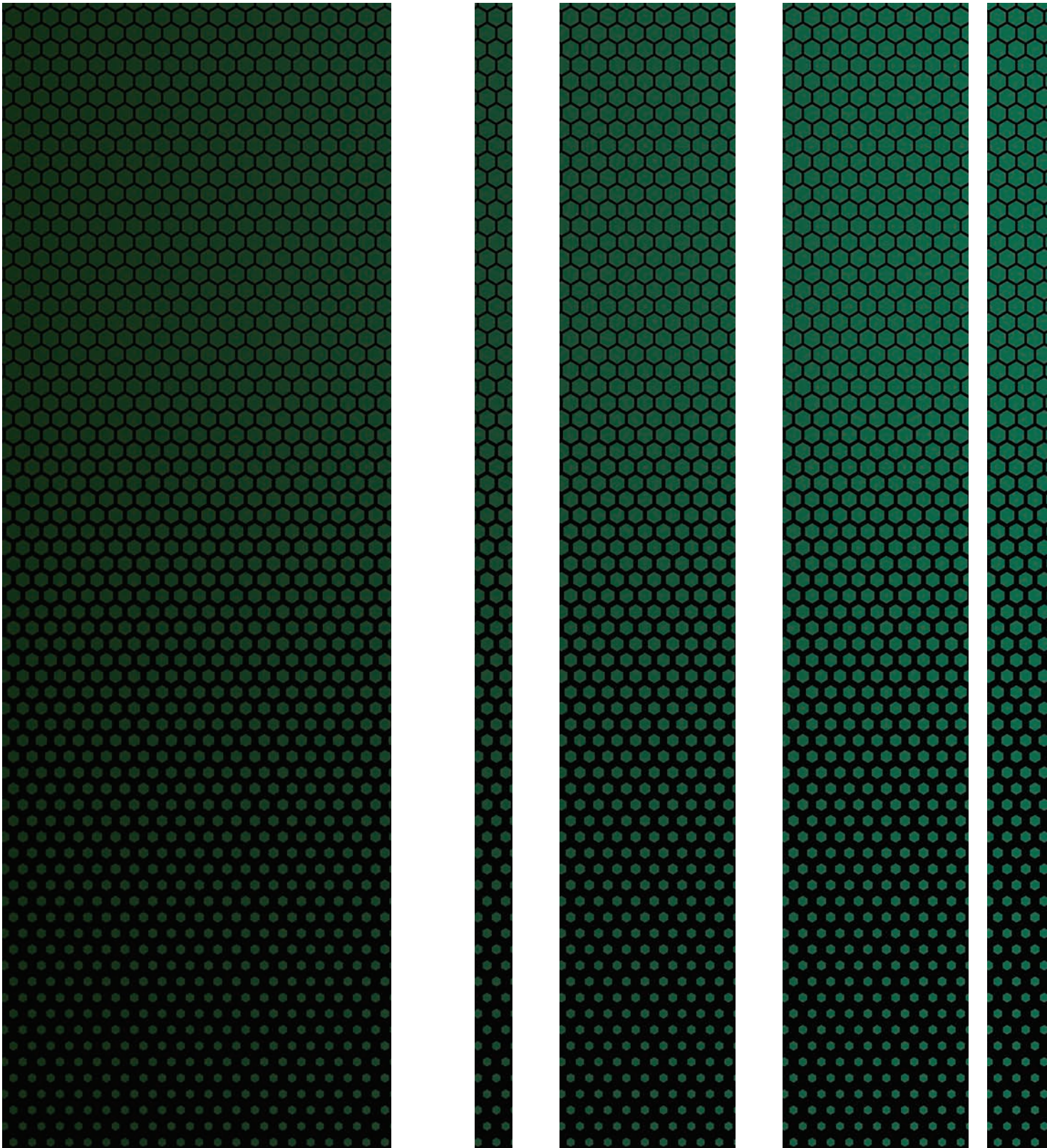
The quality characteristics of IES 6 can be most effectively and efficiently achieved by planning and using a range of assessment types that combine to provide objective evidence that competence has been developed and demonstrated at the required proficiency levels before a candidate is accepted into the profession. As individuals progress through a program of studies, instructors can support assessment of competence by systematically preparing quality exams. One way to approach this is to determine (based on the Blueprint) how much time should be allocated to higher-order cognitive skills and enabling competencies, and design cases and scenario-based questions to cover these requirements. Next, plan to use a mix of short-answer questions and MCQs to achieve sufficient breadth across the remaining topic areas. Short-answer questions should be favored where complex calculations and topic depth is needed, and MCQs are preferred to cover a broad range of concepts that require less depth.

Cost will also be a consideration for many PAOs in terms of which assessment question format is used. Generally, MCQs are cheaper to develop than longer questions. Long cases, involving a team of individuals are likely to be costly. Additionally, MCQs are often re-used if students are tested online and the content of MCQs is never made publically available. Costs relating to Group projects and oral exams/presentations are used infrequently since they tend to require a lot of attention from examiners to assess and manage. Overall, a balance will be struck about what question format is needed for the assessment and the cost of developing and administering the assessment.

By planning assessments fully and designing them to take advantage of the strengths of each question type, higher quality assessments can be achieved.

PART 4

SAMPLE EDUCATION AND ASSESSMENT MATERIALS



4.1
Introduction

4.1.1
Background

Sample materials are drawn from an international professional accounting program used in Canada and are provided as an example of best practice. The program consisted of foundation to advanced-tier courses in a comprehensive range of accounting and business topics. The program was flexible enough to be offered online or in the classroom. The primary learning materials were provided through a set of Lesson Notes. Textbooks were used as supplemental readings where available. Students were assessed by way of assignments and examinations.

The sample materials are drawn from a variety of courses in the Program to illustrate different concepts of good practice in accounting education.

For context, excerpts from the sample program curriculum are included, so that readers can see where the sample materials fit within the larger context of the Program.

The curriculum is developed for the program overall and provides information on what the required content is for both the program and for each course. This document is used by educators and administrators in planning the program and developing course materials, and by students in learning about the program and their specific courses.

The curriculum includes outlines of what is covered in a particular course, in what order, and to what level of depth. These outlines represent the course-specific curricula/syllabi used by course developers when developing course materials and assessments, by instructors and teaching assistants when developing lesson plans and teaching, and by students as they work through the courses.

Of course, course outlines and lesson plans are supported by the methods the educator uses to teach. The teaching of material to help students to achieve the competencies stated requires a particular focus on outcomes-based teaching. That is, the focus of teaching is to enable students to demonstrate that they have acquired the competencies set out in the program/module. This does not mean to say that teaching is only about passing an examination. It is more a reference to say that teachers should aim to help students achieve their objectives. The implication of this is that competency-based teaching is required that places as the focus of attention the need to help students become professional accountants. In practice, this would mean carefully designing a program of study and lesson content that addresses this objective. Specifically, it requires attention to learning objectives for each of the topics taught; educators should look to the proficiencies and levels of understanding of topics to shape a lesson; and formative assessments should be frequently used to help both educators and students understand progress in learning. This very active and engaged approach to teaching and learning supports the focus on outcomes required.

4.2

Excerpts from the curriculum for the sample program

4.2.1

Excerpt 1 from the sample curriculum: table of contents

The Excerpts from here on will be presented on notebook paper to avoid confusion, while the comments of the Guide will continue in the same style.

CURRICULUM TABLE OF CONTENTS

Auditing Courses
- External Auditing [AU1]

Finance Courses
- Corporate Finance Fundamentals [FN1]

Management Information Systems Courses
- Managing Information Systems [MS1]
- Information Systems Strategy [MS2]

Taxation Courses
- Taxation Fundamentals [TX1]
- Advanced Taxation [TX2]

General Business Courses
- Business Communication [CM1]
- Micro & Macro Economics [EM1]
- Business Law [LW1]
- Business Quantitative Analysis [QU1]

Integrative Capstone Exam
- Integrative Capstone Exam

4.2.2

Excerpt 2 from the sample curriculum: program-level guidance

PART 1: GUIDE TO THE PROGRAM CURRICULUM

PURPOSE

The purpose of the program curriculum is to provide detailed information on the content of the courses in the Program of Professional Studies. This document has been produced for education administrators, course authors, course examiners, committee members, and resource people in the education system; current and potential students and those who advise them; and others in the professional, academic, and general community.

CONTENTS

The remaining sections of this introduction provide background information on the major features of the Program. The main part of the program curriculum comprises the course descriptions and the module-by-module outlines of the course content, including levels of depth required, in the following order of subjects:

- financial accounting
- management accounting
- auditing/management auditing
- finance

- management information systems
- taxation
- general business (communications, economics, law, quantitative methods)
- integrative capstone exam

At the beginning of each major subject section is a topic index. The index identifies the specific courses and modules in which each topic is covered and indicates the level of depth required.

The amount of information provided on each course in this edition of the program curriculum depends on its current status in the program. Courses under review or development may have only a provisional description.

THE PROGRAM OF PROFESSIONAL STUDIES

Mission

The primary mission of the Program of Professional Studies is to develop instructional materials and examinations that support the development and assessment of the competencies necessary for professional qualification in the field of accounting.

Program features

The Program establishes standards of education, examination, and experience that individuals must meet to become a professional accountant. The Sample PAO is recognized internationally as a leading developer and provider of competency-based professional accounting education that integrates ethics, information and communications technology, and best international practices for competency-based accounting education, training, and certification.

Competency-based program

The Program is competency-based, emphasizing development of the key areas of knowledge, skills, and professional values required of accountants and senior financial managers, including:

- professional expertise in accounting and related areas
- ethical judgment and decision-making skills
- effective communication, management, and leadership skills
- interpretive, judgmental, and analytical skills
- competence in the use of technology as a management and accounting tool
- management of change in the technologies, processes, and structures of organizations
- use of complex information systems in decision making

The knowledge, skills, and professional values required of a newly-certified professional accountant are reflected in a set of competency statements. These competencies are validated from time to time through an analysis of professional practice (Practice Analysis). Through the use of surveys and focus groups, members from a wide range of positions in the financial community have validated the importance and essentiality of each competency as well as its frequency in practice. The results of the practice analysis have enabled the Sample PAO to develop a profile of competencies required of a newly-certified professional accountant.

The Sample PAO is committed to the concept of lifelong learning. Its competency-based approach is maintained in professional development courses and career development following certification.

Integration of information and communications technology

The Program of Professional Studies is designed to ensure that new members are fully literate in computer and information technology. Upon certification, all professional accountants must have achieved a high level of expertise in computer and information technology, including:

- a practical knowledge of information and communications technology as a management and accounting tool
- an understanding of information and communications technology, as required to use and participate in the design and control of complex information systems
- an adequate knowledge base of information and communications technology, as required to manage and adapt to technological change

For all courses in the program, students must have access to, and familiarity with, a computer. Each year recommended system requirements are published for the coming academic year. This specification exceeds the minimum system required for courses and is recommended for all students.

Course delivery

The Program of Professional Studies offers classroom and online delivery options, providing Lesson Notes for study, and Internet-based resource materials. Students have access to a wide variety of online services such as course tutors, technology support, and interactive study groups. Students also receive direct access to multimedia activities, course websites, course updates, practice examinations, module summaries, self-test questions, comprehensive course reviews, and model financial statements.

The program also integrates a wide range of leading business software, giving students hands-on opportunities to develop skills to use technology as an effective business decision tool.

Ethics integration

Ethics is the cornerstone on which all sound professions build their reputation and instill trust in those they serve. Members and students are pledged to adhere to the International Code of Ethics for Professional Accountants™ (the International Code of Ethics), developed and maintained by the IESBA®. Adherence to a code of ethics is one of the chief reasons why business holds professional accountants in such high esteem. To assist in learning and applying the business ethics that will guide students in their professional accounting careers, all courses include references to, and instruction in, professional business ethics.

Standards of written communication

A high standard of written communication is expected of the professional accountant. Reports, observations, analyses, opinions, conclusions, recommendations — these and other valued outcomes of the professional accountant's work must be communicated in clear, unambiguous language. In particular, longer passages of writing must be well organized and easy to understand. For effective communication, and to enhance the impression of professionalism, an accountant's writing must be free of errors and inadequacies relating to grammar, usage, spelling, and punctuation. A strong command of vocabulary should be in evidence.

These universally accepted standards of the professional environment apply to all students in the program. In assignments and examinations, markers and examiners can only assess knowledge, understanding, and competencies if the ability to communicate is at an appropriate standard. Especially in courses where longer reports are required, markers and examiners will expect student writing to display qualities of reasoned and persuasive argument, and clarity of presentation.

Program structure

A person becomes a professional accountant by satisfying the requirements of education, examination, and experience, as shown in Exhibit 1. The program of education and certification is shown in Exhibit 2.

Exhibit 1. Certification Requirements

The Program of Professional Studies is completed by satisfying the requirements of education, examination, and experience.

EDUCATION	Professional curriculum	
	Financial Accounting Management Accounting Accounting Theory Auditing Finance Taxation Management Information Systems	Communications Economics Law Quantitative Methods Information and Communications Technology Ethics
	Undergraduate degree	
EXAMINATION	INTEGRATIVE CAPSTONE EXAMINATION (ICE) The ICE is a capstone professional applications examination.	
	INDIVIDUAL SUBJECT EXAMINATIONS Assess knowledge, skills, and abilities at an appropriately advanced level for the major subjects in the professional accounting curriculum.	
EXPERIENCE	To qualify for certification as a professional accountant, all candidates must satisfactorily complete practical work experience and assessments. Specified competencies will generally be met through 36 months of approved work experience.	

Exhibit 2. Program Of Professional Studies

CERTIFICATION (once Practical Experience requirements are met)		
INTEGRATIVE CAPSTONE EXAMINATION (ICE)		
Undergraduate degree to be completed by this point.		
ADVANCED STUDIES	TIER 4	FA4: Financial Accounting: Consolidations & Advanced Issues MA2: Advanced Management Accounting AT1: Accounting Theory & Contemporary Issues AU1: External Auditing TX1: Personal & Corporate Taxation
FOUNDATION STUDIES	TIER 3	FA3: Intermediate Financial Accounting II FN1: Corporate Finance Fundamentals MS1: Managing Information Systems
	TIER 2	FA2: Intermediate Financial Accounting I QU1: Business Quantitative Analysis MA1: Management Accounting Fundamentals CM1: Business Communication
	TIER 1	FA1: Financial Accounting Fundamentals EM1: Micro & Macro Economics LW1: Business Law

Course and examination requirements

The Program of Professional Studies (Exhibit 2) is comprised of a combination of academic course and examination requirements. The Foundation Studies can be completed through the Program of Professional Studies or may be satisfied by transfer credit for studies at accredited post-secondary institutions. The Advanced Studies and the ICE must be completed directly through the Program of Professional Studies (no transfer credits are allowed).

The program curriculum has been developed and is maintained by a faculty of business specialists and university professors, all of whom are leaders in their fields of expertise. The courses and examinations are developed to provide and assess leading-edge knowledge, advanced computer integration skills, independent learning abilities, and professional competencies needed in today's business world.

Foundation Studies

The first three tiers of the program form the Foundation Studies. These courses provide a solid understanding of full-cycle financial accounting, economics, law, statistical analysis for business, management accounting, business communications, and management information systems.

Advanced Studies

Tier 4 of the program represents the Advanced Studies in professional education. The courses at this tier provide instruction and preparation in advanced financial accounting, advanced management accounting, taxation, auditing, and accounting theory.

Integrative Capstone Examination

The ICE is the final examination requirement in the certification process leading to the granting of the professional designation.

The ICE and its preparatory materials are designed to give candidates practice in demonstrating the competencies required of a newly certified professional accountant. The ICE includes a variety of question formats, and requires candidates to integrate technical and pervasive enabling competencies at a professional level.

Study method and workload

The Program of Professional Studies is designed to offer the opportunity to study while pursuing employment and career advancement. Each course comprises lessons with corresponding self-test questions and assignments. Students complete and submit the assignments for feedback to prepare for the final examination.

The program prepares students for certification as financial professionals. In order to be successful, they need commitment, self-discipline, and organization skills, and should anticipate devoting a minimum of 20 hours per week per course to studies. It is recommended that students take only one course per session if working full-time.

Levels of depth

Levels of depth are used to indicate to students the required depth of understanding and application of the course material. The three-level scheme used in the courses is designed to help students identify those areas of study that are of most importance as well as those areas that require less concentrated study. It also helps students understand what is expected of them on assignments and examinations as they progress from the foundation studies to the advanced tier of the program. Material at all three levels of depth is examinable.

Each course topic (and corresponding learning objective) is assigned a level of depth based on the following definitions.

Level 1 - essential/mastery

Students are required to attain an in-depth understanding of concepts and principles; develop a sound conceptual and comprehensive technical knowledge of procedures; become proficient in the application of knowledge to practice; and become a proficient user of reference documents and sources for further study. Examinations will focus primarily, but not exclusively, on level 1 material, and the requirements for questions dealing with this material will be the most extensive. In responding to examination questions based on level 1 material, students should be able to demonstrate increasing levels of mastery as they progress through the program.

Level 2 - important/comprehension

Students are required to attain a sound understanding of concepts and principles, develop a working knowledge of procedures, and become familiar with common reference documents and sources for further study. Examinations will assess level 2 material, but the question requirements will generally be less extensive than for level 1 material. In responding to examination questions based on level 2 material, students should be able to demonstrate increasing levels of comprehension, application, and analysis as they progress through the program.

Level 3 - background knowledge

Students are required to acquire a general knowledge of broad topic areas and identify common reference documents. Although level 3 material is examinable, the question requirements are limited to general knowledge and understanding. Students may find this material to be a valuable reference resource in their practical experience. In responding to examination questions based on level 3 material, students should be prepared to demonstrate a slightly higher level of knowledge and comprehension when writing the ICE.

The expected learning outcomes

The expected learning outcomes at each tier of the program include and expand on expectations in earlier studies:

Level 1 - essential/mastery	Level 2 - important/ comprehension	Level 3 - background knowledge
Foundation Studies (Tier 1 to 3) courses		
Students should be prepared to: • apply concepts and techniques to new situations • perform calculations to create appropriate solutions • analyze given information to make preliminary conclusions As part of their analysis, students will be expected to break down information into its component parts, discriminate facts from assumptions or inferences.	Students should be prepared to describe, explain, and summarize information in their own words, as well as provide examples. They will not be required to demonstrate in-depth application of concepts or provide in-depth analysis.	Students should be prepared to recognize when this material is applicable or why it is relevant, but they will not be required to demonstrate an in-depth understanding of concepts.

Level 1 - essential/mastery	Level 2 - important/ comprehension	Level 3 - background knowledge
For Advanced Studies (Tier 4) courses		
Students should be prepared to analyze information to make preliminary conclusions. As part of their analysis, students will be expected to break down information into its component parts, discriminate between relevant and irrelevant information, and differentiate facts from assumptions or inferences. They will also be expected to begin integrating concepts and ideas, and to begin applying standards and criteria to evaluate situations and make judgments.	Students should be prepared to: • describe, explain, and summarize information in their own words, as well as provide examples • apply concepts and techniques to new situations • perform calculations to create appropriate solutions Students will not be required to provide in-depth analysis or evaluation.	Students should be prepared to recognize when this material is applicable or why it is relevant, but they will not be required to demonstrate an in-depth understanding of concepts.
Integrative Capstone Examination		
Students should be prepared to: • thoroughly analyze given information • synthesize information to form a sound evaluation of a situation • make recommendations that are well supported and add value for the decision-maker • apply and implement knowledge as a competent professional would in normal circumstances, within a reasonable time frame and without supervision	Students should be prepared to: • apply concepts and techniques to new situations • analyze given information and develop preliminary conclusions • break down information into its component parts, discriminate between relevant and irrelevant information, and differentiate facts from assumptions or inferences Students will not be required to provide in-depth evaluation or make complex recommendations.	Students should be prepared to recognize why this material is relevant and understand it well enough to be able to describe or explain it in their own words, summarize the information, or provide examples. They will not be required to provide in-depth analysis or evaluation.

Examinations and passing standards

In the Foundation and Advanced Studies, students write three-hour examinations. The ICE is a four-hour exam. In Foundation and Advanced Studies courses, students earn credit for assignments. By contrast, a candidate's result on the ICE is determined solely by the examination.

All examinations (except the ICE) are marked using a total of 100 points, and the passing standard is 65%. Performance on the ICE is determined on the basis of competency statements and is communicated to candidates as a Pass or Fail. In order to pass the ICE, candidates are assessed on their performance across a broad range of competencies.

To assist in examination preparation, two practice examinations and suggested solutions are provided in the course materials. Examination review sessions are available in most regions. These sessions may be audio-streamed, online, or classroom-based.

Examination blueprint

Examination blueprints are used to assist students to prepare for their examinations. A blueprint identifies the specifications of an examination. More specifically, it identifies the content (topic) areas, relevant learning objectives, levels of depth, proportion of marks assigned to each content area, type of question (multiple-choice, short-answer, case study), and mode of delivery. Examiners also use the blueprint to develop their examinations. Blueprints have been developed for all courses. Each examination blueprint is attached to the practice examination, which is included with the course material.

Practical experience assessment

To qualify for certification as a professional accountant, all candidates must satisfactorily complete practical work experience and assessments. Specified competencies will generally be met through 36 months of approved work experience, under the supervision of a qualified professional accountant.

The experience must be acquired in positions that require a well-rounded knowledge of and a high degree of responsibility in an accounting, financial, or acceptable related position. It is expected that students will be concurrently employed full-time in an appropriate position. As students move to higher tiers of the program, they must be employed in positions of increasing responsibility. This experience provides the opportunity to apply the concepts, skills, and judgmental abilities learned through the program of professional studies.

Students' practical experience or portfolios are assessed from time to time. Key features of the experience should allow students to:

- obtain the required training to function at a high level of professional and technical competence within the workplace.
- understand the relationship of their financial role to the functioning of other areas of the business.
- develop and practice ethical business practices.
- work at progressive levels of responsibility with increased accountability, independence of action, decision making, and problem solving.
- demonstrate the ability to communicate orally and in writing.
- demonstrate strong interpersonal, project management, and supervisory skills.
- actively participate in a professional network.

The degree requirement

All students in the Program of Professional Studies are required to obtain an undergraduate degree prior to certification as a professional accountant. The degree may be from any recognized degree-granting institution including a university, university-college, or technical institution.

Degrees may be obtained in any field, and foreign degrees deemed equivalent to local standards are also acceptable. The Sample PAO will determine the recognition of a particular degree for this purpose. Applicants with a recognized degree will receive advanced standing based on their academic qualifications and may be granted exemptions; additional courses and/or examinations will be necessary.

4.2.3

Excerpt 3 from the sample curriculum: course description and outline for sample course

PART 2: COURSE DESCRIPTIONS AND OUTLINES

The pages that follow contain, for each course in the Program of Professional Studies:

- topic indexes for the major subjects
- course descriptions, including prerequisites
- lesson-by-lesson outlines of the course content, including all major topics and levels of depth required

...

INTERMEDIATE FINANCIAL ACCOUNTING I [FA2]

Prerequisites: Financial Accounting Fundamentals [FA1]

Description: Intermediate Financial Accounting I [FA2] is an intermediate financial accounting course that builds on the basic understanding that you should have acquired in Financial Accounting Fundamentals [FA1] or an equivalent introductory course.

The broad aim of this course is to present the concepts, methods, and techniques concerning the application of generally accepted accounting principles. The underlying issues of accounting theory will be incorporated as they arise. This course integrates the use of accounting and spreadsheet software in the setup and solution of accounting problems. It also covers various ethical issues related to the use of accounting information.

Exam length: 3 hours (see exam blueprint for further information)

Topic areas and levels of depth

Topic area	Level of depth
1. Financial reporting and accounting concepts	
Financial statement users and objectives of financial reporting	1
Ethics in accounting (in policy choices, decision-making, etc.)	1
Accounting assumptions and qualitative characteristics	1
Measurement methods and recognition criteria	1
Elements of financial statements	1
Professional judgment in financial reporting	2
Accounting information processing system	1
2. Statement of profit or loss and other comprehensive income and statement of financial position presentation	
Nature of income	1, 2
Presentation of the statement of profit or loss and other comprehensive income	1
Discontinued operations	1

Topic area	Level of depth
Earnings per share	2
Statement of changes in equity	1
Statement of financial position presentation	1
Restatements	2
Disclosure	2
3. Interest concepts of future and present value	
Time value of money	1
Basic interest concepts	1
Computing present and future values	1
Ordinary annuities and annuities due	1
Periodic payments required for present value and future value problems	1
Valuation concepts and generally accepted accounting principles	1, 2
4. Current financial assets and current financial liabilities	
Nature of current financial assets	1
Cash	1
Receivables	1
Accounting for bad debt expense	1
Notes receivable and payable	1
Current financial liabilities	1
Managing working capital	2
5. Inventory measurement, inventory valuation, and cost of goods sold	
Nature of inventory	1
Perpetual and periodic inventory systems	1
Inventory cost formulas	1
Valuation at lower of cost or net realizable value	1
Effect of inventory errors	1
Inventory estimation methods	2
Internal controls for inventory	2
6. Non-current assets: Acquisition, disposal, and exchange	
Definition and valuation of PPE and intangible assets	1
Determining the cost of PPE	1, 3
Intangible assets	1
Disposal, exchange, and retirement of PPE	1
Goodwill	1
Disclosure and cash-flow reporting	1
Revaluation of PPE and intangible assets	2
7. Property, plant, and equipment and intangible assets: Depreciation, amortization, and impairment	
Nature of depreciation and amortization	1
Depreciation and amortization methods	1
Fractional-year depreciation	2
Impairment of PPE and intangible assets	1
Disclosure requirements	1
Depreciation of revalued assets	2

Topic area	Level of depth
8. Liabilities	
Liabilities: Theoretical foundation	1
Contractual obligations, contingencies, and guarantees	1
Environmental liabilities	2
Current and long-term liabilities	1
Calculating bond prices	1
Subsequent changes in bond interest rates	1
Calculating interest expense on bonds	1
Preparing a bond amortization schedule	1
Debt retirement and defeasance	2
Foreign-currency denominated debt	2
Disclosure and quality of earnings	1
9. Financial statement analysis and cash flow	
Nature of financial statement information	3
Capital markets	2
Financial statement analysis: Horizontal and vertical analysis	1
Ratio analysis	1
Limitations of financial statement analysis	2
Statement of cash flows	1
10. Partnership equity accounting	
The nature of a partnership	2
Partnership contribution and profit distribution	1
Admission of a new partner	1
Retirement or death of a partner	1
Liquidation of a partnership	2
Liquidation of a partnership involving insolvency	2
Financial statement presentation	1

4.2.4

Glossary of assessment terms

The following glossary of terms is provided to assist you in interpreting learning objectives and expectations in assignment and examination questions.

It is adapted from David Palmer, *Study Guide: Developing Effective Study Methods* (Vancouver: CPA Canada, 1996). Copyright David Palmer.

GLOSSARY OF ASSESSMENT TERMS

Calculate	Mathematically determine the amount or number, showing formulas used and steps taken. (Also **Compute**).
Compare	Examine qualities or characteristics that resemble each other. Emphasize *similarities*, although differences may be mentioned.
Contrast	Compare by observing *differences*. Stress the dissimilarities of qualities or characteristics. (Also **Distinguish between**)
Criticize	Express your own *judgment* concerning the topic or viewpoint in question. Discuss *both* pros and cons.
Define	Clearly state the *meaning* of the word or term. Relate the meaning *specifically* to the way it is used in the subject area under discussion. Perhaps also show how the item defined differs from items in other classes.
Describe	Provide detail on the relevant characteristics, qualities, or events.
Design	Create an outcome (e.g., a plan or program) that incorporates the relevant issues and information.
Determine	Calculate or formulate a response that considers the relevant qualitative and quantitative factors.
Diagram	Give a drawing, chart, plan, or graphic answer. Usually you should label a diagram. In some cases, add a brief explanation or description. (Also **Draw**)
Discuss	This calls for the most *complete* and *detailed* answer. Examine and analyze carefully and present both pros and cons. To **discuss briefly** requires you to state in a few sentences the critical factors.
Evaluate	This requires making an *informed* judgment. Your judgment must be shown to be based on *knowledge* and *information* about the subject. (Just stating your own ideas is not sufficient.) Cite authorities. Cite advantages and limitations.
Explain	In explanatory answers you must clarify the cause(s), or reasons(s). State the "how" and "why" of the subject. Give reasons for differences of opinions or of results. To **explain briefly** requires you to state the reasons simply, in a few words.
Identify	Distinguish and specify the important issues, factors, or items, usually based on an evaluation or analysis of a scenario.
Illustrate	Make clear by giving an *example*, e.g., a figure, diagram, or concrete example.
Interpret	Translate, give examples of, solve, or comment on a subject, usually making a judgment on it.
Justify	Prove or give reasons for decisions or conclusions.
List	Present an itemized series or tabulation. Be *concise*. Point form is often acceptable.
Outline	This is an *organized* description. Give a general overview, stating main and supporting ideas. Use headings and sub headings, usually in point form. *Omit minor details.*
Prove	Establish that something is true by citing evidence or giving clear logical reasons.
Recommend	Propose an appropriate solution or course of action based on an evaluation or analysis of a scenario.

Relate	Show how things are connected with each other or how one causes another, correlates with another, or is like another.
Review	Examine a subject critically, analyzing and commenting on the important statements to be made about it.
State	Clearly provide a position based on an evaluation, e.g., Agree/Disagree, Correct/Incorrect, Yes/No. (Also **Indicate**)
Summarize	Give the main points or facts in condensed form, like the summary of a chapter, omitting details and illustrations.
Trace	In narrative form, describe progress, development, or historical events from some point of origin.

4.3

Sample materials from the Intermediate Financial Accounting I course

4.3.1

Sample course introduction

The sample course introduction for the *Intermediate Financial Accounting I* course provided below provides information on the course purpose and prerequisites, as well as the course table of contents.

The sample course table of contents closely parallels the course's outline in the program curriculum (the only differences stem from practical examples and tools added into the course outline). In other organizations and other programs, the curriculum may be presented at a higher level or in a different format than the course table of contents.

If a course relies on a textbook or other resources that relate to the course as a whole (rather than to a particular lesson or activity), that information could also be listed in the course introduction.

INTRODUCTION TO INTERMEDIATE FINANCIAL ACCOUNTING I

COURSE PURPOSE

Intermediate Financial Accounting I [FA2] is an intermediate financial accounting course that builds on the basic understanding that you should have acquired in *Financial Accounting Fundamentals [FA1]* or an equivalent introductory course.

The broad aim of this course is to present the concepts, methods, and techniques concerning the application of generally accepted accounting principles. The underlying issues of accounting theory will be incorporated as they arise. This course integrates the use of accounting and spreadsheet software in the setup and solution of accounting problems. It also covers various ethical issues related to the use of accounting information.

COURSE PREREQUISITES

The prerequisite for this course is the introductory course *Financial Accounting Fundamentals [FA1]* or equivalent.

You are also expected to have a sound understanding of basic mathematics and its application in the business context; the expected level of knowledge is that which can be gained from any standard business mathematics text.

An understanding of the principles of ethics and how ethical issues are addressed in the profession of accounting is an essential part of the program of professional studies. *The International Code of Ethics for Professional Accountants™* (*the International Code of Ethics*), developed and maintained by the IESBA® is a required document for this course.

In *Intermediate Financial Accounting I*, it will be assumed that you have become familiar with the *International Code of Ethics*. It clarifies important concepts and terms used throughout this and other courses.

TABLE OF CONTENTS

2.2 Presentation of the statement of profit or loss and other comprehensive income
2.3 Discontinued operations
2.4 Earnings per share
2.5 Statement of changes in equity
2.6 Statement of financial position presentation
2.7 Restatements
2.8 Disclosure
2.9 Computer illustration 2-1: Trial balance

LESSON 3. INTEREST CONCEPTS OF FUTURE AND PRESENT VALUE

3.1 Time value of money
3.2 Basic interest concepts
3.3 Computing present and future values
3.4 Ordinary annuities and annuities due
3.5 Periodic payments required for present value and future value problems
3.6 Valuation concepts and generally accepted accounting principles
3.7 Computer illustration 3-1: Value of equipment

LESSON 4. CURRENT FINANCIAL ASSETS AND CURRENT FINANCIAL LIABILITIES

4.1 Nature of current financial assets
4.2 Cash
4.3 Receivables
4.4 Accounting for bad debt expense
4.5 Notes receivable and payable
4.6 Current financial liabilities
4.7 Computer illustration 4-1: Aging of accounts receivable
4.8 Managing working capital

LESSON 5. INVENTORY MEASUREMENT, INVENTORY VALUATION, AND COST OF GOODS SOLD

5.1 Nature of inventory
5.2 Perpetual and periodic inventory systems
5.3 Inventory cost formulas
5.4 Computer illustration 5-1: Specific cost identification method
5.5 Valuation at lower of cost or net realizable value
5.6 Effect of inventory errors
5.7 Inventory estimation methods
5.8 Internal controls for inventory

LESSON 6. NON-CURRENT ASSETS: ACQUISITION, DISPOSAL, AND EXCHANGE

6.1 Definition and valuation of PPE and intangible assets
6.2 Determining the cost of PPE
6.3 Intangible assets
6.4 Disposal, exchange, and retirement of PPE
6.5 Goodwill
6.6 Disclosure and cash-flow reporting
6.7 Revaluation of PPE and intangible assets

LESSON 7. PROPERTY, PLANT, AND EQUIPMENT AND INTANGIBLE ASSETS: DEPRECIATION, AMORTIZATION, AND IMPAIRMENT

7.1 Nature of depreciation and amortization
7.2 Depreciation and amortization methods
7.3 Computer illustration 7-1: Depreciation methods
7.4 Fractional-year depreciation
7.5 Impairment of PPE and intangible assets
7.6 Disclosure requirements
7.7 Depreciation of revalued assets
7.8 Ethical considerations
Appendix 7-1: "Who sets the standard?"

LESSON 8. LIABILITIES

8.1 Liabilities: Theoretical foundation
8.2 Contractual obligations, contingencies, and guarantees
8.3 Environmental liabilities
8.4 Current and long-term liabilities
8.5 Calculating bond prices
8.6 Subsequent changes in bond interest rates
8.7 Calculating interest expense on bonds
8.8 Preparing a bond amortization schedule
8.9 Debt retirement and defeasance
8.10 Foreign-currency denominated debt
8.11 Disclosure and quality of earnings

LESSON 9. FINANCIAL STATEMENT ANALYSIS AND CASH FLOW

9.1 Nature of financial statement information
9.2 Capital markets
9.3 Financial statement analysis: Horizontal and vertical analysis
9.4 Ratio analysis
9.5 Limitations of financial statement analysis
9.6 Computer illustration 9-1: Ratio analysis
9.7 Statement of cash flows
9.8 Computer illustration 9-2: Statement of cash flows

LESSON 10. PARTNERSHIP EQUITY ACCOUNTING

10.1 The nature of a partnership
10.2 Partnership contribution and profit distribution
10.3 Computer illustration 10-1: Calculating partnership profit
10.4 Computer illustration 10-2: Calculating bonus payments
10.5 Admission of a new partner
10.6 Retirement or death of a partner
10.7 Liquidation of a partnership
10.8 Computer illustration 10-3: Liquidation of a partnership
10.9 Liquidation of a partnership involving insolvency
10.10 Financial statement presentation

10.11 Ethical accounting policy choice

10.12 Case analysis

Appendix 10-1: "Analyze a case"

APPENDIX A: LOOKUP TABLES

4.3.2

Sample Lesson Notes (Lesson 5 from Intermediate Financial Accounting I)

LESSON 5. INVENTORY MEASUREMENT, INVENTORY VALUATION, AND COST OF GOODS SOLD

TOPIC OUTLINE AND REQUIRED READING

5.1	Nature of inventory (level 1)	IAS 2 paragraphs 1 - 22 IAS 23 paragraphs 1 - 8
5.2	Perpetual and periodic inventory systems (level 1)	No required reading
5.3	Inventory cost formulas (level 1)	IAS 2 paragraphs 23 - 27
5.4	Computer illustration 5-1: Specific cost identification method (level 1)	No required reading
5.5	Valuation at lower of cost or net realizable value (level 1)	IAS 2 paragraphs 28 - 39
5.6	Effect of inventory errors (level 1)	No required reading
5.7	Inventory estimation methods (level 2)	No required reading
5.8	Internal controls for inventory (level 2)	No required reading

INTRODUCTION

In this lesson, you learn about inventory, including its characteristics and its relationship to cost of goods sold. You also learn how to determine what goods and costs should be included in inventory and the differences in accounting for perpetual and periodic inventory systems. Inventory cost flow methods are described and illustrated. The lower-of-cost-or-net realizable value method is explained, as well as the inventory estimation techniques of the gross margin method and retail inventory method. The effect of inventory errors on both the statement of financial position and profit or loss and other comprehensive income is analyzed. The lesson concludes with a brief explanation of internal controls for inventory. You also have an opportunity to apply what you have learned by using a spreadsheet program to keep track of serialized inventory.

LEARNING OBJECTIVES

After completing this lesson, you should be able to do the following:

- Topic 5.1 - Explain the nature of inventory and what goods and costs are included in this asset category (level 1).

- Topic 5.2 - Compare and contrast the perpetual inventory system to the periodic inventory system (level 1).
- Topic 5.3 - Contrast specific identification with the FIFO and average cost formulas and determine when each is appropriate (level 1).
- Topic 5.4 - Calculate the total cost of items sold using a perpetual inventory worksheet (level 1).
- Topic 5.5 - Explain the lower of cost or net realizable value requirement (level 1).
- Topic 5.6 - Explain the effect of inventory errors on the financial statements (level 1).
- Topic 5.7 - Describe the gross margin method and retail inventory method for inventory value estimation, identifying the circumstances where each is appropriate (level 2).
- Topic 5.8 - Describe the features of an effective internal control system for inventory (level 2).

TOPIC 5.1. NATURE OF INVENTORY

Required reading	IAS 2 — Inventories, paragraphs 1 to 22 IAS 23 — Borrowing Costs, paragraphs 1to 8
Learning objective	Explain the nature of inventory and what goods and costs are included in this asset category (level 1).

Level 1 Inventory is a current asset that represents goods held for future sale in the ordinary course of business or for use in the manufacture of goods for sale. Inventory is frequently the largest single component of a firm's assets. Moreover, inventory is subject to wear and tear, theft, and obsolescence. Due to its significance, it is critical that firms properly manage and safeguard their inventory.

Characteristics of inventory

Inventory may be classified according to the nature of the business entity.

- A *merchandiser* (wholesale or retail) will purchase goods from various suppliers for resale. Except for packaging or repackaging, the goods purchased are not altered prior to resale. This type of inventory is generally called **merchandise inventory**.
- A *manufacturer* purchases various types of raw materials and converts them into finished products that are then ready for sale. Consequently, a manufacturing concern has three different inventory accounts:
    - Raw material inventory comprises goods that are directly used in the manufacture of the final product.
    - Work-in-process inventory consists of goods that are partly processed and require further processing before sale.
    - Finished goods inventory comprises final products that are held for sale.
- A *service provider* incurs costs while working on a contract or project for a customer. Labor and material used on the project are considered inventory until the revenue from the project is recognized. This type of inventory is usually called **work in progress**.

Most business entities also have a supplies inventory. Supplies are normally expensed as incurred since they are typically consumed in the same period as acquired, or the amount on hand at the end of the period is not material.

Cost benefit trade-off of inventory stocking levels

There are costs and benefits in holding inventory. Some of the more common costs include interest charges, storage, insurance, security, and increased obsolescence. There is also the difficult to measure cost of lost sales due to not having an item in stock. In addition to concerns about lost sales, there may also be issues relating to cost increases if there are production delays caused by shortages of materials or parts.

These costs must be balanced against the benefits of stocking additional inventory, which include increased sales and purchase discounts for buying certain lot sizes. Some of these costs and benefits can be easily quantified, but some cannot — particularly the sales aspect. As such, achieving the ideal level of inventory is often the result of trial and error plus experience.

Just-in-time inventory management systems have been developed to help minimize the risks and costs of holding excess inventory. Under just-in-time inventory management systems, the inventory is delivered to the merchandiser or to the manufacturer only when it is needed. The risks and costs associated with holding inventory are therefore shifted to the supplier. This works well as long as delivery can be assured when the inventory is needed. If transportation is disrupted, deliveries will not be on time and manufacturers may be forced to shut down operations until the necessary inventory can be obtained.

Physical goods included in inventory

The acquisition of inventory is recognized when the benefits and risks of ownership transfer from the seller to the buyer. Three situations that directly affect inventory valuation are goods in transit, goods on consignment, and sales on instalment.

Goods in transit

In practice, because it is difficult to determine when legal title passes for each purchase, acquisition of inventory is usually recorded upon receipt of the goods. Adoption of this procedure may require an end-of-period adjustment to take into consideration situations where legal title of the goods has passed but the goods are in transit. The notion of freight on board (FOB) is key to the determination of when ownership passes.

- **FOB shipping point:** The buyer pays the freight, and ownership passes when the seller delivers the goods to a common carrier, the company that is hired to deliver the goods. Therefore, the buyer would have to include in its year-end inventory any goods in transit at the end of year that are being shipped FOB shipping point. The goods are not in the buyer's warehouse, but the buyer has legal title at the end of the year.
- **FOB destination:** The seller pays the freight, and ownership passes when the buyer receives the goods from the common carrier. Therefore, the seller would have to include in its year-end inventory any goods in transit at the end of the year that are being shipped FOB destination. The goods have left the seller's warehouse, but the seller retains legal title until the buyer receives the goods.

Goods on consignment

A business entity (consignee) may act as an agent for a consignor by taking physical possession of goods and selling them on behalf of the consignor. Because the legal ownership still rests with the consignor, it is not appropriate for the consignee to record the acquisition of the goods. Upon sale of the goods, the business entity (consignee) retains only a commission. The residual of the proceeds is returned to the consignor. The goods on consignment never become the inventory of the consignee. The goods always remain in the inventory of the consignor until the final sale.

Other inventory costs

Any other costs that are necessary to bring the inventories to their present location and condition should be included as part of the inventory cost. Examples would include the cost of transporting unfinished inventory from one location to another for further processing and the cost of designing custom products for a specific customer.

There are a number of costs that should be excluded from the cost of inventories and expensed in the periods in which they are incurred. Special consideration must be given to interest expense and purchase discounts.

Interest expense

Firms commonly obtain financing to purchase inventory, either from the bank or a vendor. While it may be argued that the interest payments were incurred to acquire the inventory and therefore should be capitalized, IAS 2 (paragraphs 17 and 18) and IAS 23 (paragraphs 5, 7 and 8) preclude the capitalization of the interest costs unless the inventories require a substantial time to get them ready for their intended use (for example, Boeing 747s).

Purchase discounts

It is common practice for suppliers to offer a cash discount for early payment of purchases made on credit. When purchase discounts are offered, inventory should be recorded at the lowest available cash price (net method). While theoretically correct, cost benefit considerations and managerial motivations come into play (managers do not like to record "purchase discounts lost" as a separate expense category because it draws attention to their poor management practices or lack of capital), so the gross method is frequently used. The two methods operate in the following manner:

- The **gross method** offsets purchase discounts against the cost of the purchases. This serves to reduce cost of goods sold.
- The **net method** segregates purchase discounts lost and records them as a financing expense.

Example 5-1 contrasts the gross method and the net method of accounting for a purchase discount. Note that the accounts are shown for both perpetual and periodic systems, which you will study in the next topic.

EXAMPLE 5-1

Consider the purchase of €5,000 of inventory under the terms 2/10, net/30 (2% discount if paid within 10 days; otherwise, full payment is expected within 30 days). Following are the journal entries required for the gross method and the net method. For simplicity, sales tax considerations have been ignored.

Gross method			Net method		
Inventory/Purchases	5,000		Inventory/Purchases	4,900	
Accounts payable		5,000	Accounts payable		4,900

Assuming that the business pays the account within the discount period, the journal entries are:

Gross method			Net method		
Accounts payable	5,000		Accounts payable	4,900	
Inventory/Purchase discounts		100	Cash		4,900
Cash		4,900			

Assuming that the business pays the account after the discount period has expired, the journal entries are:

Gross method			Net method		
Accounts payable	5,000		Accounts payable	4,900	
Cash		5,000	Purchase Discounts Lost	100	
			Cash		5,000

Inventory versus cost of goods sold

As mentioned at the beginning of this topic, inventory is a current asset — an accumulation of costs that will generate future benefits. As the inventory is sold, the costs flow through to the statement of profit or loss and other comprehensive income as an expense called cost of goods sold. The transfer of the cost of inventory from the asset account on the statement of financial position to expense at the time the goods are sold is an application of the expense recognition principle. The expense recognition principle matches the cost of the related goods to the sale of the goods. Until then, the goods are recorded as an asset. This is because the expense is incurred when goods (inventory) are consumed or used up, not when the goods are purchased or paid for.

To grasp the accounting issues associated with inventory, it is necessary to understand the relationship between the valuation of inventory and the valuation of cost of goods sold.

