



C O THE
D E CODE
BOOK

COURSE DEVELOPMENT

A comprehensive, faculty-focused resource for developing a new course or revising an existing one for web-facilitated, blended, or online delivery



FANSHawe

Centre for Academic
Excellence

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The CODE Book
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Welcome

At Fanshawe College, our mission is to provide an exceptional student experience. As a faculty member, you are at the heart of this commitment. In turn, your ability to deliver on this promise is rooted in how you are supported and prepared to teach your vocation.

Whether you've been tasked with developing a brand new course or revising an existing one for either web-facilitated, blended, or online delivery, we believe you'll find everything you need in *The CODE Book*. Each chapter, each sample, each link has been included to prompt you, whether you're a new professor or a seasoned educator, to think about the program and course learning outcomes in a way that makes them operationally meaningful. *The CODE Book* will provide a sound basis for your curriculum development, the design of your teaching and learning activities, and the creation of student learning assessments while simultaneously ensuring alignment among all of the necessary components of your course. Additionally, *The CODE Book* will direct you to a variety of resources and supports available throughout the College, including your School, the Centre for Academic Excellence, and Organizational Development & Learning, to help you be successful in your role as a faculty member and provide that exceptional learning experience for your students.

Tracy Gedies, Director
Centre for Academic Excellence

Teaching and learning is at the heart of everything we do at here at Fanshawe as we educate, engage, excite, and empower students. I commend our Centre for Academic Excellence for facilitating the implementation of this Course Development Book (*The CODE Book*) to assist faculty in the design of curriculum. I encourage our outstanding faculty to make use of this powerful resource as you continue to make learning come alive.

Gary Lima
Senior Vice-President, Academic

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List of Acronyms

Acronym	Meaning
AODA	Accessibility for Ontarians with Disabilities Act
APQASA	Annual Program Quality Assurance Self-Assessment
CAE	Centre for Academic Excellence
CEDP	College Educators Development Program
CQAAP	College Quality Assurance Audit Process
CLO	Course Learning Outcome
COMMS	Course Outline Mapping and Management System
CQA	Course Quality Assurance
CVS	Credential Validation Service
DLS	Degree-Level Standard
EoP	Elements of Performance
EES	Essential Employability Skill
FIRST	Fanshawe's Innovation, Research, Scholarship, and Teaching repository
FOL	FanshaweOnline
ITS	Information Technology Services
LLO	Lesson Learning Objectives
LMS	Learning Management System
MAESD	Ministry of Advanced Education and Skills Development
OCCQAS	Ontario College Quality Assurance Service
OCT	Orientation to College Teaching
OD&L	Organizational Development and Learning

Acronym	Meaning
PEQAB	Post-secondary Education Quality Assurance Board
PLAR	Prior Learning Assessment and Recognition
PAC	Program Advisory Committee
PVLO	Program Vocational Learning Outcome
QM	Quality Matters
QRG	Quick-Reference Guide
SOTL	Scholarship of Teaching and Learning
UDL	Universal Design for Learning
WCAG	Web Content Accessibility Guidelines
WIL	Work-Integrated Learning

Chapter 1: Introduction

Course development involves the alignment of learning outcomes, teaching and learning activities, and evaluation methods. Regardless of the delivery method – face-to-face (web facilitated), online, or blended – the teaching and learning activities and the evaluation methods used in a course should support the achievement of the course learning outcomes. *The CODE Book* will support you through the **Course Development Process** (Figure 1) and help you to develop (or re-develop) and ensure alignment among the necessary components of your course.

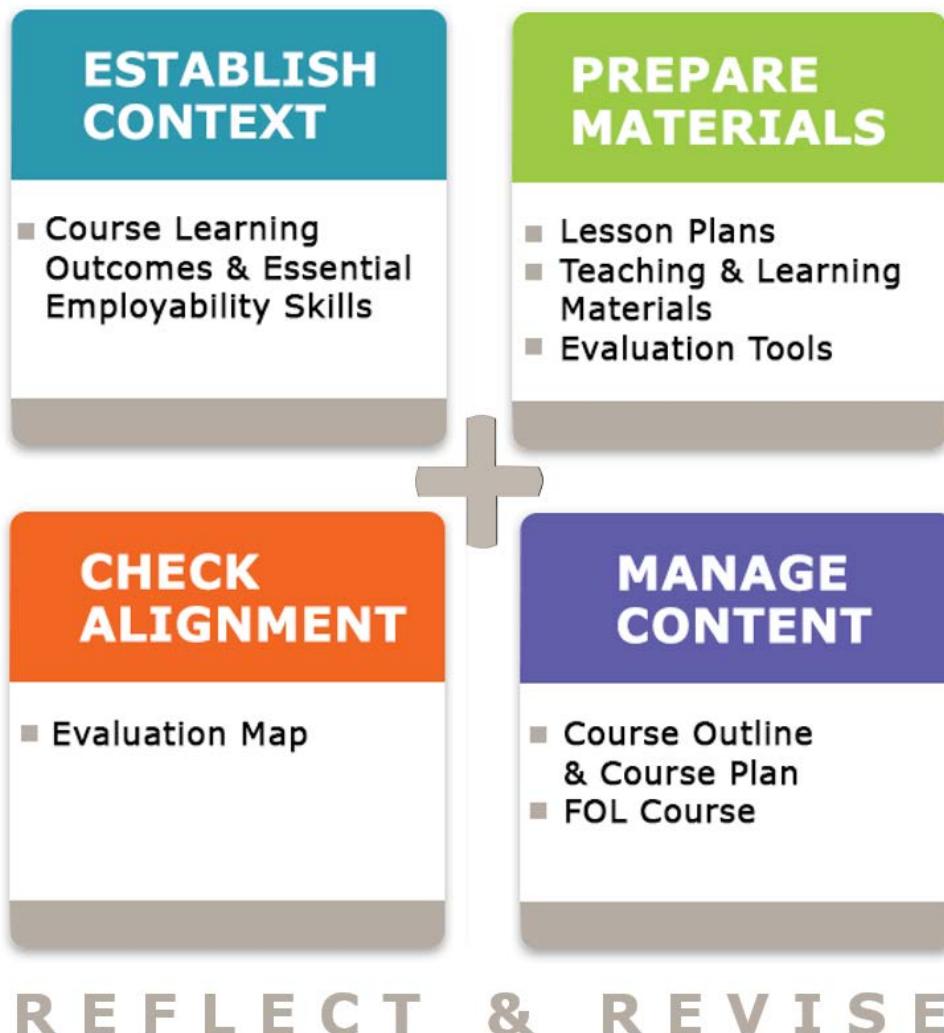


Figure 1: Course Development Process and Deliverable Components

The Course Development Process

The Course Development Process has been divided into four phases that build on each other:

- **Phase 1: Establish context** for the course by developing outcomes that reflect the nature of the content, the students who will take the course, the program that the course contributes to, and the environment in which teaching and learning will take place.
- **Phase 2: Prepare the materials** needed to deliver the course including lesson plans, teaching and learning activities, and evaluation tools.
- **Phase 3: Check for alignment** among Course Learning Outcomes (CLOs), teaching and learning activities, and evaluation methods.
- **Phase 4: Manage the course content** on the FanshaweOnline course website.

Reflection and revision are integral to the Course Development Process and can (and should) occur throughout all phases. **Reflect** on the choices that are made for the course, and **revise** course components to continuously improve the currency, quality, and alignment of the learning outcomes, teaching and learning activities, and evaluation methods.

Core Competencies for Faculty

Engaging in reflective practice of teaching and learning is a core competency for faculty members (D.11)

Within each phase of the Course Development Process, there is a series of **course components**, also known as **deliverables**. Those deliverables represent the products or outputs for each phase of development (e.g., course learning outcomes, lesson plans, course outline and course plan).

A Quick-Reference Guide is also available for the Course Development Process:



[Course Development](#)

Roles & Responsibilities

As the **Course Developer** tasked with developing or re-developing a course, you are part of a team of faculty, staff, and managers who work together to support the development and continuous improvement of high quality programming at Fanshawe College. This section defines the roles and responsibilities of the primary members of that **Curriculum Development Team** (Table 1).

Table 1: Roles & Responsibilities – The Curriculum Development Team

Curriculum Development Team Members	Responsibilities
Course Developer Full-time or Non-full-time Faculty or External Subject Matter Expert	<ul style="list-style-type: none">Develop the required deliverables for your assigned courses according to the project expectations set out by your Project Lead.Collaborate with other members of the curriculum development team regularly throughout the Course Development Process.
Project Lead (Academic Manager) Chair or Program Manager	<ul style="list-style-type: none">Initiate the curriculum development or re-development project.Manage the project budget, people (faculty and contract staff), contracts, deadlines, and risks.Assign courses (including specific components or deliverables) to course developers.Review and approve course components or deliverables.
Curriculum Lead Program Coordinator or Internal or External Subject Matter Expert	<ul style="list-style-type: none">Provide input into project planning (e.g., set interim deadlines, identify required resources).Coordinate curriculum development at the program level (e.g., mapping, content).Facilitate curriculum-related communication among curriculum development team members.
Curriculum Coach	<ul style="list-style-type: none">Provide guidance on the Course Development Process and curriculum design and delivery.Facilitate training and connect the curriculum development team to <u>institutional</u>, <u>faculty</u>, and <u>student supports</u> (e.g., workshops, guidebooks, templates, services).
Support Staff – Educational Support Technologist/ FanshaweOnline Administrator	<ul style="list-style-type: none">Provide technical and administrative support for the educational technologies used in the teaching and learning process.Collaborate with course developers to expand the online component of courses.Assist course developers in the design, creation, implementation, and delivery of new e-Learning materials.

Curriculum Development Team Members	Responsibilities
Other Members	<ul style="list-style-type: none"> • <i>Lab/Clinic/Equipment Technician</i> – Provide technical expertise and support as needed. • <i>e-Learning Coordinator</i> – Provide assistance with design and delivery of e-Learning content. • <i>Operations Manager</i> – Provide input on the budget (for new programs or significant re-development of existing programs)

College Structure & Roles

Within the College, there are five Faculties, each of which are divided into Schools that deliver a set of programs. A Dean is responsible for the management of a Faculty, and a Chair is responsible for the management of a School within a Faculty. Within a Faculty or a School, a Program Manager is responsible for some aspects of program and curriculum development and program management. Each program is led by a Program Coordinator (existing post-secondary programs), Academic Service Consultant (existing Continuing Education programs), or Curriculum Lead (new post-secondary programs) and delivered by a team of full-time and non-full-time faculty or professors.

Organizational charts for all academic and service areas within the College are available on the [myFanshawe](#) portal.

The CODE Book Structure

The purpose of *The CODE Book* is to support you, the Course Developer, with the development or re-development of your course. We have compiled the resources, worksheets, and templates that you will need to develop your course. With step-by-step instructions and a wide variety of sample course materials, *The CODE Book* will provide you with a comprehensive overview of the Course Development Process and each of its deliverables.

Chapter 2 provides a summary of the principles that guided the creation of the Course Development Process and *The CODE Book*. Following that, in Chapter 3, is an overview of the college-wide services and resources available to support you throughout the Course Development Process and later when you deliver your course. You will be reminded of some of these services and resources throughout the remainder of *The CODE Book*:



Department

Service/Resource

Chapters 4 to 7 each focus on one of the four phases of the Course Development Process and the deliverables that are produced in each phase. Throughout *The CODE Book*, you will be prompted to review the deliverables you prepare with the following icon:



Deliverable

Chapter 8 explains how reflection and revision are integral parts of the Course Development Process, and provides you with a checklist to help you keep track of your course development activities.

Throughout these chapters, there is a series of prompts you can use:

Core Competencies for Faculty

Review the faculty core competencies

FanshaweLearn

Identify opportunities for further learning or training.

Reflective Practice & Revision

Reflect on or revise your course materials

Finally, the appendices contain the supplementary materials referenced throughout *The CODE Book*.



"Where do I begin if I am re-developing a course that has already been delivered?"

Whether you are developing a new course or revising an existing one, you will want to begin by establishing context for your course ([Phase 1 – Establish Context](#)) because that context can change over time, even from semester to semester. Think about what you want to change in the course. Are you modifying the delivery method for the course? Do you need to add or remove content from the course? Is the course being moved to a different level in a program or being offered in another program? In all of those cases, and many more, the context of the course has changed.

While you should always start by establishing context for your course, you may not need to re-create every component of the course you are re-developing. By working through the Course Development Process from Phase 1 to Phase 4 as you make your changes, you will be able to identify the new situational factors that may affect your course and update your learning outcomes, teaching and learning activities, and evaluation methods in response to those factors. You will also be able to update your course outline and plan and FOL course website with all of the changes that have been made at the same time.

Perhaps you want the Course Learning Outcomes (CLOs) and lessons to remain the same, but you would like to develop a new evaluation tool. Or, you want to try a new activity to teach a particular concept. Once you have made the desired changes in [Phase 2 – Prepare Materials](#), you will then be able to check for alignment among the CLOs and the new teaching and learning activities or evaluation methods ([Phase 3 – Check Alignment](#)) before presenting the changes on the course outline and plan and FOL course website ([Phase 4 – Manage Content](#)). However, if the new evaluation tool or teaching/learning activity does not align with the CLOs when you check for alignment in Phase 3, you may need to return to Phase 1 or Phase 2 to make further changes to the course.



"I have been given someone else's course to teach. How do I develop the course materials if I have only received a course outline and plan for the course? What changes can I make to the course?"

If you have been given a course to teach that was developed by someone else, you will still want to begin by establishing context for the course ([Phase 1 – Establish Context](#)) and work through the rest of the Course Development Process to ensure you have all of the materials and resources that you need to deliver the course. In this case, you will already have some or all of those materials.

If you have only received a course outline and plan for your course, you still have a lot of information to work with. The course outline and plan represent a summary of all of the decisions that are made throughout the Course Development Process. Throughout Phases 1 to 3 (Chapters 4 to 6), we note the course information that appears on the course outline and plan so that you can see how to use an existing course outline and plan to develop lesson plans, teaching and learning materials, and evaluation methods that support it.

As a general rule, if the course outline and plan for a course has already been approved and published for the semester or year, you will not be able to make any changes to what is presented in that outline and plan. Consult with your Curriculum Lead and/or Program Manager (See [Roles & Responsibilities](#)) if you have any concerns or if you would like to make any changes to a course before the course outline and plan are approved and published.

Quality Assurance

While the primary purpose of *The CODE Book* is to provide support to anyone developing or re-developing a course at Fanshawe College, it also serves as part of Fanshawe's college-wide quality management initiatives.

The [Ontario College Quality Assurance Service \(OCQAS\)](#) is responsible for ensuring quality and consistency at the program level through the Credential Validation Service (CVS) and the institutional level through the College Quality Assurance Audit Process (CQAAP). The CQAAP involves the regular review of each college's quality assurance mechanisms against a set of standards to ensure continual improvement. *The CODE Book* and its contents support the achievement of four of those quality assurance standards:

1. Program Quality Management System

- *The CODE Book* presents the procedures for the development, review, and maintenance of the course curriculum for all programs of instruction and outlines strategies for managing changes to courses to keep them current and relevant ([Introduction](#)) (CQAAP Requirements 1.2, 1.5).