The relationship between units of inventory, the cost of inventory, the cost of goods sold, and ending inventory can be expressed as a formula:

Beginning inventory + Purchases – Ending inventory = Cost of goods sold

To determine the number of physical units on hand and the value of inventory at the end of the accounting period, the following formula can be utilized:

	Physical units	Monetary amount
Beginning inventory	105,000	€ 231,000
Plus: Purchases	75,000	135,000
Total goods available for sale	180,000	366,000
Less: Sales (at cost)	85,000	182,805
Ending inventory	95,000	€ 183,195

The ending inventory of one accounting period is the beginning inventory of the subsequent accounting period.

To determine the number of units sold and the cost of goods sold at the end of the accounting period, the formula's terms are rearranged as follows:

	Physical units	Monetary amount
Beginning inventory	105,000	€ 231,000
Plus: Purchases	75,000	135,000
Total goods available for sale	180,000	366,000
Less: Ending inventory	95,000	183,195
Cost of goods sold	85,000	€ 182,805

One of the key relationships between inventory and cost of goods sold, as illustrated by these schedules, is that the total goods available for sale in a period (beginning inventory plus purchases) can end up in only two places by the end of the period. The goods available for sale can either be sold during the period, in which case the cost of those goods sold is recorded as an expense, or not sold during the period, in which case the cost of the goods not sold remains on the statement of financial position as inventory.

This relationship will have a significant impact on a period's level of profit. For example, if ending inventory is counted incorrectly, that means that the cost of inventory assigned to expense will be wrong — either too high or too low. Therefore, an incorrect inventory count has a direct impact on the statement of profit or loss and other comprehensive income.

TOPIC 5.2. PERPETUAL AND PERIODIC INVENTORY SYSTEMS

No required reading

Learning objective Compare and contrast the perpetual inventory system to the periodic inventory system (level 1).

Level 1 There are two basic systems used in inventory accounting: perpetual and periodic. The names of the systems indicate the frequency with which inventory quantities are updated in the accounting records.

Perpetual inventory system

A business entity using a perpetual inventory system maintains detailed records of the number of units and monetary values of each inventory transaction. A running balance of the cost of inventory on hand is updated with each purchase and sale of inventory. Purchase returns and transportation-in are recorded directly to the inventory account. The cost of goods sold and related inventory reduction are recorded each time a sale is made or a sale return occurs.

Even with a perpetual inventory system, it is necessary to periodically adjust individual inventory records to agree with the physical count of inventories. For example, some inventory may have been stolen. This theft will not be known, and therefore not recorded, until a physical count of inventory is done. Similarly, any errors made in recording inventory initially can be corrected when inventory is counted.

The advantage of a perpetual inventory system is that theoretically, it is possible to determine the value of inventory on hand and the cost of goods sold for the period without performing an inventory count. The system also minimizes inventory holding costs, since management is always aware of the quantities of inventory that are in stock. A perpetual inventory system would require a significant amount of effort to manually maintain the inventory records; however, computerized systems make it cost effective to maintain perpetual inventory systems, for example using barcode or Radio-frequency identification (RFID) systems to track what items are on hand and which have sold.

Periodic inventory system

A business entity using a periodic inventory system does not maintain a detailed record of each inventory transaction. Entries are made to record purchases of inventory, just as they are under the perpetual inventory system, however when sales of inventory are made, only the sales revenue entry is made. There is no entry made to reduce the inventory account and to record cost of goods sold. In addition, purchases of inventory are recorded in a "Purchases" account. Separate accounts are also kept for "Purchase returns and allowances," "Transportation-in" and "Purchase discounts" (if the gross method of accounting for discounts is used). Hence, the inventory account is not up to date during the period. At the end of the period, a physical count of inventories is taken to arrive at the ending inventory in units and euro. The cost of goods sold expense for the period can then be derived using the formula that was shown in Topic 5.1.

The cost of goods available for sale is the opening inventory plus the purchases of inventory made during the period. When inventory is physically counted, the amount of goods not sold at the end of the period is known. Subtracting this actual ending inventory amount from the cost of goods available for sale gives the cost of goods sold expense for the period. As mentioned before, this derivation is based on the fact that only two things can happen to inventory that is available for sale during a period: it can either be sold during the period or not sold.

When inventory has been counted and cost of goods sold calculated, an adjusting journal entry is then made to record the correct ending inventory and the cost of goods sold for the period. The effect of this entry is to transfer the cost of the goods that have been sold from the Inventory account (asset) to the Cost of goods sold account (expense).

A periodic system tends to be easier to maintain and is less expensive than a perpetual system. Periodic inventory systems are often used by small businesses or when management does not need up-to-the-minute information of inventory quantities on hand. However, one of the disadvantages of a periodic system is its inability to distinguish between goods that have been sold and goods that have been stolen. The ending inventory is derived using the physical count; the underlying assumption is that if it is not there, it has been sold. On the other hand, a perpetual system "knows" what should be there; if it is not, then it is deemed to have been stolen. Example 5-2 illustrates that weakness.

Comparison of periodic and perpetual inventory systems

Example 5-2 compares the journal entries under the perpetual and periodic inventory systems.

EXAMPLE 5-2

Assume that the beginning inventory of a business entity is €1,200. During the period, inventory is purchased for €5,000 cash and goods are sold for €2,800 cash that originally cost €2,000. A physical inventory count at the end of the period reveals goods costing €4,050 still on hand. The journal entries to record these transactions and events, under both the perpetual and periodic inventory systems are as follows:

To record the purchase of inventory:

Periodic inventory system			Perpetual inventory system		
Purchases*	5,000		Inventory	5,000	
Cash		5,000	Cash		5,000

** To be closed to cost of goods sold at the end of the period.*

To record the sale of goods and corresponding cost of goods sold:

Periodic inventory system			Perpetual inventory system		
Cash	2,800		Cash	2,800	
Sales		2,800	Sales		2,800
			Cost of goods sold	2,000	
			Inventory		2,000

Note that the periodic system only records the purchase of inventory. There is no entry to reflect the reduction of inventory when goods are sold.

At the end of the period, a physical count of inventory establishes that the ending inventory is worth €4,050. According to the perpetual inventory system, the ending inventory should be €4,200 (€1,200 + €5,000 – €2,000).

The set of journal entries to adjust inventory to the end-of-period physical count is as follows:

Periodic inventory system			Perpetual inventory system		
Cost of goods sold	5,000		Shrinkage expense	150	
Purchases		5,000	Inventory		150
Cost of goods sold	1,200				
Inventory		1,200			
Inventory	4,050				
Cost of goods sold		4,050			

The three entries required for the periodic inventory system achieve the following:

- Close the Purchases account to Cost of goods sold.
- Clear the opening inventory balance from the Inventory account and transfer to Cost of goods sold.
- Set up the ending inventory value.

Effectively, the first two of these entries assume that all of the opening inventory and purchases made in the period have been sold. Hence, the transfer to Cost of goods sold (expense). The third entry recognizes that some of the purchases and opening inventory (what remains at the end of the period as ending inventory) has not been sold. Hence, the reduction in Cost of goods sold and the setting up of the ending inventory.

The entry required under the perpetual inventory system records the difference between inventory per the accounting records and actual inventory per the inventory count (€4,200 –€4,050). This is called shrinkage expense. This "expense" recognizes the cost of goods that have been stolen or are otherwise unaccounted for.

The effect of the various journal entries on the Inventory, Cost of goods sold, Purchases, and Shrinkage expense accounts under the two inventory systems is summarized below:

Periodic inventory system

Inventory

€ 1,200	
	€ 1,200
4,050	
€ 4,050	

Purchases

€ 5,000	
	€ 5,000
€ 0	

Cost of goods sold

€ 5,000	
1,200	
	€ 4,050
€ 2,150	

Perpetual inventory system

Inventory

€ 1,200	
5,000	€ 2,000
	2,000
	150
€ 4,050	

Cost of goods sold

€ 2,000	
€ 2,000	

Shrinkage expense

€ 150	
€ 150	

You should notice that both inventory methods give the same total expense related to inventory for the period. Under the periodic inventory system, the only expense is cost of goods sold of €2,150. Under the perpetual inventory system, the total expense is also €2,150, comprised of cost of goods sold of €2,000 plus the shrinkage expense of €150.

Because the perpetual inventory system keeps a running total of inventory in the accounting records, it is possible to determine how much inventory has been lost or stolen. Under the perpetual inventory system, the company thought that they had ending inventory of €4,200, however, when inventory was counted, there was only €4,050. Therefore, €150 of inventory has disappeared, of which the company was not previously aware. Since the €150 of inventory is gone or consumed, it must be an expense. However, it is a slightly different expense than the cost of goods sold because it is related to shrinkage rather than to the direct sale of products.

Under the periodic inventory system, however, it is not possible to split the expense between cost of goods sold directly related to sales of product and the consumption of inventory through shrinkage. The reason the split can't be determined is because there was no running total of inventory maintained under the periodic inventory method. The company using the periodic inventory method does not know what the ending inventory should be when it does its physical inventory count. All that it knows on completion of the inventory count is that a certain amount of inventory is gone or used up. It does not know whether the inventory has been consumed through normal sales or from shrinkage.

The shrinkage expense account is closed to the income summary. The shrinkage expense is usually shown separately for internal financial statement purposes. However, the balance in the Shrinkage expense account is normally combined with that of Cost of goods sold for external financial statement presentation.

Following is a summary of the primary differences between the journal entries for the two systems.

Purchases

- Under the periodic inventory system, the only transaction that is recorded in the Inventory account is the end-of-period adjustment. All purchases are debited to a Nominal or Temporary "Purchases" account.
- Under the perpetual inventory system, each purchase of goods for resale is debited to the Inventory account.

Sales

- At the time of the transaction, the same journal entry is made under both inventory systems to record the revenue from each sale of merchandise.
- Under the periodic inventory system, no journal entry is made at the time of sale to recognize the cost of goods sold.
- Under the perpetual inventory system, a journal entry to recognize the cost of goods sold is also made for each sale at the time of the transaction.

Physical count

- Under the periodic inventory system, a journal entry is made to record the end-of-period inventory based on the physical count. Then the opening balance in the Inventory account and the ending balance in the Purchases account are transferred to the Cost of goods sold account. As mentioned above, under this system, it is not possible to determine the costs associated with inventory shrinkage. In other words, the physical inventory count is necessary to determine the ending inventory and cost of goods sold.
- Under the perpetual inventory system, after a physical count, a journal entry is made to adjust the inventory records to the physical count and thereby recognize recording errors and inventory shrinkage. The physical inventory count under the perpetual inventory method is used to verify inventory and cost of goods sold, not to determine those amounts.

Take a look at your receipt after your next trip to the supermarket. Note how the store has neatly itemized the exact details of what you have purchased. While there is no question that this information benefits the consumer, the retailer's primary motivation for producing it is to better manage its inventory.

TOPIC 5.3. INVENTORY COST FORMULAS

Required reading IAS 2 — Inventories, paragraphs 23 to 27

Learning objective Contrast specific identification with the FIFO and average cost formulas and determine when each is appropriate (level 1).

Level 1

Common practice has been to refer to FIFO, Last in, first out (LIFO), and average cost as "cost flow assumptions". IAS 2 uses the term "cost formulas"; to be consistent with IFRS, you will see either "cost formula" or "inventory cost formula" in this lesson. Note that it is not permissible to use LIFO as a cost formula under IFRS.

The value of inventory on the statement of financial position is an accumulation of historical cost components. In conditions where historical costs are changing, the issue arises as to which historical costs remain on the statement of financial position and which costs flow through to the statement of profit or loss and other comprehensive income via cost of goods sold.

Companies purchase and sell inventory on an ongoing basis. To comply with the expense recognition principle, accountants are required to match the cost of the inventory sold to the revenue generated. Sometimes this process is straightforward. Paragraph 23 of IAS 2 states that "The cost of inventories that are not ordinarily interchangeable and goods or services produced and segregated for specific projects shall be assigned by using specific identification of their individual costs." For example, when car dealers sell an automobile, they can identify the exact car from the serial number; their purchasing records will detail the cost.

More often, though, it is difficult, or even impossible to determine which specific item was sold. For example, a grocery store has no way of knowing (short of installing a costly tracking system) whether the soft drink that you purchased today arrived in a shipment yesterday or in the delivery received last week. This becomes an issue because often the cost of identical items received on different days varies.

To address this, the IASB allows the use of two cost formulas other than specific identification — FIFO and weighted average cost. The standard setters recognize that the adoption of alternative cost formulas does not result in perfect expense recognition, but consents to their use because of cost/benefit and materiality considerations. The manner in which weighted average cost is calculated depends on whether the company uses a periodic or perpetual inventory system. When a periodic system is employed, the weighted average is usually referred to as a weighted average **unit** cost. When a perpetual system is used, the average is typically known as a **moving** average unit cost.

It may seem that the IASB has mandated the use of specific identification in all but limited circumstances. This is not the case though, as IAS 2 paragraph 24 emphasizes that "specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable." From a practical perspective, the "interchangeable" exception (foodstuffs, electronics, textbooks, and so on) will be much more prevalent than the rule (cars, high-end jewellery, artworks, and so on); therefore, the FIFO and average cost formulas are widely used.

Companies can use either FIFO or weighted average cost if specific identification is inappropriate. Once chosen, the company must disclose the cost formula used and continue to use this formula in future years to maintain consistency in the financial statements unless they change accounting policies in accordance with IAS 8.

Following are summaries of the three main inventory cost flow methods:

- specific cost identification
- weighted average cost
- FIFO

Specific cost identification method

Where inventory items are not interchangeable, the **specific cost identification method** is used to value inventory and cost of goods sold. This would generally be the case where inventory consists of relatively few items that are of large monetary value and are uniquely identifiable. This method provides for direct matching of costs with revenues. The method may be applied with either periodic or perpetual inventory systems.

One drawback to the specific cost identification method is that it may be subject to manipulation. Consider a situation where a car dealer has two identical red convertibles in stock. One of the cars was purchased at the beginning of the year for €15,000, and the other was purchased at the end of the year for €15,570. The selling price of either car is €18,750. By choosing which red convertible to deliver to a customer, the car dealer can manipulate the profit for the current accounting period. This manipulation would be a much larger problem if the specific identification method of costing were allowed for items that are interchangeable. As discussed above, however, this is not allowed.

Exhibit 5-1 illustrates the application of the specific cost identification method. Listed are data from the inventory records of a used-car dealership, which indicate when the pre-owned cars were purchased. The records also indicate the sales of the current accounting period.

Exhibit 5-1. United Pre-Owned Car Dealer Ltd. — Data

				Purchased		Sold	
Unit	Serial #		Description	Cost (€)	Date	Cost (€)	Date
1	RS76543	X1	Toyota Camry	15,991	14-Dec-X4	15,991	13-Jul-X5
2	N489175	X2	Acura Integra	22,984	20-Dec-X4		
3	DT68961	X3	Mazda 323DX	14,234	14-Jan-X5	14,234	13-Jul-X5
4	DA78653	X3	Honda Civic	15,654	23-Jan-X5		
5	V938910	X4	Volvo 244DL	15,679	16-Feb-X5	15,679	13-Jul-X5
6	V843941	X2	Nissan 240SX	16,874	25-Feb-X5		
7	TR28237	X2	Renault GT	20,543	11-Mar-X5	20,543	15-Jul-X5
8	HP23792	X1	Fiero GT	13,754	14-Mar-X5		
9	SL63207	X3	Civic CRX	16,923	23-Mar-X5		
10	H816394	X4	Honda Accord	15,678	24-Mar-X5	15,678	17-Jul-X5
11	C456129	X3	Sonata GLS	17,873	04-Apr-X5		
12	S489351	X2	Toyota Corolla	15,184	10-Apr-X5	15,184	21-Jul-X5
13	V786491	X3	VW Jetta	14,682	18-Apr-X5		
14	TM83467	X4	Acura Integra	15,041	23-May-X5		
15	TY13457	X4	Mazda MX6	14,984	17-Jun-X5		
16	H948916	X2	Honda Prelude	18,097	24-Jun-X5		
				264,175		97,309	

Given that units 1, 3, 5, 7, 10, and 12 were sold during the current accounting period, the cost of goods sold and the value of the ending inventory can be determined by performing a simple calculation. Simply identify the cost of each automobile sold and total to get cost of goods sold of €97,309. The ending inventory is the total costs of all the cars that remain in ending inventory or the total goods available for sale less the amount allocated to cost of goods sold. In this case, ending inventory will be €166,866 (€264,175 – €97,309). Remember that cost of goods sold for a period and the inventory at the end of that period must always total cost of goods available for sale, which is €264,175 in this case.

The following data for Maxi Inc. for year 6 will be used to illustrate the remaining cost flow assumptions:

MAXI INC.
Inventory purchase information for inventory item A
Year 6

	Units	Unit cost	Total cost
Opening inventory, January 1	1,000	€ 20	€ 20,000
Purchases, January 4	2,000	21	42,000
Purchases, July 2	3,000	22	66,000
Purchases, September 15	4,000	23	92,000
Number and cost of goods available for sale	10,000		€ 220,000

MAXI INC.
Inventory sales information for inventory item A
Year 6

	Units	Unit selling price	Total sales
Sales, February 10	2,500	€ 35	€ 87,500
Sales, August 12	2,000	35	70,000
Sales, November 10	3,500	36	126,000
Total sales	8,000		€ 283,500

Weighted average cost method

Often firms carry large volumes of inventory with few unique identifying characteristics. If inventory is viewed as homogeneous, then it would be reasonable to assign all units of inventory exactly the same cost. Management may use an average cost method to determine the ending value of the inventory and cost of goods sold. The weighted average unit cost and the moving average unit cost are two methods of determining the average cost, depending on whether a periodic or perpetual inventory system is used.

Weighted average unit cost

The **weighted average unit cost method** is used with the periodic inventory system. At the end of the accounting period, the cost of goods sold is determined from the number of units, the value of the beginning inventory, and the purchases during the period. Example 5-3 illustrates the weighted average unit cost method for Maxi Inc. for year 6.

EXAMPLE 5-3

Under the periodic inventory system, cost of goods sold is not accounted for at the time of each sale. Cost of goods sold is calculated only at the end of the period by counting the remaining inventory and subtracting this figure from the cost of goods available for sale to derive the cost of goods sold. The weighted average unit cost will be calculated only once, at the end of the period, not at the time of each sale. It is calculated by dividing the total cost of goods available for sale by the total number of units available for sale. In Maxi's case, the weighted average unit cost would be calculated as follows:

€220,000 ÷ 10,000 units = €22 per unit

This says that, on average, each units was purchased for €22. Therefore, this average cost of €22 should be used for costing both ending inventory and cost of goods sold as follows:

	Units	Unit cost	Total cost
Ending inventory	2,000*	22	€ 44,000
Cost of goods sold	8,000	22	176,000
Total units and cost accounted for	10,000		€ 220,000

** Assume that the physical count at the end of the period showed 2,000 units of inventory on hand.*

Note that the total cost of goods available for sale of €220,000 has been accounted for with €44,000 allocated to Ending inventory and €176,000 allocated to Cost of goods sold. As noted before, costs of goods available for sale must always be fully allocated to ending inventory and cost of goods sold. The goods available for sale in a period must have either been sold during the period or they remain as ending inventory at the end of the period.

Moving average unit cost

The **moving average unit cost method** applies to the perpetual inventory system. A new weighted average cost must be calculated after each purchase of goods during the period because cost of goods sold needs to be recorded each time a sale is made. We don't wait until the end of the period to calculate the weighted average cost like we did under the periodic method.

Example 5-4 illustrates the moving average unit cost method for Maxi Inc. for year 6.

EXAMPLE 5-4

The following chart illustrates how the weighted average unit cost is recalculated after each purchase and how it is assigned to the cost of each sale:

Date	Purchases			Sales			Inventory		
	Units	Unit cost	Total cost	Units	Unit cost	Total cost	Units	Unit cost	Total cost
January 1							1,000	€20.00	€ 20,000
January 4	2,000	€21	€42,000				3,000	20.667[1]	62,000
February 10				2,500	€20.667	€51,667	500	20.667	10,333
July 2	3,000	€22	66,000				3,500	21.809[2]	76,333
August 12				2,000	€21.809	43,618	1,500	21.809	32,715*
September 15	4,000	€23	92,000				5,500	22.675[3]	124,715
November 10				3,500	€22.675	79,363	2,000	22.675	€45,352*
			€200,000			€174,648			

[1] (€20,000 + €42,000) ÷ (1,000 + 2,000)
[2] (€10,333 + €66,000) ÷ (500 + 3,000)
[3] (€32,715 + €92,000) ÷ (1,500 + 4,000)
** Note that these figures have been rounded slightly to ensure that cost of goods available for sale at each sale date is exactly allocated to cost of goods sold and ending inventory. The rounding is necessary because the weighted average unit cost is not an even number.*

To understand this schedule, let's look at the purchase of 2,000 units on January 4 at €21 each. The total cost of this purchase of €42,000 is added to the total cost of the opening inventory of €20,000 to get cost of goods available for sale at that date of €62,000. The weighted average cost of €20.667 is calculated by dividing the €62,000 by the total number of units then on hand of 3,000 (1,000 + 2,000). When the sale of 2,500 units is made on February 10, this weighted average cost of €20.667 is used to cost both the cost of goods sold and the ending inventory remaining after the sale. When the next purchase is made, the weighted average cost per unit is recalculated using the cost of the goods on hand plus the cost of the new inventory units purchased. Note that the total cost under the sales column is the cost of goods sold, not sales proceeds. There are no valuation issues with respect to sales. The total sales number is simply the number of units multiplied by the selling price per unit.

The total cost of goods available for sale for the period is still €220,000 (the €20,000 in opening inventory plus the €200,000 of purchases). As must always be the case, this cost of goods available for sale has been totally allocated between Cost of goods sold for the period and Ending inventory. You can verify this fact by the following calculation:

€174,648 Cost of goods sold + €45,352 Ending inventory = €220,000

The weighted average unit cost method and the moving average unit cost method tend to smooth out price fluctuations. The maintenance of a moving average inventory system manually would be costly and time consuming; however, this task is made simpler and faster with computerized inventory systems.

First-in, first-out method

Under the FIFO method, there is a cost flow assumption that the first units in are the first units sold; therefore, the first costs in are the first costs out. Goods that are sold are costed at the oldest unit costs, while the goods remaining in inventory are costed at the most recent unit costs. For many business entities, the inventory cost flow for FIFO coincides with the physical flow, as the merchandisers rotate their inventory to keep it fresh.

The FIFO method is widely used for the following reasons:

- Conceptually, it is easy to understand because for most business entities the physical flow of goods will match the inventory cost flow.
- The method is both systematic and reasonably objective.
- The value of inventory on the statement of financial position approximates current replacement cost.

The primary disadvantage of this method is that it does not properly match the current cost of goods sold to the current revenues since the oldest costs are being matched with the current revenues.

FIFO inventory costing can be used with either the periodic or perpetual inventory accounting method. Note that you will derive exactly the same results, irrespective of which inventory system is used. Example 5-5 illustrates the FIFO cost method using the periodic inventory system for Maxi Inc. for year 6.

EXAMPLE 5-5

Ending inventory under a periodic method of inventory costing is determined by physical counting and then subtracting that count from cost of goods available for sale to determine cost of goods sold. When the ending inventory has been physically counted, it is costed under FIFO, with the cost of the most recent purchases.

The following chart shows how cost of goods sold and ending inventory would be calculated for Maxi Inc. for year 6. Assume that the inventory count reveals 2,000 units in ending inventory, the same amount that our perpetual records would show (10,000 units available – 8,000 units sold).

Cost of goods available for sale	€ 220,000
Less: Ending inventory (2,000 x €23)	46,000
Cost of goods sold	€ 174,000

The 2,000 units in ending inventory are assumed to be the most recent ones purchased. The most recent purchases were the 4,000 purchased on September 15 at a unit cost of €23. Therefore, the 2,000 units in ending inventory are assumed to have come from that purchase and are assigned a unit cost of €23.

Alternatively, cost of goods sold may be calculated directly by assigning the oldest costs to the 8,000 units that have been sold, as follows:

	Units	Unit cost	Total cost
From opening inventory	1,000	€ 20	€ 20,000
From January 4 purchase	2,000	€ 21	42,000
From July 2 purchase	3,000	€ 22	66,000
From September 15 purchase	2,000[1]	€ 23	46,000
Units sold and cost of goods sold	8,000		€ 174,000

[1] *It is assumed that only 2,000 units from the September 15 purchase have been sold under the FIFO cost flow assumption. The other 2,000 (the most recent purchase) are assumed to be in ending inventory.*

Again note that cost of goods sold (€174,000) plus ending inventory (€46,000) must equal cost of goods available for sale of €220,000. This equality means that once we have calculated either cost of goods sold or ending inventory, the other figure may be calculated by subtracting the first from cost of goods available for sale.

Example 5-6 illustrates the FIFO cost method using a perpetual inventory system.

EXAMPLE 5-6

The following chart illustrates how the FIFO costing method allocates inventory cost to Cost of goods sold and Ending inventory each time a sale is made under the perpetual inventory method:

Date	Purchases			Sales			Inventory		
	Units	Unit cost	Total cost	Units	Unit cost	Total cost	Units	Unit cost	Total cost
January 1							1,000	€20	€ 20,000
January 4	2,000	€21	€42,000				1,000	€20	€ 20,000
							2,000	€21	42,000
									€62,000
February 10				1,000	€20	€20,000			
				1,500	€21	31,500	500	€21	€10,500
				2,500					
July 2	3,000	€22	66,000				500	€21	10,500
							3,000	€22	66,000
									€76,500

Date	Purchases			Sales			Inventory		
	Units	Unit cost	Total cost	Units	Unit cost	Total cost	Units	Unit cost	Total cost
August 12				500	€21	10,500			
				1,500	€22	33,000	1,500	€22	€33,000
				2,000					
September 15	4,000	€23	92,000				1,500	€22	33,000
							4,000	€23	92,000
									€125,000
November 10				1,500	€22	33,000			
				2,000	€23	46,000	2,000	€23	€46,000
				3,500					
			€200,000			€174,000			

The above schedule can be interpreted as follows:

After the January 4 purchase of inventory, there are two unique types of inventory at that time. There are 1,000 units that cost €20 each and there are 2,000 units that cost €21 each. In all other respects, the inventory is identical. The FIFO method of inventory costing segregates the inventory items based on when the item was purchased. On February 10, Maxi sold 2,500 units. FIFO says that these would be the 2,500 oldest units. The 2,500 oldest units are the 1,000 that were from opening inventory and cost €20 each plus 1,500 of the units that were purchased on January 4 at €21 each. These costs are assigned to Cost of goods sold for the 2,500 units sold as

(1,000 x €20) + (1,500 x €21) = €51,500

Under the FIFO assumption the 500 units that are left in inventory after the February 10 sale are the newest ones. The newest ones are 500 of the January 4 purchase at €21 each, leaving Ending inventory after the February 10 sale of

500 x €21 = €10,500

This procedure is followed each time new inventory is purchased. Inventory is separated by its cost. Similarly, each time another sale is made, the cost of goods sold is based on the oldest units available and the ending inventory is based on the assumption that the most recent purchases remain in ending inventory.

Note again that the total cost of goods available for sale has been allocated to Cost of goods sold for the period and Ending inventory. The €220,000 cost of goods available for sale (€20,000 of opening inventory plus purchases of €200,000) has been allocated €174,000 to Cost of goods sold and €46,000 to Ending inventory.

Unlike the other inventory costing methods, the FIFO method will always give the same allocation between Cost of goods sold and Ending inventory under both the periodic and perpetual inventory accounting methods. Review the results from Example 5-5 and 5-6 to see this result.

Comparison of inventory cost flow methods

The consequences of the choice of inventory cost flow method are significant because each method will generally have a different impact on both the statement of profit or loss and other comprehensive income and the statement of financial position. Exhibit 5-2 compares two inventory cost flow methods.

Exhibit 5-2. Comparison of inventory cost flow methods

	FIFO	Average cost
Expense recognition principle	Old costs versus current revenues	Average costs versus current revenues
Valuation of assets	Most recent costs	Average costs
Effect on Cost of goods sold (in times of rising prices)	Lowest Cost of goods sold	Average Cost of goods sold
Effect on profit (in times of rising prices)	Highest profit	Average profit

Each inventory cost flow method produces the same results when prices are stable. However, if prices are changing, the outcome(s) will differ. In times of rising prices, FIFO will result in an inventory valuation that is higher than that derived under average cost. Conversely, in times of declining prices, FIFO will result in a higher cost of goods sold than that derived under the average cost method. Finally, in times of erratic price changes (sometimes up, sometimes down), the outcome can only be determined after the fact — it cannot be predicted.

It is important to remember that the choice of an inventory cost flow method will only result in different cost of goods sold and profit in the short run. In the long run, when all inventory has been sold, all inventory cost flow methods must give the same cumulative cost of goods sold and profit.

TOPIC 5.4. COMPUTER ILLUSTRATION 5-1: SPECIFIC COST IDENTIFICATION METHOD

No required reading

Learning objective Calculate the total cost of items sold using a perpetual inventory worksheet (level 1).

Material provided A file, FA2L5P1, containing a partially completed worksheet L5P1 and the solution worksheet L5P1S.

Description United Pre-Owned Car Dealer Ltd. buys and sells used cars. Because of the high unit cost, a worksheet (FA2L5P1) is used to keep track of the inventory of used cars. Each time a car is sold, the date of sale is entered into the worksheet. You will review the worksheet FA2L5P1, and then complete it using the data provided in Exhibit 5-3.

Level 1 This computer illustration demonstrates how a spreadsheet program can be used to keep track of serialized inventory.

Procedure

1. Start Excel.
2. Open the file FA2L5P1. Click the sheet tab for L5P1.
3. Study the database query in this worksheet. AutoFilter has been set for the database (cells A7:F23). The drop-down arrow to the right of each column label in the database indicates the AutoFilter setting.
4. In the column for Date Sold, enter the dates of sale of the vehicles sold using the information provided in Exhibit 5.3 below. The sale of the 2008 Toyota Camry has been pre-entered to provide you with an example. Enter the dates in the form of mm/dd/yy (for example, 07/13/12 for July 13, 2012). If you have difficulties with Excel recognizing the dates you enter, try entering the dates in the form of dd-mm-yy (such as 13-Jul-12) or customize the date formatting.
5. Perform the database query on all vehicles sold. Click the drop-down arrow in the Date Sold column. Choose (Nonblanks) from the list. The database now only shows those vehicles that have a nonblank sold date, filtering out all other unsold vehicles. The total cost of vehicles sold should show in cell D25 as €97,309. To redisplay the entire list, click the drop-down arrow in the Date Sold field, then choose (All).
6. Save the completed worksheet under your own initials.
7. To review the solution, click the sheet tab for L5P1S.

Exhibit 5-3. United Pre-Owned Car Dealer Ltd. — Data

Unit	Serial #	Description	Cost (€)	Date bought	Date sold
1	RS76543	2008 Toyota Camry	€15,991	14-Dec-11	13-Jul-12
2	N489175	2011 Acura Integra	22,984	20-Dec-11	
3	DT6820051	2011 Mazda 323DX	14,234	14-Jan-12	13-Jul-12
4	DA78653	2011 Honda Civic	15,654	23-Jan-12	
5	V20028910	2006 Volvo 244DL	15,679	16-Feb-12	13-Jul-12
6	V84320031	2009 Nissan 240SX	16,874	25-Feb-12	
7	TR28237	2011 Buick Century	20,543	11-Mar-12	15-Jul-12
8	HP23792	2007 Fiero GT	13,754	14-Mar-12	
9	SL63207	2010 Civic CRX	16,923	23-Mar-12	
10	H81632003	2007 Honda Accord	15,678	24-Mar-12	17-Jul-12
11	C456129	2010 Sonata GLS	17,873	04-Apr-12	
12	S48200251	2009 Toyota Corolla	15,184	10-Apr-12	21-Jul-12
13	V786491	2009 VW Jetta	14,682	18-Apr-12	
14	TM83467	2008 Acura Integra	15,041	23-May-12	
15	TY13457	2008 Mazda MX6	14,984	17-Jun-12	
16	H20038916	2009 Honda Prelude	18,097	24-Jun-12	

TOPIC 5.5. VALUATION AT LOWER OF COST OR NET REALIZABLE VALUE

Required reading IAS 2 — Inventories, paragraphs 28 to 39

Learning objective Explain the lower of cost or net realizable value requirement (level 1).

Level 1 Normally, business sell their inventory at prices higher than cost in order to generate profits. If, however, the value of inventory becomes impaired due to obsolescence, weak market conditions, or other factors, conservatism (prudence) dictates that the value of inventory be adjusted accordingly. IAS 2 requires that inventories be valued at the LCNRV, with net realizable value being defined in paragraph 6 as "the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale." Paragraph 7 then goes on to explain that net realizable value may not always equal fair value (FV) as net realizable value is entity specific while FV is not. This means that shop A may be able to sell inventory item X for more than shop B.

The reason for the LCNRV rule is to ensure that assets are not reported on the statement of financial position at an amount in excess of their realizable value, which is the amount of cash that the assets will be converted to or their value in use. It is the same principle that we saw where accounts receivable were reported on the statement, net of an allowance for doubtful accounts. That was also done to ensure that the accounts receivable were not reported at an amount in excess of their realizable value.

There are three different approaches for applying the LCNRV rule:

- individual basis
- group basis
- total portfolio basis

Normally, inventories are written down on an individual item basis. That is, each inventory item is evaluated separately to compare the cost of that specific item of inventory to its net realizable value. If net realizable value is lower than cost, then the cost of that specific inventory item is written down.

In limited circumstances it might be appropriate to group inventory items together for the LCNRV comparison. For example, if a company has a particular product line that consists of four different versions of a product, it would make sense to evaluate all four items as a group. If an entity has multiple product lines of similar products, then it might make sense to evaluate the cost versus net realizable value on that total portfolio basis. Exhibit 5-4 illustrates the individual, group, and portfolio approaches for determining the lower of cost or net realizable value.

Exhibit 5-4. Values used in applying the LCNRV rule

Inventory	Historical cost	Net realizable value	LCNRV rule		
			Individual	Group	Total
Product line I					
Item A	**€5,000**	€5,500	€5,000		
Item B	**4,600**	5,100	4,600		
Item C	5,300	**4,700**	4,700		
	14,900	15,300		14,900	
Product line II					
Item X	14,500	**13,100**	13,100		
Item Y	**17,000**	18,900	17,000		
Item Z	18,400	**16,500**	16,500		
	49,900	**48,500**		48,500	
Total	€64,800	**€63,800**			€63,800
			€60,900	€63,400	€63,800

The individual item basis method is the most conservative method because it produces the lowest inventory balance and the highest cost of goods sold expense. From Exhibit 5-3, the LCNRV on an individual item basis is €60,900, but €63,400 under the group basis and €63,800 under the total portfolio basis. This is because, on the group or total portfolio basis, individual inventory items where net realizable value is higher than cost serve to offset other items where the net realizable value is lower than cost. There is no such offset possible under the individual item basis method because if an individual item has net realizable value in excess of cost, it is not written up.

IAS 2 paragraph 29 makes it clear that it is not acceptable to make broad groupings for the purpose of the analysis of LCNRV. Therefore, groupings such as all finished goods or all inventory in a geographic market, would not be acceptable. Whichever method is adopted should be applied consistently from year to year.

As a result of applying the LCNRV rule, an inventory holding loss may result. (This loss represents the difference between the cost and the net realizable value of inventory, and results after a decrease in the cost of inventory during the holding period.) The loss should be recognized on the statement of profit or loss and other comprehensive income and reflected in the carrying value of the inventory on the statement of financial position. There are two different methods of recording the inventory holding loss:

1. **Direct inventory reduction method**

   Under this method, the inventory holding loss is not separately recorded and reported. The holding loss is included as a part of the cost of goods sold. The journal entry to record the inventory holding loss under the total portfolio basis is

Cost of goods sold	1,000[1]	
Inventory		1,000

[1] €64,800 – €63,800

2. **Inventory allowance method**

   Under this method, the inventory holding loss is separately recorded and reported using a contra inventory account — allowance to reduce inventory. The journal entry to record the inventory holding loss is

Loss on inventory reduction to market (I/S)	1,000	
Allowance to reduce inventory (B/S)		1,000

If inventory that has been written down to the lower of cost or net realizable value is still on hand at a future financial reporting date and the net realizable value has increased, the original writedown of inventory may be reversed, but only to bring inventory back up to a maximum of original cost. Inventory may not be carried at more than original cost.

Going back to our example, assume that the entire inventory on which the €1,000 writedown was taken is still on hand one year later. If the net realizable value of that inventory under the total portfolio basis has increased to €65,600, then the original €1,000 writedown would be reversed since net realizable value is now above the original cost. The journal entry for this reversal, assuming the use of the allowance method, would be as follows:

Allowance to reduce inventory (B/S)	1,000	
Gain on inventory increase to cost (I/S)		1,000

TOPIC 5.6. EFFECT OF INVENTORY ERRORS

No required reading

Learning objective Explain the effect of inventory errors on the financial statements (level 1).

Level 1

On occasion, errors will be made when recording inventory. The most common cause of errors is the incorrect inclusion or exclusion of items in inventory. For example, after the end of the accounting period, it may become apparent to the seller that outbound goods in transit shipped on FOB destination terms were not recorded in inventory.

Due to the relationship between inventory, purchases, and the cost of goods sold, inventory errors affect both the statement of financial position and the statement of profit or loss and other comprehensive income. An inventory error that overstates the value of the final inventory will result in the overstatement of income before income taxes by the same amount. If the ending inventory is overstated (because of an improper physical count, for example), then cost of goods sold must be understated, assuming that the cost of goods available for sale is correct. If cost of goods sold is understated, then profit for the period will be overstated. Conversely, an inventory error that understates the value of the final inventory will result in an understatement of income before income taxes by the same amount.

Inventory errors affect not only the current accounting period but also the subsequent accounting period. The net result is that, all other things being equal, over the two accounting periods, inventory errors will offset each other.

Example 5-7 illustrates the impact of inventory errors.

EXAMPLE 5-7

Cost of goods sold was calculated as follows for 20X8 and 20X9:

	20X8	20X9
Beginning inventory	€10,000	€11,000
Plus: Purchases	100,000	120,000
Goods available for sale	110,000	131,000
Less: Ending inventory	11,000	13,000
Cost of goods sold	**€99,000**	**€ 118,000**

As you can see from the above schedule, inventory would have been reported on the statement of financial position at €11,000 at the end of 20X8 and €13,000 at the end of 20X9. Total cost of goods sold for the two years was €217,000 (€99,000 + €118,000).

You subsequently discover that 20X8's ending inventory was overstated by €3,000. Cost of goods sold is recalculated as follows:

	20X8	20X9
Beginning inventory	€10,000	€ 8,000
Plus: Purchases	100,000	120,000
Goods available for sale	110,000	128,000
Less: Ending inventory	8,000	13,000
Cost of goods sold	**€102,000**	**€ 115,000**

Study the two schedules carefully and identify the similarities and differences. You should observe the following:

- Cost of goods sold was understated by €3,000 for 20X8 and overstated by a like amount in 20X9. Assuming that there was no error in cost of goods available for sale, an overstatement in ending inventory must be offset by an understatement in cost of goods sold.
- Cost of goods sold totalled €217,000 for the two-year period regardless of whether the error is detected or corrected. All other things being equal, over the two accounting periods, inventory errors will offset each other.
- Income before income taxes would have been overstated by €3,000 for 20X8 and understated by a like amount in 20X9.
- Income before income taxes for the two-year period remains the same regardless of whether the error is corrected.

Exhibit 5-5 provides a summary of the impact of inventory errors.

Exhibit 5-5. Impact of inventory errors

Error	Effect on Statement of Profit or Loss and Other Comprehensive Income	Effect on Statement of Financial Position
Beginning Inventory is understated	Cost of Goods Sold is understated. Gross Profit and Net Income are overstated.	Retained earnings at the end of the period is correct, assuming that Ending Inventory for the preceding period was understated.*
Beginning Inventory is overstated	Cost of Goods Sold is overstated. Gross Profit and Net Income are understated.	Retained earnings at the end of the period is correct, assuming that Ending Inventory for the preceding period was overstated.
Purchases are understated	Cost of Goods Sold is understated. Gross Profit and Net Income are overstated.	Accounts Payable is understated. Statement of Changes in Equity is overstated.
Purchases are overstated	Cost of Goods Sold is overstated. Gross Profit and Net Income are understated.	Accounts Payable is overstated. Statement of Changes in Equity is understated.
Ending Inventory is understated	Cost of Goods Sold is overstated. Gross profit and Net Income are understated.	Inventory is understated. Statement of Changes in Equity is understated.
Ending Inventory is overstated	Cost of Goods Sold is understated. Gross Profit and Net Income are overstated.	Inventory is overstated. Statement of Changes in Equity is overstated.

** If beginning inventory for the current period is understated, then ending inventory for the preceding period must also have been understated. The statement of changes in equity at the end of the preceding period was therefore also incorrect. The statement of changes in equity will be correct at the end of the current period after the current period's overstated net income is closed into the statement of changes in equity account.*

TOPIC 5.7. INVENTORY ESTIMATION METHODS

No required reading

Learning objective Describe the gross margin method and retail inventory method for inventory value estimation, identifying the circumstances where each is appropriate (level 2).

Level 2 Under certain conditions, it may be necessary to approximate inventory on hand, rather than conduct a physical count. Situations that call for estimates may include the following:

- The company wants to prepare a set of interim financial statements, but the cost of a physical inventory count is prohibitive.
- The company wishes to test the accuracy of inventory costs derived by another method.
- The company desires to estimate a loss for insurance purposes due to the physical destruction of inventory, by fire or other catastrophe.

While these are all valid reasons to estimate inventory the company would still need to undertake a physical count at year-end.

Two methods commonly used to estimate inventory are the **gross margin method** and the **retail inventory method**.

Gross margin method

The **gross margin method** is based on the assumption that the gross margin is more or less constant relative to gross sales. Therefore, the historical gross margin can be applied to the sales of a period to calculate the gross margin and, from that, the cost of goods sold. This method can be used to estimate the ending inventory under both the periodic and perpetual inventory systems.

Example 5-8 illustrates the application of the gross margin method.

EXAMPLE 5-8

Consider the following data:

Historical gross margin rate	25%
Current period sales	€10,000
Beginning inventory	5,000
Current purchases	7,000

The following computations are performed to estimate ending inventory:

Beginning inventory	€5,000	
Add: Purchases	7,000	
Total goods available for sale		€12,000
Sales	€10,000	
Less: Estimated gross margin	2,500*	
Cost of goods sold		€7,500
Estimated ending inventory		€4,500

** (€10,000 x 25%)*

By subtracting the estimated gross margin from sales, an estimate of cost of goods sold for the period is obtained. Since the cost of goods available for sale is known, ending inventory is calculated by subtracting the cost of goods sold from the cost of goods available for sale. As we saw in Topic 5.3, the cost of goods available for sale must be totally allocated between Cost of goods sold and Ending inventory.

The gross margin method is frequently used

- by auditors to verify the reasonableness of an inventory valuation as determined by some other method
- to estimate the final inventory for interim financial statements without taking a physical count of the goods on hand
- to estimate the value of an inventory that has been destroyed, for example, by fire or flood
- to develop budget estimates of inventories

It is important to understand the shortcomings of the gross margin method:

- The gross margin rate is based on data from the past that may not be appropriate for the current period.
- The gross margin rate is an average based on the profit margins of the sales mix, which may differ from the profit margin of any particular inventory item.

Retail inventory method

Retail stores that sell a wide variety of items frequently use the retail inventory method to estimate inventory. The retail method of estimating inventory is similar in some respects to the gross margin method. However, instead of estimating a gross margin rate, the retail method provides for the computation of an average cost ratio, which is the relationship between the historical cost and the retail price of the total inventory available for sale.

Example 5-9 illustrates the application of the retail inventory method.

EXAMPLE 5-9

	At cost	At retail
Beginning inventory	€10,000[1]	€13,000[2]
Purchases	70,000[1]	87,000[2]
Cost of goods available for sale	€80,000	€100,000
Cost ratio (€80,000 ÷ €100,000) = 80%		
Less: Sales at retail		75,000
Ending inventory:		
At retail		€25,000
At cost (€25,000 x 80%)	€20,000	

[1] Data provided by the accounting records.
[2] Data provided by supplementary inventory records containing retail price information.

Example 5-9 is simple in that it assumes that there are no markups or markdowns beyond the original selling prices. To apply the retail inventory method, careful distinction must be maintained between markups, markup cancellations, markdowns, and markdown cancellations.

- **Markups** is the increase in the original sales price of the good.

- **Markup cancellations** is the decrease in price from the markup price.
- **Markdowns** is the decrease in the original sales price of the good.
- **Markdown cancellations** is the increase in the price from the markdown price.

It is essential that the accounting records provide the amount of all markups and markdowns, since these items will affect not only the cost ratio but also the ending inventory valuation. Markups and markup cancellations should be included in the computation of the cost ratio and the ending inventory at retail, while markdowns and markdown cancellations should be excluded in the computation of the cost ratio but included in the computation of ending inventory at retail.

The retail method is frequently used

- to estimate the inventory for interim financial statements
- to provide a means for converting a physical inventory priced at retail to one priced at approximate cost
- to provide a basis for planning and controlling inventory, theft, purchases, markups, and markdowns

TOPIC 5.8. INTERNAL CONTROLS FOR INVENTORY

No required reading

Learning objective Describe the features of an effective internal control system for inventory (level 2).