2. Program Development

- The Course Development Process presented in *The CODE Book* ensures that Program Vocational Learning Outcomes (PVLOs) are operational. The PVLOs are used as the basis for curriculum development ([Phase 1 – Establish Context](#)) and the design of teaching and learning activities and student learning assessments ([Phase 2 – Prepare Materials](#)). The PVLOs are internalized and used in the day-to-day work of program faculty, and they are used in prior learning assessments ([Phase 2 – Prepare Materials](#)). (CQAAP Requirement 2.1, 2.3)

3. Conformity with Government Regulations

- The Course Development Process presented in *The CODE Book* ensures that courses are consistent with the credential framework requirements (e.g., Program Vocational Learning Outcomes, Essential Employability Skills) ([Phase 1 – Establish Context](#)) and current workplace expectations ([Phase 2 – Prepare Materials](#)). This process also ensures that students are provided with reasonable opportunities to achieve the vocational and non-vocational learning outcomes ([Phase 1 – Establish Context](#), [Phase 2 – Prepare Materials](#)) (CQAAP Requirement 3.2, 3.3, 3.4).

4. Program Delivery and Student Assessment

- The Course Development Process presented in *The CODE Book* helps to ensure consistent delivery of a course regardless of the delivery strategies ([Introduction](#) and [Guiding Principles](#)) (CQAAP Requirement 4.1).
- Teaching staff are encouraged to engage in regular experimentation with new methods of teaching and learning that are consistent with best practices ([Guiding Principles](#), [Phase 2 – Prepare Materials](#), [Reflective Practice & Revision](#)) (CQAAP Requirement 4.2).

- Teaching staff are supported in developing valid assessment methods to ensure fair and equitable evaluation of student achievement of the established PVLOs ([Phase 2 – Prepare Materials](#), [Phase 3 – Check Alignment](#)) (CQAAP Requirements 4.3, 4.4).

6. Availability and Allocation of College-Wide Resources

- Teaching staff are encouraged and supported to participate in reflective practice ([Reflective Practice & Revision](#)). *The CODE Book* and the additional resources and training opportunities it links to provide teaching staff with initial and continuing professional development opportunities to enhance their teaching expertise and ensure currency in their subject matter (CQAAP Requirement 6.1).
- Teaching staff are supported in the development of structured instructional plans ([Phase 2 – Prepare Materials](#)) (CQAAP Requirement 6.2).

For more information about the CQAAP Standards and Requirements, visit the [OCQAS website](#) .

Course Development

Course Development Process

Course development involves the alignment of learning outcomes, teaching and learning activities, and evaluation methods. Regardless of the delivery method – face-to-face (web facilitated), online, or blended – the teaching and learning activities and the evaluation methods used in a course should support the achievement of the course learning outcomes.

Whether you are developing a new course or revising an existing one, the **Course Development Process** (Figure 1) is designed to guide you every step of the way.

The Course Development Process has been divided into four phases that build on each other:

- **Phase 1: Establish context** for the course.
- **Phase 2: Prepare the materials** needed to deliver the course.
- **Phase 3: Check for alignment** among learning outcomes, teaching and learning activities, and evaluation methods.
- **Phase 4: Manage the course content.**

Reflect on the choices that are made for the course, and revise course components to continuously improve the currency, quality, and alignment of the learning outcomes, teaching and learning activities, and evaluation methods.

Within each phase of the Course Development Process there is a series of **deliverables**, which are the products or outputs for each phase of development (e.g., course learning outcomes, lesson plans, course outline and course plan).



Figure 1: The Course Development Process

The CODE Book: Course Development

The CODE Book is a resource guide designed to support you, the Course Developer, with the development or re-development of your course. With step-by-step instructions and a collection of resources, worksheets, and templates that you will need to develop your course, the CODE Book will provide you with a comprehensive overview of the Course Development Process and each of its deliverables.

The CODE Book is available on the [Centre for Academic Excellence's](#) portal site under the "Course Development" tab.

Course Development Deliverables Checklist

Review your course and ensure that you have completed all of the deliverables required for development (Table 1).

Table 1: Course Development Deliverables Checklist

Complete (Check)	Deliverable	Quality Criteria
<input type="checkbox"/>	1. Course Learning Outcomes & Essential Employability Skills	<ul style="list-style-type: none"> 6 to 10 Course Learning Outcomes (CLOs) describe the vocationally-specific knowledge, skills, and/or attitudes students must be able to reliably demonstrate by the end of the course. CLOs align with the Program Vocational Learning Outcomes (PVLOs) and Essential Employability Skills (ESSs) identified for the course. CLOs are measurable.
<input type="checkbox"/>	2. Lesson Plans	<ul style="list-style-type: none"> One lesson plan was prepared for each class/week/module as required. Lesson plans include <ul style="list-style-type: none"> Lesson learning objectives that align with the CLOs; Teaching and learning activities that align with CLOs and provide appropriate levels of experience for assessment; and Evaluation methods (informal checks for understanding and formal evaluation tools).
<input type="checkbox"/>	3. Teaching & Learning Materials	<ul style="list-style-type: none"> Materials support the teaching and learning activities described in the lesson plans. Learning resources for students were selected. Sources of information and/or teaching and learning materials were located. Materials align with the principles of Universal Design for Learning (UDL) and comply with AODA standards.
<input type="checkbox"/>	4. Evaluation Tools	<ul style="list-style-type: none"> Evaluation tools measure students' achievement of the CLOs in the same learning domain and at the same level of learning. Each evaluation tool includes <ul style="list-style-type: none"> Reference to the CLOs and ESSs evaluated; Criteria for evaluation; and Grading scheme. Evaluations align with the principles of UDL and comply with AODA standards.
<input type="checkbox"/>	5. Evaluation Map	<ul style="list-style-type: none"> Map shows alignment between CLOs and PVLOs. Map shows alignment among CLOs, evaluation methods, and teaching activities.
<input type="checkbox"/>	6. Course Outline & Plan	<ul style="list-style-type: none"> All sections of the course outline and plan are complete. Course outline was submitted in the Course Outline Mapping & Management Systems (COMMS). Course plan(s) was (were) uploaded into COMMS.
<input type="checkbox"/>	7. FOL Course	<ul style="list-style-type: none"> FOL Course Home Page was developed. FOL Course content is prepared FOL communication tools were prepared. FOL gradebook and evaluation tools were prepared. Course Quality Assurance Checklist was completed.

References

Ontario College Quality Assurance Service (OCQAS). (2015). CQAAP Standards 2015. [Online]. Retrieved from http://www.ocgas.org/wp-content/uploads/2015/01/CQAAP-Standards_April-22-2016.pdf.

Chapter 2:

Guiding Principles

The Course Development Process used at Fanshawe College is based on the principles of constructive alignment and backwards course design. It is further guided by the principles of Universal Design for Learning (UDL) as well as the instructional design and active learning strategies that support the e-Learning experience. The Course Development Process also aligns with the standards for measuring effective course design and teaching.

Constructive Alignment

Constructive Alignment is an outcomes-based approach to course design that is often referred to as “backward course design” because it begins with the end goal in mind (Biggs, 2014; Wiggins & McTighe, 1998). That “end goal” is the achievement of a set of learning outcomes that define the knowledge, skills, and/or attitudes that a student will attain by the end of the course (Biggs, 2014; Ewell, 2005).

After the learning outcomes have been identified, the process of constructive alignment continues with the design of the teaching and learning activities and the evaluation methods that will support and measure the achievement of those learning outcomes, respectively (Figure 2; Biggs, 2014; Fink, 2003, 2005).

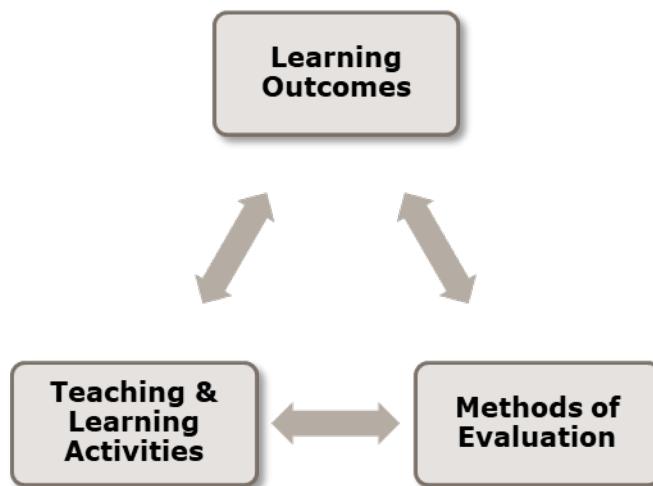


Figure 2: Constructive Alignment

An **integrated course design** process reminds us to consider the situational factors that will influence the decisions about these components of a course (Fink, 2003, 2005). Situational factors that may affect your course include but are not limited to the delivery method and environment, the characteristics of your students and the teacher delivering the course, the nature of the course content, and the relationship between your course and other courses in a program.

Thus, in [Phase 1 – Establish Context](#) of the Course Development Process, you will identify the situational factors for your course and draft the Course Learning Outcomes (CLOs); in [Phase 2 – Prepare Materials](#), you will develop your teaching and learning activities and evaluation methods, organizing them into a series of lesson plans. You will check for alignment among those course components using the Evaluation Map presented in [Phase 3 – Check Alignment](#).

Learner-Centered Approach

In addition to emphasizing the alignment of learning outcomes, teaching and learning activities, and evaluation methods, the constructive alignment approach promotes a course design that allows the learner to "construct" his or her knowledge (Biggs, 2014).

Constructivism or constructivist theory tells us that learners create or "construct" new understanding by actively engaging with the material and building on their previous and current knowledge and experience (Abdal-Haqq, 1998; Biggs, 2014; Educational Broadcasting Corporation, 2004; Gray, 1997).

Becoming aware of who your students are and what knowledge, skills, attitudes, and experiences they bring to the classroom is an important part of establishing context for your course ([Phase 1 – Establish Context](#)) before you prepare your course materials. Providing students with a Course Outline and Plan ([Phase 4 – Manage Content](#)) that detail the course learning outcomes, weekly schedule, and evaluations will allow those students to take an active role in their learning. Discover more ideas for preparing teaching and learning materials and evaluation tools that promote constructive alignment and active learning in [Phase 2 – Prepare Materials](#).

Universal Design for Learning

The **Universal Design for Learning (UDL)** educational framework emphasizes a learner-centered approach to curriculum design based on the premise that learner variability or diversity is the norm and there is no “average” learner (CAST, 2011). Learners differ based on a wide range of characteristics such as the following:

- Age and gender;
- Language and culture;
- Prior learning and life experiences;
- Physical, sensory, and cognitive abilities; and
- Preferences for learning environments and approaches.

Developed by the Center for Applied Special Technology (CAST), the UDL Guidelines represent a “framework for improving and optimizing teaching and learning for all people based on the scientific insights into how humans learn” (CAST, 2015). The goals of UDL are to remove barriers to learning and to support or guide the development of expert learners.

The [UDL Guidelines](#) are available on the National Center on UDL’s website in multiple formats and languages. They are based on three principles, supported by [extensive research](#) (CAST, 2012):

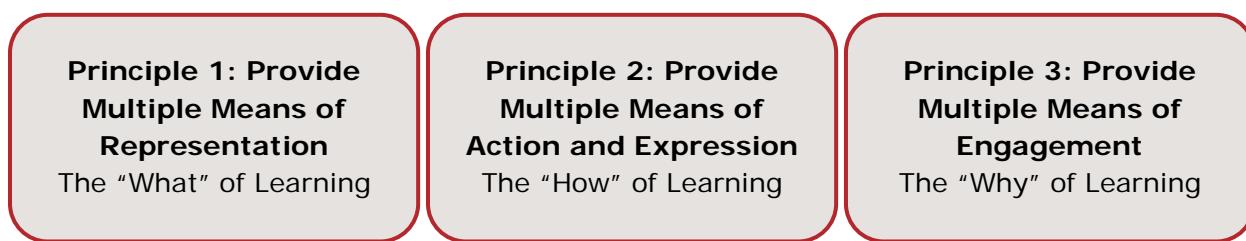


Figure 3: The three principles of Universal Design for Learning.

Removing Barriers to Learning

A “one-size-fits-all” approach to curriculum design can create unintentional barriers to learning for some or even all students (CAST, 2012). By recognizing that there is no “average” student and that learners are highly variable, the UDL framework guides the development of curricula that meet the diverse needs of all learners.

For example, when course materials are presented in only a text-based format (“one-size-fits-all”), many learners experience a barrier to accessing or engaging with those course materials (e.g., those who learn better by listening, discussing, visualizing, or doing; those with a visual impairment; those who read slowly or find reading difficult or unenjoyable; those whose first language is not the language of instruction).

Course materials that are created using the UDL framework would remove these barriers by *providing options for perception* (e.g., accessible electronic documents that allow the text to be read aloud with a screen reader; alternative or supplementary materials presented as

videos, diagrams, charts/graphs, or figures), *supporting language acquisition* (e.g., supplementary materials that define key words and concepts;), and *recruiting interest* (e.g., opportunities for students to read and discuss the text-based materials in pairs or small groups; knowledge check questions to encourage students to track their own learning)¹.

Developing Expert Learners

Expert learners are those who are resourceful and knowledgeable, strategic and goal-oriented, and purposeful and motivated (CAST, 2011). To achieve that goal, the UDL framework suggests that we develop curriculum that provides learners with multiple means of representation, action and expression, and engagement (CAST, 2011). In addition to allowing learners to access course content in multiple ways, we also need to provide learners with opportunities for guided practice and support as well as independent practice (CAST, 2011).

You will be prompted to consider the [UDL Guidelines](#) throughout the course development process as you create your lesson plans, teaching and learning materials, and evaluations ([Phase 2 – Prepare Materials](#)) and prepare your course outline, course plan, and FOL course ([Phase 4 – Manage Content](#)).

¹ The suggestions for removing barriers to learning (italics) correspond to the [UDL Guidelines](#).

e-Learning Design

At Fanshawe, all courses, whether they are delivered face-to-face (web-facilitated), in a blended format, or fully online, will include an e-Learning component. You will use [FanshaweOnline \(FOL\)](#), the College's Learning Management System (LMS) to prepare some learning materials, manage course content, and communicate with your students outside of the classroom.

e-Learning

e-Learning includes all forms of electronically-supported media, information, and communication technologies used to support teaching and learning.

The e-learning experience for our students can be optimized through **instructional design strategies** and **active learning strategies** compatible with human cognitive architecture. Instructional design strategies can substantially affect how educational material is initially received (e.g., formatted for efficient gathering of key ideas), and active learning strategies can further promote the analysis, synthesis, and evaluation of that material (e.g., framed to encourage deeper learning).

Efficient Learning through Clarity of Design

When students are learning, they must first process the information in working memory (WM) before they can possibly encode it into long-term memory (LTM). Cognitive science research has demonstrated that working memory is limited in the number of elements it can process at one time. It is therefore crucial that educational material is designed to take into account the brain's limited capacity or cognitive load.

According to Cognitive Load Theory (CLT), learning material is processed and remembered most effectively when it is provided in such a way that it does not overload the learner's mental capacity (Sweller, 1988; Sweller & Chandler, 1994; Sweller, van Merriënboer, & Paas, 1998; Plass, Moreno, & Bruken 2010).

To optimize the use of working memory's limited capacity, we recommend analyzing all instructional designs from a cognitive load perspective. By ensuring our students are not overloaded with additional content that does not directly contribute to learning and by organizing relevant content into manageable segments, we can deliver an efficient, targeted learning experience.

Instructional Design Strategies

Cognitive Load Theory guides us in designing educational material that reduces excessive demands on students' working memory so they have more brain power to put towards processing key knowledge. You can apply the concept of cognitive load to how you present your online educational material in several ways, which will be outlined [Phase 2 – Prepare Materials](#).

Active Learning Strategies

Research continues to reaffirm the invaluable role of active learning strategies for assimilating, contextualizing, and reinforcing key learning objectives (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013).