Level 2 The need to safeguard inventory is very important in most businesses as it is often subject to theft or other forms of misappropriation. Prudent companies address this matter by maintaining a system of internal controls to ensure that the inventory is adequately safeguarded.

Examples of internal controls that firms use to protect their inventory include the following:

- Segregating the custody of inventory from the recording of inventory transactions; that is, separate the receiving function, the shipping function, and the accounting function. This division reduces the possibility of theft and concealment through falsification of records.
- Requiring that a purchase order be prepared and approved by an authorized person for all procurements. This document minimizes the possibility of unauthorized purchases being made.
- Requiring that a document be prepared for all inventory transactions; that is, use a receiving report for all goods received, a shipping report for all goods shipped, and other appropriate documents to capture other changes in inventory.
- Requiring that authorized purchase orders and receiving reports are matched to invoices from suppliers before a cheque is prepared. All documentation should accompany the cheque and be reviewed before cheques are signed. This documentation minimizes the possibility of inappropriate payments being made.
- Providing for periodic test counts of inventory balances and comparing the physical inventory on hand to the perpetual inventory records.
- Physically controlling the inventory; for example, storing it in a secure area and allowing only authorized people access to this area.
- Maintaining inventory at the minimum required to avoid stock-outs.

Ethical considerations

It is important to note that an appropriate balance must be struck between internal controls and the expectations of employees, customers, and others with respect to privacy. For example, some physical surveillance measures may provide effective internal control but raise privacy issues — for example, the use of video surveillance cameras in fitting rooms where customers try on clothing at a dress shop.

The trade-off between the rights of the company and the rights of the individual are not always clear-cut. Consider for a moment the following questions:

- What obligation does a company have to tell its employees and customers that it is monitoring their phone calls and e-mails or that it randomly searches employee lockers for missing inventory?
- What steps should management take to make sure that internal controls are not misused to invade legitimate privacy interests of employees or clients?

SUMMARY

Explain the nature of inventory and what goods and costs are included in this asset category (level 1).

- Inventory represents goods held for future sale in the ordinary course of business or for use in the manufacture of goods for resale.
- Ownership of goods in transit is determined by the shipping terms.
- The consignor retains legal ownership of goods on consignment until the goods are sold by the consignee.

Compare and contrast the perpetual inventory system to the periodic inventory system (level 1).

- Under a periodic inventory system, detailed records of inventory sales are not maintained. Inventory and cost of goods sold are determined periodically — usually at the end of each period. Purchases are recorded in a purchases account, which is closed out to the cost of goods sold account at the end of the period.
- Under a perpetual inventory system, detailed inventory records are maintained. Purchases are debited to the inventory account at time of acquisition. The inventory and cost of goods sold accounts are updated when inventory is sold.

Contrast specific identification with the FIFO and average cost formulas and determine when each is appropriate (level 1).

- All inventory cost formulas apply the cost principle. All formulas attempt to match the cost of goods sold to the sales revenue so as to comply with the expense recognition principle. The methods differ in their assumption as to which goods are being sold and which goods remain on hand.
- The specific identification cost formula must be used unless there are a large number of interchangeable items in inventory. In the latter case, either the FIFO or average cost formulas may be used.

Explain the lower of cost or net realizable value requirement (level 1).

- Conservatism (prudence) requires that assets, including inventory, should not be carried at a value higher than their current value. Therefore inventory is typically valued at the LCNRV.
- The LCNRV method can be applied to individual inventory items or to groups of similar items.
- Inventory writedowns are to be reversed if the value of the inventory written down subsequently recovers.

Explain the effect of inventory errors on the financial statements (level 1).

- The effect of inventory errors can be determined from the equation that follows:

  Cost of beginning inventory
  Plus: Cost of purchases
  = Cost of goods available for sale
  Less: Cost of ending inventory
  = Cost of goods sold

- If ending inventory is overstated, then cost of goods sold will be understated and vice versa.
- If beginning inventory was overstated (last year's ending inventory was overstated and last year's cost of goods sold was understated), then cost of goods sold this year will be overstated.
- If cost of goods sold is overstated, then income is understated.

Describe the gross margin method and retail inventory method for inventory value estimation, identifying the circumstances where each is appropriate (level 2).

- Companies sometimes find it more convenient to estimate the inventory on hand, rather than conduct a physical count. Reasons include the following:
  1. The company wants to prepare a set of interim financial statements but the cost of a physical inventory count is prohibitive.
  2. The company wishes to test the accuracy of inventory costs derived by another method.
  3. The company desires to estimate a loss for insurance purposes due to the physical destruction of inventory, by fire or other catastrophe.
- A physical count of inventory should be undertaken at year end.
- Common methods used to estimate inventories include the gross margin method and retail inventory method.
- The retail inventory method is typically used by entities that maintain inventory records using retail prices.

Describe the features of an effective internal control system for inventory (level 2).

Controls to safeguard inventory include

- segregating duties for the receiving, storing, shipping, and accounting functions
- requiring approval for purchases and payments
- requiring an audit trail for all inventory transactions
- counting inventory on a periodic basis

LESSON 5. REVIEW MATERIAL

REVIEW QUESTIONS

Question 1

Riztoc Inc. is in the process of preparing its financial statements for the year ended December 31, 20X3. They have identified the following issues with respect to inventory where they are unsure as to the appropriate accounting treatment:

a. Riztoc sells goods on consignment to various retailers. During the year Riztoc sold goods on consignment that cost €100,000 and retail for €150,000. Riztoc pays the retailers a commission of 10% of the retail price when the retailers sell the goods. At December 31, goods that cost €30,000 and retail for €45,000 are still on hand at a variety of retail locations. Riztoc expects that the retailers will be able to sell these goods in 20X4.

b. Near the end of December, 20X3, Riztoc sold goods to Customer A for €450,000. These goods had cost Riztoc €384,000. The goods were shipped to the customer on December 31, with terms FOB destination. The goods arrived at Customer A's place of business on January 4, 20X4.

c. Riztoc purchased goods from a supplier on December 28, 20X3, for €32,000. The supplier shipped the goods on December 29, 20X3, with terms FOB shipping point but Riztoc did not receive the goods until January 2, 20X4.

d. Riztoc purchased goods on account, which it received on December 26, for €100,000. The payment terms were 2/10, net 30. It is the policy of Riztoc to take advantage of all purchase discounts. Riztoc expects to pay for these goods on January 4, 20X4, the last day to qualify for the purchase discount.

Required

Riztoc has asked you for your advice on the appropriate treatment of the inventory for financial reporting purposes at December 31, 20X3. For each of the above Cases, explain how Riztoc should treat the inventory and any related sales and cost of goods sold.

Question 2

Journalize the following inventory transactions for Scout Systems assuming:

a. a periodic system

b. a perpetual system.

Nov. 1	Scout Systems purchases merchandise for €1,400 on credit with terms of 2/10, n/30.
Nov. 5	Scout Systems pays for the previous purchase (assume the gross method of accounting for discounts is used).
Nov. 7	Scout Systems receives payment for returned defective merchandise of €100 that was purchased on November 1.
Nov. 10	Scout Systems pays €80 to haul merchandise to its store.

Nov. 13	Scout Systems sells merchandise for €1,500 on account. The cost of the merchandise was €750.
Nov. 16	A customer returns merchandise from the November 13 transaction. The returned item sold for €200 and cost €100. The item will be returned to inventory.

Source: Adapted from Larson 10e, Exercise 6-18, page 305

Question 3

Mineco Inc. uses the FIFO cost flow assumption for its perpetual inventory system. The following charts summarize the purchase and sales transactions for inventory Item #346 for the month ended January 31, 20X5:

Mineco Inc. Inventory purchase information for inventory Item #346 January 20X5			
	Units	Unit cost	Total cost
Opening inventory, January 1	350	€ 10.00	€ 3,500
Purchases, January 4	200	€ 9.90	1,980
Purchases, January 12	400	€ 9.75	3,900
Purchases, January 25	300	€ 9.50	2,850

Mineco Inc. Inventory sales information for inventory Item #346 January 20X5			
	Units	Unit selling price	Total sales
Sales, January 6	450	€14.00	€ 6,300
Sales, January 20	400	€14.00	5,600
Sales, January 28	300	€14.00	4,200
Total sales in units and €	1,150		€ 16,100

A physical inventory count at the end of the month showed 80 units of Item #346 on hand.

Required

a. What is Mineco's cost of goods available for sale for Item # 346 for January, 20X5?

b. Prepare a schedule that calculates the cost of goods sold for Item #346 for January, 20X5 and the cost of Item #346 inventory at January 31, 20X5.

c. Prepare journal entries to record each purchase and sale of Inventory item #346 during January, 20X5 plus any adjustments required to the Item #346 Inventory account at January 31, 20X5. You may summarize the individual purchase and sales entries.

d. Assume, instead, that Mineco uses a periodic inventory system. Calculate the Cost of goods sold and Ending inventory for Item #346 for January, 20X5 using the FIFO cost flow assumption. What information is lost using the periodic inventory system?

Question 4

Abacab Equipment Company is a small family-operated business that sells landscaping equipment. The company has four staff members, all of whom are authorized to order inventory when it gets low, sell equipment to customer and receive payments, and adjust inventory numbers if needed. Inventory levels fluctuate sometimes if two staff members both order items that are running low without coordinating their orders. The

sales floor is small, so inventory is often stored in a warehouse behind the store. Staff are allowed to use this warehouse to store their own equipment over the winter.

Ending inventory at year-end is as follows:

Product	Units on Hand	Unit Cost	Net Realizable Value per Unit
Wood chippers	20	€460	€640
Soil turners	18	85	76
Cement mixers	6	480	455
Augers	30	220	380

Required

a. Calculate lower of cost or net realizable value for the inventory:

   i. Applied separately to each product

   ii. As a whole

b. At what amount should Abacab value its ending inventory? Justify your answer.

c. Abacab's owners have asked for your advice on how to ensure inventory is safeguarded and accurately accounted for. Provide 4 suggestions that will be relevant to the company.

Question 5

KD Inc. uses the periodic method of accounting for inventory. On December 31, 20X7, inventory was counted and the General ledger was adjusted to €300,000 to reflect the cost of inventory counted. Other account balances from KD's General ledger for the year ended December 31, 20X7, were as follows:

Net sales	€ 5,000,000
Cost of goods sold	3,493,000
Retained earnings, beginning of year	8,000,000

The company marks up its inventory to earn a gross margin of 30% on selling price.

Subsequent to the inventory count, the following additional information became available:

a. A note from last year's inventory count indicated that, on December 31, 20X6, customers returned goods with a retail value of €70,000. These goods were held pending inspection in the returned goods area but were not included in the physical count. On January 4, 20X7, the returned goods were inspected and returned to inventory and credit memos totalling €70,000 were issued.

b. Goods sold on December 30, 20X7, and waiting to be picked up by a customer were still in the company's warehouse and were included in the inventory count. A sales invoice for €10,000 had been recorded for this sale on December 30, 20X7.

c. KD sends goods on consignment to various retailers and records a sale upon shipment. The retailers have 90 days to either sell the goods or return the goods to KD for a full refund. The retail value of goods on consignment and not yet sold by the retailers was €100,000 at the end of 20X7 and €80,000 at the end of 20X6. These goods were not included in the inventory counts at the end of 20X7 and 20X6, respectively. Assume all of the goods on consignment at the end of any year, are sold by the retailers in the following year.

Required

Prepare a schedule of adjustments required for 20X7 using the format below. Show separately the effect, if any, of each of the three transactions from (a), (b), and (c) on the following account balances (in €000's):

	Net sales	Cost of goods sold	Ending inventory	Retained earnings, beg. of year
Unadjusted amounts	€5,000	€3,493	€300	€8,000
Adjustments – increase (decrease)				
a)				
b)				
c)				
Adjusted amounts				

Question 6

The Flash Department Store was destroyed by fire on the night of January 30, 20X6. The store was a full service department store with hundreds of different products. Flash maintains its inventory using a periodic inventory system and does a physical inventory count on the last day of each month to compute Ending inventory and calculate Cost of goods sold. The inventory was fully insured and the insurance company has asked Flash to estimate the cost of the inventory that was destroyed in the fire. The following information is available from the accounting records:

January sales	€ 1,200,000
Inventory, January 1	200,000
Inventory purchases, January	900,000

From last year's accounting records, it was determined that the average gross profit margin for all products combined was 30%.

Required

a. Estimate January 31, 20X6, Ending inventory using the gross margin method of estimating inventory.

b. If you were the insurance company, what refinement to this calculation would you suggest be done?

REVIEW SOLUTIONS

Question 1 (Topic 5.1)

Case a

When goods are sold on consignment, legal title does not transfer from the seller to the buyer until the buyer (the retailer in this case) subsequently resells the goods. Therefore, for the goods that have been sold by the retailer, Riztoc should record sales and cost of goods sold and the selling commission. This would be Sales of €105,000 (€70,000 x 1.50), Cost of goods sold of €70,000 (€100,000 x €30,000), and Sales commission of €10,500 (€105,000 x 10%). The goods that have not been sold by the retailers at year end (€30,000) should remain in Riztoc's inventory because Riztoc still retains legal title.

Case b

When goods are shipped FOB destination, title does not transfer from the seller to the buyer until the buyer receives the goods. Since the customer does not receive the goods until January 4, 20X4, Riztoc should not record sales revenue and related cost of goods sold in the year ended December 31, 20X3. The €384,000 cost of the goods should remain in Riztoc's inventory at December 31, 20X3.

Case c

When goods are shipped FOB shipping point, legal title passes to the buyer from the seller when the seller delivers the goods to the shipping company. Since the supplier shipped the goods on December 29, they should be included in Riztoc's December 31, 20X3, inventory balance, even though the goods were not physically in their possession on December 31.

Case d

Riztoc should record this purchase using either the gross or net method of accounting for purchase discounts. The fact that they plan to pay within the discount period, does not imply a particular method should be used. If the net method is used, inventory should be recorded at €98,000 (€100,000 x 0.98), which is the amount that they expect to pay. As specified in IAS 2, any purchase discounts should be netted against the cost of the inventory. If the gross method is used, inventory should be recorded at €100,000.

Question 2

	Scout Systems - Periodic			Scout Systems - Perpetual	
Nov 1	Purchases	1,400		Inventory	1,400
	Accounts payable		1,400	Accounts payable	1,400
	To record purchases on account.			*To record merchandise purchased on account.*	
Nov 5	Accounts payable	1,400		Accounts payable	1,400
	Purchase discounts		28	Inventory	28
	Cash		1,372	Cash	1,372
	To record cash payment within discount period.			*To record cash payment within discount period.*	
Nov 7	Cash	98		Cash	98
	Purchase returns and allowances		98	Inventory	98
	To record check received for return of purchases previously paid for with discount already taken.			*To record check received for return of inventory previously paid for with discount already taken.*	
Nov 10	Transportation-in	80		Inventory	80
	Cash		80	Cash	80
	To record payment of freight charges.			*To record payment of freight charges.*	
Nov 13	Accounts receivable	1,500		Accounts receivable	1,500
	Sales		1,500	Sales	1,500
	To record sale of merchandise on credit.			Cost of goods sold	750
				Inventory	750
				To record sale of merchandise on credit and cost of merchandise sold.	

Nov 16		
	Sales returns and allowances	200
	Accounts receivable	200

To record return of merchandise bought on account.

Sales returns and allowances	200
Accounts receivable	200

To record return of merchandise bought on account.

Inventory	100
Cost of goods sold	100

To record return of merchandise by customer.

Question 3 (Topic 5.3)

Requirement a

The cost of goods available for sale is the cost of all of the inventory on hand on January 1, 20X5, plus the cost of all of the purchases of inventory in January as follows:

	Units	Unit cost	Total cost
Opening inventory, January 1	350	€10.00	€3,500
Purchases, January 4	200	9.90	1,980
Purchases, January 12	400	9.75	3,900
Purchases, January 25	300	9.50	2,850
Cost of goods available for sale	1,250		€12,230

Requirement b

Date	Purchases			Sales			Inventory		
	Units	Unit cost	Total cost	Units	Unit cost	Total cost	Units	Unit cost	Total cost
January 1							350	€10.00	€3,500
January 4	200	€ 9.90	€ 1,980				350	10.00	€3,500
							200	9.90	€1,980
									€5,480
January 6				350	€10.00	€3,500			
				100	€9.90	990	100	9.90	€990
January 12	400	€9.75	3,900				100	9.90	€990
							400	9.75	€3,900
									€4,890
January 20				100	€9.90	990			
				300	€ 9.75	2,925	100	9.75	€975
January 25	300	€9.50	2,850				100	9.75	€975
							300	9.50	€2,850
									€3,825

Date	Purchases			Sales			Inventory		
	Units	Unit cost	Total cost	Units	Unit cost	Total cost	Units	Unit cost	Total cost
January 28				100	€9.75	975			
				200	€9.50	1,900	100	9.50	€950
Shortage				20	€9.50	190	80	9.50	€760
			€8,730			€11,470			

The cost of goods available for sale has been allocated €11,470 to Cost of goods sold and €760 to Ending inventory. Note that this agrees with the cost of goods available for sale of €12,230 that was calculated in Requirement 1. Since inventory was maintained on a perpetual basis, it is possible to determine the amount of inventory that was lost or stolen. Since the perpetual records show goods available for sale of 1,250 and sales of 1,150 units, we would expect 100 units to be on hand at the end of January. The inventory count shows only 80 units on hand. In the FIFO schedule above, we must transfer the cost of the missing 20 units out of Ending inventory into Cost of goods sold.

Requirement c

To record purchases of inventory during January (€1,980 + €3,900 + €2,850:

Inventory — Item #346	8,730	
Cash/Accounts payable		8,730

To record sales of inventory during January (€6,300 + €5,600 + €4,200):

Cash/Accounts receivable	16,100	
Sales		16,100

To record transfer of cost of inventory from asset to cost of goods sold as inventory is sold (€3,500 + €990 + €990 + €2,925 + €975 + €1,900):

Cost of goods sold	11,280	
Inventory		11,280

To record inventory shrinkage:

Shrinkage expense	190	
Inventory		190

Requirement d

Under the FIFO cost flow assumption, the same allocation of cost of goods available for sale between Cost of goods sold and Ending inventory is obtained whether the enterprise uses the periodic or perpetual method of accounting for inventory. Therefore, a simpler alternative to the detailed perpetual calculation would be to calculate Ending inventory and Cost of goods sold under the periodic method as follows:

Cost of goods available for sale	€12,230
Less: Ending inventory (80 x €9.50[1])	760
Cost of goods sold	€11,470

[1] Under FIFO, the ending inventory units are assumed to consist of the most recent purchases. The most recent 80 units purchased were from the January 25 purchase of 300 units at €9.50 per unit.

The information that is lost by calculating cost of goods sold under the periodic method is the amount of the inventory shrinkage. Since the periodic method did not keep track of inventory quantities sold, Cost of goods sold is just the remainder after Ending inventory is subtracted from Cost of goods available for sale. It is not possible to separate goods used up through sales versus goods consumed through shrinkage.

Question 4 (Topics 5.5 and 5.8)

Requirement a

Abacab Equipment Company Ending Inventory						i.	ii.
		Per Unit				LCM applied to:	
Inventory Items	Units on Hand	Cost	NRV	Total Cost	Total NRV	Each product	Inventory as a whole
Wood chippers	20	€460	€640	€9,200	€12,800	€9,200	
Soil turners	18	85	76	1,530	1,368	1,368	
Cement mixers	6	480	455	2,880	2,730	2,730	
Augers	30	220	380	6,600	11,400	6,600	
				€20,210	€28,298	€19,898	€20,210

Requirement b

Abacab is required under IAS 2 to value its ending inventory at LCNRV. NRV should be calculated based on individual products, as the products are all different. This produces the most conservative approach and ensures that the inventory is not overvalued. In other words, Abacab would write down the soil turners and cement mixers to NRV.

Requirement c

Relevant advice to give Abacab's owners would include:

- Authorize only one person to order inventory (with an alternate person in case the primary person is absent). This reduces the risk of overstocking and ensures one person is accountable for procuring the best available prices.
- Require that a document be prepared for all inventory transactions; that is, use a receiving report for all goods received, a shipping report for all goods shipped, and other appropriate documents to capture other changes in inventory.
- Perform periodic test counts of inventory balances and comparing the physical inventory on hand to the inventory records. Investigate differences.
- Improve the physical control of the inventory; for example, restrict access to the warehouse if it is being used for inventory storage.
- Maintain inventory at the minimum required to avoid stock-outs. This reduces the risk of damage and obsolescence and also makes it more obvious if items go missing.

Question 5 (Topic 5.6)

	Net Sales	Cost of Goods Sold	Ending Inventory	Retained earnings, beginning of year
Unadjusted amounts	€5,000	€3,493	€300	€8,000
Adjustments — increase (decrease)				
a) Note 1	70	49		(21)
b) Note 2		7	(7)	
c) Note 3	(20)	(14)	70	(24)
Adjusted amounts	€5,050	€3,535	€363	€7,955

Note 1

The reduction to sales should have been made in 20X6 when the goods were returned, not in 20X7 when the credit memos were issued. Therefore, 20X7 sales should be increased by €70,000. Since the returned goods were not counted at December 31, 20X6, ending inventory at December 31, 20X6 is too low by €49,000 (€70,000 x 70%) and 20X6 Cost of goods sold is too high. This makes 20X7 Cost of goods sold too low by €49,000 since opening 20X7 inventory is too low. Therefore, 20X7 Cost of goods sold needs to be increased by €49,000. The €21,000 reduction to opening Retained earnings is made up of the following:

	Error	Effect on December 31, 20X6 RE
20X6 Cost of goods sold too high	€49,000[1] too high	€49,000 too low
Overstatement of 1996 Sales	70,000 too high	70,000 too high
		€21,000 too high

[1] €70,000 x 70%

Note 2

Since the title had transferred to the purchaser by December 31, 20X7, the goods should not have been included in the December 31, 20X7 inventory count. Therefore, Ending inventory is too high by €7,000 (€10,000 x 70%) and needs to be reduced by that amount. If Ending inventory is too high by €7,000, Cost of goods sold is too low by the same amount and needs to be increased by €7,000.

Note 3

The sales reduction of €20,000 is the net of the €100,000 goods on consignment at December 31, 20X7, that should be removed from 20X7 sales and the €80,000 of goods on consignment at December 31, 20X6, that should be recorded as sales in 20X7, when they are actually sold by the retailers. Ending inventory is increased by €70,000 (€100,000 x 70%) since the €100,000 of goods on consignment at December 31, 20X7, belongs in KD's inventory, not in 20X7 sales. The €14,000 reduction in Cost of goods sold is made up of the following:

	Inventory error	Effect on 20X7 Cost of goods sold
Opening inventory, Jan 1, 20X7	€56,000[1] too low	€56,000 too low
Closing inventory, Dec. 31, 20X7	70,000[2] too low	70,000 too high
		€ 14,000 too high

[1] €80,000 x 70%
[2] €100,000 x 70%

The €24,000 reduction to opening Retained earnings is made up of the following:

	Inventory error	Effect on December 31, 20X6 RE
20X6 Cost of goods sold too high	€56,000[1] too high	€56,000 too low
Overstatement of 20X6 Sales	80,000 too high	80,000 too high
		€24,000 too high

[1] €80,000 x 70%

Question 6 (Topic 5.7)

Requirement a

Opening inventory	€200,000
Plus: Purchases	€900,000
Cost of goods available for sale	€1,100,000

Sales	€1,200,000
Less: Estimated gross margin	360,000[1]
Estimated Cost of goods sold	840,000
Estimated Ending inventory	€260,000

[1] *€1,200,000 x 30%*

Requirement b

The calculation of the estimated inventory of €260,000 was based on a historical average gross profit percentage. If the information were available it would be better to estimate the inventory by major category, using the gross profit percentage for each major category of inventory. Also, if there was any evidence that the historical gross margin figures were not indicative of the current period (major changes in costs or in selling prices, for example), then a revised estimate of the gross profit percentage should be used in the inventory estimation method.

4.4

Sample materials from other courses in the sample Program of Professional Studies

4.4.1

Excerpt from FN1 Corporate Finance Fundamentals

TOPIC 6.1. THE NPV RULE MEASURES SHAREHOLDER WEALTH

Required reading — Please read the pages in your text that describe NPV and other investment rules, as well as the equivalent annual cost method.

Learning objective — Explain why NPV is the preferred capital budgeting criterion, and illustrate how it is implemented (level 1).
Use a spreadsheet application to analyze a project's NPV (level 1).

Level 1

The criterion: Accept positive net present value projects

An important objective of a corporate executive is to maximize long-term value to shareholders. This is equivalent to maximizing share price. For the capital budgeting decision, this objective means that the executive should choose new investment projects (for example, new plant and equipment, new organizational designs, and new labour training programs) that will raise the share price. The executive will, of course, need to consider other qualitative factors when making decisions, to ensure that other stakeholder needs are being appropriately balanced and that share price gains are sustainable.

Review the example in Lesson 2, Topic 2.1 where Mrs. Peal is analyzing investment in the Senior Citizens' Payment Plan (SCPP). You see that you calculated a PV for the plan to Mrs. Peal of €15.70. This amount represents the benefit of the SCPP to Mrs. Peal today (the day of the analysis), in current Euros (remember that PV is just a "shifting" of future Euros to current t = 0 Euros).

By moving her current savings from a bank certificate of deposit to the SCPP, Mrs. Peal has ensured that her t = 2 income will be €250 rather than €231. If she went to the bank today and borrowed money at her discount rate of r = 10%, she could borrow $(250 - 231) \div (1.10)^2 = €15.70$ today, and repay €19 in interest and principal to retire the loan at t = 2. The extra €19 at t = 2 translated to a "benefit" today of €15.70 (Mrs. Peal is going to treat herself to dinner!) The €15.70 is, of course, the NPV of the SCPP at Mrs. Peal's opportunity cost of r = 10%.

For the corporation, the positive NPV for a project translates to an increase in share price by the NPV. This is why the rule "accept positive NPV projects" coincides with the rule "accept projects that raise share price."

EXAMPLE 6-1

ABC Corp. generates a risk-free, perpetual after-tax cash flow of €10 per year, all of which is paid out in dividends. Given a risk-free rate of rf = 10%, this firm will have a current value of:

$$V_0 = 10 \div 0.10 = €100$$

A new project becomes available that will pay off a risk-free, perpetual, after-tax cash flow of €3 per year, and the current (t = 0) cost of implementing this project is €25. Is this a good project?

SOLUTION 6-1

The project has a positive NPV:

$$NPV = -25 + 3 \div 0.10 = €5$$

which indicates that the project will raise shareholder wealth. It is easy to show that the value of the firm (that is, price per share x the number of outstanding shares) will go up. The firm spends €25 today, but gets an additional perpetual cash flow of €3 per year. Thus, the new firm value is:

$$V_1 = -25 + (10 + 3) \div 0.10 = €105$$

Notice that the value of the firm has increased by the NPV:

$$V_1 = V_0 + NPV$$

Suppose that ABC Corp. did not have €25 to invest in the project. Does this change the result? No! ABC Corp. could go to its banker and obtain a risk-free loan for €25, with perpetual interest payments of (0.10)(25) = €2.50 per year. After using the loan to install the project, the cash flow to the shareholders becomes:

$$\text{Shareholder CF} = 10 + 3 - 2.50 = €10.50 \text{ per year}$$

where the €3 is the new project cash flow, and the €2.50 is the required annual interest payment. Shareholders apply a 10% discount rate to this new cash flow to obtain the new equity value:

$$\text{Equity value} = 10.50 \div 0.10 = €105$$

for a gain of €5 (the NPV of the project).

Example 6-1 shows that if the NPV of a new project (or any managerial action, for that matter) is positive, then the value of the firm will be higher with the project than without it.

Accepting new capital projects with positive NPVs is consistent with making decisions to raise shareholder wealth.

Implementing the NPV criterion

$$NPV = \sum_{t=0}^{n} \frac{CF_t}{(1+r)_t}$$

where

CF_t is cash flow of period *t*
r is the required rate of return.

The project's NPV is compared to zero. If NPV ≥ 0, the project is accepted; otherwise it is rejected. The higher the NPV, the better.

The NPV rule is a **discounted cash flow** method meets two critical requirements for any capital budgeting rule:

1. The method accounts for the time value of money.
2. The method considers all relevant cash flows.

You will recognize specific **types** of project cash flows and calculate a project NPV by adding up the PVs of these categories of cash flows. Note that **r** in the equation is the appropriate discount rate, a concept to be addressed later in this topic. The NPV criterion is demonstrated in Example 6-2.

EXAMPLE 6-2

European Jukebox and Crab Trap Inc. (EJCT) is considering a new crab trap manufacturing facility. Land could be purchased at a cost of €80,000 and would grow in market value at 10% per year into the future. Capital expenditures on the building would be €20,000 immediately (t = 0) and €40,000 in one year (at t = 1). After six years (at t = 6) the project will end, and it is anticipated that the building can be sold for €10,000 (at t = 6). The building has an annual tax depreciation (amortization) rate of 15%.

Capital expenditures on machinery will be €30,000 immediately (t = 0), and the maximum depreciation rate for tax purposes is = 0.15. The machinery is expected to be worthless at the end of year 6, t = 6 (i.e. no salvage value).

Revenues from the plant are expected to be €80,000 at t = 2, then grow at 5% per year for the next 4 years. Costs are anticipated to be €20,000 at t = 2 and at t = 3, and €30,000 per year for the next 3 years.

The corporate tax rate for EJCT is T = 0.40 and the after-tax discount rate is k = 15%. What is this project's NPV?

SOLUTION 6-2

Capital expenditures

The first category of cash flows to consider is capital expenditures:

Land cost	€80,000.00
Building cost (€20,000 + €40,000 ÷ 1.15)	54,782.61
Machinery cost	30,000.00
**PV total expenditures	€164,782.61

Note that the building costs of €40,000 were discounted at t = 1 back to t = 0 euro so that it could be added to the other t = 0 euro expenditures (everything will be converted to t = 0 euro).

Tax shield

Second, you must account for the additional tax shields, or savings, generated from the new depreciation deductions to be taken on the new capital expenditures.

Since the depreciation rate for both the assets are equal, you can combine them and find the depreciation tax shield each year. Again, assume that, in the first year, only half of the rate is applicable:

Year 1

Addition to assets: Building = €20,000
Machinery = €30,000
Total = €50,000

The depreciation at 7.5% (half of the rate) is €3,750
The tax shield, therefore, is 3750 x 0.4 = €1,500

Year 2

The assets acquired in year 1 will generate an annual depreciation of €7,500. In addition the new asset of €40,000 will generate a depreciation of €3,000 to give a total depreciation of €10,500 and a tax shield of €4,200.

Years 3-6

The annual depreciation for years 3-6 is €13,500 being 15% of the original cost of the assets added in years 1 and 2 amounting to €90,000. This gives a tax shield of €5,400 every year.

The present value of depreciation tax shield is computed as follows:

Year	Tax Shield	PV@15%
1	1,500	1,304.40
2	4,200	3,175.62
3	5,400	3,550.50
4	5,400	3,087.72
5	5,400	2,684.88
6	5,400	2,334.42
**Total		16,137.54

Note that depreciation is not taken on land, which is a non-amortizable asset.

Operating cash flows

The third category of cash flows are after-tax operating cash flows from the new project. Each year, the after-tax cash flow, CF_t, will be:

$$\mathbf{CF_t = REV_t - EXP_t - T(REV_t - EXP_t - DEP_t)}$$

or

$$\mathbf{CF_t = (1-T)\,(REV_t - EXP_t) + T(DEP_t)}$$

But you have already accounted for the last term, $T(DEP_t)$, for all future years in the present value of tax savings calculations above. Therefore, you only need to take the PV of the after-tax operating cash flows:

t	REV	EXP	After-tax operating cash flows (1 – T) (REV – EXP)
2	80,000.00	20,000.00	36,000.00
3	84,000.00	20,000.00	38,400.00
4	88,200.00	30,000.00	34,920.00
5	92,610.00	30,000.00	37,566.00
6	97,240.50	30,000.00	40,344.30

Discount each of these after-tax operating cash flows back to t = 0 at 15%:

**PV of after-tax operating cash flows:

$$= 36,000.00(0.7561) + 38,400.00(0.6575) + 34,920.00(0.5718) + 37,566.00(0.4972) + 40,344.30(0.4323)$$
$$= €108,553.52$$

Salvage

As indicated at the time of disposal, if the salvage value is different from the book value, there will be tax implications. Identify the same for each of these assets:

Building

Original cost	€60,000
Deprecation over 6 years	€43,500 (1,500 + 6,000 + 4 x 9,000)
Book Value	€16,500

Since the building can be sold for only €10,000, there will be a tax loss of €6,500 which will give a tax benefit of €2,600 (40% of €6,500).

Machinery

The book value of machinery at the end of 6 years will be €5,250. As the salvage value of the machinery is zero, there will be a tax loss of €5,250 generating a tax shield of €2,100.

Land salvage value, less capital gains tax:

The land can be sold at its market value which is calculated by compounding the original cost by 10% per annum. However, the excess of market value over book will attract capital gains tax. Assuming that 1/2 of the capital gain is taxed you arrive at the net proceeds as follows:

$$= \{80,000.00(1.10)^6 – (0.40)(1/2)[80,000.00(1.10)^6 – 80,000.00]\} \div (1.15)^6$$
$$= \{141,724.88 – (0.40)(1/2)\ [61,724.88]\}/2.3131$$
$$= €55,934.46$$

Building salvage value, and the tax benefit due to loss

$$[10,000.00 + 2,600] \div (1.15)^6 = €5,447.24$$

The machinery has no salvage value, but there is a tax benefit due to loss. The present value of the tax benefit is given by

$$[2,100 \div (1.15)^6] = €907.87$$

**The total PV of salvage value and tax benefits

$$= €55,934.46 + €5,447.24 + €907.87 = €62,289.57$$

Summary

The NPV of the project is the sum of the present values above marked with "**":

$$= –164,782.61 + 137.54 + 108,553.52 + 62,289.57$$
$$= €22,198.02 > 0$$

Because the NPV is positive, the project should be implemented — EJCT should build the new crab trap manufacturing facility.

Thus, the categories of cash flows must include:

1. Capital expenditures (generate new depreciation)
2. Purchases of non-amortizable assets (such as, land)
3. Initial expenses (none in the above example)
4. The present value of tax savings due to depreciation on new capital expenditures
5. After-tax operating cash flows
6. Salvage values
7. Loss/gain in tax shield due to selling assets at a price other than the book value

These cash flows are included because they meet the relevancy criteria given in Lesson 5, Topic 5.2.

Summary

The NPV rule is a correct capital budgeting rule because it corresponds to the objective of maximizing shareholder wealth (share price). The NPV rule discounts relevant cash flows.

- If NPV is positive, shareholder wealth is increased by accepting the project.
- NPV correctly measures the increment to shareholder wealth from a new project.
- The NPV rule is implemented by discounting relevant cash flows at the appropriate discount rate, and summing up the individual present values.

COMPUTER ILLUSTRATION 6-1: CAPITAL BUDGETING — NET PRESENT VALUE

No required reading

Learning objective

After working through this illustration, you will have constructed the formulas required to calculate the NPV of a project. You will also use the worksheet to perform a what-if analysis.

Material provided

The file I-FN1L6P1 contains two worksheets:

- L6P1 — a partially completed worksheet that provides a framework for the calculations
- L6P1S — the solution worksheet for you to check your work

Description

EJCT Inc. is considering investing in a new crab trap manufacturing facility. The controller of EJCT decides to construct a worksheet to assist in the analysis and to analyze several possible scenarios for the project.

Required

Enter appropriate formulas in the following cells in the partially completed worksheet L6P1:

- G8 (NPV for the project)
- B25 to H25 (tax shield from building)
- B26 to H26 (tax shield from machinery)
- B44 to H44 (tax shield loss from disposal of building)
- B45 to H45 (tax shield loss from disposal of machinery)

The preceding example (Example 6-2) applies NPV analysis to evaluate project proposals. In this computer illustration, you will construct a worksheet that can be used for performing NPV analysis.

Procedure

1. Open the file I-FN1L6P1 and click the sheet tab for L6P1.
2. Examine the layout of the worksheet. Cells A8 to B13 contain the various rates relevant to the project. Note that the depreciation rate for the building (cell B11) is the same as the rate for the machinery (cell B12). Cell G8 is to contain the NPV for the project. The formula for this cell should not be constructed until you have completed step 9. Cell G13 contains the following formula:

   $(2 + k) \div (1 + k)$

   where k is the discount rate. This "intermediate calculation" factor will be used in the calculation of tax shields.
3. Examine rows 18 to 47 which contain the table used to analyze the cash flow from the project.
4. Move to cell C25 and enter an appropriate formula for this cell to calculate the tax shield arising from the investment in the building. Note that the half-year rule applies for Year 1 (on €20,000) and in Year 2 (on €40,000). Years 3 to 6 will have consistent amounts for depreciation.

   When you construct the formula for cell C25, use absolute cell references where appropriate. You will also have to begin the formula with a leading negative sign because the amount in cell B21 is negative to indicate a cash outflow, but the tax shield amount is a cash inflow and must be a positive number; by using the leading negative sign, you ensure a positive result for C25.
5. If you have used absolute cell references properly in cell C25, you can copy the formula in cell C25 to cells D25 to H25 to complete the formulas for this row.
6. Move to cell C26 and enter an appropriate formula, using a similar logic to that used in step 4.
7. Use a similar technique to that of step 5 to complete the formulas in cells D26 to H26.
8. Enter appropriate formulas in rows 44 and 45, using formulas similar to those for rows 25 and 26 respectively. Note that the formula for tax shield loss arising from salvage is similar to that for tax shield arising from investment in the asset.
9. Examine row 47, which represents the total cash flows from the project. Note that some of these cash flow amounts are different from those in row 33, which represent the net cash flow from operations, excluding the capital investments. Cell B47 is the initial investment (at year 0). Cells C47 to H47 represent the total cash flow from the entire project for years 1 to 6.
10. Move the cell pointer to cell G8 and construct an appropriate formula to calculate the NPV for the project. Use the NPV function and use the values in row 47 as data to the NPV function.
11. Save the file, then print a copy of your completed worksheet.
12. Click the sheet tab for L6P1S and compare your printout with the solution worksheet. Reconcile any differences and make corrections as required.

What-if analysis

You should use your own completed worksheet, or the solution worksheet L6P1S to perform the following **independent** what-if analysis.

Case 1

EJCT management feels that the estimate of revenue from the plant was too optimistic. Instead of projecting revenue to start from Year 2 at €80,000, and growing at an annual rate of 5%, revenue is now projected to start at €70,000 in Year 2, remaining constant for the next four years. Projected expenses are the same as before. Is this project still desirable (that is, is the NPV still positive)?

Procedure

1. Change the values in cells D29 to H29 to 70000.
2. The NPV in cell G8 now reveals a negative number, indicating that the project is no longer desirable.
3. Close the file. Do not save these changes.

Case 2

EJCT management wants to know whether the project is still desirable if the estimate for the sale price of the land at Year 6 is €100,000 and not €141,725 as originally projected, and all other estimates remain as originally projected.

Procedure

1. Open the file I-FN1L6P1. Display your completed worksheet or the solution worksheet L6P1S.
2. Change the value in cell H36 to **100000** (salvage value of land at year 6).
3. The NPV amount in cell G8 now shows a positive number, making the project still desirable.
4. Close the file without saving the changes.

4.4.2

Excerpt from AU1 External Auditing: Lesson 2

LESSON 2. PROFESSIONAL STANDARDS, ETHICS, AND LEGAL LIABILITIES

TOPIC OUTLINE AND REQUIRED READING

2.1	Professional standards (levels 1 and 2)	IAS 2 paragraphs 1 - 22 IAS 23 paragraphs 1 - 8
2.2	Professional ethics (level 1)	IESBA *International Code of Ethics for Professional Accountants* Appendix 2-1: Analyze a case
2.3	Legal liability (level 2)	No required reading

ASSESSMENTS

Review questions 1 to 3 and Assignment 2

INTRODUCTION

In this lesson, you learn about professional audit standards and the ethical and legal environment in which an accountant in public practice operates.

TOPIC 2.1. PROFESSIONAL STANDARDS

Required reading

Background Information on the International Federation of Accountants (http://www.ifac.org/about-ifac/organization-overview)

Preface to the *International Standards on Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements* (download Part 1 of the *Handbook of International Standards on Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements* at http://www.ifac.org/publications-resources/2018-handbook-international-quality-control-auditing-review-other-assurance - free registration required)

ISQC 1 (Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements) (also in Part 1 of the *Handbook of International Standards on Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements*)

Learning objective

After completing this topic, you should be able to

- Briefly describe the process for developing accounting and auditing standards (level 2).
- State the ISAs and describe their implications for auditors (level 1).
- Differentiate between auditing standards and auditing procedures (level 1).
- Explain the purpose of assurance standards and describe the main differences between assurance standards and ISAs (level 2).
- List the elements of quality control for which public accounting firms establish policies (level 2).

Level 1

In Lesson 1, you reviewed the basic elements of financial statement audits and other assurance engagements. In this topic, you study the more specific ISAs used in external auditing, which you should become familiar with. It starts by reviewing the standard-setting process, and then looks at the general principles underlying external auditing. ISAs summarize most of what you need to know about auditing, and this course provides more detailed guidance on ISAs. ISAs are outlined and related to other professional standards. The topic ends by comparing ISAs to assurance standards and reviewing quality control standards — standards designed to achieve ISAs in practice.

Level 2

Standard setting

The process of setting accounting and auditing standards varies widely between countries. In some countries, such as the United States, standard setting is largely in the hands of the accounting profession. In some others, standards are set by legislation.

IFRS are set by the IASB, within the governance structure of the IFRS Foundation. The Foundation's mission is "to develop standards that bring transparency, accountability and efficiency to financial markets around the world. Our work serves the public interest by fostering trust, growth and long-term financial stability in the global economy."[46] The IASB has a membership drawn from the professional accounting organizations of the world.

IFRS (which includes the standards bearing the previous title "International Accounting Standards") comprise more than 45 individual standards and are gaining worldwide acceptance. To accommodate pre-existing diverse approaches throughout the world, the first standards dealt mainly with broad principles, avoiding much detail. Consequently, while providing standards where none existed before, they were viewed as somewhat elementary by those jurisdictions which had a history of more detailed standard setting (for example, the United States). Since that time, standards have become more detailed and comprehensive. Draft standards are circulated for public comment from all interested parties prior to their adoption. (The IASB website can be accessed at https://www.ifrs.org.)

[46] IFRS Foundation website https://www.ifrs.org/about-us/

Now read the Background Information on the International Federation of Accountants and the Preface to the International Standards on Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements. These documents describe the terms of reference, organization, process, and authority of the ISAs issued by the International Auditing and Assurance Standards Board (IAASB), an independent standard-setting board of the International Federation of Accountants (IFAC). IFAC has approximately 175 member bodies from every part of the globe, representing almost 3 million accountants. In addition to issuing ISAs and International Standards on Assurance Engagements (ISAE), the IAASB also issues International Auditing Practice Notes (IAPN), which provide practical assistance to auditors in implementing ISAs and promote good practice in auditing. (The IFAC website can be accessed at https://www.ifac.org.)

The process involved in the preparation and adoption of a new auditing standard is described on the IFAC website. Much of the credibility and authority of standards derive from the process used in creating the standards. In particular, the process must be seen as fair and responsive to user needs. Hence, it is essential to get input from all those affected, including regulators such as the various national securities commissions, management, users, and public accountants (and their international organizations, where applicable). Unfortunately, such processes can be time consuming and it is challenging for standard setting to keep pace with changes in the business environment. This is one reason supporting the pooling of resources globally to concentrate on developing harmonized international standards.

A number of countries have issued their own auditing standards, many of which predated the first international standards. The professional or regulatory bodies in those countries usually provide a detailed comparison between their standards or guidelines and the ISAs. It should be noted that ISAs do not override local or national standards, laws, or regulations.

Level 1

International Standards on Auditing

You will recall from Lesson 1 that the standard auditor's report states that the audit was conducted "in accordance with International Standards on Auditing" (or refers to relevant national standards or practices). The reference to International Standards on Auditing refers to the ISAs taken as a whole. Other national standards may contain a brief outline of those relevant standards which establish the framework from which other specific standards are developed.

In Lesson 1, you learned what an audit entails, the objective of an audit, and that an auditor provides an opinion on the financial statements. The purpose of the audit is to enhance confidence for users of financial statements. You also learned that auditors have certain attributes that enable them to perform audits. Throughout the ISAs, general principles govern the quality of an audit. Auditors must follow the ISA when performing audits.

Review the Contents of Part 1 of the *Handbook of International Standards on Quality Control, Auditing, Review, Other Assurance, and Related Services Pronouncements*.

Notice how the ISAs are grouped logically:

- AUDITS OF HISTORICAL FINANCIAL INFORMATION
- 200–299 GENERAL PRINCIPLES AND RESPONSIBILITIES
- 300–499 RISK ASSESSMENT AND RESPONSE TO ASSESSED RISKS
- 500–599 AUDIT EVIDENCE
- 600–699 USING THE WORK OF OTHERS
- 700–799 AUDIT CONCLUSIONS AND REPORTING
- 800–899 SPECIALIZED AREAS

Auditing standards are not the same as auditing procedures. Auditing standards set out the framework within which the audit is performed. Audit procedures are the specific steps taken by the auditor to obtain the sufficient and appropriate evidence upon which the audit opinion will be expressed.

Level 2

Assurance standards

Lesson 1 introduced the concept of an assurance engagement in which a practitioner is called to provide assurance regarding a subject matter, in the context of an existing accountability relationship between two parties (the accountable/responsible party and the user). The IAASB has also provided a set of assurance standards to provide a framework for carrying out the auditing and related engagements included in that concept. (Standards for financial statement audits are viewed as a specialized subset of assurance standards.) The focus of this course is on the audit of financial statements. Although a detailed study of assurance standards is deferred to *AU2*, you should at least be aware that assurance standards

- Exist to provide a framework for auditing subject matters other than financial statements
- Require the practitioner to have sufficient knowledge and proficiency with respect to the subject matter, whatever that subject matter may be
- Specifically require the practitioner to develop a set of criteria against which the subject matter can be evaluated
- Specifically require the practitioner to document matters important in providing evidence to support the conclusion expressed in their report

Quality control standards

To make sure that the ISAs are adhered to, it is necessary to develop mechanisms to monitor and enforce the ISAs. Such a monitoring and enforcement mechanism ensures that all accounting services are performed with due care. There are several ways of regulating adherence to ISA. One is to have a set of principles or code of conduct for guiding professional practice. This approach is covered in the next topic. Another is to have in place a system of quality control in professional practice within each public accounting firm. IFAC's standards on quality control for public accounting firms are the subject of International Standard on Quality Control 1, which you should now read.

Elements of a system of quality control

The standard (in paragraph 16) requires that public accounting firms establish policies and procedures for the following elements of a system of quality control:

- Leadership responsibilities for quality within the firm
- Relevant ethical requirements
- Acceptance and continuance of client relationships and specific engagements
- Human resources
- Engagement performance
- Monitoring

Yet another way of ensuring that the standards are actually practiced is through "audits of the auditors." There are various types of these monitoring mechanisms, with the most common being the practice inspection approach. In some jurisdictions, practice inspection stresses the educational aspect of the monitoring process rather than the disciplinary aspect. Practice inspection can be carried out by staff of the auditor's professional association, by government officers, or through peer reviews by staff of other public accounting firms.

Quality control for audit work (as opposed to general assurance or other engagements) is the subject of ISA 220.

A final, extreme form of enforcing standards is through litigation. This approach is explained in Topic 2.3.

TOPIC 2.2. PROFESSIONAL ETHICS

Required reading

IESBA *International Code of Ethics for Professional Accountants* (*including International Independence Standards*) [the "IESBA Code"] (http://www.ethicsboard.org/iesba-code)
Appendix 2-1: Analyze a case

Learning objective

After completing this topic, you should be able to

- Define ethics, describe the accounting profession's ethical concerns, and explain the fundamental principles in accounting codes of conduct in relation to the IESBA *International Code of Ethics for Professional Accountants* (level 1).
- List and explain the fundamental principles in codes of conduct for professional accountants (level 1).
- Explain the importance of independence for a professional accountant, and evaluate situations that may threaten independence (level 1).
- Apply the five-step approach to resolve ethical dilemmas (level 1).
- Describe and apply the IESBA *International Code of Ethics for Professional Accountants* (level 1).
- Explain the general and moral responsibilities of an auditor to clients and to third party users of information provided by the auditor (level 1).

Level 1

Ethics and a professional accountant's ethical concerns

Ethics involves making the correct choice amongst alternatives upholding one's values. It involves moral principles and making decisions between right and wrong. Ethics is also concerned with the consequences of decisions that were made.

As a professional accountant, you are considered by society to be a professional and as such, the first obligation you have is to society. The underlying reason for a high level of professional conduct is because professional accountants need to ensure that society has confidence in the services that the profession provides. The overall success of the profession depends on our clients and employers having the utmost confidence and respect for the services we provide.

As a professional accountant, your reputation will be your most important asset; it is the reputation of the members of the profession that creates a demand for their services. This is why maintaining a good reputation should be considered the single most important ethical principle. In addition to technical skills, it is the professional accountant's concern for integrity that is the basis for that reputation.

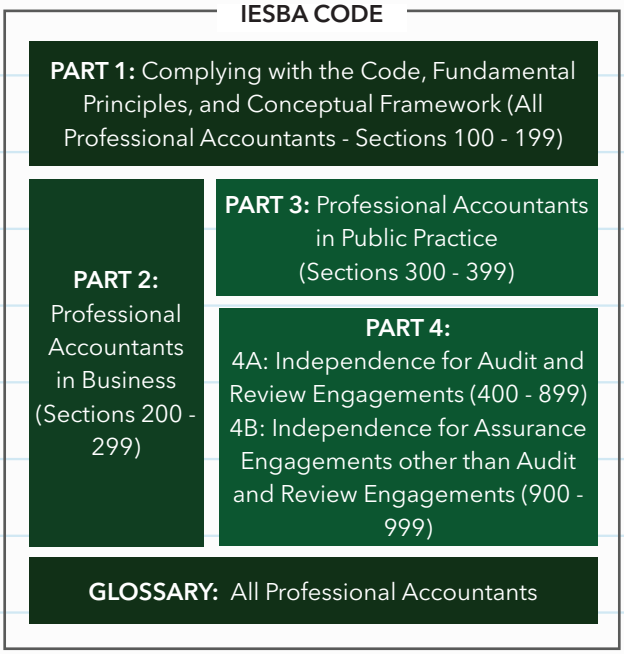
As noted in Topic 2.1, one way of assuring that ISAs are followed is through a professional code of conduct. Such a code is especially useful in helping the auditor satisfy the general standard of ISAs relating to the auditor's qualifications. Underlying a code of conduct, however, is the more general philosophical theory of morality and ethics. Ethics or moral philosophy is the systematic study of human conduct and moral judgment. Moral behavior involves more than making good moral judgments; it involves acting on those judgments. So professional ethics, which deals with proper conduct in one's professional life, has both an intellectual aspect (making ethically good judgments) and a choice aspect (doing what is right).

Rules of professional conduct and code of ethics

Many national professional accounting and auditing organizations have their own codes of ethics and rules of professional conduct. Members of those organizations must comply with those requirements. Some IFAC member bodies have adopted the *IESBA Code* as the statement of ethical requirements in their countries.

Overview of the IESBA Code

The architecture of the *IESBA Code* is as follows (see the Appendix to the Guide to the Code):



The parts include:

- Introductory materials that provide context in applying the conceptual framework (e.g., 200.1)
- Requirements that establish general and specific obligations (denoted "R" - e.g., R120.5)
- Application material that provides context, explanations, suggestions for actions or matters to consider, illustrations and other guidance relevant to an understanding of the Code (denoted "A" - e.g., 120.5 A1)

Parts 2 to 4 start with a discussion on applying the Conceptual Framework in the context of the Part, then provide Requirements and/or Application material.

Where there is a conflict between a national requirement and the *IESBA Code*, the professional accountant/auditor should follow the more demanding of the requirements unless prohibited by law or regulation.

Part 1: Complying with the Code, Fundamental Principles, and Conceptual Framework

The *IESBA Code* establishes the fundamental principles of professional ethics for professional accountants and provides a conceptual framework for applying those principles. Professional accountants are required to apply this conceptual framework to identify threats to compliance with the fundamental principles, to evaluate their significance, and to address the threats by eliminating them or reducing them to an acceptable level such that compliance with the fundamental principles is not compromised.

The *IESBA Code* lists (in section 110) the five fundamental principles of ethics that form the basis for the *IESBA Code*. The principles are established to protect the reputation of the profession. As a professional accountant, your reputation will be your most important asset; it is the reputation of the members of the profession that creates a demand for their services. This is why maintaining a good reputation is essential. This can only be accomplished by adherence to professional standards, compliance with rules of conduct for professional behavior, and acting with integrity.

It should be noted that the profession's ethics and rules of conduct apply whenever a professional accountant (or student) is performing any service requiring accountancy or related skills, including (but not limited to) accounting, auditing, tax, consulting, and financial services. They also apply whenever a professional accountant or student is holding himself or herself out to be a professional accountant or member of a professional accounting organization.

In most codes of ethics, the ethical principles and most of the standards apply to all accountants whether they are in public practice, industry, commerce, the public sector, or education. Certain standards may be applicable only to professional accountants in public practice.

The code of ethics of a professional group provides several important advantages for both its members and the public:

- It provides the public with a statement of the minimum standards to which the profession adheres.
- It provides the members of the profession with guidelines to govern their behavior so they know what is expected of them.
- It provides the members of the profession with a benchmark against which they will be judged by their peers and by the public and thereby facilitates disciplinary action.

Complying with the Code (Section 100)

This section explains the requirements for compliance with the *IESBA Code*. It differentiates "requirements" from "application material" and provides the requirements to be followed by a professional accountant when the code is breached.

The code of ethics of a profession should be viewed as the **minimum** level of behavior expected of its members. That, in fact, seems to be the case because many organizations have more rigorous standards of behavior than their professional code of ethics requires.

Once you become a member of a national or regional professional accounting organization, you will be bound by the Code promulgated that organization. As a professional, you will be called upon to resolve issues that have ethical implications. Appendix 2-2, "An ethics case study" from the *Ethics Reading Handbook* (Unit A2), presents a short case involving an ethical dilemma.

Fundamental principles (Section 110)

Professional codes of conduct can only provide a partial guide to professional ethical behavior; there is considerable room left for good judgment. For this reason, the *IESBA Code* begins with the five principles with which the professional accountant is expected to comply:

- **Integrity** – to be straightforward and honest in all professional and business relationships. (R111.1)
- **Objectivity** – not to compromise professional or business judgment because of bias, conflict of interest, or undue influence of others. (R112.1)
- **Professional competence and due care** – to:
  a. Attain and maintain professional knowledge and skill at the level required to ensure that a client or employing organization receives competent professional service, based on current technical and professional standards and relevant legislation; and
  b. Act diligently and in accordance with applicable technical and professional standards. (R113.1)
- **Confidentiality** – to respect the confidentiality of information acquired as a result of professional and business relationships. (R114.1)
- **Professional behavior** – to comply with relevant laws and regulations and avoid any conduct that the accountant knows or should know might discredit the profession. (R115.1)

The Conceptual Framework (section 120)

The Conceptual Framework specifies the use of a threats and safeguards approach (see 120.2). A professional accountant is required to:

a. Identify threats to compliance with the fundamental principles;
b. Evaluate the threats identified; and
c. Address the threats by eliminating or reducing them to an acceptable level.

The use of the Conceptual Framework maintains the focus on principles, not requirements, and deters accountants from concluding that a situation is permitted solely because that situation is not specifically prohibited by the *IESBA Code*. Each professional accountant would need to evaluate the situations within their own professional sphere that might threaten their ability to comply with the Fundamental Principles.

Parts 2 to 4 start by looking at compliance with the Conceptual Framework in the context of a specific role (Professional Accountant in Business or Professional Accountant in Public Practice), then include requirements in specific situations.

Threats to Compliance with the Fundamental Principles (120.6 A3)

In order to apply the Conceptual Framework, professional accountants need to understand the considerations that might threaten their compliance with the Fundamental Principles. The *IESBA Code* classifies these threats as follows:

a. Self-interest threat – the threat that a financial or other interest will inappropriately influence a professional accountant's judgment or behavior;

b. Self-review threat – the threat that a professional accountant will not appropriately evaluate the results of a previous judgment made; or an activity performed by the accountant, or by another individual within the accountant's firm or employing organization, on which the accountant will rely when forming a judgment as part of performing a current activity;

c. Advocacy threat – the threat that a professional accountant will promote a client's or employing organization's position to the point that the accountant's objectivity is compromised;

d. Familiarity threat – the threat that due to a long or close relationship with a client, or employing organization, a professional accountant will be too sympathetic to their interests or too accepting of their work;

e. Intimidation threat – the threat that a professional accountant will be deterred from acting objectively because of actual or perceived pressures, including attempts to exercise undue influence over the accountant.

Reasonable and Informed Third Party Test (see 120.5 A4)

The Conceptual Framework includes applying professional judgment and professional skepticism, and the use of the "reasonable and informed third party" test.

This test asks: when identifying and evaluating threats, would the same conclusions likely be reached by a *reasonable and informed third party*, who:

- *"weighs all the relevant facts and circumstances that the professional accountant knows, or could reasonably be expected to know, at the time the conclusions are made"?*
- is not necessarily an accountant, but possesses *"the relevant knowledge and experience to understand and evaluate the appropriateness of the accountant's conclusions in an impartial manner"?*

Addressing threats with safeguards (120.10 A2)

To address threats, the *IESBA Code* discusses a number of safeguards. Safeguards are defined as "*actions, individually or in combination, that the professional accountant takes that effectively reduce threats to compliance with the fundamental principles to an acceptable level.*" (see 120.10 A2)

Examples could include:

- Restructuring or redistributing tasks to segregate duties
- Adding an oversight role
- Hiring additional expertise
- Ensuring adequate disclosure

Part 2: Professional accountants in business

In the IESBA Code, professional accountants are categorized as either Professional Accountants in Public Practice (PAPPs) or Professional Accountants in Business (PAIBs). PAIBs work (for example) in:

- Commerce, industry, or service
- Public sector
- Education
- Not-for-profit
- Regulatory or professional bodies

Part 2 provides the requirements specific to the perspective of professional accountants not in public practice, such as:

200	Applying the Conceptual Framework (general requirements for identifying, evaluating and addressing threats; communicating with those charged with governance)
210	Conflicts of Interest (e.g., self-interest threats to integrity or objectivity when faced with a conflict of interest)
220	Preparation and Presentation of Information (e.g., self-interest and intimidation threats to integrity or objectivity related to wanting to present strong financial results)
230	Acting with Sufficient Expertise (e.g., self-interest threat to competence and due care that results in situations where a professional accountant takes on a role they aren't qualified for)
240	Financial Interests, Compensation and Incentives Linked to Financial Reporting and Decision Making (e.g., self-interest threat to objectivity when bonuses are tied to performance)
250	Inducements, Including Gifts and Hospitality (e.g., self-interest threats to integrity, objectivity, professional behavior related to bribes and less insidious inducements – how do we distinguish inappropriate inducements?)
260	Responding to Non-Compliance with Laws and Regulations (NOCLAR) (e.g., intimidation and familiarity threats to objectivity and professional behavior if an employer is violating environmental law or is laundering money)
270	Pressure to Breach the Fundamental Principles (e.g., intimidation and familiarity threats to objectivity and professional behavior if an employer is pressuring an accountant to misstate financial information to attract new investors)

These sections address contexts that PAIBs often face, with specific requirements and guidance. Each section provides illustrations of common threats to compliance with the Fundamental Principles.

Part 2 is the part of the *IESBA Code* dealing specifically for requirements for PAIBs. Note, however, that this part is also applicable to PAPPs when they are performing professional activities pursuant to their relationship with the firm. In other words, with respect to their role as an employee or partner within the firm, this part also applies. This means that, for example, if an employee were feeling pressured by their supervisor to overlook evidence on a client file and justify a client's actions inappropriately, it would be Part 2 of the Code that they would look to for guidance.

Part 3: Professional accountants in public practice

A PAPP is "*a professional accountant, irrespective of functional classification (for example, audit, tax or consulting) in a firm that provides professional services.*" The term "professional accountant in public practice" is also used to refer to a **firm** of professional accountants in public practice (i.e., in addition to individuals). Part 3 applies to all practitioners whether they provide assurance and/or non-assurance services.

Part 3 provides the requirements specific to the perspective of professional accountants in public practice, such as:

300	Applying the Conceptual Framework (when Part 2 applies; general requirements for identifying, evaluating and addressing threats; communicating with Those Charged with Governance)
310	Conflicts of Interest (e.g., self-interest threats to integrity or objectivity when faced with a conflict of interest)
320	Professional Appointments (e.g., self-interest threats to integrity or professional behavior related to client acceptance and continuance of clients that are potentially lucrative engagements but where the client ethics are in question)
321	Second Opinions (e.g., self-interest threat to competence and due care based on a potential client opinion shopping)
330	Fees and Other Types of Remuneration (e.g., self-interest threat to competence and due care if a firm is tempted to offer a very low fee to attract a new client, but the fee in inadequate to cover the work)
340	Inducements, Including Gifts and Hospitality (e.g., familiarity, intimidation or self-interest threats to integrity, objectivity, professional behavior related to clients offering gifts to develop a more conciliatory attitude among auditor staff)
350	Custody of Client Assets (e.g., self-interest threats to objectivity or professional behavior when holding client assets)
360	Responding to NOCLAR (e.g., self-interest, intimidation and familiarity threats to objectivity and professional behavior if a client is violating environmental law or is laundering money)

Part 4: Independence

Part 4 applies to PAPPs offering assurance services

- 4A – Independence for Audit and Review Engagements
- 4B – Independence for Assurance Engagements other than Audit and Review Engagements

Both sections (4A and 4B) start by looking at compliance with the Conceptual Framework, then include requirements in specific contexts.

Glossary

The Glossary in the IESBA Code applies to all professional accountants regardless of role. It contains:

- Defined terms with explanations
- Described terms that apply in certain contexts (such as the fact that the term "audit engagement" includes review engagements)
- References to where in the Code the various terms are described or used
- List of abbreviations used
- List of other standards that are referred to within the Code (such as specific International Standards on Auditing)

All professional accountants (and students) should know and understand the code of ethics and rules of conduct for the association of which they are members (or aspire to membership). Such codes and rules of conduct are the means by which the profession communicates to its members and students the behavior expected of members of the profession by both fellow members and the public.

As a prospective professional accountant you should be aware not only of your organization's code of ethics but also why it exists. The rules were not developed in a vacuum; they are a living set of precepts to be followed today and revised in the future to reflect changed circumstances. Requirements such as those embodied in the *IESBA Code* should be followed thoughtfully, not mindlessly.

Independence

Independence is a major attribute of the professional accountant in public practice, as evidenced by Part 4 of the *IESBA Code*. Independence is a special condition of objectivity that applies to audit and other assurance engagements. Independence is a requirement only for "assurance engagements," which are engagements conducted to provide a moderate or high level of assurance that specific subject matter (for example, financial statements) conforms in all material respects with identified suitable criteria (such as IFRS). Thus, it does not apply to the provision of tax services or to compilation engagements. It should be noted, however, that if the professional accountant performing a compilation engagement is not independent, the report should disclose the lack of independence.

Independence applies in several ways during an audit. First, the auditor must have the independence to plan the audit to obtain the required assurance. The client management must not be permitted to limit the timing, nature, or extent of the audit work performed. Second, the auditor requires the investigative independence necessary to carry out the audit. This includes free access to all books, records, and personnel. Finally, the auditor must have the reporting independence necessary to report freely and fairly as to the result of their work. Auditors must resist client attempts to get them to modify their opinion or reduce the monetary amount of adjustments required.

A concern related to the potential for loss of independence arises because the auditor sometimes provides non-assurance services to the audit client. Such non-assurance services may include the preparation of accounting records and financial statements, valuation services, taxation services, and internal audit services. Section 600.2 of the *IESBA Code* states that "Firms and network firms might provide a range of non-assurance services to their audit clients, consistent with their skills and expertise. Providing non-assurance services to audit clients might create threats to compliance with the fundamental principles and threats to independence."

Part 4 of the *IESBA Code* provides detailed guidance on the application of the principles underlying the *IESBA Code* to specific situations that may arise in practice with respect to the need for independence when performing assurance engagements.

Tools for ethical decision-making

When faced with an ethical challenge, it is important that you analyze the situation systematically to determine the best course of action. You need to be able to determine a plan that is in alignment with the ethical requirements of the profession and be able to justify and implement your decisions. Two tools can be particularly helpful in responding to these types of situations, both in your studies and in your career.

Tool #1: 5-Step approach to analyzing ethical dilemmas

This tool guides you through a systematic method of evaluating the situation in terms of alternatives and ethical consequences, and helps you determine the best action to take. Each step included a number of questions to guide your thought process.

1. Identify the problem
    - What are the ethical implications?
    - What fundamental principles are being threatened and how?

2. Consider stakeholder perspectives
    - Who is impacted by the current situation, and/or by the actions that could be taken?
    - How is each stakeholder impacted?
    - Are there other people who can/should be consulted?
3. Specify feasible alternatives
    - What decisions could be made?
    - Are there different short-term and long-term options?
4. Evaluate ethically significant factors for each alternative
    - For each alternative, would the actions be compliant with the fundamental principles and the conceptual framework?
    - What new ethical issues may come up as a result?
5. Make and defend your choice
    - Who do you have to communicate your decision to?
    - How do you implement the decision?
    - What documentation will be important?

It's important to note that the model may be somewhat iterative as new information emerges, new feasible alternatives are generated, and so on. Using a systematic approach will help you make more consistent decisions over time.

Tool #2: Framing the discussion

Once you've determined the best decision to address an ethical situation, you need to plan a means of carrying it out. This can sometimes be the most challenging part, as you will often need to convince someone else (your supervisor, a colleague, or a client, for example) that your decision is the appropriate action to choose. Persuading others to take appropriate action requires framing and negotiation skills.

Framing the decision as a business case:

1. Start by determining who you need to convince.
2. Examine their perspectives and motivations – what is important to them?
3. Evaluate how not taking the "right" action will jeopardize what is important to them.
4. Build your arguments based on their perspective.

This allows us to avoid getting into an adversarial debate over "right" and "wrong" and focuses on aligning mutually-beneficial outcomes.

Case study example

Johnny Keems is not yet a professional accountant but is doing quite well in his first employment with a large public accounting firm. He has been on the job for two years and has become a good junior auditor. If he passes his last professional qualification exam next month, he will be promoted to senior auditor.

This month, during the audit of Row Lumber Company, Johnny told the controller that he was remodelling an old house. The controller liked Johnny and had a load of needed materials delivered to his house, billing Johnny at a 70% discount — saving him over €300 above the normal cash discount. Johnny was happy to have the materials, which he otherwise would not have been able to afford on his meagre salary.

Required:

a. Determine what Johnny should do.

b. Frame your decision as a business case to justify your decision and guide Johnny on implementation.

Requirement a: Suggested solution

To analyze this situation and decide on the best action for Johnny to take, apply the ethical decision-making framework:

1. **Identify the problem**
   - What are the ethical implications?

     The problem is whether it is ethical for someone doing an audit to accept a substantial benefit from the firm being audited.

   - What fundamental principles are being threatened and how?

     Objectivity and professional behavior are being threatened – accepting the discount may make it more difficult for Johnny to objectively evaluate the audit evidence, and to act professionally if he disagrees with the client about the appropriate treatment, disclosure, etc. This is a self-interest threat.

2. **Consider stakeholder perspectives**
   - Who is impacted by the current situation, and/or by the actions that could be taken?

     Johnny, the client, Johnny's firm, stakeholders relying on the audit results

   - How is each stakeholder impacted?

     Johnny: would benefit from the discount

     The client: would benefit from having a closer relationship with the auditor, and particularly if the auditor were indebted to the client in some way. There may not be any intended impropriety on the part of the client – they may simply be trying to be helpful.

     Johnny's firm: would be jeopardized by Johnny's behavior if he were to act unethically (through quality loss, loss of independence, potential reputational damage, etc.)

     Stakeholders relying on the audit: would be harmed if audit quality were reduced

   - Are there other people who can/should be consulted?

     Johnny's supervisor should be made aware of the offer, so that they can assist Johnny in ensuring appropriate action.

3. **Specify feasible alternatives**
   - What decisions could be made?

     1. Accept the additional discount.
     2. Refuse the 70% discount and take only the normal cash discount.

   - Are there different short-term and long-term options?

     No, this is a short-term decision.

4. **Evaluate ethically significant factors for each alternative**
   - For each alternative, would the actions be compliant with the Fundamental Principles and the Conceptual Framework?

     1. Accepting the 70% discount:
        - Auditors must remain independent both in appearance and in actual fact. Accepting a significant gift from a client may threaten Johnny's independence, and therefore threaten his objectivity in performing the audit. Even if he is able to maintain objectivity, he would likely not be seen to be independent in appearance.
        - Accepting the discount would call into question whether Johnny would require the client to restate amounts or correct errors if he himself is seen as being willing to bend the rules, or if he is indebted to the client.
        - Johnny's firm and/or the PAO may decide to discipline or fire Johnny for not abiding by

requirements for independence and for inappropriately handling the conflict of interest. (see Section 420 of the *IESBA Code* as an example of professional rules related to gifts and hospitality).

2. Decline the 70% discount:
    - This maintains independence and removes the self-interest threat to objectivity.
    - Not accepting the gift allows Johnny to educate the client as to the requirements for, and benefits of, the independence rules.
    - This action signals to the client that Johnny takes his professional obligations seriously, which may increase their respect for him.

- What new ethical issues may come up as a result?

1. Accepting the 70% discount:
    - An intimidation threat may result if, during the audit, Johnny discovers some questionable items in the lumber firm's books. The controller may remind Johnny of the 70% discount and threaten that if the discount became public, other people, including Johnny's bosses, "might not be too happy."

2. Decline the 70% discount:
    - There is no ethical downside to this action, although diplomatic communication is needed to ensure there is no ill will between Johnny and the client as a result.

5. **Make and defend your choice**

Option 2 – refuse the offer of an additional discount.

- Who do you have to communicate your decision to?

  The client and his supervisor (the firm should be aware of the offer and of how Johnny dealt with the situation; if there is reason to believe that the client was trying to induce Johnny inappropriately, this should be factored into the risk assessment for the engagement).

- How do you implement the decision?

  Johnny should diplomatically thank the client but decline the discount. He should ensure that he doesn't make assumptions about the client's intentions, but educates them as to the reason for the independence requirements.

- What documentation will be important?

  Johnny should document the situation in an email to his supervisor to ensure understanding of the situation from the firm's perspective.

Requirement b: Suggested solution

To justify this decision and guide Johnny on implementation, frame the decision as a business case:

Framing the decision as a business case:

1. **Start by determining who Johnny needs to convince.**

   Johnny needs to explain to the client why he can't take the discount offered in a way that does not negatively impact the relationship.

2. **Examine their perspectives and motivations – what is important to them?**

   We don't know if the client is trying to improperly induce Johnny or if they are simply trying to be helpful. Johnny should not jump to conclusions about motives.

3. **Evaluate how not taking the "right" action will jeopardize what is important to them.**

   Taking the discount would go against the need for independence, and independence is necessary in order for the client to receive a high-quality audit that stakeholders can rely upon.

4. **Build your arguments based on their perspective.**

   This allows us to avoid getting into an adversarial debate over "right" and "wrong" and focuses on aligning mutually-beneficial outcomes.

   Johnny should explain why independence is important for the client, and should thank them but graciously decline.

TOPIC 2.3. LEGAL LIABILITY

No required reading

Learning objective

After completing this topic, you should be able to

- Describe the relationship between legal liability and ethical responsibility (level 2).
- Outline the characteristics of an auditor's liability under common law (level 2).
- Explain how an auditor's negligence is established (level 2).
- Identify the parties to which an auditor owes a duty of care, and describe the circumstances under which liability to third parties arises (level 2).
- Explain how an auditor can respond to legal liability (level 2).

Level 2

Topic 2.2 covered auditors' responsibilities to the public, to their peers and profession, and to their professional organization as set out in the organization's code of ethics. Failure to comply will result in censure by the professional organization; such censure may range from a reprimand to expulsion.

Auditors' legal responsibilities vary somewhat from country to country, and are defined by statutes (such as the *Canada Business Corporations Act*, for example). In addition, auditors will have contractual relationships with clients that define their legal responsibilities.

Among the more developed countries of the world, there are two distinct types of legal environments. While there are differences between the countries within each grouping, the two basic patterns can be described as the **code law tradition** and the **common law tradition**. The code law (or "civil law") tradition has established prescriptive rules governing behavior, codified into the countries' legal system. Such countries have tended to legislate accounting standards, codes of ethics, and so on. The best known of these is the Napoleonic Code of France, which has been adopted by many of the nations that were at one time French colonies.

In the common law tradition, the law is developed through cases decided in court, the decisions of which serve as precedents for future cases where the same issues are at stake. Such legal systems develop legal interpretations (some would say, new laws) in response to the matters brought to court. Common law countries have tended not to define accounting standards or codes of professional conduct through statute, but rather have left them to the professional associations to develop. Most such countries do have some statutory requirements such as company acts and securities legislation.

Much of the pioneering work in establishing formal standards for accounting and auditing standards has come from the common law countries, particularly the United States and the United Kingdom. Many of the standards have developed in response to a need for the profession to identify the work required, for example, of an auditor in order to establish that the auditor was not negligent. The existence of formal standards makes it easier for the practitioner to establish that the work done met the standards of the profession at the time (and consequently was not negligently performed).

Relationship between legal liability and ethical liability

Before contemplating the legal responsibilities of auditors, it is important to recognize that acting ethically may not be the same as acting legally; nor is acting legally necessarily acting ethically. The reason ethical and legal responsibility do not always coincide is that ethical responsibility is judged by ethical standards, and legal responsibility (liability) by legal standards. The law may sometimes demand that people act unethically.

For example, in South Africa under the former racist regime, non-Caucasian people were denied fundamental human rights, and it was illegal to assert these rights. So while it would have been ethically acceptable to protest this denial of human rights, it was illegal to do so. On the other hand, the law may permit people to do things that are not ethically acceptable. For example, the law may allow a wealthy landlord to evict tenants who are behind in their rent. A particular tenant who is a single parent may have been behind in paying rent because of a sudden illness. To evict the tenant would be to show a lack of compassion for the parent and children; this action could not be ethically recommended, though it would be perfectly legal. Often, the ethical way and the legal way are synonymous, but sometimes they might be at odds, as shown by these examples. Frequently, ethics require us to do more than the law requires.

Usually, there is a moral obligation to obey the law (unless the law affronts fundamental moral principles) because the law is often based on moral principles (for example, don't kill), or because the law states areas of significant social agreement important for cooperative behavior. It is therefore important to recognize that while legal liability is not the same as moral liability, they are related.

Liability to clients and third parties

The auditor's liability under common law may arise under either **contract law** or **tort law**.

Tort actions arise out of the common law when a party to whom a duty is owed by a person or persons with social or professional obligations, suffers a loss through the negligent performance of that duty. This is the usual type of action by third parties who have suffered losses through their reliance on audited financial statements. The plaintiff, in undertaking such a suit, must establish **all** of the following to win the case:

- There was an obligation to the injured party (that is, no duty of care existed).
- There was a loss suffered.
- The loss was the consequence of reliance on the auditor's report and financial statements.
- The auditor was negligent in carrying out the audit.

Therefore, the auditor wins a case by proving that **at least one** of these elements is missing, or that the plaintiff contributed to their own loss (for example, by knowingly hiring a corporate controller who lacked adequate education or experience). Auditors often try to establish that the duty of care was not breached (that is, that the audit work was not negligently performed) or that if it was, the damages did not result from it. [Most cases will not reach court unless the plaintiff can establish to their lawyers (at least) that a loss was suffered and that there was a duty of care.]

Liability to clients

Contract law generally covers only the agreement between the auditor and the client, as they are the only parties to any legal contract with respect to an audit. The auditor is required to perform the work in accordance with the terms agreed upon with the client. Such terms should be contained in an engagement letter (which is required by ISA 210 and will be covered in Lesson 3) but in the absence of an engagement letter they will be implied.

Because of the contractual relationship between the client and the auditor, auditors have a responsibility to perform their duties "with due care" — that is, auditors must not be negligent in performing the audit. This duty of care is sometimes referred to as arising from **privity of contract**. Under certain conditions (usually where the user has been identified to the auditor), a third-party user of the financial statements may also have privity under an auditor-client contract. An example might be a bank which is known to the auditors to be relying upon the auditor's report and financial statements in granting credit to the client.

Clients are most likely to believe that the auditor was negligent if a material fraud or other illegal acts come to light after the audit has been completed. This is especially true if there was no engagement letter, or if the engagement letter did not clearly indicate the auditor's responsibility with respect to the discovery of fraud or other illegal acts. An American case (1136 *Tenants v. Max Rothenberg and Company*) provides an example of a public accountant who was sued by a client for failing to detect a fraud. The client asserted that the public accountant had been negligent and the courts agreed, even though no audit had been performed. This case illustrates the importance of spelling out the terms of the engagement in an engagement letter. Negligence arising from a contractual relationship is often demonstrated with compelling facts showing that specific terms of the contracts were breached.

Liability to third parties

Most of the common law legal cases concerning auditors' negligence deal with the issue of third-party liability. This type of liability is the most important source of lawsuits for public accountants — acting as auditors or otherwise. The concept of privity of contract is not strong enough to be used as a defence; potentially, anyone can claim that a duty of care was owed to them by an auditor. The case of *Haig v. Bamford* (a Canadian case) decided circumstances under which a duty of care was deemed to exist. The court held, the auditor being found to be negligent, that a duty of care existed to that limited class of users of whom the auditor had knowledge that they would rely on the audited financial statements. Lawsuits are typically brought forward by third parties in a variety of situations. There are three types of third parties:

- Third parties known by the auditor (that is, the auditor is explicitly aware that these third parties will rely on the financial statements)
- Reasonably foreseeable third parties, such as creditors and investors
- All other third parties that may decide to use the financial statements for various reasons

Where the auditor is held by the court to have shown such a reckless disregard for duty and responsibility that the auditor's conduct constitutes gross negligence (as opposed to ordinary negligence), the courts have held that the auditor has a wider responsibility for resulting third party losses.

Under the common law, the auditor's liability to third parties is continually evolving and has generally increased over the years.

Fraud

An auditor who commits a fraud is liable to any person — including third-party users — who can prove that money was lost because of the fraud. In addition, the auditor is liable to be prosecuted under the jurisdiction's criminal law.

An auditor who issues a report on financial statements that he or she knew or should have known were false and misleading is deemed to be guilty of fraud. Under the law, reckless disregard for the truth is tantamount to committing fraud; the judgments presented in such cases often refer to this situation as **constructive fraud**. This is the equivalent of knowingly being associated with misleading financial information. Thus, not only is the auditor breaking the rules of professional conduct, but he or she they may also be criminally charged and found guilty of the offence of fraud.

Responding to legal liability

The primary defence in a negligence case is to prove the audit has been performed in accordance with the ISAs and other relevant professional standards. The evidence to demonstrate this point comes mainly from the audit working paper file, which you will learn to develop throughout this course. As mentioned, this defence means showing that the duty of care has not been breached.

Auditors follow a Code of Ethics and strict measures are put in place to ensure that these standards are adhered to. Auditors are trained in auditing and understand accounting standards. Audit work and decisions made should be adequately documented. Auditors should only accept quality clients.

Three additional issues have arisen from the increasingly litigious climate in which public accountants operate. These are fiduciary duty, confidentiality, and legal liability implications for an audit practice. The last is the most important; the best defence is to perform quality audits at all times. You will see that knowledge of the client's business is a recurring theme in this course, because the more you know and understand your client, the better quality audit you can perform, which serves the public and also mitigates the risks of being sued.

4.4.3

Appendix found in most courses

APPENDIX A. ANALYZE A CASE

The program of professional studies requires you to solve problems and analyze cases in a variety of course subjects — from financial accounting, management accounting, and finance to management information systems, taxation, and auditing. Beginning in the foundation tier courses and progressing through the advanced tier courses, cases are designed to help enhance your technical and analytical skills. At first, each case may seem unique and you might wonder where to begin your analysis; in fact, the cases share many features, so it's worth taking the time and effort to learn a common approach to analysis.

Whether you are new to case analysis or just want to improve your skills, you will find the following approach helpful. It gives you a set of tools and skills that gradually will become second nature to you. You will learn to recognize which tool works best for a particular case or problem. With practice, solving cases will no longer be a daunting task, but one that you approach methodically with increasing confidence and success. More importantly, these case analysis skills will be useful to you throughout your career.

NINE-STEP APPROACH TO CASE ANALYSIS

When working on cases and problems in your courses, it is recommended that you follow this nine-step approach:

1. Skim the case.
2. Read the case closely.
3. Identify problems and issues.
4. Analyze the data.
5. Generate alternatives.
6. Select the decision criteria.
7. Analyze and evaluate the alternatives.
8. Make a recommendation or decision.
9. Write a report or action plan.

Some of these steps may not be necessary. For example, in a simple case, you probably don't need to both skim and read the case. It makes sense, however, to skim larger cases to get an overview before you read the entire case more thoroughly. Similarly, courses at a foundation tier are more likely to identify the problem for you and provide you with alternatives and decision criteria. Your task might simply be to compare (or analyze) the alternatives and make a recommendation.

Applying the steps

Each of the nine steps is explained in detail below, along with helpful hints on how to formulate a successful response and avoid common pitfalls. Where applicable, example cases that illustrate the steps are provided at the end of the reading.

1. Skim the case.

It is worthwhile to skim any case longer than two pages. To skim effectively, read the first and last paragraphs (or sections), and take a quick look at any exhibits. When you skim, look for anything that indicates the important aspects of the case. Ask yourself these questions:

a. What is required of me and what is my role?

b. What is the main issue and why is it important to the organization?

c. Why has the issue arisen, and why now?

d. When does the issue need to be decided?

e. How should I allocate my time on this case?

2. Read the case closely.

Next, read the entire case carefully, making sure you understand the information presented. As you read, gather background information and make notes on the case and the exhibits. The background of a case includes the environment, organization, stakeholders, and users, as well as any motivational aspects of those involved. Ask yourself these questions:

a. How do the exhibits fit the case? Which ones are relevant, and which ones are not?

b. What industry does the organization operate in? What is the state of the economy? What information do I have on competitive factors that are important to my analysis?

c. What are the key organizational factors? (What is the reporting structure, and what are the organization's goals and objectives? What principles, rules, or values, if any, are at issue? What are the organization's planning and control systems? Are there any incentive systems that might affect behavior? Which business functions are critical to success or failure?)

d. Who are the affected stakeholders (investors, employees, managers, customers, suppliers, and members of the public or community)? What are their interests and what motivates them?

e. Who are the readers of any reports that I might prepare? What decisions will be made based on my report?

3. Identify problems and issues.

Using the background information you gathered in step 2, ask yourself these questions:

a. What do I know that will help me analyze this case and solve the problem?

b. What, if any, ethical issues are involved?

c. Are there any issues that are outside the scope of this case? (For example, while it may be cheaper to operate in another country, if the company has already made major investments in its current location, it has a commitment to that location. Recommending a move to the other country would not be a viable option. Similarly, if you are asked to provide a solution that can be implemented within a week, recommending that a new factory be built will not meet the requirement.)

d. Am I missing information? If so, can I determine the missing information from the information I already have? What reasonable assumptions can I make that are supportable, given the information that I do have?

4. Analyze the data.

This step may include a number of separate tasks as follows:

a. Prioritize the issues.

b. Determine the accounting procedure or business tool most appropriate to your analysis. Keep in mind that before you perform any analytical procedure, you should know what you are going to do with the results of the analysis. Analysis for its own sake, particularly in a test setting, is a waste of time. You should also have an estimate of the answer you expect to get. A common pitfall for students is to accept the number they arrive at after a calculation, even when it is a number they know couldn't possibly be right if they took the time to think about it. By having an estimate before you start, you will recognize an impossible result when you get it. Estimating allows you to check your work and make corrections before you proceed.

c. Separate the cause from the effects. Make sure you know which is which. It is the cause you want to correct. The effects will follow.

d. Where possible, use both qualitative and quantitative analysis.

e. Identify any constraints and any opportunities.

5. Generate alternatives.

Use this step as a brainstorming activity to help you problem solve. Keep these points in mind:

a. The alternatives should address the causes you identified in Step 4.

b. When time permits, generate as many alternatives as possible. The process of generating alternatives often produces good ideas that don't immediately come to mind and would otherwise be overlooked.

6. Select the decision criteria.

Decision criteria help you sort through all the alternatives you have identified, ensuring that you apply a consistent standard to your analysis. Ask yourself these questions:

a. Have I considered the four ethical heuristics of *autonomy, non-malfeasance, beneficence*, and *justice*?

b. Is there a value or principle involved that is so compelling it overrides the other decision criteria?

c. What organizational goals, objectives, values, principles, or critical business functions must the decision be judged against?

d. Have the criteria been developed while recognizing that all of the alternatives will be evaluated against the same criteria?

e. Have I weighted the criteria? (Some criteria, such as the safety of personnel, are weighted more heavily than others, such as cost.)

f. Have I given my basic values greater weight than other criteria? (Remember, you are the decision-maker and whatever decision you make reflects your values.)

7. Analyze and evaluate the alternatives.

This step helps you take a closer look at the alternatives you identified in Step 5. It may include these tasks:

a. Determine the accounting principles, standards, and concepts for each alternative. (Following generally accepted accounting principles is a requirement, but when you have to choose among alternatives, you should also consider fair presentation and the financial statement users.)

b. Determine the accounting procedure or business tool that is appropriate for the analysis.

c. Use both qualitative and quantitative analysis.

d. Determine the ethical, moral, and financial consequences of each alternative. Consider also how each alternative will affect the various stakeholders.

e. For each alternative, consider what factors would have to change for you to evaluate it differently. You may find that changed circumstances can make possible what initially seemed impossible. It is helpful if you are prepared for unforeseen events and are able to recognize such events for the opportunity they present or, more importantly, the risk, if the change is negative. This type of analysis can help you suggest necessary changes before an alternative is considered any further. It is sometimes an important interim step in real-life situations.

8. Make a recommendation or decision.

Once you have completed your analysis, you are ready to make a recommendation or decision:

a. Whether you make a decision or a recommendation depends on the requirements of the case. If your role is that of a manager, you may be the decision maker. In other situations, you may be called on to make a recommendation because of your expertise in accounting and problem solving.

b. Assess your decision using the decision criteria you identified. Remember the weight you gave to the different criteria; consider that as you make your decision.

c. Your decision (or recommendation) must follow logically from your analysis.

d. Accept responsibility for the decision you make. If you have done a thorough analysis, given due consideration to all known or available information, and been objective and fair to all parties' interests, your decision should not only be the optimal one, but one that you can live with in good conscience.

9. Write a report or action plan.

The final step is to articulate your decision or recommendation. Plan your report so it addresses the most important issues. Here are some helpful hints:

a. Use exhibits to summarize or display numerical analysis. (Don't include all of the numerical analysis in the written text of your report. In all but the simplest situations, this can be confusing for the reader.)

b. As part of your report, provide an overview of the most important background factors and variables. (Limit this overview to one brief paragraph.)

c. List the issues or problems in order of importance.

d. Include your analysis and alternatives. If there are many options, you might find it easier to begin by addressing those that are least attractive, but still possible. Briefly introduce and dispose of each of these. For more attractive but not recommended options, provide your analysis and state why you have not recommended them. Finally, present your preferred alternatives (no more than two or three) along with a detailed analysis. Explain the exhibits followed by the advantages, disadvantages, and limitations of each alternative.

e. Make your recommendation. This should follow from your written analysis. If there are limitations, explain how these may be addressed. You should also indicate possible conditions that may necessitate changes to these plans and what changes would be appropriate.

Modifying the steps

Not all of the questions and comments provided with the nine steps are always applicable. For example, you won't always know what motivates other people, but if the case provides you with this information, you will want to consider it in your analysis. In some cases, you may be told what analytical tool or procedure to use and won't have to work this out on your own. Finally, you may find that you need to modify the steps to suit your own style of decision making.

As you read textbooks, particularly management books, you will come across other problem-solving approaches. At first glance, they may seem different. However, if you look closely and compare them to the nine-step approach, you will probably find that all approaches have a similar basic framework. Consistent use of a problem-solving approach such as the one outlined here will help you achieve success not only in your studies but also in other areas of your professional and personal life.

Formulating a successful response

When preparing a case analysis report, keep in mind that it is important to communicate your thought process. The path you travel to arrive at your recommendation is just as important as the recommendation itself. Remember to include background data, issues, alternatives, decision criteria, analysis, and a recommendation. Be clear and concise, and avoid repetitive or vague recommendations such as "fire the accountant" or "gather

more information." Make your recommendations as specific as possible in the time allotted. Finally, take into account the specific conditions of the situation to ensure that your recommendations are feasible.

A final point to remember is that there is no one correct answer to a case. It is not uncommon for markers to encounter different but equally valid solutions to the same case. Successful case solutions demonstrate your ability to:

- define issues
- apply relevant concepts and techniques to analyze issues
- analyze the situation from different perspectives
- identify more than one feasible course of action, supported by analysis
- objectively evaluate the alternatives to make specific recommendations

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4.5

Sample assessment materials from the Program of Professional Studies

4.5.1

Sample multiple choice questions

FROM EXTERNAL AUDITING PRACTICE EXAMINATION

1. Which of the following would be the most reliable documents in terms of evidence?
    a. Shipping documents
    b. Receiving reports
    c. Cancelled checks
    d. Sales summaries

Solution: c. [Source: Topic 3.3 (level 1)]

2. Which of the following statements would be inappropriate in an audit engagement letter?
   a. "Our audit work is subject to the unavoidable risk that errors may not be detected."
   b. "We expect to obtain reasonable assurance that material errors do not exist in the financial statements."
   c. "We will provide your staff with a package of blank schedules needed by our staff during the audit. We understand that your staff will prepare all of the schedules in the package."
   d. "We will advise you of our fee at the conclusion of the audit."