Active learning is generally defined as any instructional method that engages students in the learning process. It is often contrasted with the traditional lecture where students passively receive information from the professor. The key to active learning is that the learning activity takes place within the student's brain as opposed to the observed behaviour. So, when you think of active learning, think of active brain processing. Active learning involves higher-order thinking tasks such as analysis, synthesis, and evaluation, which you will learn more about as you develop your learning materials in [Phase 2 – Prepare Materials](#).

Summary

The clarity and ease-of-use of your e-Learning materials is what will give students a smooth path to learning. The fewer questions they have, the better sense of orientation they have and the more trust and confidence they will develop for the e-Learning environment.

We want our students' e-Learning experience to be organized and appealing, not encumbered with unnecessary stumbling blocks (e.g. long-winded introductions, redundant text, and vague instructions). When e-Learning materials are clear and well-structured with consistent and effortless navigation, they encourage a sense of flow or of being fully engaged and immersed in the material. Students may need to struggle and make the effort to learn key concepts and ideas, but they do not need to stumble over ambiguous, muddled content. Clarity of design is the hallmark of efficient e-Learning.

Standards for Measuring Effective Course Design & Teaching

Fanshawe has established a set of [core competencies](#) that form the basis for the opportunities available to support faculty members. These competencies reflect quality standards that adhere to the Ministry of Advanced Education and Skills Development (MAESD) standards for measuring effective teaching, and they are based on the following areas of demonstration and review:

- A. Curriculum Design
- B. Course Delivery
- C. Engagement
- D. Professional Development

Throughout *The CODE Book*, you will see references to the core competencies that you are achieving as you work through the Course Development Process. You will see these core competencies when you complete your annual performance evaluation, so you can use what you develop for your course as evidence of your achievement of these competencies.



Additionally, Fanshawe has adopted [Quality Matters™ \(QM\)](#) as an overarching quality assurance framework for e-Learning. QM has been adopted by other post-secondary institutions across North America, and it provides tools such as the self-assessment tool that you can use to ensure the high quality of the online components of your course (See [Phase 4 – Manage Content](#)). Of course, many of the elements of the QM framework can also be applied to the measurement of quality for traditional face-to-face (web-facilitated) courses.

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Chapter 3:

Support for Course Development

At Fanshawe, it is part of the mission of the College to provide an exceptional learning experience for our students. Thus, there are several college-wide resources and services in place to support you in creating that exceptional learning experience for your students through the Course Development Process.

This chapter will provide you with an overview of the key institutional, faculty, and student supports and resources available to support you as you develop (and deliver) your course. You will be reminded of some of these services and resources throughout the remainder of the guide with the following icon:



Department
Service/Resource

For a full list of service departments, visit the [Fanshawe College](#) website.

Support from the Institution

The Course Development Process is embedded within Fanshawe College's Program Excellence Model and aligns with the e-Learning Strategy at the institutional level. In addition to those two supportive frameworks, there is an institution-wide network, myFanshawe, which will connect you with the service departments and resources you will need at the College.

Program Excellence Model

The **Program Excellence Model** guides the development, continuous quality improvement, and formal review of all academic programming at the College. The Course Development Process takes place in all three phases of the Program Excellence Model (Figure 4).

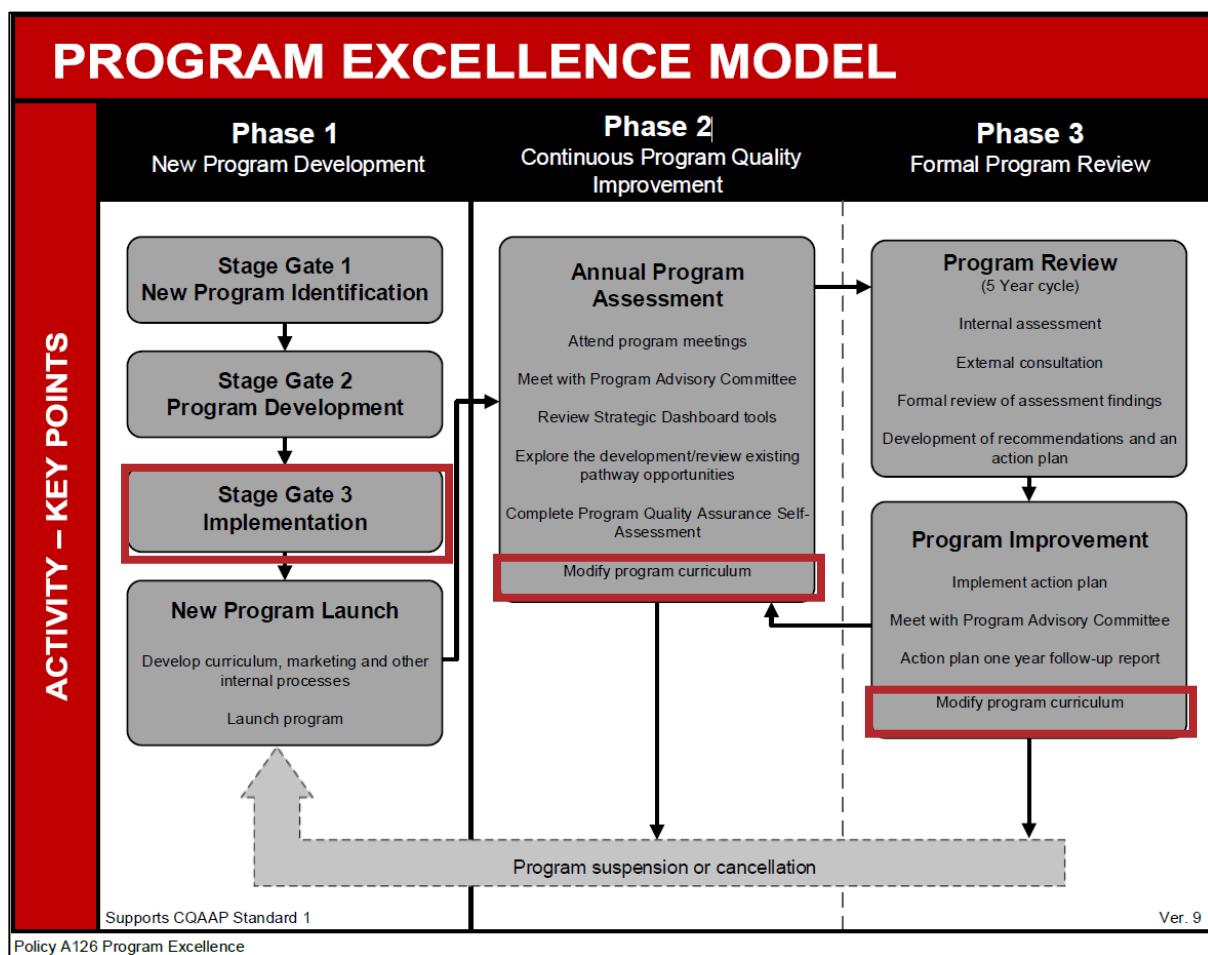


Figure 4: Program Excellence Model showing where the Course Development Process occurs (red boxes)

New Program Development

Fanshawe's **Stage-Gate Program Development Process** is a quality assurance process designed to ensure the strategic development and delivery of current, compelling, and competitive curriculum. The Course Development Process is embedded in Stage-Gate 3 of the Program Development Process, and it builds on the broader curriculum development that takes place in Stage-Gate 2.

After a new program idea is identified and approved for development in Stage-Gate 1, the program-level curriculum is developed in Stage-Gate 2. For all new programs, Program Vocational Learning Outcomes (PVLOs), Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks, course descriptions, and admission requirements are developed by the College and approved by the Credential Validation Service (CVS) within the [Ontario College Quality Assurance Service \(OCQAS\)](#) .

The [Ministry of Advanced Education and Skills Development \(MAESD\)](#)  manages the program standards/descriptions approved by the CVS and provides a Framework for Programs of Instruction that outlines the characteristics and scope for each credential type in the Ontario College system.