   Solution: d. [Source: Topic 3.6 (level 2)]

3. Which of the following assertions would be the least important for the audit of inventory?
   a. Existence
   b. Valuation
   c. Compliance
   d. Ownership

   Solution: c. [Source: Topic 9.1 (level 1)]

FROM ADVANCED MANAGEMENT ACCOUNTING PRACTICE EXAM

1. The Snack Shop is a small restaurant that is open during the summer. The following financial information is available.

	Cheeseburger	Hot Dog	Pizza
Selling price	€ 3	€ 2.5	€ 6
Food costs	1.5	0.75	2.5
Labour costs	0.75	0.25	1
Fixed costs allocated	1	0.5	2
Number of sales (in units)	2,000	3,000	500

   What would the effect on Snack Shop's profit (loss) be if the owner decided to stop offering the cheeseburger?
   a. €(500)
   b. €500
   c. €(1,500)
   d. €1,500

   Solution: c (3.00 - 1.50 - 0.75 = 0.75 x 2,000 = 1,500). [Source: Topic 1.8 (level 1)]

2. Based on the following information, what is the average wait time?
   - Annual capacity of machine: 2,000 hours
   - Average number of orders: 120
   - Lead time: 18 hours
   - Manufacturing time: 12 hours

   a. 15.43 hours
   b. 16.78 hours
   c. 18.46 hours

d. 20.96 hours

Solution: a (Average wait time = $(120 \times 12^2) \div (2 \times [\ 2{,}000 - (120 \times 12)\ ]) = 17{,}280 \div 1{,}120 = 15.43$ hours). [Source: Topic 3.8 (level 1)]

4.5.2

Sample short-answer questions

FROM EXTERNAL AUDITING PRACTICE EXAMINATION

Question 4

Lilan's working papers for evaluating a client's internal controls include the following notes:

- There were over 1,000 purchase transactions under $4,500 from 4 vendors — these are routine purchases.
- All purchases over $4,500 are non-routine transactions and must be pre-approved by the purchasing manager, but one purchase for $15,000 was authorized by the plant manager without the purchasing manager's initials.
- All cheque stubs for purchases should have purchase order numbers recorded, but 5% of the sample did not have the purchase order number recorded — traced the 5% to August payments.
- Conclusion — internal controls are weak; substantive approach is recommended.

Required

a. For each of the deviations found by Lilan, state what the deviation is and why it indicates a problem from an internal control standpoint. (4 marks)

b. Give four reasons why Lilan's conclusion may be incorrect. (8 marks)

Solution

a. 2 marks per bullet / Source: Topic 5.2 (level 1)

- "One purchase for $15,000 was authorized by the plant manager without the purchasing manager's initials." This is a problem because it indicates management over-ride. This means management is willing to ignore the internal controls of the company.
- "5% of the sample did not have the purchase order number recorded — traced the 5% to August payments." This is a problem because this means that cheques were issued without a purchase order and, therefore, that specific internal control was not working or was ignored.

b. 2 marks per bullet / Source: Topic 5.2 (level 1) and 6.2 (level 2)

- There may be other controls in place that were effective.
- The controls over the routine transactions may be effective (Lilan did not note any deviations in these transactions). Lilan could test 100% of the non-routine transactions.
- The 5% of transactions with deviations were all traced to one time period, so Lilan could have tested these transactions 100% but relied on the controls for the balance of the period.

- There is no indication that Lilan compared the deviation rate to the tolerable deviation rate in making the decision.
- There may be sampling error and/or non-sampling error.

Question 6

Kim is a senior auditor with a public accounting firm. This is the second year that the firm has conducted the audit of this client. Kim has already done some work on liabilities by reviewing the client's notices of assessment from the tax authority for the year being audited. Kim is now reviewing his plans for the receivables, which includes sending confirmations, and will also audit fixed assets. The client decided this past year to sell its receivables to a finance institution at a discount.

(Note: A notice of assessment is an annual statement sent by tax authorities to taxpayers detailing the amount of income tax they owe.)

Required

a. Using only the data generated by the client's own accounting system, design one audit procedure using analysis of the accounts receivable. State the assertion being tested and explain how the evidence obtained from your procedure will relate to that management assertion. (4 marks)

b. What management assertion is involved when an auditor studies the client's tax notices of assessment for the year being audited? What evidence is the auditor looking for? (2 marks)

c. When customers confirm the amount owed as of a certain date, this does not provide evidence of ownership. Explain how Kim would be aware of the sale of the receivables, and suggest an audit procedure Kim could undertake to verify this. (3 marks)

Solution

a. For one of the following audit procedures only allocate: 1 mark for assertion tested, up to 1.5 marks for audit procedure, and up to 1.5 marks for explanation of why the evidence collected is a test of the assertion / Source: Topic 8.5 (level 1)

Valuation

- Compare the percentage change and volume change (from prior years) for sales relative to that for accounts receivable.
- If accounts receivable have increased by more than the increase in sales, there may be a collectibility problem. (Customers may have started to default on their payments, or the company may have relaxed its credit granting policies in order to increase or maintain sales volumes.)

Existence

- Compare the gross profit margin to the prior year.
- For example, an unexpected increase in gross profit may indicate a possible overstatement of sales, which in turn would point to an overstatement of accounts receivable.

Valuation

- Compare the current year's aged listing of accounts receivable total to the control account in the general ledger and the amount reported in the financial statements.
- If the totals agree, this would support the valuations assertion.
- Compare the current year's aged listing of accounts receivable to that of the prior year to determine if there have been significant changes in major customers accounts.
- No significant changes would support the valuations assertion.

or

- Determine whether the ratio of overdue accounts to total accounts receivable has increased.
- No significant changes would support the valuations assertion.

or

- Determine whether there are outstanding balances from the previous year-end that are still outstanding at the current year-end.
- Any amount still outstanding must be investigated, and likely indicates a valuation problem.

Valuation

- Evaluate the change in the ratio of allowance for doubtful accounts to accounts receivable from the prior year.
- A lower or higher ratio may indicate a significant change in policy, such as the method used to estimate uncollectible accounts (accounting policy) or the rules for granting credit (operating policy).

b. 1 mark per bullet / Source: Topic 8.8 (level 1)

- The completeness assertion
- The tax notices of assessment would provide evidence of unrecorded liabilities.

c. 1.5 marks per bullet / Source: Topic 8.5 (level 1)

- The auditor should be aware of the company's various credit arrangements through adequate knowledge of the client, for example, by enquiry of management.
- A review of the minutes of board of directors' meetings, and a review of all loan documents, bond indentures, and other debt covenants should determine whether accounts receivable have been factored or pledged as collateral.

FROM ADVANCED MANAGEMENT ACCOUNTING PRACTICE EXAM

Question 3

A retailer presents the following information regarding the inventory management of Product X:

1. Regular cost: €140
2. Shipments are FOB destination.
3. Annual demand: 60,000 units
4. Average demand per week: 1,200 units
5. Required rate of return on investments: 15%
6. Purchase order lead time: 14 days
7. Relevant carrying costs per year: €13,250
8. Relevant ordering costs per order: €125

Required

a. Calculate the economic order quantity (EOQ). (4 marks)

b. Calculate the total annual relevant costs (TRC) for the EOQ. (3 marks)

c. Calculate the number of deliveries for each time period. (3 marks)

d. Determine the re-order point. (2 marks)

Solution

a. Source: Topic 4.1 (level 1)

Relevant carrying costs = €13,250/60,000 + (15% × €140) = €0.22 + €21 = €21.22

EOQ = √(2 DP / C) = √(2 (60,000) ($125) / $21.22) = 841 units of Product X per order.

b. Source: Topic 4.1 (level 1)

TRC = (D / Q) × P + (Q / 2) × C

= [(60,000 / 841) × €125] + [(841 / 2) × €21.22]

= €8,918 +€8,923

= €17,841

c. Source: Topic 4.1 (level 1)

D / EOQ = 60,000 / 841 = 71.34 or 72 deliveries

d. Source: Topic 4.1 (level 1)

Re-order point = Number of units sold (per unit of time) × Purchase order lead time

= 1,200 × 2 = 2,400 units

Thus, when the inventory falls to 2,400 units of Product X, the company should reorder. With information order tracking and scanning techniques, this can be easily tracked.

Question 7

Pintor Inc. paint manufacturer, based in London, England, anticipated that they would take 9% of the specialty acrylic based paint market this year (anticipated to be 42,500,000 gallons of paint). Pintor has operations in England, Canada, and the U.S. In April, researchers in the United States announced findings that this particular mix of acrylic paint created problems for those suffering with asthma. During the year, the actual acrylic paint sales were 38,700,000 units for the market and actual sales for Pintor were 3,947,400 units. Pintor sells a gallon of paint for €34 and has total variable cost of €11.

Required

a. Compute the market-share and market-size variances for Pintor for the year. (3 marks)

b. What could possibly explain the results found in part a. Explain. (2 marks)

Solution

a. Source: Topic 2.3 (level 1)

Market size = (Budgeted market share %) × (Actual sales – Budgeted sales) × Budgeted Contribution Margin

= (9%) × (38,700,000 – 42,500,000) × (€34-11) = € (7,866,000) U [1.5]

Market share = (Actual market share % – Budgeted M/S%) × (Actual sales) × Budgeted Contribution Margin

= (10.2% – 9%) × 38,700,000 × (€34 – 11) = €10,681,200 F [1.5]

b. Source: Topic 2.3 (level 1)

We sold more than expected (greater percentage of overall worldwide market), despite the market being smaller than expected due to the announcement [1]. This could possibly be because the news was in the U.S. and did not affect sales in England as much as in U.S. [1].

4.5.3

Sample short case questions

FROM ADVANCED MANAGEMENT ACCOUNTING PRACTICE EXAM

Adapted from Question 5

1001 Threads Inc. is a textile manufacturer owned by Mr. Weave. The following information has been extracted from the accounting system of its cotton division, which is an investment centre.

Total assets for the year 20X7	€1,839,000
Variable operating costs	2,630,000
Traceable fixed costs	3,920,000
Sales	7,125,000

Performance target for the division:

Investment turnover	2.5
Return on sales	7.5%

Mr. Weave has historically used a return on investment (ROI) approach to evaluate the performance of the company's various divisions, but he recently overheard some other business owners talking about potential limitations to the approach.

Mr. Weave planned to give a bonus to the cotton division's manager based on the ROI, but he is wondering whether that is appropriate. He has asked for your help in determining the ROI of the cotton division for 20X7, and advising him as to whether a bonus should be given as planned.

Required (15 marks)

Prepare a brief memo to Mr. Weave answering his questions regarding ROI as performance metrics, the results for 20X7, and the appropriateness of awarding a bonus to the manager of the cotton division.

Solution (Source: Topic 8.4 (level 1))

MEMO
To: Mr. Weave
Date: <date>
From: Candidate
Re: ROI as a Performance Metric

Thank you for the opportunity to assist you with your understanding of Return on Investment (ROI) as a performance metric for your company.

ROI reflects the amount of income generated per unit of funds invested. ROI is one of the most common performance metrics used, but it is not without flaws. The calculation of ROI includes accounting income, which is prone to management manipulation through accounting policy choices. Further, ROI suffers from a focus on short-term performance. A division manager could increase ROI by deciding not to reinvest in new assets. Assets will decline due to amortization, all else being equal, which could increase return on investment at the expense of investing in equipment upgrades, research and development, and so on. This is called the "horizon problem".

The cotton division's ROI for 20X7 is calculated as follows:

Computation of earnings:	
Sales	€7,125,000
Less: Variable operating costs	(2,630,000)
Traceable fixed costs	(3,920,000)
Earnings	€575,000 (2 marks)

Calculation of return on sales:

(Earnings / Sales) = (€575,000/€7,125,000) × 100% = 8.07% (1 mark)

Calculation of investment turnover:

(Sales / Average Total Assets) = (€7,125,000 / €1,839,000) = 3.87 (1 mark)

Calculation of the cotton division ROI:

8.07% × 3.87 = 31.23% (1 mark)

Although the division has exceeded its targets for investment turnover and return on sales, ROI may not be a suitable metric on which to base bonus decisions. It seems that a significant portion of the costs incurred in this division are not controlled by the manager. Based on the controllability principle, the manager may feel that the evaluation of this performance is unfair if uncontrollable items are included. For this year, the use of ROI to give a bonus would be beneficial for the manager, but in future years, the results may not support a bonus. Either way, bonuses should be based on factors the manager can control, in order to provide proper motivation.

Based on both the limitations of ROI discussed above and the controllability issues, I would recommend that you consider other more relevant metrics in addition to ROI when evaluating performance.

Marking grid

- Award up to 5 marks for the calculations of ROI, as broken out in the sample solution above.
- Award up to 4 marks for explaining limitations of ROI as metrics for performance measurement.
- Award up to 3 marks for explaining why the manager's bonus should not be tied to these metrics.
- Award 1 mark for a recommendation in line with the analysis.
- Award up to 2 marks for communication, clarity and persuasiveness of advice.

FROM CORPORATE FINANCE FUNDAMENTALS PRACTICE EXAM

Question 4 (14 marks)

In response to a modernization program undertaken by its nearest competitor, CanAm Airways, a Canadian airline, is considering the purchase of two new commuter jets to use on its Toronto to Montréal service. The cost of the new jets is projected to be $50 million ($25 million each). Based on past experience with similar aircraft, CanAm estimates that the new jets will have a useful service life of 15 years at the end of which they can be sold for salvage value equal to 20% of their original cost. CanAm's existing aircrafts have a current market value of $7,500,000 and a book value of $9,000,000. The annual tax deprecation on them is $600,000. These aircrafts would be sold if the new jets were purchased.

CanAm provides daily service (365 days per year) on the Toronto to Montréal route and charges a fixed rate of $200 per round trip ticket (CanAm only sells round trip tickets). Currently, an average of 300 passengers per day use the service. However, CanAm fears that if it continues to operate its existing aircrafts on the route, the daily average will drop to 200 because its competitor will offer faster and more comfortable service. Conversely, management believes that if it purchases the new jets, the daily average number of passengers will remain at

300. Management also believes that, because of stiff competition, the price of a round trip ticket will remain at $200 throughout the planning horizon. Although the new aircrafts are larger than CanAm's current aircrafts, operating costs are expected to be the same because of increased efficiency.

CanAm's tax rate is 46%, its weighted average cost of capital is 14%, and the applicable depreciation rate for the jets is 5%. CanAm makes capital investment decisions based on the NPV method.

You have been recently designated as a professional accountant. CanAm's management has asked you to help determine whether they should purchase the new jets based on the assumptions they have made. Because they are not sure how accurate their estimate of customer losses is, they are also wondering how many customers they can afford to lose before the new jet purchases makes sense.

Required

Prepare a memo advising CanAm with respect to the purchase the new jets. In your memo, provide management with your calculations.

Sample Solution (Source: Topic 6.1 (level 1))

MEMO
To: CanAm Management
Date: <date>
From: Candidate
Re: Potential New Jet Purchase

As requested, I have analyzed the question of whether it makes sense to purchase two new jets, based on the assumptions you provided. Calculating the project NPV provides the following information:

Investment		
New jet		($50,000,000)
Less:		
(1) Sale of old jet	$7,500,000	
(1) Tax benefit on old jet (9,000,000 – 7,500,000) × 0.46	690,000	8,190,000
(1) Net investment		(41,810,000)
(2) Present value of incremental depreciation tax shield (2,500,000 – 600,000) × 0.46 × PVIFA(15,14%)		5,368,108
(2) Incremental revenue: [100 × 200 × 365(1 – 0.46)] × PVIFA(15,14%)		24,212,426
(1) PV of Incremental salvage value: 10,000,000 × PVIV(15,14%)		1,400,000
(1) PV of Tax shield on Salvage value: (12,500,000 – 10,000,000) × (12,500,PVIF(15,14%)		161,000
NPV		($10,668,466)

Based on the NPV, you should not purchase the jets as the NPV is negative. However, the NPV calculation will become positive if the incremental revenues exceed $34,980,892. Thus, if CanAm is threatened with the loss of 145 or more passengers per day, the purchase of the new jets would be justified. Before making the decision, it would be beneficial if you could gain more certainty over the accuracy of the estimate of customer losses.

Marking grid

- Award up to 10 marks for the calculations of NPV as broken out in the sample solution above.
- Award 1 mark for a recommendation in line with the NPV analysis.
- Award up to 2 marks for determining the break-even point with respect to customer losses.
- Award 1 mark for recommending to gain more certainty of estimated customer losses before decising.
- Award 1 mark for effectiveness of communication (does the memo explain the problem, clearly detail the analysis, and arrive at a conclusion?).

4.6

Sample ethics questions

4.6.1

Short-answer

FROM CORPORATE FINANCE FUNDAMENTALS ASSIGNMENT 10

Question 5b (4 marks)

The senior management of Pyramid Inc. is currently developing its marketing strategy for the next two years. A potential input into this process is confidential information on the marketing plans of its nearest competitor, which has been provided to Pyramid by a new staff member who recently resigned from a position with the competitor. Briefly explain why it is important for the senior management of Pyramid to consider how they have acquired this information as well as the content of the information itself in a situation such as this one.

Solution

It is important to focus on how the information has been acquired as well as on its content for ethical reasons. Specifically, because the information is confidential in nature and has most likely been provided by the employee without permission, it has not been acquired in a legitimate fashion. It would, therefore, be unethical for the management of Pyramid to use the information in formulating its own marketing strategy. Further, its use would clearly be unfair to the competitor. Additional ethical issues relate directly to the actions of the employee, who is likely in breach of his or her fiduciary obligation and confidentiality toward the former employer. In sum, use of the information would negatively affect trust within the business setting, and also negatively affect the trust that Pyramid could place in its new employee.

4.6.2

Scenario-based question

You are the senior accountant for a manufacturing business. The bank has requested schedules of trade receivables and inventory to support the business' loans. You prepare the schedules, but you are concerned that some of the inventory is getting quite old and newer models have been released. You also know that some of the customer accounts are over 60 days old and a few customers are having financial difficulties. The owner insists that you not set up an allowance for doubtful accounts or write down the inventory.

Required

a. Use the 5-Step approach to analyzing ethical dilemmas that you practiced in class to analyze the situation and decide what to do. In your response, list each of the five steps, and ensure that you address each step adequately. (2 marks per step)

b. Frame your decision as a business case that justifies the actions you have decided to take. (5 marks)

Sample Solution

a. 5-Step approach to analyzing ethical dilemmas:

1. Identify the problem
   - What are the ethical implications?

     Providing the schedules without making the appropriate allowances/write-downs would result in misleading information being given to the bank.
   - What fundamental principles are being threatened and how?

     Intimidation, Familiarity, and Self-interest threats to Objectivity, Integrity, and Professional Behavior
2. Consider stakeholder perspectives
   - Who is impacted by the current situation, and/or by the actions that could be taken?

     At a minimum: the bank, the business owner(s), and me
   - How is each stakeholder impacted?

     The bank needs accurate information, reflective of supportable asset values and would be harmed by being misled; the owners don't want to jeopardize the loan; I want to keep my job, but not compromise professional standards
   - Are there other people who can/should be consulted?

     Perhaps an external auditor or other owners/the board (if there are any)
3. Specify feasible alternatives
   - What decisions could be made?
     i. Send in the schedules as they are;
     ii. Get the owner to send in the schedules; or
     iii. Convince the owner to adjust the schedules.
   - Are there different short-term and long-term options?

     Short term, we need to address the valuation concerns and liquidity; longer term we need to stop this from happening again through better business management.
4. Evaluate ethically significant factors for each alternative
   - For each alternative, would the actions be compliant with the fundamental principles and the Conceptual Framework?
     i. Send in the schedules as they are:

        Breaches the fundamental principles (Objectivity, Integrity and Professional behavior)
     ii. Get the owner to send in the schedules:

        Breaches the fundamental principles (does not alleviate my responsibility, as I'm still associated with misleading information).
     iii. Convince the owner to adjust the schedules:

        Meets the fundamental principles, but may be difficult to achieve; may jeopardize my job
   - What new ethical issues may come up as a result?

     Not taking appropriate action makes it even harder to refuse next time.

5. Make and defend your choice

   Option 3: Convince the owner to adjust the schedules.

   - Who do you have to communicate your decision to?

     The owner – I need to convince them.

   - How do you implement the decision?

     By building a business case from the owner's perspective.

   - What documentation will be important?

     I would keep notes on discussions in case we face the issue again, or in case the owner won't listen to me.

b. Framing the decision as a business case

   1. Start by determining who you need to convince.

      The business owner – my boss.

   2. Examine their perspectives and motivations – what is important to them?

      Keeping their business in operation, and not jeopardizing the bank loan.

   3. Evaluate how not taking the "right" action will jeopardize what is important to them.

      Providing misleading information to the bank is short-term thinking – if it goes wrong, the relationship with the bank will be badly damaged, jeopardizing funding and reducing the banker's willingness to be flexible. It also fails to address the underlying financial issues and does nothing to help sustain the company in the longer term.

   4. Build your arguments based on their perspective.

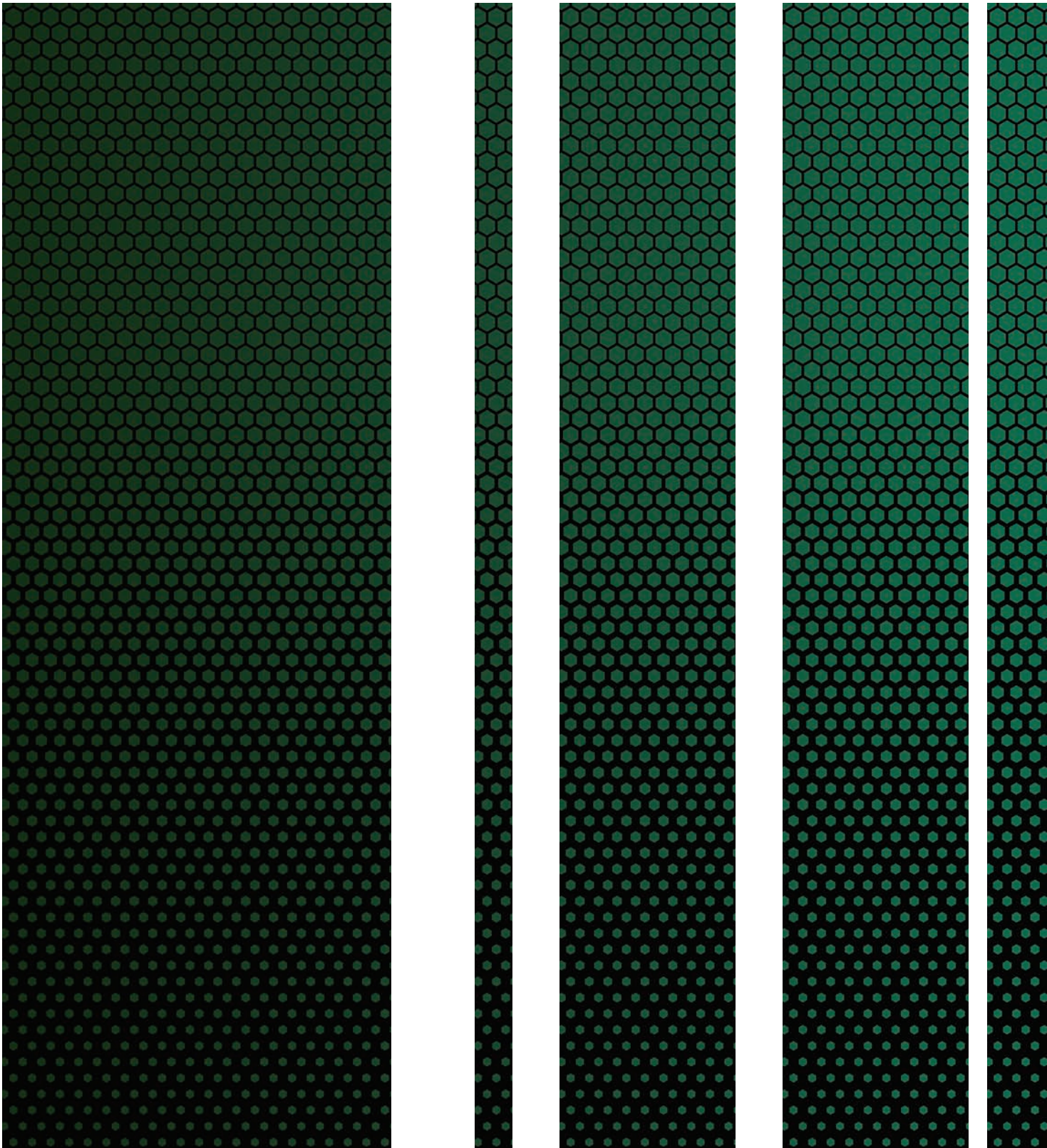
      I will explain the risks to them and point out that company failure is more likely if we try to mislead the bank. I will offer other suggestions – to negotiate a sustainable plan with the bank or another funding source, as well as re-evaluating credit and inventory policies to reduce the risk of bad debts and obsolescence. We need to shift the focus from short-term tactics to longer term sustainability and success. I need to illustrate that the company hired me, as a professional, to help the business succeed by applying my expertise; if I am to add value, I need to be able to make and act on decisions in a professional manner.

Marking grid

- For **Requirement a** award ½ mark for each step identified; award up to 1.5 marks for the explanation of relevant factors under each step. Candidates are not expected to provide the specific subheadings under each step, but should raise and discuss relevant points for each heading.
- For **Requirement b** award 1 mark for each valid point raised. The solution below follows from the answer in part a. A candidate who provided a different answer in part a should be awarded marks based on the validity of the points they raise to frame the decision as a business case. Candidates do not need to present their response in a question/answer format, but it should be apparent that they have considered the motivations of the person they are trying to convince.

PART 5

INTEGRATIVE CAPSTONE EXAMINATIONS



5.1 Overview

The use of case studies was introduced in Part 3.4.6, and the ICE were presented as an example of a longer case study.

Many PAOs have introduced a similar type of assessment and use different names for it, such as "Common Final Examination," "Unified Final Examination," and some simply use the term "Case Study."

The case method was pioneered at the Harvard Business School in the 1920s, as it was seen as the best teaching method to train future executives. The case method confronts students with real cases for which a pre-established solution doesn't exist. Students are required to analyze the problems raised by the case, taking into account the opportunities and constraints outlined, and to produce a coherent response. As such, it is well suited to developing students' capacity for analysis, synthesis, and action, which are tied to the higher order cognitive levels highlighted in Part 2.1.4.

The purpose of using an integrated case study rests in three key areas:

- They enable an assessment of competencies not readily achievable in other examinations. Specifically, ICEs enable the assessment of more than one subject and, importantly, of the relationships between them. For example, strategic choice can impact on financial reporting for an overseas acquisition.
- The key skill of assimilating a large volume of material, often exhibiting complex relationships that forces students to approach the information with a questioning mindset, more closely parallels what is likely to happen in practice. In this respect, the exercise of professional skepticism plays an important role.
- The conclusion to analysing a case study will rest on the application of judgment with interacting variables and not necessarily a clear outcome. The process of understanding, analysis, evaluating, and making recommendations to a client problem – and represented in a case study - is a vital skill for all professional accountants.

This explains the growing popularity of case studies with PAOs (and Universities) which have adopted a competency-based approach. Case studies relate to a real business situation, and have the potential to test technical competencies, professional skills, values, ethics, and attitudes.

Traditional case studies are usually conducted over an extended period of time, and involve the formation of student workgroups, the ability for students to conduct further research, and the presentation of the analysis and recommendations of each student group before their peers. The instructor plays the role of facilitator. An example of a business case study schedule follows:

- Phase 1: Distribution of the initial case study documentation. Students read the case.
- Phase 2: Questions and Answers session. Students will usually have a lot of questions about the context, organization, etc.
- Phase 3: Group discussion. The instructor facilitates a group discussion on the decision(s) to be taken to resolve the issue presented in the case. The instructor doesn't lead the students to a particular decision or outcome, nor does he or she assess the alternatives proposed by students. The role of the instructor is rather to clarify the solutions offered by students and their implications. Two to three solutions will usually emerge.
- Phase 4: Groups of students are formed on the basis of their preference for a particular solution. Each group nominates a spokesperson. The groups work separately on developing their analysis and recommendations.
- Phase 5: The recommendations of each group are presented to the entire class, either by the spokespersons appointed, or through other means such as role playing by each group.
- Phase 6: The teacher leads a discussion on the types of issues raised by the case, and general principles and conclusions which have emerged throughout the process, both in relation to the challenges and solutions identified, as well as from the perspective of collaboration required to identify and implement a solution.

Case study methods can be implemented within the context of University studies. For the advanced levels of PAO professional programs, often completed when candidates are employed, case studies can be more challenging to organize. Online platforms and new media technologies provide new possibilities in this area, and many PAOs have leveraged these opportunities to transform their education and assessment processes including through online teamwork, business simulations, and in-depth case studies.

The ICE is a particular form of case study, and is usually designed as a final assessment of competence by the aspiring professional accountant. Unlike most other examinations, it isn't aimed at testing in-depth knowledge or technical competencies. Rather, it is designed to give candidates practice in demonstrating competencies required for a newly certified professional accountant. Completing the examination develops candidates' competencies in the application and integration of knowledge in a professional context. Depending on the Competency Framework of the PAO, candidates can either be required to solve problems from a different perspective, such as that of (a) an internal accountant/finance manager, (b) an external accountant or auditor. PAOs may require several ICEs to be completed by candidates from a different perspective. Additionally, the role of the ICE is made more prominent in situations where PAOs have a shared responsibility in adopted IESs that underpin the need to ensure relevancy in the professional qualification. Specifically, a multi-stakeholder perspective is needed to respond to the fast-moving challenges that educators face in maintaining the currency of the qualification and to inform new developments. In this context, the ICE is often at the leading edge in enabling students to demonstrate new skills in new circumstances.

Developing the ICE requires a comprehensive process:

1. Designing and updating the exam specifications
2. Appointing and hiring the ICE team
3. Training team leaders and members
4. Creating exam forms
5. Preparing candidate preparatory materials
6. Administering the exam
7. Assessing candidate papers
8. Compiling, analyzing, adjusting, and approving results
9. Communicating results
10. Handling appeals and critiques

The challenges represented for a PAO in creating an ICE can be considerable but they do depend on the degree of complexity of the case, which is a choice. There is no single, agreed approach used by PAOs in developing ICEs where they are used: they range from extended questions over a couple of pages, to much longer versions stretching over many pages, to the use of pre-issued (pre-seen) information, and to a choice between using structured (heavily directed) and fairly unstructured questions. Generally, the greater the complexity the more significant the effort required in designing the case and assessing students. But it is a choice.

There are resource implications for developing an ICE but many of the processes outlined in the following sections are no different at a high level in practice from those employed in developing other examinations. Detail does matter and certain features of an ICE can be time consuming, such as the marking of scripts. However, the benefits are substantial and once a process is established, the development of experience represents the leverage point that makes the process easier.

The following sections contains guidance on each activity. The guidance has been adapted from a World Bank project and should be adapted to the capacity and needs of each PAO wishing to implement an ICE.

5.2

Designing and updating the exam specifications

An Examination Blueprint (refer to Part 3.4.3 of the Guide) which provides the design specifications for the exam and ensures appropriate learning outcome coverage will need to be developed and updated.

The ICE Blueprint identifies the learning outcome areas covered on the examination and outlines the weighting of each area (for example, 25 to 30% of learning outcomes assessed on any given exam form are from the Audit and Assurance sub-group; 20 to 30% are from Financial Accounting and Reporting, and so on).

Note that a number of learning outcomes are classified as best developed and assessed through the experience requirement, rather than through education and examination, and are not expected to be assessed on examinations. Examination design targets full coverage of the examinable Competency Framework over a reasonable number of examination sessions to ensure that sufficient coverage is achieved. For example, the PAO may aim to assess each level 3 Audit and Assurance learning outcome at least once every 3 years. Coverage is planned in advance through the use of examination "menus" (number of learning outcomes from each subject area to be included on a particular exam form) and case "recipes" (learning outcomes to be included for a specific case question) for both written and oral questions.

Consistent reference to the Competency Framework in these ways supports the validity of the exam, by ensuring that the exam evaluates appropriate content, and that the coverage is broad enough, but that emphasis is placed on the learning outcomes with the highest required proficiency level.

The Blueprint narrative also describes structural and other requirements, which are used by candidates in preparing for the exam, such as:

- the purpose and objective of the exam
- the purpose and how to use the Blueprint
- the learning outcomes covered on the exam (excluding those deemed to be best assessed in the workplace)
- overall exam writing time
- the number of cases per exam
- the time estimates for exam cases
- additional reading time permitted
- the types of exhibits that may be expected as stimulus material (source documents, financial statements, disclosures, excerpts of conversations with management or colleagues, and so on)
- allowable exam room materials
- a description of, and distinction between, the ICE and the prerequisite exams

Designing and maintaining the Blueprint requires the involvement of competent individuals with both academic and practical experience in the areas of practice of accounting and audit relevant to members of the PAO. Learning outcome sub-groups from the Framework are listed in the Blueprint template, along with their required levels of proficiency. The weighting is determined based on input received from a number of individuals who are knowledgeable about the requirements to be a competent professional accountant or auditor, as well as accounting and auditing academics and members of oversight bodies. These individuals also help identify the top ten essential learning outcomes in the Framework that would be needed for a candidate to demonstrate competence as a professional accountant.

5.3

Appointing and hiring the ICE team

Development and administration of the ICE is carried out by the ICE leadership team (lead administrator, authoring leader, and marking leader), as well as through the larger pool of case authors, markers, and standard setters.

The PAO appoints and/or hires the individuals to fill these roles, and oversees the development and administration processes. Team members are chosen on the basis of the criteria outlined below, with an overall objective of assembling a balanced mix of academic and practical experience and perspectives. In addition to possessing the appropriate skill set, it is essential that those involved are independent and that the exam processes and outcomes are protected against undue influence from outside sources.

The role for each of the required positions follow:

Lead administrator

The lead administrator is responsible for the overall logistics and operations of the exam development, sitting, and marking. The lead administrator:

- monitors and manages overall timelines
- compiles and safeguards documentation (such as contractual paperwork and confidentiality agreements)
- arranges for secure printing, transport, and storage of the exam papers
- arranges and supports the exam centre(s) and marking centre
- arranges the standard-setting process, including hiring the psychometrician
- facilitates standard-setting in cooperation with the marking leader, under the guidance of the psychometrician
- compiles results and presents them to the PAO for approval

Authoring leader

The authoring leader is responsible for organizing and overseeing the work of the case authors in developing their cases and marking materials, and ultimately for creating the examination form. The authoring leader:

- develops the recipes for the exam cases (refer to Part 5.4)
- guides and reviews the work of case authors and reviewers
- compiles the cases into an exam form, assembles the exam and marking material package and presents it to the PAO for approval
- maintains a "pool" of cases

Marking leader

The marking leader is responsible for the exam marking centre and for guiding and overseeing the work of the exam markers. The marking leader:

- arranges for training and debriefing markers in advance of each exam write
- presents the orientation at the beginning of the marking session
- presents or arranges the presentations of technical updates for markers
- ensures markers are marking consistently throughout the process
- facilitates standard-setting in cooperation with the lead administrator, under the guidance of the psychometrician
- performs borderline reads of candidates achieving performance just below the established passing level to ensure appropriate pass/fail decisions
- reviews any changes to pass/fail decisions that arise during the appeal/critique process

The role of the lead administrator, authoring leader, and marking leader is also to provide input into the quality control process and to implement such processes. That is, quality control over logistics, authoring, and marking will underpin quality outcomes. Establishing the control processes is important but it is also important to monitor other key players in the process supporting the use of ICE. The remaining sub-sections outline who is involved and what is involved.

Case authors

Case authors are responsible for preparing the case questions and marking materials, including scoring grids and sample solutions under the direction of the authoring leader and in accordance with the requirements provided in the Section: Creating Exam Forms. Case authors are also assigned peer review roles.

Markers

Markers are responsible for assessing candidate papers in accordance with the scoring grids, as part of the marking team under the direction of the marking leader.

Criteria

Exam markers must possess a willingness to learn about competency-based outcomes and evaluation of students, and should demonstrate the following:

- strong analytical and problem-solving skills
- excellent communication, time management, and interpersonal skills

- ability to work well under pressure
- ability to provide and receive constructive feedback and work in a team-based and collaborative environment
- availability and willingness to commit to the required schedule and requirements of the role

Exam markers are expected to have:

- a solid background in assurance and financial accounting and reporting, coupled with other areas of competence
- experience in evaluating performance on exams
- a good working knowledge of the PAO Competency Framework and ICE Blueprint

Standard setting panelists

Standard setters are responsible for determining the cut score (passing level) for each exam, as described in the Section: Assessing Candidate Papers. The lead administrator and marking leader facilitate standard setting, under the guidance of a qualified psychometrician.

5.4

Training team leaders and members

Individuals chosen to participate as authors and markers receive training packages, including their role description, specific requirements for their tasks, and delivery deadlines.

For case authors, the training package is very detailed. Because the case authoring work is generally conducted independently and asynchronously, there is flexibility in the training methods used. Face-to-face training seminars for groups of authors are preferred, but portions of the training may also be conducted online or using teleconferencing systems.

Case authors study the training material and then prepare their case outlines, which are internally reviewed to ensure they reasonably reflect the intended learning outcomes and proficiency levels, and that the proposed case fits with the desired approach. Throughout the process, case authors refer to the training materials regularly when drafting their cases. Authors are in regular contact with the authoring leader and are put in touch with appropriate support if they need to discuss ideas or technical issues with another subject matter expert.

Markers are trained just before the marking session, using a very hands-on approach. Each marking session begins with an orientation to the competency-based assessment process and a refresher on standards to ensure that all markers are up to date with standards they may not deal with regularly. The training approach for markers is further discussed in Part 5.8: Assessing Candidate Papers.

The primary materials used in training case authors and markers include:

- PAO's Competency Framework
- ICE Examination Blueprint
- PAO resolutions on the form and content of the ICE
- Sample case questions and marking materials, including sample solution, and detailed scoring grids (refer to sample ICE in Part 6)
- ICE case-author guidelines, included in the next section.

5.5

Creating exam forms

Exam forms and the supporting marking guidance are created as a set. For initial development, two exam forms are developed simultaneously to ensure a backup exists for contingency purposes. After that, one or two exams may be developed at a time, depending on need.

The process for developing one or more ICE forms is outlined below. Please refer to the subsection ICE case author guidelines below for more detail on case authoring.

Setting the menus and recipes

For each exam form being developed, the authoring leader refers to the ICE Blueprint and develops an overall exam "menu". The menu specifies the number of learning outcomes from each sub-area that will be assessed on the exam. This menu is determined for a number of exams at a time (whether they are being developed concurrently or not), to ensure adequate coverage across learning outcome sub-groups over a reasonable period. A sample menu is provided in Table 14.

Using the menu for the exam cases, a specific pair of case "recipes" is set, which list the specific learning outcomes to be assessed in each case of a given exam. Recipes typically provide a mix of mandatory learning outcomes that must be covered by a case author, and a selection of optional learning outcomes that the author can choose from depending on the background and storyline of the case they are creating. The recipe for a case is provided in Figure 10.

The author confirms that their case has met the recipe requirements by completing a Table of Specifications.

Menus and recipes are documented using control spreadsheets to track how the exam meets the Blueprint requirements consistently over time.

Establishing the case and marking materials

Based on the recipes, each author drafts their case(s), along with the marking materials. This includes both a written sample of a complete response, as well as a scoring grid for each learning outcome being assessed in the case. All cases are developed independent of previously published cases and materials to ensure that they reflect original work.

In addition to the design specifications provided in the Blueprint, the exam must also be developed in compliance with a set of development processes that ensure the exams have high levels of validity, reliability, equity, transparency, and sufficiency. The requirements for case authors are provided next:

ICE case author guidelines

This section provides guidance on the role and responsibilities of case authors in developing business simulation cases for the PAO ICE. Case authors are provided with these guidelines and required to review them fully and refer to them as needed during the case authoring and review process.

The development process of the ICE draws heavily on well-established best practices for examination development and case authors play a critical role in this process. It is essential that the cases ultimately produced by the team form a cohesive assessment. During the process, case authors are encouraged to ask questions and make suggestions for improvement.

Cases used on the ICE are developed to reflect realistic scenarios that could be faced by a newly certified professional accountant. Examination cases should present the candidate with scenarios from that perspective. All cases should be based on "normal circumstances," defined as follows:

Normal circumstances are situations where each of the entities involved is:

- a business in the private sector, formed as a proprietorship, as a partnership, as a private corporation, as a small public corporation, or as a division of a large public corporation; or
- in the public sector or is a not-for-profit organization or a division of either; or
- an individual; and

Table 14. Integrative Capstone Examination case menus

						I	II	III	IV	V	
Year	**Case#**	**Author**	**Organization type**	**Engagement type**	**Standards**	**Audit & Assurance**	**Financial Accounting & Reporting**	**Taxation-Business Laws & Regulations-Governace Risk & Internal Controls-I.T.**	**Finance - Economics**	**Management Accounting-Strategy & Manangement-Organizational Environment**	**Total**
2016-17(1)	20X1-01	LB	Private company	Single entity audit - going concern issue	National regulations	3	1	3	2	1	10
2016-17(1)	20X1-02	KW	Private company becoming a joint stock company	Single entity audit - transition to IFRS	National regulations & IFRS	2	4	1	0	0	7
						5	5	4	2	1	17
2016-17 (1)						29%	29%	24%	12%	6%	100%
2016-17(2)	20X2-03	AK	Private company	Review + tax	National regulations	1	2	2	1	0	6
2016-17(2)	20X2-04	DT	Bank	Consolidated statement audit	IFRS	4	2	1	1	1	9
						5	4	3	2	1	15
2016-17 (2)						33%	27%	20%	13%	7%	100%
2017-18(1)	20X3-05	GT	Private company	Other assurance engagement	National regulations	3	3	2	1	1	10
2017-18(1)	20X3-06	WK	Public (Listed joint stock)	Audit - single entity	IFRS	3	2	2	2	1	10
						6	5	4	3	2	20
2017-18 (1)						30%	25%	20%	15%	10%	100%
MIN						25%	20%	15%	10%	5%	
MAX						35%	30%	30%	20%	10%	

- the entity, situation, event, or transaction is of a size or degree of complexity likely to be encountered by a Professional Accountant at the point of qualification.

For qualification purposes, candidates are expected to demonstrate learning outcomes at specified levels of proficiency in normal circumstances, as required by the PAO Competency Framework.

Determining observable outcomes

In order for exam markers to evaluate a candidate's demonstration of competence, cases must be written to elicit responses that can be observed and measured. Questions should not be so leading that they do not distinguish between the competent and non-competent candidate; however, if a question is too open ended, the response may also end up being too broad to assess reliably, as competent candidates may raise issues that were not intended to be part of the assessment process.

Scoring opportunities must enable markers to distinguish between increasing levels of candidate performance. In other words, case authors must enable markers to distinguish between unsatisfactory and satisfactory performance in a candidate's response. When developing a case, it is useful to start by considering the outcomes desired (What output should be expected from a competent candidate?). These outcomes should be provided in the scoring grid, where the issues of the case are linked to the levels of performance on a scale of 0 to 4 (see any of the scoring grids in sample ICE (Part 6)).

Particular care needs to be taken when assessing two learning outcomes in the same sub-group (for example, two audit and assurance learning outcomes). It is important that the expected outcomes do not overlap; otherwise, assessment of each learning outcome will become individually difficult. Case scenarios and requirements need to be designed so that demonstration of each learning outcome can be distinguished within the candidate's response.

Working with case recipes

Case recipes provide specific learning outcomes that are to be covered in a particular case, as well as the time estimate required to complete the case. These recipes are not stand-alone – each recipe has been developed to ensure that the developed cases fit together to form an exam with appropriate time requirements and learning outcome coverage, as well as fitting the exam within a set of exams during the planning cycle. Recipes may also provide guidance as to the type of engagement or type of organization that the case should concentrate on. This helps ensure sufficiency of the exam by testing a broader range of contexts over time.

Recipes specify learning outcomes to cover as either mandatory or optional. Case authors must cover all mandatory learning outcomes and choose between optional learning outcomes as directed by the recipe. If a case author is preparing more than one case and is given two or more recipes with the same set of optional learning outcomes, it is strongly preferred that different optional learning outcomes are chosen for different cases – particularly if there is overlap of optional learning outcomes for two questions planned for the same examination.

Recipes are developed to include learning outcome combinations that fit the requirements for coverage, but it is recognized that case authors need flexibility to develop scenarios that are realistic. If any specifications in a recipe are posing significant difficulties or are too restrictive, authors are encouraged to discuss the situation with the authoring leader, who will be able to suggest ideas and can refer to the overall exam design documents to consider what additional options may be available for a case.

Preparing case outlines

When preparing the required deliverables, material should generally be presented to reflect the ordering of learning outcomes in the Blueprint. This ordering highlights the relative priority of the Audit and Assurance and Financial Accounting and Reporting learning outcomes.

Case outlines

The first deliverable required from case authors is an outline of each case question to be written. The outline is expected to be quite short (one-half to one page), but should describe the basic scenario (type of organization, type of engagement, role of candidate, and so on) that the case author plans to use to assess the learning outcomes. The outline should also indicate which optional learning outcomes are expected to be included. Outlines are reviewed by the authoring leader to get a sense of how the recipes will be implemented and how the exam cases will fit together. Outline approval and any feedback should be returned to case authors within about one week.

Drafting case questions and marking materials

A complete case package includes the case question (or "stimulus material"), and the marking materials (the sample solution and scoring grids). Use of the scoring grids is discussed in Part 5.8: Assessing Candidate Papers.

Case stimulus material

In general, cases should conform to the following format and structure.

Introductory Material

A half-page to one-and-a-half pages of introductory material about the candidate's role in the simulation, in addition to the case context, background, and organization involved. Within the introductory material, "hooks" and "limiting opportunity statements" can be used to guide candidates toward the learning outcomes you are intending to assess.

A hook is something that a candidate must recognize in a question in order to successfully demonstrate the learning outcome(s) being evaluated. For example, a scenario may indicate that the client's bank has imposed restrictive covenants on a loan. Candidates would be expected to use the information given in the case to assess whether the bank covenant was in danger of being violated. They would also be expected to know the consequences if a violation were to occur, and to advise accordingly.

A limiting opportunity statement is a statement that sets the context and "scopes in" or "scopes out" certain areas of response. For example, if you are assessing a Financial Accounting and Reporting learning outcome, specifying the type of organization provides limits on appropriate responses (if the company is publicly traded, candidates should not be tempted to spend time discussing the accounting treatment under local small entity standards). As another example, if a scenario deals with a public sector organization and the case states that funding levels will be fixed for the next three years, candidates should focus on cost measures, rather than revenue measures.

Hooks and limiting opportunity statements are cues that successful candidates will be guided by, but unsuccessful candidates will likely miss.

The following standard elements are expected in the development of ICE cases:

- Introductory material: Ensure that enough information is given to develop a clear and unambiguous picture of the situation to be addressed. Scenarios should reflect plausible situations. Sometimes it is useful to provide a brief quotation from relevant reference material (such as a standard) as a way of providing a context for the question. Ambiguous questions, unstated assumptions, incomplete data, or confusing case descriptions can often be identified and corrected by considering the question from the perspective of a candidate.
- The "Required" part of the question: State specifically what students are required to produce in their answers. Use clear, directive words such as "present in good form," "explain," "compare," "evaluate," "recommend," and so on. Avoid words that may produce less precise answers, such as "discuss," or "suggest how to….". Try to anticipate whether students will know what is expected based on the "Required." Be consistent in using terminology used in the standards, in sample exams, and so on.
- Proficiency levels: Learning outcomes must be assessed at the proficiency levels expected in the PAO Competency Framework. PAO's proficiency levels draw on Bloom's taxonomy of six cognitive levels. The ICE is designed to assess candidates' skills in interpretation, judgment, analysis, and problem solving. Case authors are expected to set questions that evaluate candidates' abilities in these higher-order thinking skills, and therefore in the higher Bloom's cognitive levels (refer to Figure 5 in Part 2.2.1). Because of time constraints, testing higher order skills will require avoiding, to the extent possible, the need for lengthy or tedious calculations that will require significant amount of candidates' time.
- Inclusive language: It is current practice in higher education to avoid gender bias or stereotyping by using inclusive language. Thus, "the auditor," "taxpayers," "salespersons," "workers," and "working days" include both men and women. Presidents, managers of companies, secretaries and all other roles are performed by men and women. When composing examination cases, authors are requested to be aware of the unintentional bias of the language. In cases, the names of the characters should alternate between male and female, and the writer should select names from various ethnic backgrounds to reflect the make-up of society.
- Actual names: Actual company or individual names should not be used in fictional scenarios. All companies should be fictitious (e.g., Pear and Strawberry, Winter and Summer, or even ABC and DEF). Using actual organizations can provide an unintended advantage to candidates who are more familiar with the organization being discussed.

"Required" paragraph

A paragraph specifying the deliverable(s) or outcome(s) expected of the candidate. Required deliverables may include memos, letters, reports, planning documents, and other realistic deliverables, and should target a specific type of audience requiring a particular perspective and level of communication (e.g., management, audit committee, audit partner, colleague, junior audit staff).

Requirements will vary in the amount of direction given to candidates. In a more focused case, primary issues should be well laid out in the "Required." For broader cases, issues should be subtler, and be spread throughout the background material.

Learning outcomes are, by design, relatively broad in scope. As a result, assessment of a learning outcome in a case does not require that the entire learning outcome be covered – in fact, this would generally not be feasible in any one case or exam. Competency assessment in the ICE cases provides opportunities for candidates to demonstrate various aspects of the learning outcomes over a range of contexts at the level of proficiency specified for the learning outcomes.

Exhibits

Cases should generally include three to five pages of additional material presented as exhibits. Exhibits should provide the types and forms of information that a candidate would realistically be presented with in the given situation. In particular, cases often include some form of financial information that needs to be analyzed and evaluated by candidates. This may take the form of financial statements (consolidated or single-entity, full statements or excerpts), notes to the statements, or schedules.

Additional exhibits could include:

- working papers
- planning memos
- information from the prior year's engagement
- source documents
- notes from a meeting with the client, a colleague, or a third party (for example, client's lawyer, bank, predecessor auditor, or consulting firm)
- correspondence from a third party (for example, a regulator)
- schedules of non-financial information
- proposed new accounting or auditing standards
- spreadsheet or other software output
- competitor, industry, or section-specific information
- economic data

Marking materials

These materials must provide sufficient guidance to markers to enable them to make valid and reliable pass/fail decisions. The required components and their purposes are described below.

Sample solution

The sample solution is used at the marking centre to assist in preparing markers to grade papers. For cases that are included in the materials to help candidates prepare for the examination, the solution is entitled "self-test solution." The sample solution provides a complete answer that fully addresses each learning outcome being assessed, as well as the professional skills, values, ethics, and attitudes pervasive throughout the case. The sample solution will go well beyond the minimum performance required for a candidate to be deemed "competent." This provides a more complete range of solution options for assessors when evaluating actual responses, though the solution will still not be exhaustive. The reader is reminded that the solutions are developed in the context of an exam and that, therefore, all of the complexities of a real-life situation may not be fully reflected in the sample solution.

Authors should identify the authoritative source for the solution, such as the IFRS or ISA number and paragraph(s), or the relevant reference in the Code of Conduct.

Although markers should always be open to valid alternatives when they mark examinations, authors are required to check their questions carefully against the solutions to limit subjectivity.

Detailed scoring grids

The assessment guidance outlines for assessing the intended "Pass/Fail" delineation.

For each case question, markers are provided with:

- A detailed scoring grid for each technical learning outcome
- A scoring grid for the professional skills – assessed as a set
- A scoring grid for the professional values, ethics, and attitudes – assessed as a set

For the technical learning outcomes, the scoring grids contain the following information and guidance:

- Learning outcome statement and required level of proficiency, as presented in the PAO Competency Framework.
- Baseline expectation, which describes what is generally expected of candidates to demonstrate competence. The minimum requirements for

passing are specified in the scoring grids for each learning outcome; the baseline expectation simply provides context for the general expectation.

- Detailed performance descriptors

In general terms, performance level ratings can be described as follows:

0. Did not attempt or insufficient response to evaluate
1. Responded, but did not demonstrate competence in the area being assessed (response was incorrect and/or incomplete)
2. Demonstrated competence at a level lower than that expected of a newly qualified Professional Accountant
3. Demonstrated competence at the level expected of a newly qualified Professional Accountant
4. Demonstrated competence at a level higher than that expected of a newly qualified Professional Accountant

The scoring grids for the pervasive skills do not include baseline expectations, but instead provide lists of examples of how the skills, values, ethics, and attitudes may be demonstrated.

Please see the sample case (Part 6) for illustrations of each of these elements. Note that developing cases requires a somewhat iterative approach between the stimulus material and its marking material. Careful, ongoing cross-referencing should be done to ensure that any changes in one element are dealt with consistently and that the intent of the assessment is not lost. Verifying a proposed case against these criteria will often bring to light potential problems in the case that can be solved in advance of the review process.

Table of specifications

Once the case stimulus materials and scoring guidance have been written, self-review the materials and complete the table of specifications (see, for example, Figure 10). The table of specifications provides confirmation of how the case recipe was implemented (that is, the case author completes it to confirm that all mandatory learning outcomes are included at the required levels of proficiency, and indicates which optional learning outcomes were included at their required levels of proficiency). The table also includes the case author's estimate of the degree of difficulty of demonstrating each learning outcome, and the time estimate for a competent candidate to successfully complete the case. For convenience, the learning outcomes and required proficiency levels from the case recipe is pre-completed in the Table of Specifications, and the case author then completes the remaining components.

Figure 10. Integrative Capstone Examination recipe and table of specifications

CASE IDENTIFIER: 17-01 CASE DEVELOPER: LB

Learning outcome identifier	Learning outcome statement	To confirm	Required proficiency level	To confirm	Degree of difficulty
Mandatory learning outcomes:					
T-A-4	Plan the audit of financial statements in accordance with International Standards on Auditing and applicable laws and regulation.	✓	3	✓	Moderate
TA-5	Lead the identification and assessment of the risks of material misstatement as part of an overall audit strategy.	✓	3	✓	Moderate
T-FAR-11	Evaluate the entity's ability to continue as a going concern.	✓	2	✓	Moderate - High
T-GRI-5	Evaluate corporate governance structures and risk assessment processes affecting the financial statements of an entity as part of the overall audit strategy.	✓	2	✓	High

Learning outcome identifier	Learning outcome statement	To confirm	Required proficiency level	To confirm	Degree of difficulty
T-F-11	Assist or advise financially-troubled businesses.	✓	1	✓	Low - Moderate
	Choice of options:				
	One of:				
T-A-3	Explain the objectives and key elements and stages of assurance engagements, and the standards that are relevant to such engagements.		3		
T-A-6	Develop and/or perform appropriate procedures to audit financial statements in accordance with International Standards on Auditing and applicable laws and regulations.	✓	3	✓	High
	One of:				
T-LR-4	Evaluate identified or suspected non-compliance with laws and regulations to determine the effect on the overall audit strategy and audit opinion.		2		
T-GRI-3	Analyze an organization's risks and opportunities using a risk management framework, and advise on managing risks.	/	2	✓	Moderate
	One of:				
T-IT-2	Contribute to the design of information systems by determining requirements for Information and controls.		2		
T-IT-5	Evaluate the information technology environment to identify controls that relate to the financial statements to determine the impact on the overall audit strategy.	✓	2	✓	Moderate
	One of:				
T-F-4	Analyze the current and future financial position of an organization, using techniques including ratio analysis, trend analysis, and cash flow analysis.		2		
T-F-10	Evaluate an entity's cash flow, budgets, and forecasts, as well as working capital requirements to determine the impact on the overall audit strategy.	/	2	✓	Moderate
T-EC-2	Describe the effect of changes in macroeconomic indicators on business activity.		2		
	One of:				
T-MA-1	Apply or advise on techniques to support management decision making, including product costing, variance analysis, inventory management, and budgeting and forecasting.	/	2	✓	Moderate

Learning outcome identifier	Learning outcome statement	To confirm	Required proficiency level	To confirm	Degree of difficulty
T-MA-3	Analyze financial and non-financial data to provide relevant information for management decision making.		2		
T-MA-S	Evaluate the performance of products, business segments, and the organization as a whole.		2		
T-SM-7	Advise on Issues arising from an entity's current strategies.		2		

Total learning outcomes to be assessed by this case: 10
Guidance to case developer: Private company, single-entity audit; company has a potential going concern issue.
Target time to complete case: 90 minutes
Estimated time to complete case: 100 minutes

Case author signature: _____ Authoring leader signature: _____

Reviewing individual cases and marking materials

Draft cases and marking materials are reviewed for:

- technical accuracy
- adherence to the specified recipe
- conformance with the style requirements and guidance in the ICE Case Author Guidelines
- reasonableness of the estimated time required
- format issues

Reviewers are required to begin their review of a case by independently answering the case under simulated exam room conditions, which reflect as closely as possible the conditions under which the candidates will respond to the case.

The following are the recommended conditions under which the reviewers should respond to the case to best approximate examination room conditions:

- The questions should be written in a quiet location with a minimum of distractions.
- Only the same allowable reference materials as permitted to candidates, calculators and writing tools, should be available.
- The cases should be responded to in their entirety regardless of the amount of time it takes, but the time spent reading and responding to each case should be tracked; this information should be filled in on the ICE case review checklist.
- The examination should be objectively self-marked.

Reviewers complete an ICE case review checklist – a checklist of items that should be verified and considered when reviewing cases. For efficiency, reviews should be performed by other case authors (or former authors), with the authoring leader compiling all review comments and performing a comprehensive review. It is important that a current author does not review another author's cases before drafting their own case(s), as there is a tendency for authors to inadvertently mirror each other's case elements if cross review occurs too early.

At the exam level, overall reviews are done throughout the development process, starting with the case outlines and continuing with each draft.

Compiling and reviewing the exam as a whole

The final exam-level review conducted by the authoring leader confirms that the designed exam menu has been achieved and that the Blueprint has been adhered to. Once the exam is finalized, the authoring leader presents the exam package to the PAO for review and approval.

Maintaining security

Throughout the development and review process, the exam materials must be kept strictly secured. This is accomplished by authors, reviewers, administrators, and staff paying close attention to security measures. For example:

- All documents are password protected at all times using the passwords designated by the authoring leader. Passwords must be at least 8 characters, and must contain at least one: lower case letter, uppercase letter, number, and symbol. Passwords must be kept secure by all individuals.
- Case authors and reviewers are required to sign a statement confirming that they understand the requirements for confidentiality and security, which extend indefinitely. Authors must not allow access to, or discuss the contents of, the exam materials by or with anyone not specifically authorized to have access. Breach of these requirements would be considered a breach of professional ethics, as well as a breach of contract.
- Authors and reviewers, other than the authoring leader are required to securely delete all copies of exam cases, solutions, and other confidential documents once they have been approved in final form.
- All staff working on the examinations material do so in a restricted area of the office to avoid disclosing confidential matters.
- Print copies of exam-related materials are kept to a minimum, and are shredded as soon as possible.
- Final approved exam files are kept secure by locking away any print materials under strict access controls and keeping electronic files password protected on encrypted drives.

Contingency plans are also necessary to manage the risk of a security leak. It is preferred that a backup exam is available to be used in place of the compromised exam, if a leak is discovered prior to the exam sitting. This is why two exams are developed initially, so that one can be kept in secure reserve at all times. If a leak is discovered after the exam has been written, the situation is investigated to determine the extent of the leak and resolved on a case-by-case basis. Resolution may involve one or more candidates being disqualified or, in the case of a severe and extensive breach, the examination as a whole or at a particular writing centre might be declared invalid, and a re-write scheduled as soon as possible.

The PAO must also ensure that the exam papers are printed and transferred to the exam centre under strict control. Once printed, exam papers are bundled and sealed, and are kept in a highly secure area until the morning of the exam. Exam paper bundles are unsealed at the exam centre, and distributed to candidates under strict controls.

5.6

Creating candidate preparatory materials

Because there is a significant difference between the ICE and the exams that candidates experienced during their university studies, as well as being very different in purpose and form from the pre-requisite exams, candidates receive specific ICE preparatory material.

To assist candidates, the PAO maintains a set of Candidate Workshop Materials and the ICE Study Guide, which provide training resources and guidelines to assist in preparing ICE candidates.

Sample cases included in the preparatory material follow the same process as the actual exam cases, although security does not need to be as robust. Over time, more samples are made available as the pool of cases is built and more cases can be cycled out of the pool. Sample exams and study materials are reviewed and updated annually (e.g., for technical currency and to reflect any changes to the Competency Framework).

5.7 Administering the exam

The ICE is scheduled at least semi-annually based on candidate demand and resource availability. Exam venues are carefully chosen to conform to security requirements, and are large enough to accommodate exam writers with sufficient space.

Setting up the exam room

At least 90 minutes before the examination start time, staff and/or invigilators set up the exam room:

- Exam room conditions must be conducive to exam writing (sufficient lighting, reasonable room temperature, and quiet environment).
- The room is cleared of any unauthorized materials, and any papers or garbage are removed to ensure a clean exam room.
- Desks are adequately spaced to ensure the independence of candidates' work.
- Each desk is stocked with water, several sheets of blank working paper (each sheet stamped with PAO's stamp), and an exam card and blank envelope.
- Washrooms are checked to ensure that there are no hidden notes or other unauthorized materials.

Invigilator guidance

The ICE is carried out under the supervision of at least two members of the PAO, one of which acts as Chief Invigilator. In the event of a disagreement in procedures, the Chief Invigilator's decision is final. At least one invigilator must be present in the exam room at all times.

At least 15 minutes before the exam start time, invigilators gather and are briefed by the Chief Invigilator. Any questions during the exam process are directed to the Chief Invigilator.

Exam invigilators should have access to a mobile phone during the exam. All phones must be turned to silent, but invigilators must monitor for calls, messages, and emails. Invigilators exchange mobile phone numbers when arriving at the examination centre, to ensure prompt communication in case of issues.

Before the exam starts

Before entering the examination room, candidates must provide their identity card or other recognized national identity document. For individuals that are nationals, invigilators note the type of identity document and its unique identifier. Identity documents are confirmed by PAO staff against the listing of candidates registered for the exam, and the candidate is requested to sign the sign-in sheet. Note that, for fairness, if a candidate is present who is not on the list, but believe that they are scheduled for the exam, they will be permitted to write and the administrative issues surrounding the misunderstanding will be investigated following the examination.

Candidates are allowed into the exam room 10 to 15 minutes before the exam. Invigilators must ensure that candidates take only allowable exam room materials to their seat – all other items, including mobile phones, must be left at the front or sides of the room. Candidates should be reminded to turn off their mobile phones before proceeding to their desk.

At the scheduled exam start time, the sealed examination bundles are opened and question papers are distributed to candidates.

Candidates are given instructions about the exam procedures, and are provided an opportunity to make sure all exam pages are included, and to ask questions on the exam procedures and rules. No questions may be asked of invigilators regarding the exam content, even for clarification.

Once in the exam room, candidates are anonymous until after their written paper is marked. As part of the exam instructions, candidates are directed to write their name on the exam card (and not on their exam papers), insert the card into the blank envelope, and seal the envelope.

Once administrative procedures are complete, candidates are given 30 minutes to read and reflect on the exam cases and questions. During this time, candidates are allowed to highlight or annotate their question paper, but cannot access calculators, reference material, or their answer booklet. This reading and review time allows for increased case complexity and depth of assessment, while maintaining the same exam writing time. Following this 30 minutes, candidates are directed to begin writing the exam, which is strictly timed.

During the exam

Late arrivals are permitted up to 15 minutes late, but are not granted extra writing time.

Candidates must supply their own writing implements, such as pen, pencil, ruler, eraser, and highlighters. Examinations must be written in ink, but calculations and rough work may be submitted in pencil. Candidates are to use the answer booklet to respond to the case as directed, and the blank working paper for rough work.

Candidates are allowed to use reference materials during the examination – a list of allowable exam room materials should be developed.

During the examination, a candidate may leave the exam hall to use the washroom with permission of an invigilator. The candidate must give his or her paper to the invigilator before leaving the room. Any personal belongings taken out of the exam room during exam writing are subject to inspection.

Examination invigilators are prohibited from giving advice on or making an interpretation of any examination wording to candidates. If candidates suggest that there may be an error on the examination (e.g. incorrect dates, missing tables, figures transposed), invigilators may only advise the candidate to state, in their answer booklets, what assumptions they have made in answering that question. If this situation arises, the Chief Invigilator documents the issue in their report.

Before and/or during the exam, each candidate's materials are briefly checked to ensure they comply with the allowable exam room materials. This process should be as minimally disruptive as possible.

If an invigilator witnesses a candidate violating the examination rules by having materials or electronic devices not allowed in the exam room, the invigilator seizes all exam materials and notes the individual's identity number. If the candidate argues, to avoid disturbing the other candidates, the individual may be allowed to continue writing the exam, but his or her exam will be segregated at the end of the exam session, and the Chief Invigilator will report the issue and mark a note on the candidate's paper.

If an examination is interrupted, invigilators should endeavour to maintain the security and integrity of the examination so that the administration of the examination can be completed. If, however, the examination cannot be completed within a period of reasonable delay, the examination papers should be collected with a report of the unusual circumstances.

Ending the exam

An invigilator will announce to candidates when there are 15 minutes remaining in the exam.

When time is finished, one invigilator announces that candidates must immediately stop writing, by saying: "*The exam is now complete. Stay seated, close your exam books immediately, and put down your pens and pencils.*"

Candidates remain seated so that the invigilators have a clear view of the room and can ensure that all candidates stop writing immediately. If a candidate does not stop writing when instructed, their paper should be segregated as an exam room violation.

Upon completion of the exam, each candidate's exam paper, answer booklet, working paper, and identity envelope are collected and marked with a serial number. This allows for anonymity to be maintained during the marking process, but for the papers to be matched with the candidates after marking of the written exam is complete. Every candidate must submit an examination answer booklet, even if the candidate has not answered any questions. All booklets and working paper, whether used or unused, must be collected.

Exams are sorted by number, in the same order as the listing of candidates registered for the exam, and the listing is checked off to indicate that all elements have been received from each candidate (i.e., all exam materials, working paper, identity envelope) and appropriately numbered.

Invigilator reporting

At the conclusion of each examination sitting, all invigilators complete and sign an affidavit. Any recorded irregularities and confiscated materials must be attached.

5.8

Assessing candidate papers

Ensuring the reliability of scoring is central to the assessment process. Achieving reliability occurs throughout the examination process:

- Consistency in case and scoring grid development – cases and scoring grids are carefully constructed and adequately reviewed; cases are regularly pre-tested (trial sit) with a small group of recently-registered Professional Accountants to ensure that the instructions and expectations are clear and reasonable (confidentiality agreements must be signed by pre-testers).
- Consistency in marking – scoring grids must support inter-rater reliability, and the marking leader must have all markers assess the same paper at least periodically (double marking) to ensure consistency is achieved and maintained. Individual markers are also evaluated for consistency through an auditing process (e.g., checking for drift – becoming systematically more lenient or strict, and for general adherence to the scoring grid).
- Appropriate standard setting – proficiency levels must be interpreted in the context of the exam and the requirements to be demonstrated by a minimally-competent candidate must be clearly defined.
- Involvement of appropriate individuals – administrators, case authors, markers and those setting the cut scores need to be diverse, knowledgeable, realistic and unbiased.

The following process is used to assess candidate papers. All papers are marked as a batch, as soon as practicable after the exam sitting.

The assessment of candidate competence is performed through a three-step process:

1. PAO determines the descriptive profile of a passing candidate. This profile is reviewed regularly, but may stay the same from exam to exam.
2. Keeping the profile in mind, candidate papers are marked using the scoring grids developed with the cases.
3. Based on the profile and considering the exam results, a cut score (passing mark) is set for the exam, and papers are rated based on the cut score.

Using scoring grids and cut scores

Competence is not directly measurable, rather it is inferred from a sample of observed behaviour or performance on a number of learning outcomes. For each learning outcome being assessed on an exam, a scoring grid is developed as part of the case authoring process, as described above. At the marking centre, markers evaluate each candidate's performance by comparing the candidate's response against the scoring grid for that learning outcome and assigning a score from 0 to 4.

Once a quantitative value for each learning outcome has been assigned using the scoring grids, the candidate's overall score on the exam is calculated by summing the individual learning outcome scores. That score is compared with the minimal acceptable score, called a "cut score." The cut score for any given exam will reflect its difficulty; therefore cut scores will vary somewhat from exam to exam.

Developing the passing profile

To ground and give context when setting the cut scores, the PAO first determines the "Profiles" – descriptors for three categories of performance of ICE writers (highly competent performance; minimally competent performance - pass; and unacceptable performance - fail). These generic descriptors have the purpose of anchoring those involved in assessment to a common and consistent understanding of what a newly registered statutory auditor should be able to demonstrate. The profile of the minimally competent candidate is the foundation for determining/validating the cut score for the examination. This profile is independent of any particular examination or case context, and provides continuity between examinations. Profiles are reviewed and refreshed as needed before each exam session.

Scoring candidate papers

All candidate papers for the same session are marked at the same time at the marking centre. Each session begins with an orientation led by the marking leader

to ensure markers understand the assessment process. The orientation includes a refresher on IFRS, IAS, and local standards to ensure that all markers are up to date with standards they may not deal with regularly. Markers are then separated based on experience and expertise into 2 teams – during the marking process, markers mark only one of the two cases on the exam.

The marking leader and one or more experienced markers begin by testing the solutions and the scoring grids (performance descriptors at various levels) by marking sample papers using the grids and assigning a score for each learning outcome. Based on this test-marking, any necessary adjustments to the scoring grids are made.

Before "live" marking begins, the team should mark a set of sample papers until they are all marking consistently, in other words that the assessors, acting independently, consistently come to the same judgment, given the same level of performance. This is a necessary step to ensure reliability.

Once marking goes "live", experienced markers are available to assist with any questions. Periodically, the marking leader circulates a test case to all markers to ensure they are still marking consistently. One experienced marker also acts as a marking auditor, sampling marked papers and assessing if inter- and intra-rater reliability are being achieved.

During the marking process, statistics are gathered that will be used by the psychometrician.

Standard-setting and determining the cut score

There is one scoring grid (rated from 0 to 4) for each technical learning outcome being assessed, plus 2 grids for pervasive skills per case. Thus, the maximum raw exam score that can be achieved is 4 x (# of technical learning outcomes on the exam + 4 pervasive grids). The number of technical learning outcomes assessed per exam is generally 15 to 20, for a maximum raw score of between 76 and 96. To more heavily weight the technical learning outcomes with higher proficiency levels, the maximum score per learning outcome can be multiplied by the proficiency level of each learning outcome. Thus, a learning outcome with a proficiency level of 1 would contribute 1 x 4 = 4 points toward the maximum possible score, while a learning outcome with a proficiency level of 3 would contribute 3 x 4 = 12 points toward the maximum possible score. Using this methodology, the Sample ICE, with 17 technical learning outcomes, has a maximum possible score of 188 points.

Consistent with "best practices," the standard-setting panel considers the properties of the examination itself, the characteristics of the candidate population writing the exam, and the level of performance required to ensure competent practice of a profession at an entry level. Standard setting has been incorporated into the ICE marking to ensure reliable and valid support for the pass/fail decision using cut scores.

The PAO should appoint the standard-setting panel for the exam, made up exclusively of PAO members. The panel should determine the cut score under the guidance of a qualified psychometrician. An exam cut score reflects the minimum score needed to pass that exam. For example, if a particular exam has a maximum possible score of 88, the cut score required to pass may be 57 out of 88. Similarly, if weighting is used and an exam has a maximum possible weighted score of 192, the cut score required to pass may be 124 out of 192. This is determined based on the judgment of the standard setters with respect to how a minimally-competent candidate would be expected to score. In other words, the cut score represents the score that would be expected of someone who is "just good enough" to pass the exam.

Protection of the public requires that the cut scores be absolute (criterion-referenced based on an individual's performance), not relative (norm-referenced based on performance compared to the group). This gives greater confidence that candidates passing will be competent, but has the downside of not being able to estimate in advance how many candidates will pass. Although absolute cut scores should not be impacted by the overall performance of the candidates as a group, in reality, the passing percentage will impact the cut score, recognizing that groups of exam-takers are not likely to be vastly different from each other if they came through the same path. For example, if the preliminary cut score for an exam was set at 57 and this resulted in a very low passing percentage, the final cut score would likely be somewhat lower than 57 out of 88.

Rating papers and reviewing borderline papers

Once a cut score has been approved by the PAO, papers are rated as "pass" or "fail," based on the candidate's achieved score versus the cut score. Following the initial evaluation process, all failing examination papers in a borderline range (slightly

below the cut score) should be re-read by the senior marker who oversees the evaluation of each question and by the marking leader who oversees the entire assessment process. These "borderline reviews" provide a holistic look at the candidate's full paper. For each borderline paper, the marking leader determines the final rating of pass or fail, with consideration of feedback from the senior marker. As a result, borderline examination papers will be re-read at least twice by reviewers prior to the final assignment of a "pass" or "fail".

Finally, quality control checks are conducted on each failing examination paper through a re-addition process to eliminate the occurrence of clerical errors. This process focuses on the following types of errors:

- errors in transfer or transposition within the marking documents
- ratings recorded illegibly
- questions, parts of questions, or pages missed by markers.

5.9

Compiling, analyzing, adjusting, and approving the results

After exams are graded, scores are compiled, and then (under the guidance of the psychometrician) they are equated and scaled to present a total scaled score for each candidate. The use of equated and scaled scores means that candidate scores are directly comparable from exam session to session, regardless of any differences in the difficulty level of the examinations. The use of scaled scores ensures that only ability differences are reflected in resulting scores, so the reported scores can be used interchangeably.

Also under the guidance of the psychometrician, the Leadership Team performs quantitative analysis to determine the reliability of the examination results, and reports this back to the PAO. This type of analysis provides information on the degree to which the results of the examination are free of measurement errors and the accuracy with which pass/fail decisions are made. Such information will assist the PAO in its decision making on the pass/fail status for the ICE and also enhances consistency over time.

Candidate results should also be monitored and statistics compiled on an ongoing basis to guide future exam development and assess the preparatory effectiveness of different candidate backgrounds and programs, as well as the exemptions being accepted. These metrics could include comparing a candidate's ICE score against:

- average grade on the prior professional exams (or the exams deemed acceptable through exemption)
- average university course grade
- length or extent of work experience
- university attended
- geographic region
- age and/or time lag between completing university and attempting the ICE.

5.10

Communicating results

A candidate's overall performance is reported as a pass or fail. Failing candidates are provided with guidance on the learning outcome areas for which they did not receive a score of "competent." The complete examination questions and marking materials, including suggested solutions and scoring guidance, are posted for candidates to download, but individual answer booklets are not returned. Failing candidates who wish to receive individual feedback on their performance are allowed to request a critique as described in the next section.

In some situations, a candidate's employer may request information on a candidate's pass/fail status. For privacy reasons, no information on a candidate is disclosed without the candidate's written consent.

5.11

Handling appeals and critiques

The ICE appeal process allows failing candidates to request a critique or performance appraisal review, where the candidate will receive specific feedback on their performance as compared with the expected requirements. Candidates choosing to have their answers critiqued are charged a fee for this service on a cost-recovery basis. The critique contains an extensive critical analysis of the candidate's examination paper that is intended to help the candidate identify areas of weakness in content or approach, and become better prepared for a subsequent exam attempt.

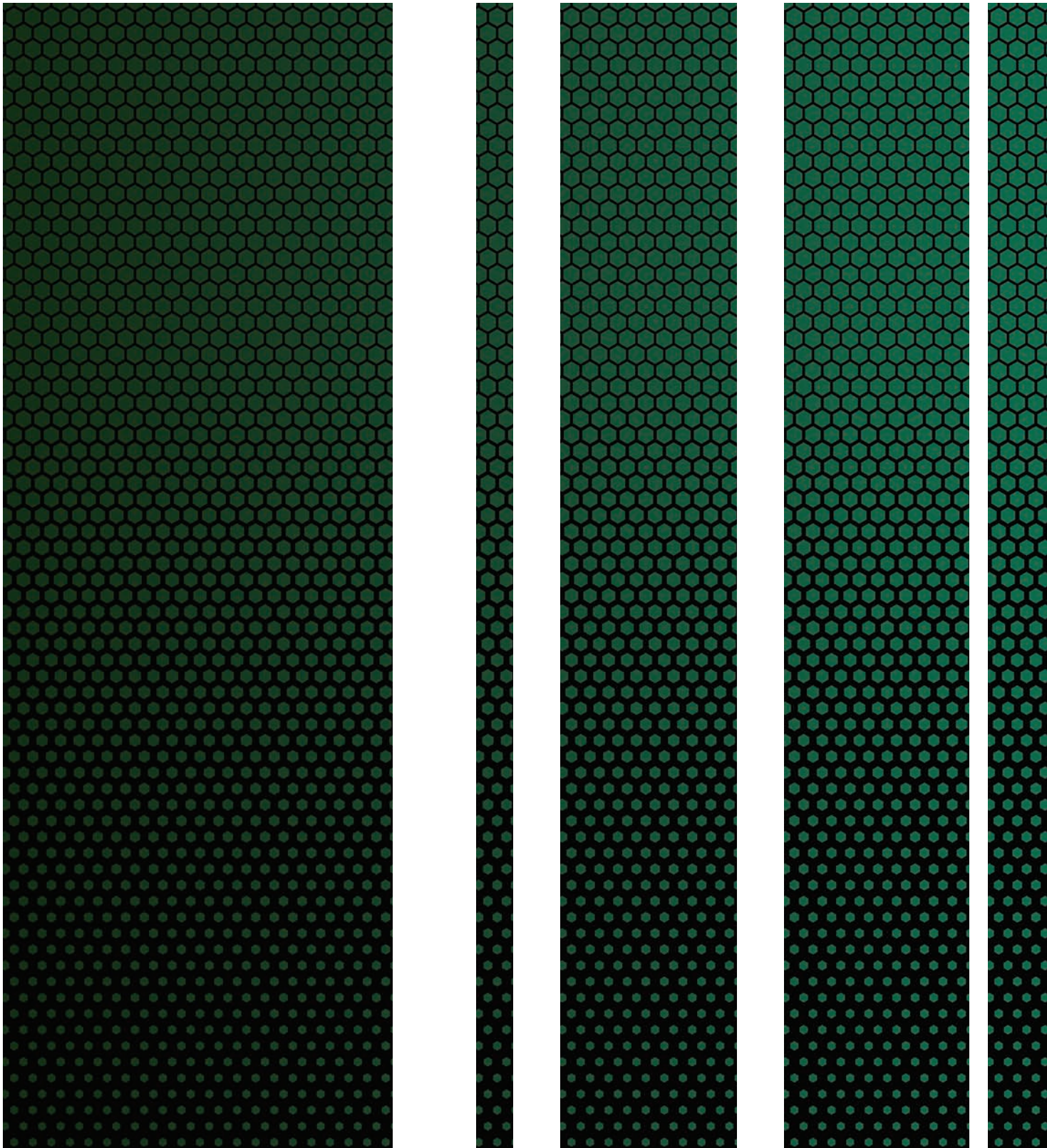
The examination critique:

- points out exactly where the candidate made errors and how this led to the assigned score;
- indicates why the candidate's answers were incorrect;
- indicates the subject areas in which the candidate demonstrated a lack of understanding or incomplete knowledge; and
- advises the candidate on where to locate additional information (for example, references to the law or standards), especially where the suggested solution is not very detailed.

An experienced marker who was on the marking team, but who was not the original marker, performs critiques. In the course of preparing a critique, the marker may discover a marking error, although this would be expected to be rare, given the strong process followed at the marking centre. If the pass/fail decision changes through the process of performing the critique, the marking leader must approve the change, and the candidate's critique fee is returned to them. Critiques are prepared and delivered to failing candidates within 60 days of receiving the critique fee. No further appeals are generally permitted.

PART 6

SAMPLE INTEGRATIVE CAPSTONE EXAMINATION



6.1

Sample case: Cruizing Ltd.

Suggested time allocation: 80 minutes

CruiZing Ltd. (CruiZing) operates daily cruises in several well-known tourist destinations around the country. The company offers various cruise packages, including sight-seeing tours, marine life spotting tours, and evening tours featuring dinner and dancing. CruiZing has been in business since 1976. In two or three years, the company is planning to raise capital through an initial public offering (IPO).

It is currently March 26, 2016. You, a statutory auditor, are part of the audit team working on CruiZing's annual financial statement audit for the year ended December 31, 2015. Your firm, Kolarski & Partners, has been CruiZing's auditor for the past three years. You have been part of the audit engagement all of this time.

Generally, the financial statements prepared by the client have been carefully presented, and each year the audit goes very smoothly. Each year your firm has issued an unqualified audit report. This year has been no exception, and the audit is coming to a close. Consistent with previous years, the materiality for this engagement is EUR 1 million. The company's net income before taxes and extraordinary items is EUR 19,405,000. After completing your audit work for this year, the engagement partner, Sylvia Decker, provides you with some additional tasks.

Sylvia calls you into her office to discuss CruiZing's transition to IFRS in order to go public. Sylvia tells you that she spoke with the CFO, and he indicated that CruiZing's management team wasn't particularly concerned about adopting IFRS. He told Sylvia that his team has looked into the impact of IFRS on CruiZing, and he's satisfied that the impact will be minimal. He said, "IFRS are not that different from what we're currently doing. My team will do what they need to when we go public, to make sure the statements are right at the end of that year." When Sylvia advised him that IFRS can cause significant differences in the statements based on the required accounting treatments, he said, "You know, I bet if you audited our December 31, 2015 statements and pretended that IFRS was already required, we'd still get a clean opinion."

Sylvia asks you to do just that. To demonstrate to the client the significance of the impact of IFRS on CruiZing's financial statements, Sylvia would like you to go through the most significant accounts (see Exhibit 1) and determine how the treatment under local accounting regulations and IFRS would differ. For this task, perform your evaluation as if IFRS had always been applied (i.e. not taking into consideration the potential impact of IFRS 1 adjustments and exemptions). Sylvia would also like to know what your conclusions would have been on the balances, and what the overall audit opinion would have been, if IFRS had been used as the framework for the audit. In particular, she would like to see the reconciliation of net income before tax and extraordinary items under local regulations to net income before tax under IFRS. Sylvia has also asked you to prepare notes explaining to the client why they can't wait until the year of their IPO to start preparing for the transition, for example, by providing advice regarding what will be needed for first-time adoption of IFRS.

To ensure that the audit team is aware of the changes facing them in the next few years, Sylvia would like you to document any changes that will be made to the audit program to adapt to IFRS. Some notes from the current year's audit file related to the company's key areas are summarized in Exhibit 1.

While you are at the client's office working on the IFRS assignment, Sylvia also requests that you provide the client with feedback on their new cash disbursement system. She notes that this system was implemented after year end and will therefore not affect the 2015 audit. Sylvia notes that addressing the client's concerns will not impede the independence of Kolarski & Partners for the upcoming 2016 audit, because this is the kind of information that would normally be documented in the course of the audit. She also asks you to provide your preliminary thoughts on any changes to the audit program for the 2016 audit that may result from the new system. To complete this task, you meet with Diana, the client's Accounts Payable Supervisor. Notes from your meeting with Diana are summarized in Exhibit 2. Sylvia requests that you summarize your work in a memo to her.

Required

Write the memo to Sylvia. Ensure that you address all of the questions and requests that she has raised.

EXHIBIT 1. NOTES ON THE CURRENT YEAR'S AUDIT PROCEDURES

Property, plant and equipment

At the end of fiscal 2015, the largest asset on CruiZing's balance sheet was PPE. PPE includes the following items:

	Cost	Accumulated amortization	Net book value
Cruise ships	74,357,000	8,164,267	66,192,733
Buildings	6,328,918	1,774,856	4,554,062
Total	80,685,918	9,939,123	70,746,795

CruiZing owns all of the cruise ships that it operates in its business. Currently, the company has a fleet of 10 ships located at various ports around the country. Six of the ships are suitable for ocean voyages, and are referred to by CruiZing management as ocean craft. All six ships are relatively new. They were purchased in January 2014 with the assistance of a bank loan. The expected life of these ships is 20 years. The remaining four ships, which were all purchased in 2012, are designed for lake voyages and are referred to by CruiZing management as lake craft. The expected life of these ships is 30 years. At the end of fiscal 2015, the details of the cruise ship assets are as follows:

	Cost	Accumulated amortization	Net book value
Ocean craft	52,500,000	5,250,000	47,250,000
Lake craft	21,857,000	2,914,267	18,942,733
Total	74,357,000	8,164,267	66,192,733

Various components of each ship require replacement at different times throughout the life of the ships. For example, passenger seats and interior décor (carpets, drapes, and so on) are replaced every five years. Ship engines have an expected life of 10 years, and then must be fully replaced. Although the panels on the ships' exteriors must be maintained on a regular basis, on ocean crafts the exterior must be replaced every 15 years, and on lake crafts every 20 years. Fixtures in the galley and lavatory have an expected life of 10 years. All other miscellaneous parts of the ship are expected to last for the full life of the vessel.

On average, the total cost of a ship can be attributed to the following components:

Component	Percentage of total cost
Ship engines	40
Passenger seats and interior décor	35
Ship exterior panels	10
Galley and lavatory	10
Miscellaneous parts	5

Non-current asset impairment

In fiscal 2013, the company incurred an impairment loss on a building located on the shores of Lake Majestic. In 2013, the use of the building changed from a cruise ship maintenance centre to a rental property. At the time, the impairment test calculations were based on the assumption that the future value of rent anticipated from the building would be minimal (EUR 500 a month) given its isolated location. As a result, an impairment loss of EUR 500,000 was recognized.

In fiscal 2015, a well-known French movie production company purchased the land surrounding the building on Lake Majestic. The company intends to use the site as its primary production lot for several upcoming feature films. This company has offered to rent the old building from CruiZing for the next 10 years at a rate of EUR 5,000 a month leading to an increase in the market valuation of EUR 700,000 above the impaired value in the books.

Extraordinary item

On May 25, 2015, one of the company's lake ships was destroyed in a tornado. The eye of the storm passed directly over the port where CruiZing docks one of its ships. The value of this ship was removed from the non-current assets account and, along with other related costs, was disclosed as an extraordinary item for EUR 5,400,000 on the company's 2015 income statement. The company did not have an insurance policy on the ship.

Inventory

At December 31, 2015, the company had EUR 1,265,000 in inventory. Included in the inventory account are raw goods used in the ships' kitchens (for example, beverages and pre-packaged foods), as well as a wide variety of souvenirs for patrons to purchase while on their cruise. The inventory is recognized at the lower of cost or net realizable value. In fiscal 2014, CruiZing experienced a decrease in demand for several of the souvenir products, and decided to sell some of the inventory below cost. The decrease in demand was attributed to the poor sailing weather experienced during the season. In 2014, a writedown of EUR 650,000 of inventory was recognized. However, in 2015 the demand increased, and the same products that were written down in inventory (and not sold in 2014) were sold at the original retail price. To reflect this change in the net realizable value of the inventory, the 2014 writedown of the inventory attributed to the products still on hand was reversed. The reversal was for a value of EUR 269,000.

EXHIBIT 2. NOTES FROM YOUR MEETING WITH DIANA WINTERS

- In fiscal 2016 the company introduced new corporate policies to streamline cash disbursements.
- The company purchases a variety of supplies on a regular basis for each cruise. Since each cruise's passenger list has some people with special dietary requests, many purchases have to be made at the last minute. In order to cater to passenger requests, the galley manager on each ship has been given a credit card. Often, the galley manager sends an assistant to make these last-minute purchases using the corporate credit card. All credit card bills are sent directly to the company's accounts payable department, and are paid on receipt.
- When invoices are received at the corporate head office, they are forwarded directly to the accounts payable department. Invoices are stored in a file folder in the order received. Invoices are entered into the system, and paid in the order they are received. All members of the accounts payable department have the authority to pay any invoice received by the company.
- When an accounts payable staff member receives an invoice from a new supplier, they have the authority to create a new supplier in the system. Once created, the details of the new supplier are stored, and can be retrieved from the system to facilitate subsequent disbursements.

- In your walkthrough of the new cash disbursements policies with Diana, she shows you two invoices. From the invoices, you copy down the following information:

  Invoice A
  Value of goods purchased: EUR 25,980
  Vendor: The Clean Company
  Description of goods purchased: Monthly ship maintenance
  Due date: February 15, 2016
  Purchased by: Manager, Purchasing
  Payment status: Received but not paid

  Invoice B
  Value of goods purchased: EUR 55,980
  Vendor: The Future Electronics Company
  Description of goods purchased: Miscellaneous electronic equipment
  Due date: March 28, 2016
  Purchased by: Senior crew member, Ocean vessel A
  Payment status: Paid

- Diana explains that because the ship needs to be at the ready in terms of its seaworthiness and provisions at all times, senior crew members can also provide CruiZing's billing information when purchasing items on credit. Suppliers send the invoices directly to the accounts payable department, where the invoices are paid.

6.2

Sample case solution: Cruizing Ltd.

The sample solution provide complete answers that fully address each learning outcome being assessed, as well as the professional qualities and skills pervasive throughout the cases.

The training solutions go beyond the minimum performance required for a candidate to be deemed "competent," but will not necessarily address every scoring opportunity.

The assessor is reminded that the solutions are developed in the context of an exam and that, therefore, all of the complexities of a real-life situation may not be fully reflected in the solutions.

SAMPLE CASE SOLUTION

MEMO

To: Sylvia Decker
From: Statutory Auditor
Date: April 3, 2016
Re: CruiZing

Per your request, I have compiled notes regarding CruiZing and their adoption of IFRS, as well as the assurance issues related to upcoming changes. I have also discussed the client's new cash disbursement system.