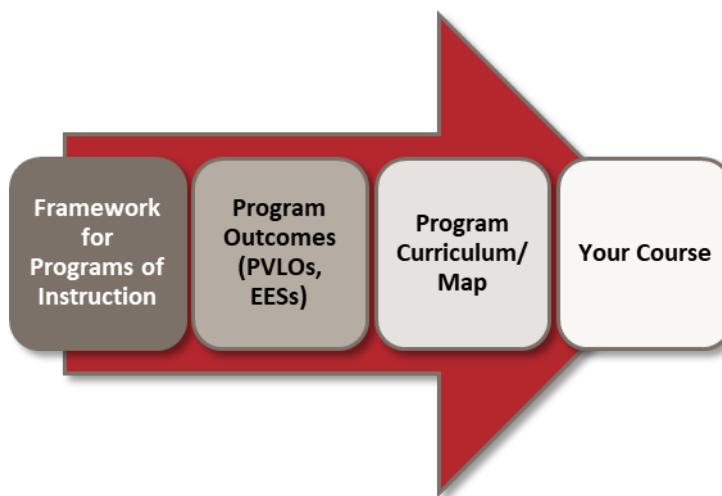
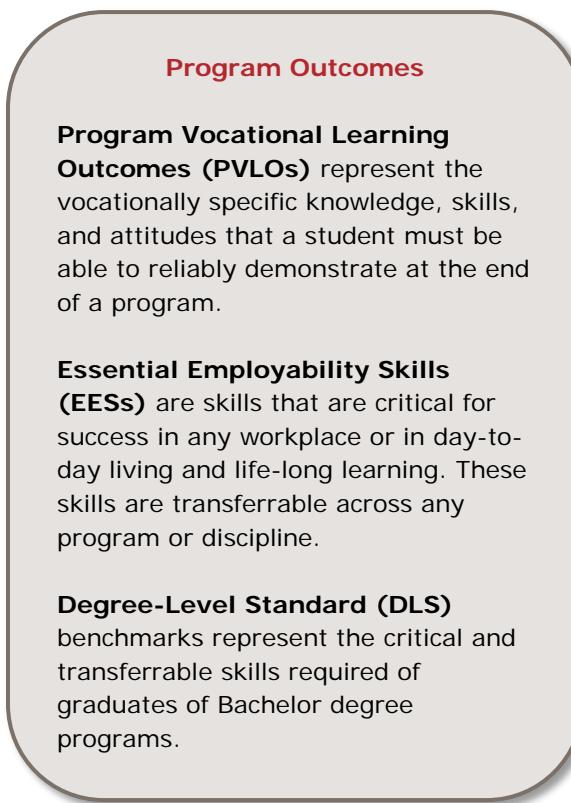


Figure 5: Overview of Ontario College Curriculum

Thus, even for a new brand new program, there have already been many decisions made about the content and the outcomes of each course (Figure 5).

In addition to identifying the outcomes and content or curriculum for the program, program developers in Stage-Gate 2 will also prepare program maps for the PVLOs, EESs, and any other relevant outcomes (e.g., professional competencies dictated by an external accrediting body).

A **program map** is a graphical representation of the relationship between the courses and the program outcomes. The program map indicates where and how each outcome (i.e. PVLOs, EESs) is addressed in each course across the program.

Figure 6 provides an example of the PVLO map for the Entrepreneurship Certificate program. It shows the level of learning (1 – Introductory, 2 – Building, or 3 – Culminating) achieved in each course in the program for each PVLO.

COMMS - Vocational Learning Outcomes by Program, Level and Course (Including General Education Courses)														
Legend														
Program Name: Entrepreneurship Program Code: ENP1 Academic Year: 2016-2017 Date Generated: 11/7/2016 19:10														
Level 1														
Course Number	Course Name	1	2	3	4	5	6	7	8	9	10	11	12	13
BUSI-1121	Small Business Creation			3				1	2			2	2	
BUSI-1122	Small Business Marketing		23	3			123	3	123	1		3	23	
COMM-1023	Business Communication													
COMP-1332	Information Management	123	123							123				
FINA-1046	Small Business Financial Mgmt	1	1				1			1		1	1	
MKTG-1028	Secondary Market Research			1				1		2		1	1	
Level 2														
Course Number	Course Name	1	2	3	4	5	6	7	8	9	10	11	12	13
ACCT-1069	Quickbooks	12	12				1	1		1		12	12	1
BUSI-1120	Small Business Legal Issues	1					1			1		1	1	
BUSI-3013	Small Bus. Entrepreneurship		2					2		2			2	
BUSI-3026	Business Planning Workshop	2		3			3	2		1	3	1	2	2
MGMT-3053	Supervisory Management			1					3				3	
MKTG-3007	Selling Fundamentals				3					3		2	2	
Vocational Learning Outcomes														
1. Apply accounting and financial knowledge to the operation of an entrepreneur-led enterprise. 2. Apply time management and organizational skills to facilitate the completion of tasks and to meet deadlines in a business environment. 3. Develop a comprehensive business plan, suitable for presentation to potential funders and stakeholders, and to serve as an implementation plan for 4. Prepare and deliver sales presentations, successfully manage sales resistance, close sales, and deliver customer service. 5. Identify the key criteria required to operate an entrepreneur-led enterprise in a manner consistent with law and professional standards, practices, 6. Apply knowledge of the marketing function to the operation of an entrepreneur-led enterprise. 7. Apply knowledge of the human resources function to the operation of an entrepreneur-led enterprise. 8. Evaluate and prepare for economic, social, political, and cultural variables which impact on a business. 9. Develop customer-service strategies to meet the needs of internal and external customers. 10. Apply computer skills and knowledge of information technology to support the management of an entrepreneur-led enterprise. 11. Apply knowledge of operational interrelationships between the functional areas of a business. 12. Apply creative problem-solving skills to address business problems and opportunities. 13. Develop strategies for personal and professional development to manage job stress, required workload, enhance work performance, and maximize potential for success as an entrepreneur.														

Figure 6: Sample Program Map

Any changes that are made to the original course descriptions and program maps must be approved by an Academic Manager as part of the Curriculum Modification Process that can occur in Phase 2 – Continuous Quality Improvement or Phase 3 – Formal Program Review of the Program Excellence Model.

If you are developing a course for a new program, ask your Curriculum Lead for a copy of the Stage-Gate 2 documents and access to the [curriculum development team site](#), if one is being used for your program.

Continuous Program Quality Improvement

Every year, every program at Fanshawe is reviewed as part of the **Annual Program Quality Assurance Self-Assessment (APQASA)**, which is led by the Program Coordinator for each program. The program team will review and discuss the curriculum, program data reports (Strategic Dashboard data), and **Program Advisory Committee (PAC)** feedback. As a result of those discussions, and to respond to the changing needs of students, faculty, and/or industry, one or more courses in the program may need to be revised.

If you have been asked to revise or re-develop an existing course or to develop a new course for an existing program as the result of an annual program assessment, ask your Curriculum Lead (Program Coordinator) for a copy of the APQASA report and for more information about the changes that need to be made to the courses. This will help you to establish context for the course you are developing or re-developing ([Phase 1](#)).

Formal Program Review

Every program at Fanshawe undergoes a formal **program review** every five years. The formal program review is facilitated by a Curriculum Consultant from the Centre for Academic Excellence (CAE) and includes both an internal assessment and an external assessment. Those assessments involve a review of the curriculum and how it has evolved over the previous five years; program data reports encompassing trends from the previous five years; and current or emerging industry trends that will impact programming for the next five years.

Recommendations are made by the internal and external stakeholders involved in the formal program review process, and an action plan detailing how those recommendations will be implemented is prepared. As with the annual assessments, one or more courses in the program may need to be revised to address those recommendations and respond to the changing needs of students, faculty, and/or industry.