I have structured my memo as follows:

1. An assessment of the differences between local accounting regulations and IFRS for the key items
2. Based on those differences, my assessment of whether the balances and statements as a whole would be misstated if they were supposed to be IFRS compliant, including a reconciliation of net income
3. Advice for the client on issues related to IFRS 1
4. A discussion of how the audit program will change because of the client's transition to IFRS
5. A discussion of the new cash disbursement system and how it will impact the audit

Local accounting regulations versus IFRS for the key items presented

Key areas noted in the file are as follows:

- Property, plant, and equipment
- Non-current assets impairment
- Extraordinary item
- Inventory

Property, plant, and equipment

Accounting for PPE is explained in IAS 16. Although many aspects of this section are similar to the local accounting regulations treatments, some noteworthy differences exist that will affect CruiZing.

IFRS requires separation based on a component's cost relative to the total cost of the asset. Indeed, IAS 16 requires that each part of an item (with a significant cost in relation to the total cost) be depreciated separately. Therefore, CruiZing's current amortization of the cruise ships over 20 years (ocean craft) and 30 years (lake craft) must be changed based on the estimated life of key components (see discussion that follows below).

To evaluate the impact the change in standards will have, I have quantified what the effect would have been in the past year. I have recalculated the 2015 amortization schedules for the two types of cruise ships used by the company in accordance with the IFRS guidelines. Because many of the significant components on a ship have a useful life less than the total life of the ship, the annual amortization expense has increased. Under local accounting regulations, the ocean craft are currently being amortized over 20 years, with annual amortization of EUR 2,625,000 (EUR 52.5 million ÷ 20 years). This annual expense is significantly lower than the annual amortization of approximately EUR 6.8 million required by IFRS. Similarly, the lake craft were amortized over 30 years with annual amortization of 728,567 (EUR 21.857 million ÷ 30 years). This annual expense is significantly lower than the annual amortization of approximately EUR 2.8 million required by IFRS. If the company were to adopt IFRS, an adjustment for these differences should be recognized in the income statement.

Ocean craft

Component	Percentage of total cost	Allocated cost	Expected life	Annual amortization	Accumulated amortization*	Carrying value
Ship engines	40	21,000,000	10	2,100,000	4,200,000	16,800,000
Passenger seats and interior décor	35	18,375,000	5	3,675,000	7,350,000	11,025,000
Ship exterior panels	10	5,250,000	15	350,000	700,000	4,550,000
Galley and lavatory	10	5,250,000	10	525,000	1,050,000	4,200,000
Miscellaneous parts	5	2,625,000	20	131,250	262,500	2,362,500
Total under IFRS	100	52,500,000		6,781,250	13,562,500	38,937,500
As reported Dec. 31, 2015		52,500,000			5,250,000	47,250,000

Lake craft

Component	Percentage of total cost	Allocated cost	Expected life	Annual amortization	Accumulated amortization*	Carrying value
Ship engines	40	8,742,800	10	874,280	3,497,120	5,245,680
Passenger seats and interior décor	35	7,649,950	5	1,529,990	6,119,960	1,529,990
Ship exterior panels	10	2,185,700	20	109,285	437,140	1,748,560
Galley and lavatory	10	2,185,700	10	218,570	874,280	1,311,420
Miscellaneous parts	5	1,092,850	30	36,428	145,712	947,138
Total under IFRS	100	21,857,000		2,768,553	11,074,212	10,782,788
As reported Dec. 31, 2015		21,857,000			2,914,267	18,942,733

** The ocean craft were purchased in 2014, so they have been amortized for two years, and the lake craft, purchased in 2012 have been amortized for four years.*

The differences in amortization for the ship exterior panels, galley and lavatory, and miscellaneous parts are not as significant as for the ship engines and passenger seats. As a result, the company may elect to group these smaller items into one account and continue to use the 20-year amortization rates for these balances.

Another difference between the local accounting regulations and IFRS is in the treatment of carrying value after initial recognition. IAS 16 offers a choice of accounting policies — the cost model or the revaluation model. In the cost model, the asset is carried at its cost less accumulated depreciation. In the revaluation model, asset values can be adjusted to be carried at the FV as at the revaluation date. In practice, the revaluation model is quite onerous (periodic and consistent independent appraisals, with all assets in the class appraised at the same time are required) and not often used. Local accounting regulations use the historical cost method and, except in extreme circumstances, does not allow any revaluation.

Additionally under IAS 16 depreciation should be charged until the asset reaches its residual value, which should be considered if that residual value is material in relation to the cost of the asset. Under local regulations, residual values are often assumed to be nil.

An issue on transition to IFRS might also be nil value items. The practice under the local regulation is that non-current assets are depreciated using tax allowed rates. Those rates are usually generous leading to a prompt depreciation of certain assets with much longer useful lives. On transition to IFRS such assets would have to be measured at their FV (if the company chooses the FV as deemed cost exemption) or at their depreciated cost determined using the rules of IAS 16 i.e. their actual useful lives.

IAS 16 requires that assets be measured at cost when first recognized. However, IFRS 1 allows a first-time adopter to report items of PPE in its opening statement of financial position at a 'deemed cost' as an alternative to costs as defined by IAS 16. The deemed cost could be based on the FV at the date of transition, the amount determined under a previous revaluation, or a deemed FV cost under previous standards. Because the average cost of the components used to determine an approximate componentization are not strictly the original costs, CruiZing will probably find it beneficial to elect to use a deemed cost, as allowed under IFRS 1. It should be noted, however, that the IFRS 1 options as they relate to PPE are complex and worthy of careful review and consideration.

The FV as deemed cost exemption can be used on an item per item basis and thus the company would have to decide to which items (if any) this exemption would be applied.

IAS 16 also requires that the estimates of useful life and residual value and the method of depreciation be reviewed at least annually.

Non-current asset impairment

On the decision to change the way the building is used into a rented property, the company would have to reclassify the building into investment properties – governed by IAS 40. Investment properties are measured at FV with changes to those FV being recorded in profit and loss.

The FV of the building (as calculated by discounted rents) on this transition is lower than the previous net book value, which will result in the recognition of an impairment loss in the profit and loss account in 20X3.

However the subsequent recovery would be treated as an increase in the FV of the investment property and therefore shown as an item of income in 2015 when trends reverse.

Under the local accounting policies, investment properties are held at depreciated cost which is a benchmark treatment under the local regulations. Under this model, there is no basis for writing it up again once it has been written down. On transition to IFRS all investment properties would have to be measured at their FV.

Extraordinary item

Local regulations allow for the presentation of certain items in the profit and loss account as extraordinary items. Such items have to be difficult to predict, be outside the regular operating activities of an entity, and not be related to the entity's overall business risks.

However, IFRS do not allow the separate disclosure of extraordinary items. Therefore, for IFRS purposes, the extraordinary transaction would be included in (most likely other) operating expenses on the company's income statement in fiscal 2015.

However, this is a classification issue, and the net effect of this transaction on the company's net income after tax would remain unchanged regardless of the company's accounting policies (IFRS versus local regulations).

Inventory writedown

The reversal of the writedown of inventory recognized in 2015 is consistent with both IFRS and local accounting regulations. Local accounting regulations are harmonized with IFRS inventory standards. Both sections require that the amount of any writedown of inventories to net realizable value should be recognized as an expense in the period in which the writedown or loss occurs. Further, the sections specify that the amount of any reversal of any writedown of inventories arising from an increase in net realizable value shall be recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs. Therefore, there would not have been any change to this transaction under IFRS.

What the audit conclusions would be if the 2015 statements were audited using IFRS as the framework

If the client had presented us with these financial statements under IFRS, several of the company's balances would have been misstated. Using the assigned level of materiality of EUR 1 million, our conclusions about the current 2015 financial statement balances would have been quite different if we were auditing the financial statements reported in accordance with IFRS. Indeed, the implementation of IFRS will require material changes to several accounts. In my review of the financial statements, the following accounts would have been materially misstated: accumulated amortization, amortization expense, investment property (the 700,000 EUR misstatement does not exceed overall materiality, but would most likely exceed performance materiality). Based on the analysis above, I have calculated the impact that IFRS would have on the current financial statements. Notably, the income before income taxes is nearly EUR 11 million lower than that presented by the client.

If we were auditing in accordance with IFRS and the client presented us with the existing 2015 financial statements without making any of the adjustments required, I would recommend that we issue a qualified opinion. In that opinion we would want to specify the account balances that we found to be misstated. A qualified opinion would be more appropriate than an adverse opinion, because the errors (based on the information I've reviewed thus far) are not pervasive throughout the financial statements. Users of the financial statements may still find other balances (for example, inventory) useful in evaluating the company's performance for the current year. We should discuss this with CruiZing's CFO, to illustrate to him that if the company doesn't take action, there is a good chance that an unqualified opinion will not be possible once CruiZing is required to report under IFRS.

Net income before taxes and other extraordinary items	19,405,000
Amortization expense — Ocean crafts	
Reversal of local accounting regulations expense	2,625,000
IFRS expense	(6,781,250)
Amortization expense — Lake crafts	
Reversal of local accounting regulations expense	728,567
IFRS expense	(2,768,553)
Recognition of an increase in value of investment properties	700,000
Extraordinary expense	(5,400,000)
Adjusted net income before taxes under IFRS	8,508,764

First-time adoption of IFRS for CruiZing

To respond to the client's implementation of IFRS, there are a number of areas that require special attention by the client and should be included in our audit program. I'll begin by looking at the situation from the client's perspective, and will discuss the audit impact in a later section of this memo.

The client has stated that they will do what needs to be done in 2018 to make sure their statements comply with IFRS. Unfortunately, they cannot wait until 2018 to take action.

To adopt IFRS for their 2018 year end, the implications on their timeline are as follows:

- Comparative figures have to be restated using the newly adopted policies. For the December 2018 year end, that means the 2017 comparatives will have to be restated using IFRS.
- In order for the 2017 income statement to be restated, the January 1, 2017 (that is, December 31, 2016) balance sheet data will have to be available using IFRS standards.
- CruiZing will therefore have to decide between now and the end of this year (2016) which areas they have to restate retrospectively, which they have to restate prospectively, and in which areas they have policy choices.
- Furthermore, for items in the financial statements that are subject to estimation, those estimates must be done in "real time," not using hindsight, so that will have to be done for December 2016.

This timeline should be clearly explained to CruiZing's CFO, since action is required immediately if the company is going to be able to meet the requirements for adoption of IFRS.

Transitioning to IFRS extends far beyond just looking at specific transactions and accounting treatments. Some other areas that the client needs to be preparing for at this point are

- projected launch and planning activities;
- revision of accounting policies that require interpretation and judgment, especially areas where choices are involved in the new policy;
- identifying and resolving data capture issues to support the new standards;
- retraining personnel, including CruiZing's audit committee and the board;
- a review of other areas that might be affected by IFRS, such as compensation arrangements and debt covenants.

IFRS 1 (first-time adoption of IFRS)

IFRS 1 outlines the requirements for an entity that is adopting IFRS and preparing IFRS financial statements for the first time. The standard provides guidance to entities about the adoption of IFRS and, as a result, applies only at the time of changeover. IFRS 1 also identifies whether each standard should be applied using retrospective or retroactive adoption. In our client's case, it will be applicable for the December 31, 2018 financial statements.

Under IFRS 1, the financial statements are presented as if the first-time adopter had always presented IFRS financial statements, which is why comparatives need to be presented using IFRS as well. IFRS 1 requires that the IFRS be retroactively applied, except for certain mandatory exceptions and optional exemptions. This means that, in general, some assets and liabilities may need to be recognized/derecognized or reclassified so that they are accounted for and presented under IFRS requirements, in situations where IFRS requirements differ from current generally accepted accounting principles.

The main mandatory exception is that estimates must be done in "real time," not using retrospective hindsight. In other words, the company is not allowed to use information that became available only after the previous estimates were made (except in the case of error correction). As noted above, this means that the company will have to determine all relevant estimates by their 20X6 year end. In addition, IFRS 1 requires the following IFRS to be applied prospectively:

- derecognition requirements in IAS 39, Financial Instruments: Recognition and Measurement (unless there is sufficient information available to apply retrospective application, in which case the company has the option to do so)
- hedge accounting (IAS 39)
- non-controlling interests (IAS 27)

We'll need to more closely evaluate the extent to which these mandatory exceptions impact CruiZing, if at all.

IFRS 1 also provides optional exemptions for a variety of sections where the cost to apply the section retroactively may be greater than the benefit to financial statement users. One such exemption was discussed above, with respect to the valuation of property, plant and equipment. Other exemptions relate to

- business combinations — for example, the company can choose not to restate the purchase price allocation;
- employee benefits — for example, on defined benefit plans, the company can elect to recognize all cumulative actuarial gains and losses at the opening IFRS balance sheet date.

Several of the other exemptions relate to investments in subsidiaries, associates, and joint ventures, and the designation and valuation of financial instruments.

CruiZing will also need to disclose how the transition from previous standards to IFRS affected its reported financial position, financial performance, and cash flow. This requires various reconciliations of equity, comprehensive income, and impairment losses. The disclosures need to have sufficient detail for financial

statement users to understand the material adjustments resulting from the adoption of IFRS. From the illustration provided earlier regarding how the 2015 statements would have been impacted by IFRS, CruiZing's CFO will want to make sure this is done well, in order to explain to shareholders why there are substantial changes in financial results (assuming the same impact on results when the actual implementation is done).

Another important element is that the standards to be applied on transition should be standards effective at the transition date, not the ones that were effective when the contemplated transactions took place.

Changes to the audit program based on changes to standards

Adoption of IFRS by client

The audit program for 2016 will need to accommodate the verification of the following information:

- client's interpretation as to which IFRS will be affecting them, and in which areas they are going to make changes;
- client's data and estimates that they have gathered in anticipation of the 2018 adoption;
- client's interpretation of which changes will require retroactive and which prospective application.

Based on the attitude of the CFO towards IFRS implementation, it is likely that there will be some problems in these areas, so we should be looking at these as part of our 2016 audit work, though they won't be used until 2018.

Audit procedures for specific accounts under IFRS

Property, plant, and equipment

To verify the accuracy of the PPE cost allocations, we must obtain assurance about the components' weighting (for example, the cost of the engine is 40% of the cost of the ship). One method to confirm the reasonability of the estimates is to obtain industry averages for cost estimates of cruise ships. Alternatively, we could obtain costing information for the replacement parts for each component (for example, the engine) and calculate and compare the percentage that each replacement cost comprises of the total ship cost to the client's estimate.

We must also verify the accuracy of the useful life estimates provided by the client. Accurate useful life estimates will improve the accuracy of amortization expenses. One way to test the accuracy of the useful life of the various ship components would be to refer to industry statistics. Alternatively, we could obtain information about previous client experiences. For example, we could determine the age of each component that was replaced on previous ships, and compare this to the client's current useful life estimates. (We may need to adjust for any technological developments that increase the useful life of the current components.)

We should review the client's new IFRS amortization schedules for accuracy. To do so we can re-perform the calculations.

Non-current asset impairment

We must verify the client's revised assessment of the building's test for impairment. For example, we must test the accuracy of their calculations. To test this we should re-perform their calculations as necessary. We must also verify the client's revised estimate of future cash flows to be earned by the asset.

To do so, we should obtain a copy of the contract, and agree the monthly income earned by CruiZing (EUR 5,000 per month) and the duration of the agreement (10 years) with the contract.

Extraordinary item and inventory

Our audit plan regarding these two balances will not change significantly. The work performed on extraordinary items will be required on material operating cost balances in the future. Because the IFRS and local regulations are harmonized, the audit program to test inventory will remain unchanged when the company adopts IFRS.

Review of cash disbursements system

During my preliminary review of the new cash disbursements system, I noted several deficiencies. I have described these issues and possible resolutions below.

The galley manager of each ship has a corporate credit card to fund last-minute purchases. All credit card bills are sent directly to the accounts payable department for payment. Under this new system, there is no review of the reasonableness of the costs or the nature of the costs. This process creates an opportunity for the manager to buy items for personal use that are paid for by the company. Further, the manager is giving his or her company credit card to another individual to use for purchases. Allowing another individual to have custody, and the use of, a corporate credit card increases the risk of unauthorized transactions. In addition, even on goods that are purchased for the cruises, this method of purchase may not be the most efficient. If the company were to coordinate the purchases required for all of their cruises, they might be given discounts or special deals with suppliers due to the bulk of the order. Even though the credit cards are provided to galley managers primarily to facilitate purchases to accommodate special dietary needs, it is possible to minimize last minute purchases by planning for common dietary concerns in advance.

To address issues associated with these credit cards, the company should appoint the manager in charge of purchasing to review and approve the costs incurred by the galley managers prior to payment. Any unusual items should be followed up on with the galley managers, and the cost of any items of a personal nature should be collected from them. Finally, the manager in charge of purchasing should also consider purchasing all goods required by the cruise ships in bulk to take advantage of potential discounts and devise a purchasing program whereby such last minute purchases are rarely required. It should be ensured that the credit card policy is not used by senior members of the crew to bail themselves out of bad planning.

It may be appropriate to charge crew members who use corporate credit cards for personal purposes to pay an administration or premium for such use. This would discourage corporate cards from being used for personal purposes given the risk that they may be treated as a corporate expense and given the level of administration required to separate and collect for personal usage.

Invoice payments are not monitored to ensure that all invoices are paid. For example, an invoice to The Clean Company for EUR 25,980 was due on February 15, and still unpaid at the end of March. Missed invoice payments likely occur because invoices are stored in a file folder when received and only entered into the system when they are paid. This method of payment causes several problems for the company. First, it increases the risk that an invoice will be missed, or paid late, because the due dates are not closely monitored. Missed invoices that are not entered into the system negatively affect the accuracy of the accounts payable balance. This type of error would lead to an understatement of accounts payable and the related expense or asset account. Late invoice payments negatively affect the company's cash flow due to missed early payment discounts and the requirement to pay late fees and interest charges. To mitigate these risks, all invoices should be entered into the system upon receipt. Not only will this ensure that accounts payable is accurate, but it will also allow the accounts payable manager to monitor outstanding invoices to ensure that all invoices are paid by the required dates. Another consequence of recording vendor invoices only at the time of payment is that quarterly or monthly financial statements are misstated, with understated liabilities and expenses. This will lead to significant distortion in the last quarter of the year when our audit uncovers these unrecorded expenses and the audited annual financials show a significantly higher cost of operations than the three interim statements did. Also, any management decisions based on these interim statements about performance, for example, will be based on inaccurate information about the true cost of operations.

All members of the accounts payable department have the authority to pay any invoice received by the company. When an accounts payable staff member receives an invoice from a new supplier, they have the authority to create a new supplier in the system. Currently the accounts payable clerks have a great deal of authority in the cash disbursements cycle. This lack of third-party authorization of new supplier setup or invoice payments creates an opportunity for fraudulent transactions. For example, an accounts payable clerk could easily create a fictitious company in the system, then create and pay invoices for this fictitious company and collect the cash personally. Thus, a clerk could embezzle money from the company relatively easily. To avoid this risk, the company should limit the number of users that have the authority to set up new supplier accounts. For example, authorization from the controller or area manager of the organization should be required for new account setup. In addition, because invoice payments do not have to be authorized, the company may be mistakenly

paying for goods that were not ordered or received. To ensure that this does not happen, accounts payable clerks must ensure that the invoice agrees to the purchase order and the bill of lading confirming the receipt of the goods and that approvals by appropriate personal are in evidence.

Senior crew members also have the authority to provide CruiZing's billing information for any purchase. Information for a purchase made this way is sent to accounts payable, where the outstanding balance is paid without further review. This setup creates the opportunity for crew members to purchase items of a personal nature, or to spend CruiZing's money on unnecessary cruise-related items. For example, in my walkthrough I noticed an invoice for electronics equipment purchased by a senior crew member. While this equipment could have been used on the cruise, it is also possible that the crew member was purchasing some electronic equipment for his own use. Generally speaking, a company's purchase order system should require appropriate approvals for all purchases, to reduce the opportunities for crew to purchase personal items with company funds, and to establish better control over such purchases with respect to responsibility and authority. Allowing company representatives to provide billing information circumvents controls that exist over purchases (such as ensuring that purchases are appropriate as to cost and need). In CruiZing's situation, however, such purchases need to be allowed on an exception basis, in order to ensure ships are seaworthy at all times. As a result, there must be back-up control procedures to ensure that when such an exception is made the expenditure is valid and appropriate. For example, any purchases made directly by senior crew members over a certain threshold (say EUR 1,000) should be reviewed by the company's controller or department manager before the payment is issued. Given the cost of administering such back-up controls (and potential difficulties resolving potential issues after the fact), a policy that limits exceptions to emergency circumstances would be appropriate.

Audit procedures

My preliminary assessment of the new cash disbursement policies is that several of the controls over the accuracy and completeness of accounts payable are very weak. If the controls are not improved shortly, it appears that we will not be able to rely on them during the course of next year's audit. Even if the controls were improved shortly, we are well along (March) in the current fiscal year, and it is likely that we would only be able to rely on such controls for the last half of the year. This will increase the control risk of the engagement. To reduce the overall engagement risk to an acceptable level, it will be necessary for us to increase the amount of substantive testing performed.

6.3

Sample scoring grids

This section contains the detailed scoring grids that are used to evaluate candidate responses on a competency basis.

Scoring grids for each learning outcome provide a framework for consistent candidate assessment.

Each level in the grid is meant to be cumulative and builds on the level below it. For example, a candidate rated as "exceeds" would need to demonstrate the criteria for "meets" as well, then go beyond.

Scoring grids are classified as Technical learning outcomes; Professional Skills; or Professional Values, Ethics, and Attitudes.

A Summary of Candidate Performance is provided at the end of the section that is used to record the candidate's examination performance and determine a final score.

SAMPLE CASE SCORING GRIDS

TECHNICAL LEARNING OUTCOMES

T-FAR-3	Level 2	**Apply national accounting regulations other than IFRS to transactions and other events.**

Baseline question: Did the candidate explain national accounting regulations as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Accurately explained national accounting regulations for ONE of: PPE, building impairment, extraordinary item, inventory ☐ Other
2	Below	☐ Accurately explained national accounting regulations for TWO of: PPE, building impairment, extraordinary item, inventory ☐ Other
3	Meets	☐ Accurately explained national accounting regulations for THREE of: PPE, building impairment, extraordinary item, inventory ☐ Other
4	Exceeds	☐ Accurately explained national accounting regulations for ALL of: PPE, building impairment, extraordinary item, inventory ☐ Other

Page(s)[1]: _____

Notes: _____

[1] *Page reference(s) in candidate response where this issue is discussed*

T-FAR-4	Level 2	**Apply IFRS to transactions and other events.**

Baseline question: Did the candidate explain IFRS requirements as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Accurately explained IFRS requirements for ONE of: PPE, building impairment, extraordinary item, inventory ☐ Other
2	Below	☐ Accurately explained IFRS requirements for TWO of: PPE, building impairment, extraordinary item, inventory ☐ Other
3	Meets	☐ Accurately explained IFRS requirements for THREE of: PPE, building impairment, extraordinary item, inventory ☐ Other
4	Exceeds	☐ Accurately explained IFRS requirements for ALL of: PPE, building impairment, extraordinary item, inventory ☐ Other

Page(s): _____

Notes: _____

T-FAR-5	Level 2	**Evaluate the appropriateness of accounting policies used to prepare financial statements.**

Baseline question: Did the candidate advise as to the policy decisions needing to be made by the client when transitioning to IFRS, and explain the implications on the client's timeline?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Discussed that the client needs to decide on policies and estimates prior to the year of transition ☐ Other
2	Below	☐ Explained why the client must decide on policies and estimates by the end of 20X6 in order to present the statements as if IFRS had always been applied ☐ Other
3	Meets	☐ Explained why the client must decide on policies and estimates by the end of 20X6 in order to present the statements as if IFRS had always been applied AND ☐ Discussed at least 3 mandatory exceptions and/or optional exemptions ☐ Other
4	Exceeds	☐ Explained additional disclosure requirements and the underlying need for reconciliations ☐ Other

Page(s): _____

Notes: _____

T-FAR-9	Level 3	**Evaluate whether an entity has prepared, in all material respects, financial statements in accordance with the applicable financial reporting framework and regulatory requirements.**

Baseline question: Did the candidate conclude on the significant balances and reconcile net income before tax and extraordinary items under local regulations to net income before tax under IFRS?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Explained ONE account that would be materially misstated ☐ Other
2	Below	☐ Explained TWO accounts that would be materially misstated ☐ Other
3	Meets	☐ Explained AT LEAST TWO accounts that would be materially misstated, AND ☐ Provided a reasonable reconciliation of net income, consistent with their analysis ☐ Other
4	Exceeds	☐ Explained AT LEAST TWO accounts that would be materially misstated, *with specific reference to the materiality level*, AND ☐ Provided a complete reconciliation of net income, consistent with their analysis ☐ Other

Page(s): _____

Notes: _____

T-A-6	Level 3	**Develop and/or perform appropriate procedures to audit financial statements in accordance with International Standards on Auditing and applicable laws and regulation.**

Baseline question: Did the candidate explain national accounting regulations as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Noted that changes to the audit program would be needed under IFRS reporting OR ☐ Noted weakness in the controls in the new cash disbursements system ☐ Other
2	Below	☐ Identified that PPE and the impairment loss would be the accounts requiring changes to the audit program, OR ☐ Explained that the weaknesses in the controls in the new cash disbursements system would mean that the controls could not be relied on (i.e., that more substantive procedures would be needed) ☐ Other
3	Meets	☐ Explained the changes needed to the audit program with respect to PPE and building impairment AND ☐ Explained that the weaknesses in the controls in the new cash disbursements system would mean that the controls could not be relied on (i.e., that more substantive procedures would be needed) ☐ Other
4	Exceeds	☐ Explained the changes needed to the audit program with respect to PPE and building impairment AND ☐ Explained what assertions would be most impacted by the weaknesses in the controls in the new cash disbursements system, and the resulting need for more substantive procedures as opposed to reliance on controls ☐ Other

Page(s): _____

Notes: _____

T-A-10	Level 3	**Develop an appropriate audit opinion and related audit report, including a description of key audit matters as applicable.**

Baseline question: Did the candidate conclude on the audit opinion that would be appropriate if IFRS were the framework used for audit purposes?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Identified that an unqualified opinion would not likely be possible ☐ Other
2	Below	☐ Discussed that a qualified or adverse opinion would be most likely ☐ Other
3	Meets	☐ Explained that a qualified opinion would be most appropriate ☐ Other
4	Exceeds	☐ Explained why a qualified opinion would be most appropriate, as the errors are not pervasive ☐ Other

Page(s): _____

Notes: _____

T-GRI-4	Level 2	Analyze the components of internal control related to financial reporting.

Baseline question: Did the candidate evaluate the new cash disbursements system and advise on deficiencies and potential resolutions?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Described general deficiencies of the new cash disbursements system. ☐ Other
2	Below	☐ Explained at least two deficiencies of the new cash disbursements system. ☐ Other
3	Meets	☐ Explained at least two deficiencies of the new cash disbursements system, AND ☐ Suggested methods to correct the deficiencies noted. ☐ Other
4	Exceeds	☐ Explained at least three deficiencies of the new cash disbursements system, AND ☐ Suggested methods to correct the deficiencies noted. ☐ Other

Page(s): _____

Notes: _____

PROFESSIONAL SKILLS

Professional skills are grouped together under one scoring grid. Examples listed are not exhaustive, and other ways of demonstrating the skills should be accepted.

PS-I, PS-C, PS-P, PS-O	Level 2	Professional Skills – Intellectual, Communication, Personal, Organizational

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Demonstrated 1 or 2 examples of professional skills
2	Below	☐ Demonstrated 3 examples of professional skills
3	Meets	☐ Demonstrated 4 or 5 examples of professional skills
4	Exceeds	☐ Demonstrated 6+ examples of professional skills

Examples of professional skills demonstrated include (check those evident in the response):

- ☐ Recommending solutions that consider the needs of the client from a variety of perspectives (decision-making, change management, etc.)
- ☐ Identifying issues that go beyond reporting when transitioning to IFRS (such as planning, training, data capture)
- ☐ Proactively addressing client arguments
- ☐ Logically evaluating the necessary changes by working systematically through the issues
- ☐ Presenting discussion points persuasively with respect to convincing the client to adjust their thinking
- ☐ Communicating clearly
- ☐ Preparing a well-structured response
- ☐ Presenting issues diplomatically
- ☐ Other:

Page(s): _____

Notes: _____

PROFESSIONAL VALUES, ETHICS, AND ATTITUDES

Professional values, ethics and attitudes are grouped together under one scoring grid. Examples listed are not exhaustive, and other ways of demonstrating the values, ethics and attitudes should be accepted.

PV-J, PV-ETH, PV-PI	Level 2	Professional values, ethics, and attitudes – professional skepticism and judgment, ethics, and commitment to the public interest

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Demonstrated 1 example of professional values, ethics, and attitudes
2	Below	☐ Demonstrated 2 examples of professional values, ethics, and attitudes
3	Meets	☐ Demonstrated 3 examples of professional values, ethics, and attitudes
4	Exceeds	☐ Demonstrated 4+ examples of professional values, ethics, and attitudes

Examples of professional values, ethics, and attitudes demonstrated include (but are not limited to):

☐ Exhibiting sound judgment when determining the best course of action for the client and the audit team

☐ Recommending that some areas need further investigation before a decision can be made

☐ Promoting audit quality by explaining the audit difficulties expected and how to resolve them

☐ Advise on the need to explain changes to stakeholders

☐ Other:

Page(s): _____

Notes: _____

SUMMARY OF CANDIDATE PERFORMANCE

Learning outcome	Level	Rating	Weighted max (level x 4)	Weighted rating (level x rating)
T-FAR-3	2		8	
T-FAR-4	2		8	
T-FAR-5	2		8	
T-FAR-9	3		12	
T-A-6	3		12	
T-A-10	3		12	
T-GRI-4	2		8	
Professional skills	2		8	
Professional Values, Ethics, And Attitudes	2		8	
Total number of learning outcomes = 9	Max score = 36	Actual score =	Total weighted max = 84	Weighted total =
Actual score (%)				

6.4

Sample marked candidate responses

This section contains two parts: (1) a sample candidate response to Section I: Sample ICE and (2) completed scoring grids from Section III applied to the sample candidate response.

Part 1 is meant to be illustrative of how a potential candidate might respond under examination room conditions. It is not necessarily intended to be a complete or fully competent response, unlike the sample solution provided in Section II.

Part 2 applies the scoring grids from Section III to the sample candidate response. This demonstrates the marking process using the scoring grids and provides examples of the decision-making underlying the ultimate competent/not-competent evaluation that the markers are required to reach.

6.4.1

Sample candidate response

RESPONSE 1
PAGE 1

SAMPLE CASE

To: S. Decker (SF)
From: Statutory Auditor (SA)
Date: March 26, 2016
Re: CruZing Ltd. (CL) –Transition to IFRS and new Cash Disbursement System

Further to our recent meeting and your request for action on several items related to CL's planned transition to IFRS and the implementation of new cash disbursement system I have prepared this memo and related attachments. The memo addresses each of your requests for information and analysis as a separate item. Global or interconnected comments follow at the end of the memo. Should you require further details or explanations please contact me.

Yours truly
SA

RESPONSE 2
PAGE 1

TRANSITION TO IFRS - SIGNIFICANT ACCOUNTS – LOCAL ACCOUNTING VS. IFRS TREATMENT ETC.

Property, Plant, and Equipment

CL currently uses the historical cost method for accounting for its PPE. Accordingly FV is not considered and components within existing categories of PPE are not separated out. This approach is acceptable under local accounting principles but is not acceptable for IFRS. IFRS requires components to be accounted for separately using their FV. To be able to do this, CL has a lot of work to do, including recalculating amortization under this approach. It will be necessary to determine prior year's amortization and carrying values so that comparative statements can be prepared.

To adopt FV, CL must establish the FVs of each of their ships and buildings. For comparisons sake this should be done right away. They will need to hire an expert to do the year end valuation as well. Of course CL must allocate the FVs to the components on the ship and account for each separately using the FV approach.

Given the number of ships and components and the buildings it owns CL will want to get started on valuations right away. I have not prepared an excel spreadsheet demonstrating the approach to allocating total ship cost to components as it is a relatively straightforward matter.

Non- current asset impairment

With the change in use of the Lake Majestic (LM) property CL wrote down the value of its building. That writedown was appropriate under local accounting standards as the realizable value had fallen below cost. If CL adopts FV accounting for its PPE then the LM property will be revalued under that approach. If FV accounting is not adopted then with the increase in the rental revenue related to the offer from the French film company the value of the LM property should be written up by 700,000 EUR.

Extra-ordinary items

Under IFRS, the loss of the ship could be shown as a separate item on the income statement but it cannot be presented as an extraordinary item. If CL insisted on extra-ordinary items treatment we would qualify our audit report.

From a bigger picture perspective, I question if extra-ordinary items treatment was appropriate even under local accounting standards, as storms are part of the normal conditions faced by cruising companies, and not extraordinary in nature. What seems extraordinary to me was the fact that the ship that was destroyed was not insured. We should advise CL to review and revise insurance coverage as befits a company of their size. Public company shareholders would sue the Board if proper insurance coverage was not in place.

Inventory

Inventory is carried at LCNRV. Deciding to reduce the selling price to an amount below cost when the demand was low due to poor sailing weather might have been a sound decision for cash flow purposes, but basing a write-off of inventory to be sold in the future on past weather was questionable, especially given that normal conditions would permit a return to regular selling prices. Whether a write-down was required or not, however, the reversal of the write-down is not permissible under local accounting standards as such write-downs may not be reversed (they can only be added to). Under IFRS, the write-down could be reversed and recognized in the profit and loss.

Reconciliation of net income before tax and extra-ordinary items under local regulations to IFRS

Net income before tax and extra-ordinary items	EUR	19,405,000
Adjustment for amortization (see calculations)	EUR	-5,569,273
Adjustment for inventory write-down	EUR	269,000
Extra-ordinary item that cannot be treated as such	EUR	-5,400,00
Income before tax per IFRS	EUR	8,704,727

Overall it appears that CL was following local accounting treatment correctly for the most part. It should be apparent from the analysis above that we would have had to qualify if they had adopted IFRS and if we share the above analysis with the CFO they will see that transitioning to IFRS is more complicated than they assumed to be the case and they will want to consider when they do this as it will have an immediate effect on income before tax. Managing the change so that CL can go public will be an important task for the CFO and if we can help CL with this plan it will be good for our relations with them and for our fees.

RESPONSE 2
PAGE 3

Cash disbursement systems

CL's new cash disbursement system is problematic on several fronts. First of all it does not seem to be functioning as it should, as Invoice A which the employee responsible for the system showed me which was due on Feb 15th has not yet been paid. It is now a month and a half overdue. The system is therefore not resulting in more effective and expedient payments being made.

The new system allowing for last minute purchases with a corporate credit card is good as it allows guests' needs to be met and is better than using cash as credit card receipts are now sent directly to accounts payable. We will need to design an audit routine in this area to analyze the charges made on the corporate card to make sure that purchases are always being made for CL's needs and not the person who happens to have the credit card.

Sending invoices directly to corporate head office is a very good idea as it ensures the invoices do not go missing. Somebody in accounts payable needs to be assigned the responsibility of paying these invoices on time. This would be facilitated if the person assigned this responsibility had to set the invoices up for payment when the invoice was received. Currently no senior official has the responsibility of reviewing the invoice and approving for payment. Such a procedure should be put in place. We might also want to ensure that purchase orders are created which can then be matched up with invoices.

Allowing accounts payable staff members to set up new suppliers will make it easier for the person who receives the invoice to set it up for payment. Any new suppliers to be set up for payment should be approved by a senior official however and that official should verify the existence of the supplier.

Invoice B that Diana showed me was a concern as it was for misc electronic equipment. It has been paid on time but apparently without approval. Although having senior officers being able to charge on CL accounts and request new supplier be set up is one way of ensuring efficiency and readiness there needs to be a check and balance to ensure only valid suppliers are being set up.

Overall comments

We will not be able to rely on CLs payment system next year unless the changes noted above are instituted and in any event we will have to review the stump period between the implementation of the new system and the implementation of the changes recommended above in detail to be able to provide an unqualified opinion.

RESPONSE 2
PAGE 4

Calculations:

Cost approach

Type of vessel	Cost EUR	Life in years	Annual Amortization
Lake craft	21,857,000	30	728,567
Ocean craft	52,500,000	20	2,625,000
			3,353,567

Simplified FV approach

I have assumed for simplicity that the components' FV changes will approximate the stated useful life of the components and to further simplify I did not break into components (though they should) but I applied a rate of 12% for decline in FV.

Type of vessel	Cost EUR	FV decline rate	Annual Amortization
Lake craft	21,857,000	12%	2,622,840
Ocean craft	52,500,000	12%	6,300,000
			8,922,840
		Difference	5,569,273

6.4.2

Application of scoring grids to sample candidate response

SAMPLE CASE

TECHNICAL LEARNING OUTCOMES

T-FAR-3	Level 2	**Apply national accounting regulations other than IFRS to transactions and other events.**

Baseline question: Did the candidate explain national accounting regulations as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Accurately explained national accounting regulations for ONE of: PPE, building impairment, extraordinary item, inventory ☐ Other
2	Below	☐ Accurately explained national accounting regulations for TWO of: PPE, building impairment, extraordinary item, inventory ☐ Other
3	**Meets**	☒ **Accurately explained national accounting regulations for THREE of: PPE, building impairment, extraordinary item, inventory** ☐ Other
4	Exceeds	☐ Accurately explained national accounting regulations for ALL of: PPE, building impairment, extraordinary item, inventory ☐ Other

Page(s): 1 and 2

Notes: Candidate correctly explained PPE, extraordinary item and building under local regulations, but was wrong about the inventory treatment. The discussion of extraordinary items was a bit odd, as the candidate suggested that it may not have been appropriately accounted for under local regulations on the audited statements – this impacts pervasive skills score.

T-FAR-4	Level 2	**Apply IFRS to transactions and other events.**

Baseline question: Did the candidate explain IFRS requirements as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Accurately explained IFRS requirements for ONE of: PPE, building impairment, extraordinary item, inventory ☐ Other
2	**Below**	☒ **Accurately explained IFRS requirements for TWO of: PPE, building impairment, extraordinary item, inventory** ☐ Other
3	Meets	☐ Accurately explained IFRS requirements for THREE of: PPE, building impairment, extraordinary item, inventory ☐ Other

4	Exceeds	☐ Accurately explained IFRS requirements for ALL of: PPE, building impairment, extraordinary item, inventory ☐ Other

Page(s): 1 and 2

Notes: Candidate correctly explained extraordinary item and inventory under IFRS but not PPE (FV not mandatory under IFRS) or the building (should not be PPE – would be reclassified to investment property).

T-FAR-5	Level 2	**Evaluate the appropriateness of accounting policies used to prepare financial statements.**

Baseline question: Did the candidate advise as to the policy decisions needing to be made by the client when transitioning to IFRS, and explain the implications on the client's timeline?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	**Substantially below**	☐ Discussed that the client needs to decide on policies and estimates prior to the year of transition ☒ **Other:** *made reference to the amount of work*
2	Below	☐ Explained why the client must decide on policies and estimates by the end of 20X6 in order to present the statements as if IFRS had always been applied ☐ Other
3	Meets	☐ Explained why the client must decide on policies and estimates by the end of 20X6 in order to present the statements as if IFRS had always been applied AND ☐ Discussed at least 3 mandatory exceptions and/or optional exemptions ☐ Other
4	Exceeds	☐ Explained additional disclosure requirements and the underlying need for reconciliations ☐ Other

Page(s): 2

Notes: Candidate made reference to the amount of work and the need to get started right away, but did not recommend specifics.

T-FAR-9	Level 3	**Evaluate whether an entity has prepared, in all material respects, financial statements in accordance with the applicable financial reporting framework and regulatory requirements.**

Baseline question: Did the candidate conclude on the significant balances and reconcile net income before tax and extraordinary items under local regulations to net income before tax under IFRS?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Explained ONE account that would be materially misstated ☐ Other
2	**Below**	☒ **Explained TWO accounts that would be materially misstated** ☒ **Other:** *attempted to reconcile, but not consistent or correct*
3	Meets	☐ Explained AT LEAST TWO accounts that would be materially misstated, AND ☐ Provided a reasonable reconciliation of net income, consistent with their analysis ☐ Other

4	Exceeds	☐ Explained AT LEAST TWO accounts that would be materially misstated, *with specific reference to the materiality level*, AND ☐ Provided a complete reconciliation of net income, consistent with their analysis ☐ Other

Page(s): 2

Notes: Candidate included reconciling items for amortization, extraordinary item and inventory, but missed the building revaluation in their reconciliation, and the calculations for amortization were illogical.

T-A-6	**Level 3**	**Develop and/or perform appropriate procedures to audit financial statements in accordance with International Standards on Auditing and applicable laws and regulation.**

Baseline question: Did the candidate explain national accounting regulations as they relate to the most significant accounts?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Noted that changes to the audit program would be needed under IFRS reporting OR ☐ Noted weakness in the controls in the new cash disbursements system ☐ Other
2	**Below**	☐ Identified that PPE and the impairment loss would be the accounts requiring changes to the audit program, OR ☒ **Explained that the weaknesses in the controls in the new cash disbursements system would mean that the controls could not be relied on (i.e., that more substantive procedures would be needed)** ☐ Other
3	Meets	☐ Explained the changes needed to the audit program with respect to PPE and building impairment AND ☐ Explained that the weaknesses in the controls in the new cash disbursements system would mean that the controls could not be relied on (i.e., that more substantive procedures would be needed) ☐ Other
4	Exceeds	☐ Explained the changes needed to the audit program with respect to PPE and building impairment AND ☐ Explained what assertions would be most impacted by the weaknesses in the controls in the new cash disbursements system, and the resulting need for more substantive procedures as opposed to reliance on controls ☐ Other

Page(s): 3

Notes: Candidate did not address the changes needed to the audit program once client has implemented IFRS.

T-A-10	**Level 3**	**Develop an appropriate audit opinion and related audit report, including a description of key audit matters as applicable.**

Baseline question: Did the candidate conclude on the audit opinion that would be appropriate if IFRS were the framework used for audit purposes?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate

1	Substantially below	☐ Identified that an unqualified opinion would not likely be possible ☐ Other
2	Below	☐ Discussed that a qualified or adverse opinion would be most likely ☐ Other
3	**Meets**	☒ **Explained that a qualified opinion would be most appropriate** ☐ Other
4	Exceeds	☐ Explained why a qualified opinion would be most appropriate, as the errors are not pervasive ☐ Other

Page(s): 2

T-GRI-4	Level 2	Analyze the components of internal control related to financial reporting.

Baseline question: Did the candidate evaluate the new cash disbursements system and advise on deficiencies and potential resolutions?

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Described general deficiencies of the new cash disbursements system. ☐ Other
2	Below	☐ Explained at least two deficiencies of the new cash disbursements system. ☐ Other
3	**Meets**	☒ **Explained at least two deficiencies of the new cash disbursements system, AND** ☒ **Suggested methods to correct the deficiencies noted.** ☐ Other
4	Exceeds	☐ Explained at least three deficiencies of the new cash disbursements system, AND ☐ Suggested methods to correct the deficiencies noted. ☐ Other

Page(s): 3

Notes: Candidate specified more than two improved controls (e.g., review and approval, use of purchase orders, verifying existence of new suppliers) but did not explicitly identify all of the related risks, and it is not implicit in their response.

PROFESSIONAL SKILLS

Professional skills are grouped together under one scoring grid. Examples listed are not exhaustive, and other ways of demonstrating the skills should be accepted.

PS-I, PS-C, PS-P, PS-O	Level 2	Professional Skills – Intellectual, Communication, Personal, Organizational

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	Substantially below	☐ Demonstrated 1 or 2 examples of professional skills
2	**Below**	☒ **Demonstrated 3 examples of professional skills**
3	Meets	☐ Demonstrated 4 or 5 examples of professional skills
4	Exceeds	☐ Demonstrated 6+ examples of professional skills

Examples of professional skills demonstrated include (check those evident in the response):

- ☐ Recommending solutions that consider the needs of the client from a variety of perspectives (decision-making, change management, etc.)
- ☐ Identifying issues that go beyond reporting when transitioning to IFRS (such as planning, training, data capture)
- ☐ Proactively addressing client arguments
- ☐ Logically evaluating the necessary changes by working systematically through the issues
- ☐ Presenting discussion points persuasively with respect to convincing the client to adjust their thinking
- ☐ Communicating clearly
- ☒ **Preparing a well-structured response**
- ☐ Presenting issues diplomatically
- ☒ **Other:** *critically questioned whether the event was extraordinary even under local regulations and discussed insurance (page 2); noted the benefits of the new disbursement system not just the faults.*

Page(s): throughout

Notes: Candidate raised some good points, but did so somewhat inappropriately (not diplomatically), as they were in effect questioning the audit results. Also missed some of the "required" items because of not being systematic.

PROFESSIONAL VALUES, ETHICS, AND ATTITUDES

Professional values, ethics, and attitudes are grouped together under one scoring grid. Examples listed are not exhaustive, and other ways of demonstrating the values, ethics, and attitudes should be accepted.