If you have been asked to revise or re-develop an existing course or to develop a new course for an existing program as the result of a formal program review, ask your Curriculum Lead (Program Coordinator) for a copy of the action plan report and for more information about the changes that need to be made to the courses. This will help you to establish the context for the course you are developing or re-developing ([Phase 1](#)).

Supporting Services and Resources

Centre for Academic Excellence

Room: K1024

E-mail: cae@fanshawec.ca

The Centre for Academic Excellence (CAE) provides leadership and support to the college community as a whole for curriculum and program development, e-Learning initiatives and instructional design, academic program renewal and quality assurance, and the development of academic pathways for students.

Within the Centre for Academic Excellence, there are eight Curriculum Consultants (two of which are e-Learning Specialists) and two Instructional Designers available to assist faculty members with program/course design.



- Curriculum Consultants to coordinate Program Development and Program Review
- Instructional Designers to support development of e-Learning materials and videos
- Teaching & Learning Workshops
- CODE Book: Course Development and Templates

e-Learning Strategy

To support the mission of the College, Strategic Goal #1 highlights the need for online delivery options to meet the needs of our diverse learners:

Enhance innovative practices for exceptional student learning.

One way that Fanshawe is meeting that goal is with its e-Learning Strategy, which was developed to

- Support faculty in being successful e-Learning delivery agents;
- Invest in technologies and instructional design approaches to assist faculty in developing new online and blended courses; and
- Provide students with an engaging e-Learning experience.

At Fanshawe, all courses, whether they are delivered face-to-face (web-facilitated), in a blended format, or fully online, will include an e-Learning component. **e-Learning** includes

Flexible Delivery Methods

Face-to-Face (Web-Facilitated):

Course work is completed during normal class hours in a face-to-face format, and the online component is used to supplement face-to-face time.

Blended: This model combines traditional, face-to-face class time with online and out-of-class course work.

Online: All or almost all of the content is web-based with no or very few face-to-face meetings.

See [Phase 1: Establish Context](#) for more information about flexible delivery methods.

all forms of electronically-supported media, information, and communication technologies used to support teaching and learning.

FanshaweOnline (FOL) is the College's **Learning Management System (LMS)**. FOL is a cloud-based LMS hosted by Desire2Learn (D2L)/Brightspace. You will use FOL to prepare some course materials and manage course content. For more information and resources for accessing and using FOL, refer to [Phase 4: Manage Content](#).

Educational Technologies Survey

Every two years, the Information Technology Services (ITS) department surveys students and faculty on their experiences and expectations for educational technologies. The results of the survey are used to inform and guide the future direction of the ITS department when researching, implementing, and supporting educational technologies.

Supporting Services and Resources

<p><u>Information Technology Services (ITS) – IT Service Desk</u> </p> <p>Room: E2030 Phone: 519-452-4430 x4357 E-mail: helpdesk@fanshawec.ca Online Chat: https://livehelp.fanshawec.ca</p> <p>The ITS department provides technical support for students, staff, faculty, and administrators. The IT Service Desk provides a single point of contact to connect you with the technical resources and expertise you need to assist you with computer issues such as hardware and software troubleshooting, installation, and maintenance or technical support in the classroom.</p>	 <ul style="list-style-type: none">• FanshaweOnline (FOL) and WebAdvisor Support• Fanshawe Wireless Support• Academic Software Installation and Support• General Troubleshooting• CONNECT Laptop Program
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<p><u>Educational Support Technologists/FanshaweOnline Administrators</u> </p> <p>Educational Support Technologists/FanshaweOnline Administrators are embedded in each Faculty and are responsible for providing technical and administrative support for the educational technologies used in the teaching and learning process.</p> <p>A complete list of Educational Support Technologists is available on FanshaweOnline Help .</p>	 <ul style="list-style-type: none">• Technical and administrative support with educational technologies• Support design, creation, implementation, and delivery of new e-Learning materials
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myFanshawe



myFanshawe, also known as “the portal”, is a web-based platform that connects you with College information, resources, and services including WebAdvisor and FanshaweOnline. Log into myFanshawe online anywhere at portal.myFanshawe.ca.

All College service departments have a site on the portal that includes contact information, an overview of the services and resources they offer, and related forms, templates, and documents. For example, on the [Centre for Academic Excellence's](#) portal site, you can access all of the templates and resources available for course development as well as other resources for program development, program excellence, e-Learning and instructional design, academic pathways, and scheduling. On the [Information Technology Services'](#) portal site, you can connect directly with the IT Service Desk to access technical support.

Sign in to myFanshawe every day to see the news and events that are happening at the College. Be sure to also check out the Professional Development site, hosted by [Organizational Development & Learning](#). That is where you sign up for workshops and have your professional development activities tracked.

Team Sites for Curriculum Development

If you are developing a course for a brand new program, a team site may be prepared on myFanshawe. All members of your [Curriculum Development Team](#) will then be able to access the program information and resources needed to develop the curriculum for that program. Ask your Program Manager, Curriculum Lead, or Curriculum Coach for more information about the team site on myFanshawe.

Fanshawe's Innovation, Research, Scholarship, and Teaching (FIRST)

FIRST is an open-access repository that highlights **Fanshawe's Innovation, Research, Scholarship, and Teaching** activities. FIRST is facilitated by [Library and Media Services](#) in collaboration with the [Centre for Research & Innovation](#) and the [Centre for Academic Excellence](#).

The FIRST repository allows Fanshawe faculty, staff, administration, and students to contribute a wide range of materials that showcase exemplary learning and quality in teaching:

- Student work samples;
- Working papers, technical reports, journal articles, and research papers;
- Conference proceedings;
- Creative work (e.g., artwork, photography, music, recorded performances);
- Primary research; and
- Books, book chapters, magazines, and articles.

For more information about the FIRST repository or to explore the materials created by your colleagues at Fanshawe, visit the [FIRST website](#) .

Supporting Services and Resources

<p>Library & Media Services </p> <p>Room: L1003 E-mail: library@fanshawec.ca</p> <p>Library & Media Services offers access to print, digital, and media materials and equipment, which are accessible in the library and online. Each School has a Subject Librarian assigned to assist faculty and staff with research. The library can also place specified course resources on reserve.</p> <p>You can request in-class library instruction by a Librarian on topics such as generating research topics and keywords, finding and evaluating sources, citing sources, and searching databases.</p> <p>The Library & Media Services includes Copyright Services, which provides an online guide to copyright. The guide includes a brief overview of copyright requirements and their application to course packs, FanshaweOnline, and the classroom. You can also request an appointment with the Copyright Services Officer for specific copyright support with your course materials.</p>	 <ul style="list-style-type: none">• Subject Librarians provide research assistance• Copyright Services and Guide• Teaching, learning, and research guide• Course reserves• Accessible Content E-Portal• In-class library instruction• Fanshawe's Innovation, Research, Scholarship, and Teaching (FIRST) repository
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[Centre for Research & Innovation](#)

Room: K1024

E-mail: research@fanshawec.ca

The Centre for Research and Innovation (CRI) is Fanshawe College's Research Office and Industry Innovation Centre (IIC). CRI works with industry and community partners and with Fanshawe researchers to develop innovative research projects and programs, and it serves as the College's liaison with external funders.

Every program at Fanshawe should include activities that involve the students in a formal project requiring knowledge and application of recognized research and innovation methodologies, techniques, strategies, and implements ([Policy A125](#)).



- Research funding opportunities
- Project development assistance
- Research-related information and research skills development opportunities
- Faculty and Student Research & Innovation Days

Support for Faculty

Fanshawe College provides numerous professional development opportunities to faculty to support their teaching including orientation training, on-going teaching and learning workshops, and FanshaweOnline (FOL) training and workshops. These opportunities are in place to support faculty in achieving their [core competencies](#).

Orientation to College Teaching

The **Orientation to College Teaching (OCT)** is a two-day weekend program designed for new part-time faculty and offered at the beginning of every semester. The orientation is followed by a series of online courses that further support teaching and learning excellence.