PV-J, PV-ETH, PV-PI	**Level 2**	**Professional values, ethics, and attitudes – professional skepticism and judgment, ethics, and commitment to the public interest**

0	Not addressed	☐ Did not attempt or there is insufficient response to evaluate
1	**Substantially below**	☒ **Demonstrated 1 example of professional values, ethics, and attitudes**
2	Below	☐ Demonstrated 2 examples of professional values, ethics, and attitudes
3	Meets	☐ Demonstrated 3 examples of professional values, ethics, and attitudes
4	Exceeds	☐ Demonstrated 4+ examples of professional values, ethics, and attitudes

Examples of professional values, ethics, and attitudes demonstrated include (but are not limited to):

- ☐ Exhibiting sound judgment when determining the best course of action for the client and the audit team
- ☒ **Recommending that some areas need further investigation before a decision can be made**
- ☐ Promoting audit quality by explaining the audit difficulties expected and how to resolve them
- ☐ Advise on the need to explain changes to stakeholders
- ☐ Other:

Page(s): throughout

Notes: Candidate suggested assisting with transition without noting the need for independence (page 2).

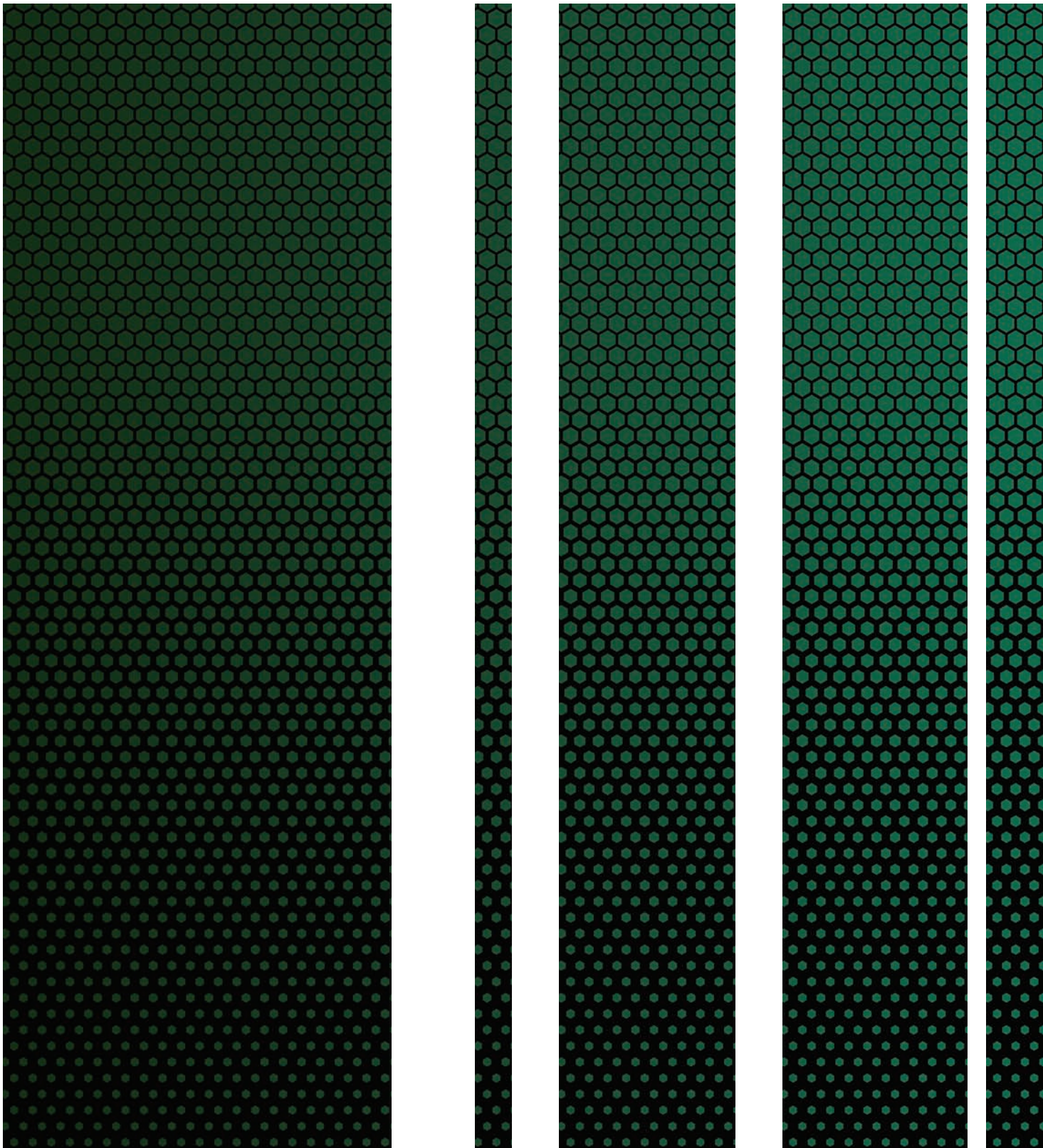
SUMMARY OF CANDIDATE PERFORMANCE

CASE 1

Learning outcome	Level	Rating	Weighted max (level x 4)	Weighted rating (level x rating)
T-FAR-3	2	**3**	8	**6**
T-FAR-4	2	**2**	8	**4**
T-FAR-5	2	**1**	8	**2**
T-FAR-9	3	**2**	12	**6**
T-A-6	3	**2**	12	**6**
T-A-10	3	**3**	12	**9**
T-GRI-4	2	**3**	8	**6**
Professional skills	2	**2**	8	**4**
Professional Values, Ethics, And Attitudes	2	**1**	8	**2**
Total number of learning outcomes = 9	Max score = 36	**Actual score = 19**	Total weighted max = 84	**Weighted total = 45**
Actual score (%)		**53%**		**54%**

PASS or FAIL depends on the standard set for this exam

APPENDICES



APPENDIX 1

FA2 LESSON 5 LECTURE SLIDE PRESENTATION

FA2: Intermediate Financial Accounting I

Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Instructor: <<Name>>
Date: <<Date>>

1

1

Lesson: 5
Inventory measurement, Inventory valuation and cost of goods sold

Introduction

2

2

Lesson 5 Topics

5.1 Nature of inventory
5.2 Perpetual and periodic inventory systems
5.3 Inventory cost formulas
5.4 Computer illustration – specific identification method
5.5 Valuation at lower of cost or net realizable value
5.6 Effect of inventory errors
5.7 Inventory estimation methods
5.8 Internal controls for inventory

3

3

Lesson 5 Overview

This Lesson covers:

- Inventory, its characteristics, and the relationship between inventory and cost of goods sold
- Criteria for determining what goods and costs should be included in inventory
- Accounting for perpetual and periodic inventory systems
- Inventory cost formulas and valuation methods
- How inventory is controlled
- Ethical issues associated with inventory

4

4

Key Points

Inventory is important because:

- It is often a significant asset for a company
- It is typically a high-risk asset due to the potential for theft, spoilage, obsolescence

Make sure you understand **how inventory** value affects **cost of goods sold** and **net income**.

Once you have a thorough grasp of that relationship, you will also understand *how inventory **errors** affect income.*

5

5

Study Tip: Remember what you learned in FA1

- FA2 continues from material you learned in FA1.
- If you're having trouble, go back to your FA1 notes, and redo the questions and solutions included there.
- Working with the earlier material will refresh your memory and increase your comfort level, helping you master the new material.

6

6

Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.1 Nature of Inventory

7

7

5.1 Learning Objective

Explain the nature of inventory and what goods and costs are included in this asset category.

Level: 1

8

8

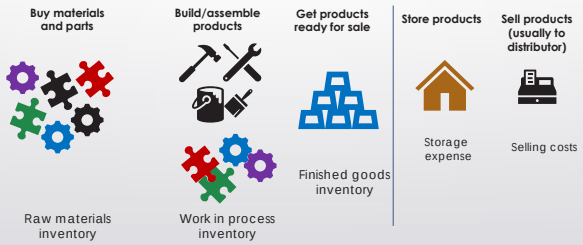
Nature of inventory - asset category

- Inventory is a **current asset.**
- It represents goods held for **future sale in the ordinary course of business** or for use in the **manufacture of goods for resale**.

9

9

Inventory cycle - Manufacturer



10

10

Inventory cycle – Retailer/Wholesaler

11

11

Classification of inventory types

1. Retail and Wholesale - Goods available for sale
2. Manufacturing
   - Raw materials inventory
   - Work-in-process inventory
   - Finished goods inventory
   - Supplies inventory (often just expensed)
3. Long term service contracts - work in progress
4. Long term construction contacts - work in progress

12

12

ACTIVITY: Inventory Classifications

In pairs:

1) List a few of your favourite companies
2) Identify what items would be in their inventory
3) How would these inventory items be classified? (see previous slide for categories)

Research your companies online if needed to find answers

13

13

Importance of inventory

- Inventories typically represent the **largest current asset of manufacturing and retail firms**.
- For many companies, inventories are a **significant portion of total assets**.
- Inventory should be considered a **"high-risk"** asset.

14

14

Importance of inventory, continued

- Inventory accounting methods and management practices can become **profit-enhancing tools**.
- Inventory effects on profits are **more noticeable** when **business activity fluctuates** (for example, because of large seasonal swings in sales).
- Inventory requires estimates and choice of accounting policies, which leads to **ethics questions** and **control** issues.

15

15

Just for Fun - Check your logic

Assume that the following statements are true:

- Company A has a current ratio of 0.9.
- Companies with a current ratio < 1 are more likely to go bankrupt than companies with a current ratio >1.

Is the following conclusion valid?

- Company A is likely to go bankrupt.

1. Valid **2. Not valid**

16

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Cost benefit trade-off inventory stocking levels

- It costs money to have inventory sitting on-hand.
  - Interest on the value of inventory on-hand
  - Rent on the storage space for the inventory
  - Risk of damage or obsolescence
- But, it also costs lost sales to have not enough inventory for the customer.
- Poor inventory management can cost a company a lot of money.
- Entire careers exist for people managing inventory levels.

17

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What's included in Inventory Costs?

1. Costs of purchase (see IAS 2 para. 11)
   - Purchase price
   - Customs & excise duties
   - Freight charges and other incidental charges (if the costs are specifically identifiable to the inventory)
   - Insurance charges
   - Non-refundable taxes
   - Handling

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What's included in Inventory Costs?

2. Costs of conversion (see IAS 2 para. 12)
   - costs directly related to the units of production, such as direct labour
   - a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods.
3. Other costs to bring inventory to the location and condition where they are ready for sale (see IAS 2 para. 13)

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What's NOT included? (see IAS 2 para. 16-17)

- Abnormal waste or production costs
- Storage costs once the items are ready for sale
- Selling costs (such as Freight out)
- Administrative overheads not related to bringing the inventory to its present location and condition
- Borrowing costs (unless the items take a long time to build and get ready for sale – see IAS 23 paras 5-8)

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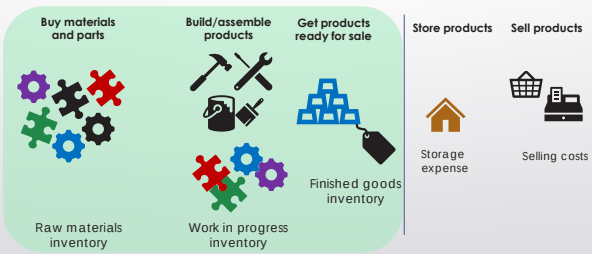
Costs to include in inventory



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Complexities – Goods in Transit

Goods that have been ordered but not yet received:

- If the goods are **owned by the company**, they should be included in inventory
- Ownership of goods in transit is set by the shipping terms.
  - If goods were shipped FOB **shipping point**, company owns them as soon as they are shipped, and would include them
  - If goods were shipped FOB **destination**, company doesn't own them until received, and would **not** include them

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Goods on consignment

Goods on consignment:

- The consignor retains legal ownership of goods on consignment until the goods are sold by the consignee. Consignee gets a commission on the sale.
- The company selling the goods for the owner never records the goods as inventory.

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Purchase discounts

- If a company buys goods on credit, suppliers often offer a discount if the company pays for their order early
- For example, the terms may be "2/10, net 30" meaning "take a 2% discount if you pay within 10 days; otherwise, full payment is expected within 30 days"

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ACTIVITY: Purchase discounts

At your table, discuss:

Is a 2% discount significant?

OR

25

25

Recording Purchase Discounts

Two methods of recording purchase discounts:

- **The gross method** offsets purchase discounts against the cost of the purchases. This serves to reduce cost of goods sold.
- **The net method** segregates purchase discounts lost and records them as a financing expense.

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ACTIVITY: Purchase discounts: Gross or Net

In Pairs:

- Review example 5-1 in the Lesson Notes
- Answer the following questions:
  - If you were the manager for that department, what method would you want the company to use? Why? How would you justify your choice to others?
  - If you were the senior manager overseeing all of the managers in all departments, what method would you want the company to use? Why? How would you justify your choice to others?

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.2

Perpetual & periodic inventory systems

28

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5.2 Learning Objective

Compare and contrast the perpetual inventory system to the periodic inventory system.

Level: 1

29

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Perpetual compared to periodic inventory

Periodic system:

- Under a periodic inventory system, detailed records of inventory sales are not maintained.
- Sales are recorded when they happen, but inventory and cost of goods sold are determined **periodically** — at the end of each week, month, quarter.
- Purchases are recorded in a purchases account, which is closed out to the cost of goods sold account at the end of the period.

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Perpetual compared to periodic inventory

Perpetual system:

- Under a perpetual inventory system, **detailed** inventory records are maintained on an ongoing basis.
- Purchases are debited to the inventory account at time of acquisition.
- The inventory and cost of goods sold accounts are updated when inventory is sold.

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Perpetual compared to periodic inventory

Summary: See Review Question 2

Perpetual Inventory

Each purchase goes to inventory account (Dr Inventory, Cr A/P)

Each sale adjusts inventory to COGS (Dr COGS, Cr Inventory)

Inventory is always up to date except for shortages

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Perpetual compared to periodic inventory

Summary: See Review Question 2

Periodic Inventory

Each purchase goes to Purchases (Dr Purchases, Cr A/P)

Separate accounts kept for Purchase returns, Transportation-in, Purchase discounts (gross method)

Inventory is adjusted only at period end

Inventory shortages become part of COGS

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.3

Inventory cost formulas

34

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5.3 Learning Objective

Contrast specific cost identification with the FIFO and average cost formulas and determine when each is appropriate.

Level: 1

35

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Inventory cost formulas

- Accountants are required to match the cost of the inventory sold to the revenue generated.
- Quite often it is difficult, or even impossible to determine which specific item was sold.
- **Specific cost identification** is the required method for items that are not interchangeable or that are segregated for specific projects.
- **FIFO** or **Weighted average cost** formulas are used for everything else.

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Inventory cost formulas

1. Specific cost identification
2. Weighted average cost
3. FIFO - First in, First out

Video: Understanding Inventory Cost Allocation – FIFO and Weighed Average (from the University of Cape Town College of Accounting, in partnership with FASSET)

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Specific cost identification

1. Specific cost identification
   - Used for large, valuable identifiable items
   - Inventory items are priced individually when the company buys them
   - The customer cares which item they buy – each has a unique set of features

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Weighted Average Cost

2. Weighted Average Cost

Periodic: Weighted average unit cost

- total purchases/total units = AVG cost per unit
- calculate at end of period

Perpetual: Moving average unit cost

- calculate new AVG cost after every purchase

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First in, First out (FIFO)

3. First in First out

Periodic:

- COGS is the first units purchased.
- Inventory is the last units purchased.

Perpetual:

- Each sale is sold from the oldest stock first.

Both methods will give the same results.

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ACTIVITY: Inventory cost formulas

Use this information from the inventory records of BTG for the following multiple choice questions on the next two slides.

Dates		Inventory Units
Inventory, January 1		200 units at $5.00
Purchases:	May 17	300 units at $5.10
	August 15	400 units at $5.25
Sales:	March 11	100 units at $8.00
	November 12	500 units at $8.20

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ACTIVITY: Inventory cost formulas

What would the **gross profit** on the November 12 sale be, assuming the FIFO method is used in a perpetual inventory system?

1) $1,490
2) $1,545
3) $1,570
4) $2,075

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42

ACTIVITY: Inventory cost formulas

What would the **ending inventory value** per unit be on May 31, assuming the weighted-average method is used in a perpetual inventory system?

1) $5.05
2) $5.06
3) $5.075
4) $5.15

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ACTIVITY: Inventory cost formulas

Solutions:

1. Correct Answer = 2

   500 × $8.20 = $4,100
   $4,100 – (100×$5.00) – (300×$5.10) – (100×$5.25) = $1,545

2. Correct Answer = 3

   100 × $5.00 + 300 × $5.10 = $2,030 / 400 = $5.075

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Inventory cost formulas

- **All** inventory cost formulas apply the cost principle.
- All formulas **attempt to match the cost of goods sold to the sales revenue** (expense recognition principle).
- The methods differ in their assumption as to **which goods are being sold** and which goods remain on hand.
- The **application** of the cost flow assumption will **differ** depending on whether you use a periodic or perpetual recording method.

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ACTIVITY: Management decisions and ethics

In Pairs answer the following:

1. How could a company show a higher net income in periods of rising inventory prices?
   - Why would they want to do this?
2. How could a company show lower net income in periods of rising inventory prices?
   - Why would they want to do this?
3. Would either of the above actions be ethical? What ethical principles are being threatened? Is it ever acceptable for a company to change its inventory method?

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Disclosure (see IAS para 36)

The financial statements and note disclosures include:

- accounting policies adopted
- cost formula used
- carrying amounts of inventories
- cost of goods sold during the period (amount of inventories recognized as expense)
- any write-downs and reversals (including the circumstances or events that led to the reversal)
- carrying amount of inventories pledged as security for liabilities.

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.4

Computer illustration: Specific cost identification method

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5.4 Learning Objective

Calculate the total cost of items sold using a perpetual inventory worksheet.

Level: 1

ACTIVITY: Follow the instructions and complete the CI now.

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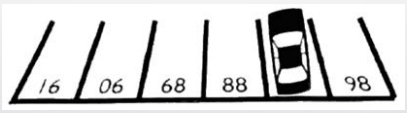
Just for fun

What is the number of the parking spot the car is parked in?



① 08
② 58
③ 78
④ 87
⑤ 89

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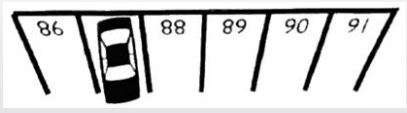
Just for fun

What is the number of the parking spot the car is parked in?



① 08
② 58
③ 78
④ 87
⑤ 89

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.5

Valuation at LCNRV

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5.5 Learning Objective

Explain the lower of cost or net realizable value requirement.

Level: 1

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Lower of Cost or Net Realisable Value

- The prudence (conservatism) constraint requires that assets, including inventory, should **not** be carried at a value higher than their current value.
- Net realizable value as defined in IAS 2 (para 6): "the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale."
- Therefore inventory is valued at the lower of cost or net realizable value (LCNRV).

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Lower of cost or net realisable value

- LCNRV method can be applied to individual inventory items or to groups of similar items.
- Inventory writedowns are to be **reversed** if the value of the inventory written down subsequently recovers BUT be sure to **only bring the value back up to cost**.
- Details of the specific method adopted should be set out in the **notes to the financial statements.**

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Application of LCNRV – Two approaches

1. Comparison of cost and NRV separately for **each item** of inventory - typical method
2. Comparison of cost and NRV for **each (similar or related) classification** of inventory - may be appropriate in some circumstances

Consistency in application over time is essential!

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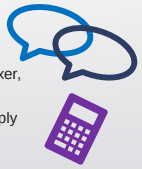
ACTIVITY: Lower of Cost and Net Realisable Value

In Pairs:

- Complete Review Question 4, parts a and b, and review your answers using the solution provided
- In addition, answer the following question:
  - Abacab plans to start selling a new brand of cement mixer, in addition to the brand it currently sells. Under what circumstances would it be appropriate for Abacab to apply the LCNRV rule to the cement mixers as a group?



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Lesson: 5
Inventory measurement, Inventory valuation and cost of goods sold

Topic 5.6 Effect of inventory errors

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5.6 Learning Objective

Explain the effect of inventory errors on the financial statements.

Level: 1

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Effect of inventory errors on financial statements

The effect of inventory errors can be determined from the equation that follows:

	Cost of beginning inventory
Plus:	Cost of purchases
=	Cost of goods available for sale
Less:	Cost of ending inventory
=	Cost of goods sold

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ACTIVITY: Effect of inventory errors on financial statements

- If this year's ending inventory is **overstated**, then COGS will be _____.
- Because COGS is _____ then this year's income is _____.
- If this year's ending inventory was **overstated** then next year's beginning inventory is _____.
- If next year's purchases and ending inventory are **correct**, next year's COGS will be _____ and income will be _____.

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ACTIVITY: Effect of inventory errors on financial statements

- If this year's ending inventory is **overstated**, then COGS will be understated.
- Because COGS is understated then this year's income is overstated.
- If this year's ending inventory was **overstated** then next year's beginning inventory is understated.
- If next year's purchases and ending inventory are **correct**, next year's COGS will be overstated, and income will be understated.

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ACTIVITY: Inventory errors

- Missie Ltd. uses a periodic inventory system and has a December 31 year end. Missie subsequently discovered that $2,000 of merchandise had inadvertently been omitted and not included in the December 31, 20X6 ending inventory.
- This error was not discovered until 20X8.

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ACTIVITY: Inventory errors

Required:

- In the table on the next slide, indicate the combined impact the error would have on the indicated financial statement items for each of the years 20X6 and 20X7, by stating whether the errors would result in an overstatement (O), understatement (U), or have no effect (NE).
- Include the dollar amount of the overstatement or understatement. (e.g. enter "$2,000 O" in the table to represent "$2,000 overstated")

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ACTIVITY: Inventory errors

	20X6	20X7
a. Cost of goods sold		
b. Current assets — December 31		
c. Retained earnings — December 31		
d. Net income		
e. Cash flows from operations		

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ACTIVITY: Inventory errors

Solution:

	20X6	20X7
a. Cost of goods sold	$2,000 O	$2,000 U
b. Current assets — Dec 31	2,000 U	NE
c. Retained earnings — Dec 31	2,000 U	NE
d. Net income	2,000 U	2,000 O
e. Cash flows from operations	NE	NE

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.7 Inventory estimation methods

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5.7 Learning Objective

Describe the gross margin method and retail inventory method for inventory value estimation, identifying the circumstances where each is appropriate.

Level: 2

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Reasons to estimate inventory

1. The company wants to prepare a set of interim financial statements but the cost of a physical inventory count is prohibitive;
2. The company wants to test the accuracy of inventory costs derived by another method; or
3. The company needs to estimate the value of inventory lost due to fire or other catastrophe (e.g., for insurance purposes).

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Gross Margin Method

Uses the historical gross margin rate
(remember that gross margin % + COGS % = 100%)

	Beginning inventory
+	Purchases (less returns & allowances)
+	Transportation-in (if given)
	Total Goods Available for Sale
-	Estimated Cost of Goods Sold*
=	Estimated Ending inventory

* Estimated COGS = Sales x (1 – gross margin %)

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Retail Inventory Method

- See example 5-9 in the Lesson Notes
- Remember, the selling price is NOT the inventory value.
- The selling price includes the mark up, or profit portion.
- The store buys inventory for $8 and sells it for maybe $11.
- For the retail method, the objective is to find out the price that the store purchased the goods for ("at cost"), not the value they will sell them for ("at retail").

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Lesson: 5
Inventory measurement, inventory valuation and cost of goods sold

Topic 5.8 Internal controls for inventory

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5.8 Learning Objective

Describe the features of an effective internal control system for inventory.

Level: 2

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Controls to safeguard inventory include:

- Segregating duties for the receiving, storing, shipping, and accounting functions
- Requiring approval for purchases and payments
- Requiring an audit trail for all inventory transactions
- Counting inventory on a periodic basis
- Physical security
- Tracking systems (bar codes, etc.)

Next time you are in any retail outlet, stop and think about the inventory controls that might be in place.

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Controls to safeguard inventory include:

Be aware of the ethical considerations when designing controls:

- A balance must be struck between privacy of employees and security of premises
- Employees should be advised of monitoring that is being done to protect assets (physical, such as video monitoring, as well as electronic)
- Monitoring should be designed to adequately protect the organization in the least intrusive way possible, and should protect employee rights in all cases.

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ACTIVITY: Internal controls for inventory

Fill in the table:

- Inventory is generally classified as a "high-risk" asset. Why? What kinds of risk do we mean?
- What characteristics make some types of inventory higher risk than others?

Type of risk	Characteristic of inventory

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ACTIVITY: Internal controls for inventory

Solution (other answers may also be valid):

Type of Risk	Characteristic of inventory
Theft	Small, valuable, easy to sell stolen goods
Spoilage	Perishable, sensitive to light/heat/cold/water
Obsolescence	Trendy, rapidly improving (e.g.,
Damage	Fragile

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Lesson: 5
Inventory measurement, Inventory valuation and cost of goods sold

Exam Preparation

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Review the Exam Blueprint

- 9 to 12% of the exam will be on topics in Lesson 5.
- Topics 1 to 8 are all examinable, except topic 4, computer illustration.
- Topics 1 through 6 are Level 1, and,
- Topics 7 and 8 are Level 2.

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What to expect on the Exam

Inventory is an important topic and can be tested in a variety of ways on the final examination.

Common question types include MCQs and inclusion in longer questions where a wide variety of transactions are tested together.

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Remember:

"Circumstances may cause interruptions and delays, but never lose sight of your goal."

--Mario Andretti

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APPENDIX 2

PROJECT PLANNER: DEVELOPMENT OF A COMPETENCY BASED PROGRAM

How do we do this?

1. Design

1.1 Establish design group

- Identify key personnel, stakeholders and other groups who will have an interest or will be part of the delivery of the new program
- Understand the environment: approvals required, regulations to observe and process to follow
- List the likely resources required including time commitment, individuals and reporting responsibilities
- Specify stage by stage critical success factors, build-in contingencies, and identify project risks and mitigations

1.2. Design Competency Framework

- Review relevant trends
- Review related research and benchmark competency frameworks of other organisations
- Collect targeted stakeholder input
- Develop preliminary drafts of the required domains, competency statements, and knowledge topics
- Design and prepare for the Practice Analysis
- Validate and test the preliminary drafts and set proficiency levels
- Design competency statements
- Test the proposed Competency Framework
- Finalize and disseminate the initial Competency Framework

1.3. Develop learning objectives and proficiency statements

- Specify learning objectives for all domains. Ensure adequate coverage and depth of treatment.
- Detail the proficieincy levels required for each of the learning outcomes having regard to stakeholder needs and the fact that there are likely to be multiple proficiencies for each learning objective.
- Validate and test preliminary learning objectives and proficiency levels
- Proficiency levels will be cross-referenced or mapped to knowledge requirements and knowledge level requirements.

2. Develop educational materials

- Identify suitable texts or learning materials to support learning objectives. Ensure availability of material
- Specify related resources (eg Financial reporting standards, regulations, case studies, articles, video content, academic articles)
- Identify key teaching areas
- Develop teaching program and write Lesson Notes.
- Identify and publish student reading program to coincide with teaching schedule.
- Develop support activities (seminars, workshops, educational visits)
- Develop and publish online presentation notes. Schedule their release to coincide with teaching program

3. Develop assessments

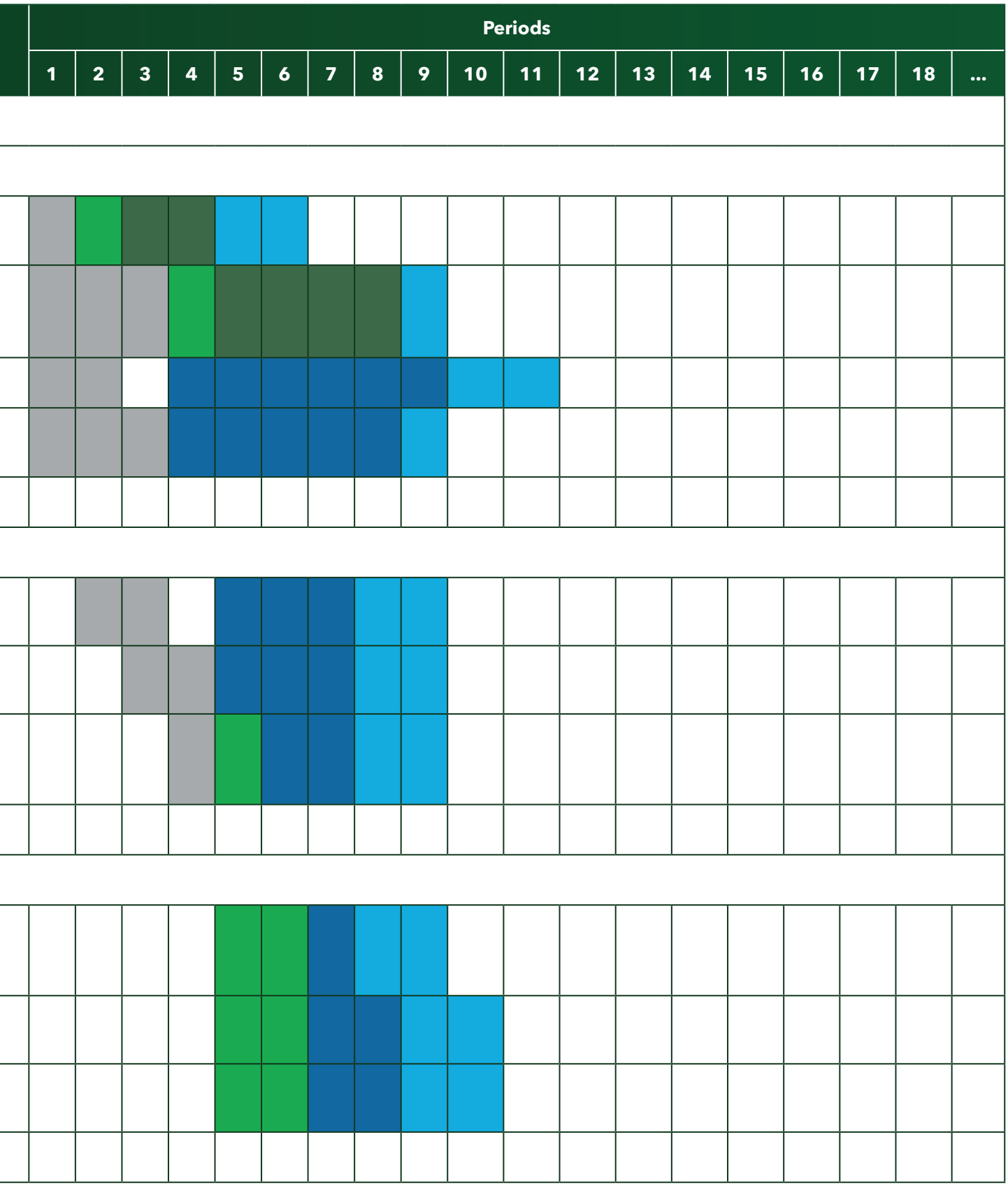
- Assessment strategy will consider the distinction and use of formative versus summative assessments; the key learning points and scheduling of formative assessments; scope and depth of testing of subject matter; variety of assessments (mutliple choice, essay, cases).
- Examination details will comprise consideration of what should be assessed, weigthing of competencies/topics, method of assessments, length and frequency of examinations).
- Allocate tasks of development, review and approval of examinations
- Detail the examination administration tasks and schedules
- Specify marking program: determination of final mark scheme, allocation and scheduling of marking activity, reporting of results to studemts

Project planner

Description	Plan Start	Plan Duration	Actual Start	Actual Duration	Percent Complete
1. Design					
1.1 Establish design group					
1.1.1 Identify and detail key stakeholders and members of the design group	1	4	2	5	35%
1.1.2 Review environment, specify objectives, detail the group's purpose and schedule of activities	1	8	4	6	10%
1.1.3 Identify resources required	1	2	4	8	85%
1.1.4 Specify key milestones and approvals required	1	3	4	6	85%
1.1.5 Additional activity to insert	*0*	*0*	*0*	*0*	*60%*
1.2. Design Competency Framework					
1.2.1 Specify structure of program (years, modules, progression, credits)	2	2	5	5	60%
1.2.2 Determine competency domains (subject content over which competencies are defined)	3	2	5	5	60%
1.2.3 Define a set of competency statements that meet the objectives and overall requirement of the program	4	2	5	5	60%
1.2.4 Additional activity to insert	*0*	*0*	*0*	*0*	*0%*
1.3. Develop learning objectives and proficiency statements					
1.3.1 Define a complete set of learning objectives for all domains that meet the objectives of the program	5	2	5	5	60%
1.3.2 Specify proficiency statements for each of the competencies/learning outcomes	5	2	5	6	75%
1.3.3 Detail of knowledge requirements and map to competencies/proficiencies	5	2	5	6	75%
1.3.4 Additional activity to insert	*0*	*0*	*0*	*0*	*0%*

Plan Duration Actual Start % Complete

Actual (beyond plan) % Complete (beyond plan)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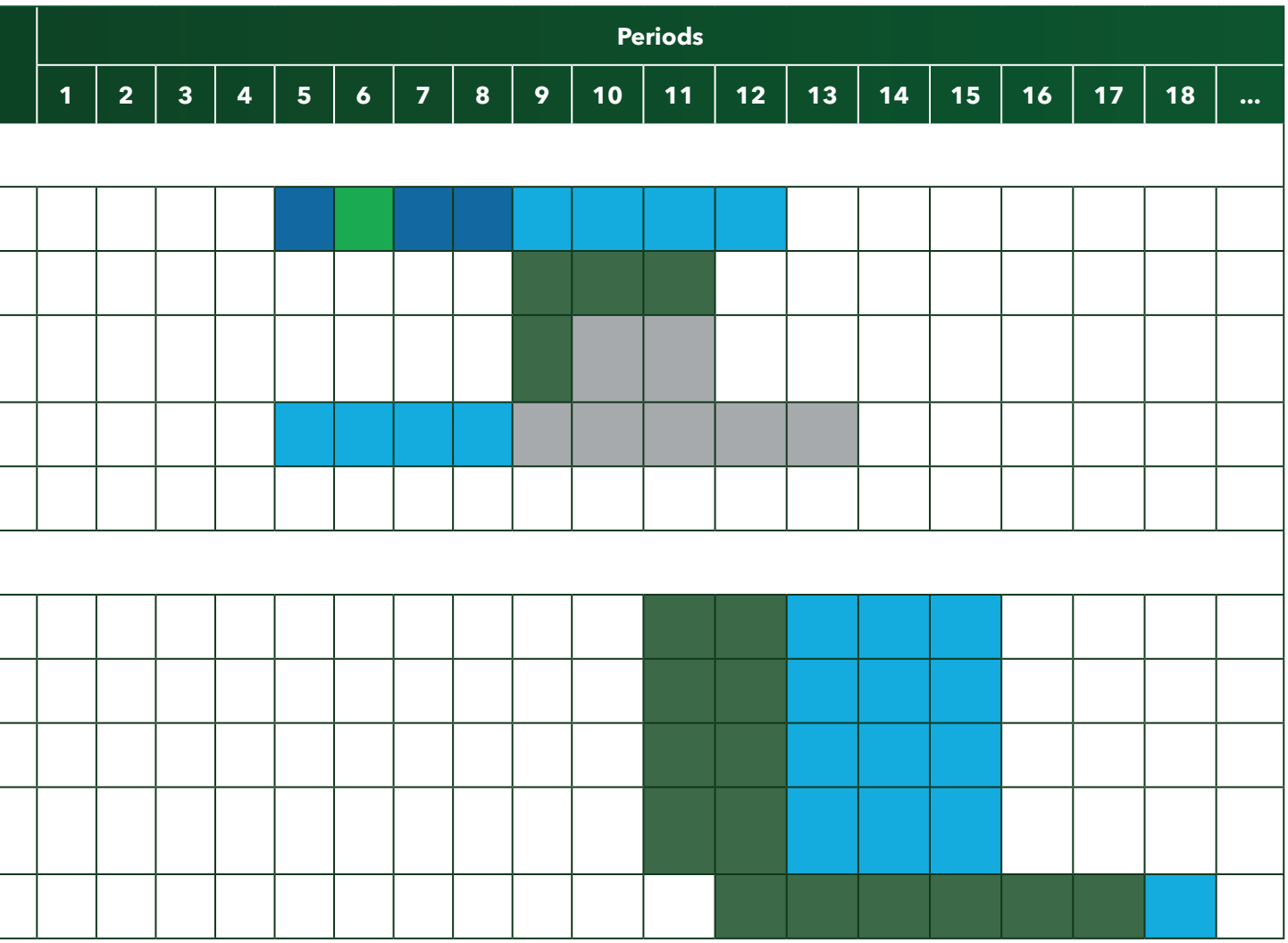
Description	Plan Start	Plan Duration	Actual Start	Actual Duration	Percent Complete	
2. Develop educational materials						
2.1 Choose readings and supplemental resources	6	1	5	8	60%	
2.2 Write Lesson Notes	9	3	9	3	0%	
2.3 Develop presentation materials and learning activities	9	3	9	1	0%	
2.4 Develop support information	9	5	5	4	0%	
2.5 Additional activity to insert	*0*	*0*	*0*	*0*	*100%*	
3. Develop assessments						
3.1 Design assessment strategy	11	2	11	5	0%	
3.2 Specify details of examinations	11	2	11	5	0%	
3.3 Detail examination administration	11	2	11	5	0%	
3.4 Mark and report the results of the examinations	11	2	11	5	0%	
3.5 Additional activity to insert	*12*	*6*	*12*	*7*	*0%*	

Plan Duration Actual Start % Complete

Actual (beyond plan) % Complete (beyond plan)


Periods
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APPENDIX 3

DEVELOPING CRITICAL THINKING AND ANALYSIS SKILLS

Despite the importance of critical thinking and analysis, surveys often find that a significant percentage of individuals joining the workforce do not have sufficient competence in this area.[47] Employers often encourage the profession and universities to place more emphasis on these and other enabling skills.

The ability to think critically is not a skill that can be developed quickly. It takes time, practice, and reflection. It is therefore essential that educators build activities and assessments that focus on critical thinking into accounting courses as early as possible. This is consistent with a competency-based approach that focuses on developing abilities, rather than just memorizing facts and gaining knowledge.

Signs of weakness

Oftentimes, younger students will struggle with the concept that there may be more than one way of approaching a problem, and that there might not be a right answer, or a single right answer. Students also tend to want to rely on the opinions of more experienced or knowledgeable individuals and accept these opinions as fact, rather than reaching their own conclusions.

To help students overcome these tendencies, it is important that the instructor differentiate between what we know as fact and what we don't know, and how that results in different people having different opinions, more than one of which may be valid. Recognizing different approaches to dealing with uncertainty and ambiguity is essential for innovation and intellectual agility.

Another common trait among students is that they may reach a conclusion prematurely based on their initial ideas or biases. They may then give greater weight to information that supports that conclusion. To address this tendency, the instructor needs to get the student to recognize biases. Have them identify what their initial preference or opinion was and encourage them to be mindful of that bias when evaluating information. Practice interpreting evidence in more than one way by asking "what else might that mean?"

A third area where students are challenged is with respect to logical reasoning. It is important that instructors help students understand the two directions of inference:

- **Induction** – using particular facts or observations to make inferences about the general state

[47] See, for example, https://www.aacu.org/leap/public-opinion-research/2015-slides and https://www.cbsnews.com/news/employers-new-college-grads-arent-ready-for-workplace/ and http://www.p21.org/storage/documents/FINAL_REPORT_PDF09-29-06.pdf

- **Deduction** – using what is known to be true in the general state to make inferences about particular situations

Inductive reasoning is the type being used, for example, if the stock market has risen for three days in a row and we predict on that basis that it will rise again on day 4. This type of reasoning has benefits in determining what might be likely, but severe limitations in ensuring we make a valid assessment. What the stock market does on day 4 will depend on the underlying drivers, not on the basis of the previous day's change.

Deductive reasoning, on the other hand, is the reasoning used if we suppose that Stock A went down because Stock A is in the technology industry and all tech company stocks went down. This type of reasoning offers more confident results, as long as we are sure of the validity of the statements on which the conclusion is being made (i.e., that Stock A **is in fact** a technology stock and all technology stocks **did in fact** lose value).

In assignments and on exams, students should be asked to explain their reasoning when analyzing information and drawing conclusions. Watch for situations where they display inappropriate reasoning and provide feedback to correct their process.

Quick logic activities can be used to engage the class and break from more typical lecture content. Brain-teasers and logic challenges are entertaining for students while also building valuable reasoning skills. As an example, look at slide 16 in the FA2 Lesson 5 Lecture presentation. This "just for fun" activity is actually challenging logical reasoning.

A framework for critical thinking

Education company Pearson has developed a model for critical thinking that is based on 80+ years of research. Pearson's **RED Model of Critical Thinking**[48] provides a three-step approach that illustrates how critical thinking works and helps students develop these necessary skills. The RED Model provides a way to apply critical thinking principles when faced with decision making and problem-solving situations.

The RED model stands for:

Recognize assumptions:

- Separate fact from opinion and assumption
- Consciously seek confirmation, even (or especially) when the source sounds credible and trustworthy, or confirms our own viewpoints.
- Proactively look at the issue from different viewpoints.

Evaluate arguments:

- Suspend judgment and systematically analyse and assess ideas impartially.
- Question the quality of supporting information.
- Understand how emotion is playing in.
- Accept and expect healthy debate and conflict.

Draw conclusions:

- Bring diverse information together to arrive at conclusions that logically follow from the available evidence.
- Be willing to change position when warranted.
- Do not inappropriately generalize beyond the evidence.

Overcoming bias

Critical thinking requires the ability to objectively evaluate information and evidence. A key part of remaining objective is the ability to recognize and overcome biases. Some bias comes from self-interest. This type of bias is readily apparent, if we evaluate the situation honestly. But some bias is unconscious and not obvious – we need to **actively** look for it.

There are a number of common types of bias that instructors should teach students to be aware of listed in Table 15.

Some ways to help overcome bias:

- Be aware of biases – understand them.
- Recognize that they are part of human nature.
- Explicitly consider bias before finalizing a decision.
- Seek out diverse opinions.
- Challenge stereotypes and answers that reflect "that's just the way it is"

[48] Online: https://www.pacific.edu/Documents/business/techservices/ThinkWatson-Critical%20Thinking-Means-Business.pdf

Table 15. Examples of bias

Type of bias	Description	Example
Hindsight	Our tendency to think – after the fact - that an outcome was more obvious than it was	After the value of Cryptocurrency X plummeted, many people took the opinion that it was obvious that the cryptocurrency would fail, without understanding anything about that cryptocurrency.
Outcome	Where we judge the merits of a decision based on the outcome that resulted	A Board of Directors hires a CEO who is well qualified and highly competent, based on all available information and a sound process. Two years later, the CEO embroils the company in scandal by accepting bribes. Shareholders claim the Board's decision-making was faulty.
Anchoring	Our tendency to put more weight on information that supports the first position we heard	An accountant in the procurement department had a very good first impression of a supplier's product, and continues to purchase from the supplier even when there are signs that quality has decreased.
Confirmation	Our tendency to pay more attention to information that supports our beliefs	If you believe Sir Richard Branson is a brilliant and philanthropic entrepreneur, you will likely be drawn to articles that present him in this way. If you believe he is a self-interested showman, you will find indications of this instead.
Conformity ("groupthink")	Our tendency within a group to all converge around the same central idea and accept it as the "right" way of thinking.	A Board of Directors comprised of affluent older white males decides to pursue a business strategy that is completely misaligned with the needs of the company's young diverse customers.
Overconfidence	Our tendency to overestimate our own positive attributes	A controller believes that they are more competent than their staff and that staff would not be able to commit fraud undetected. As a result, the controller fails to implement appropriate controls.
Recency	Our tendency to be more influenced by the most recent events (this can sometime act against anchoring bias)	An investment manager fails to recognize signs that the market trend is about to change because the results have been positive in the last few quarters.
Stereotyping	Ascribing certain characteristics to all members of particular cultures or groups	An auditor places more reliance on evidence provided by one client's employee than another based on their belief that the employee belongs to a culture known for quantitative skill.

Summary

Critical thinking requires answering questions such as:

- What assumptions am I making?
- Would others in different positions agree with this assumption?
- Who stands to benefit from this "fact"? Was the beneficiary involved in deciding what is "fact" or was that objectively determined by an independent source?
- How do I know this "fact" is true? What objective evidence can I draw on?
- Do I trust the source of this information? Is the information being presented in such a way as to emphasize a particular opinion?
- Am I being influenced by inherent bias or groupthink?
- What are the alternative explanations?
- Which arguments are the most relevant and supported?
- What conclusion, decision, or belief is the best one?

Students should be encouraged to use these questions when evaluating situations (for example on a case study) and making recommendations. Instructors may want to explicitly ask students to consider and respond to these questions when an assignment or class activity presents a particularly challenging decision to be made.

When teaching:

- Use interesting and relevant examples.
- Recognize that you don't have all the answers!
- Acknowledge your own biases.
- Teach how to determine the right questions and the process of logical reasoning.
- Have students critique each other's work based on process and reasoning.
- Include debates as classroom activities.
- Assess the thinking process as well as the final answer ("show your work", "explain your reasoning").
- Give credit for valid ideas and opinions that differ from your own but are well-supported.

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