For more information about OCT, contact Organizational Development and Learning (odl@fanshawec.ca). To register for OCT, speak with your Academic Manager (See [Roles & Responsibilities](#)).

College Educator Development Program

The **College Educator Development Program (CEDP)** is a collaborative undertaking of the six Western Region Colleges and is designed for new full-time faculty. This assessed, outcomes-based program focuses on the scholarship of teaching and learning (SoTL). The program creates a learning community that supports the achievement of the program learning outcomes, the exchange of best practices, and continuous professional growth. Through active learning in a technology-enhanced environment, faculty members develop a solid pedagogical foundation to design curriculum and engage students in a wide range of transformative learning experiences.

CEDP has developed six interactive online modules, which are available on [FanshaweOnline](#) to all faculty (full-time and non-full-time) to assist them with enhancing their teaching skills:

1. Creating a Positive Learning Environment
2. Integrating Technology
3. Introduction to Assessment
4. Lesson Planning & Active Learning
5. Outcomes-Based Education
6. Teaching Professional

Teaching & Learning Website and Workshops

The **Organizational Development & Learning (OD&L)** department manages the College's [Teaching and Learning website](#), which connects you with the information you need for developing and delivering your courses.

OD&L also offers a variety of teaching and learning and FanshaweOnline workshops and training sessions for new and experienced faculty. These workshops focus on course design and delivery, teaching methodologies, and technologies and tools that can be used in the classroom or online.

To register for these workshops and training sessions, go to [FanshaweLearn](#)s  on the [myFanshawe portal](#) .

Throughout *The CODE Book*, we have identified the workshops that are relevant for each phase of the Course Development Process. Watch for the **FanshaweLearn**s icon to know when you should register for one of the workshops.



Through a college-wide subscription, you also have access to lynda.com, an online company with a library of educational videos for business, software, technology, and creative skills. You can access lynda.com from the [myFanshawe portal](#) .

Supporting Services & Resources

[Organizational Development & Learning \(OD&L\)](#)

Room: K1024

www.fanshawec.ca/teaching 

The Organizational Development & Learning (OD&L) department offers a variety of workshops, teaching sessions, conferences, and other professional development opportunities for faculty members. This support begins as soon as a faculty member is part of Fanshawe's family and is available throughout his or her career path as a non-full-time or full-time instructor, professor, and teacher.



- New Faculty Orientation and Training
- Teaching & Learning Workshops (FanshaweLearn)
- FanshaweOnline (FOL) Training and Workshops
- Quality Matters Program
- Tuition Reimbursement Programs

Other Support for Course Development

There are other departments and services across the College that you may want to consult as you develop (or deliver) your course, depending on the nature of the content and the characteristics of the students.

Supporting Services and Resources

<p>Retail Services – Campus Store </p> <p>Room: F1002</p> <p>As the Course Developer, you will need to identify the materials that your students may need to obtain to support the intended learning including textbooks, instruments/equipment, and computing resources.</p> <p>Approximately two months before the start of each semester, course materials will need to be adopted to ensure adequate stock for students enrolled in the course.</p>	 <ul style="list-style-type: none">• Course materials adoption• Textbooks, kits, instruments/equipment, computing resources
<p>Print Shop </p> <p>Room: B1002</p> <p>E-mail: repro@fanshawec.ca</p> <p>You will be able to use the Print Shop to print bulk course materials such as multi-page tests/exams or assignments. The Print Shop will also manage print requests for posters, special paper (e.g., colour, weight, size), scanning, copying, binding, and laminating.</p>	 <ul style="list-style-type: none">• Print, scan, copy, bind, and laminate course materials

Support for Students

As a faculty member, you have one of the most important roles for students beyond that of "professor" or "teacher". You are also their guide to the College. You are a vital point of contact for them, and, for some students, you are their only contact with the College. Therefore, it is important that you are aware of the support services that are available for students and how to connect students with those valuable resources.

Supporting Student Success

In this section, you will find a list of the support services and other resources here at Fanshawe that will help your students to address the challenges and embrace the opportunities they may experience. As you develop or revise your course, think about how and when you could tell your students about the support services that are available to enhance their learning experience.

Supporting Services and Resources

[Student Success Advisors](#)

Student Success Advisors (SSAs) are located in each academic area as well as in the First Nations Centre, and there are SSAs dedicated to serving International Students.

SSAs meet with students one-on-one or in a group setting to help them reach their academic and personal goals. They provide support on issues such as program fit, course selection, college policies and processes, course failures and options for program completion, and strategies for time or stress management. SSAs may refer students to other services or departments to assist them with their concerns.



- One-on-one and group academic and personal support for students
- Referrals to other services and departments

[The Learning Centre](#)

Room: F2001

Phone: 519-452-4265

www.fanshawec.ca/tlc

The Learning Centre provides one-on-one assistance and group workshops or study sessions for a variety of subjects and general study skill topics including math, chemistry, physics, English, and ESL.



- Math, chemistry, and physics drop-in support
- English and ESL support by appointment
- Study skill tutorials by appointment

Peer Tutoring ↗

Room: F2001

Phone: 519-452-4265

E-mail: peertutoring@fanshawec.ca

Students experiencing academic difficulties in a specific course can request help from a Peer Tutor. Costs for peer tutoring are subsidized.

Students excelling in a particular course or program can apply to be a paid Peer Tutor.



- Peer tutoring for students at subsidized rate
- Employment opportunity for students excelling in class/program

Accessibility Services ↗

Room: F2010

Phone: 519-452-4282

E-mail: accessibility@fanshawec.ca

Accessibility Services are available for students with a disability including physical disabilities, learning disabilities, medical conditions, and mental illness. Services include academic accommodations, specialized technology, assessments, learning strategies instruction, counselling, and test/exam accommodations.

Accessibility Services also provides support and guidance to faculty required to provide accommodations for a student.



- Accommodations and supports for students with disabilities
- Support and guidance for faculty providing accommodations
- Test Centre
- Peer note taking services
- Accessibility computer lab

Homework Labs

Room: F1000, B1049, and L2005 (Library Research Lab)

There are open-access computer labs reserved exclusively for students on a first-come, first-serve basis. Classes are not scheduled in these labs.

The labs include computers, printers, and scanners; power and date connections for laptop computers; drafting tables; and group work/study rooms.

There are additional shared computer labs across campus used for scheduled classes and unscheduled student computer activities.



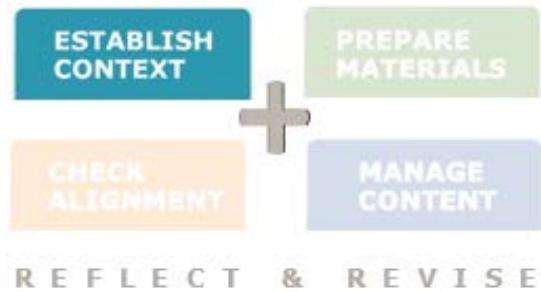
- Open-access homework labs with computer access and group study space
- Shared computer labs for scheduled classes and unscheduled student access
- Printing and scanning capabilities

References

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Chapter 4:

Phase 1 – Establish Context

Before you can develop a course, you need to know where it fits into the “big picture” and how a variety of situational factors will influence the decisions you make about your course. In this chapter, you will identify the situational factors that will affect your course design, brainstorm ideas for the content of your course, and establish the outcomes for your course including Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks.

Core Competencies for Faculty

By the end of this chapter, you will be able to...

- Identify situational factors and their impact on the design and delivery of curriculum (A.1); and
- Develop Course Learning Outcomes (CLOs) that align with Program Vocational Learning Outcomes (PVLOs) and Essential Employability Skills (EESs) (A.1, A.2).

Situational Factors

How and where will your course be delivered? Who are the students that will take your course? Who will teach the course you develop? What is the nature of the course content, and how does it relate to the other courses in the program it is part of? These are some of the questions you should ask about your course to determine the **situational factors** that may influence the design and scope of your course.

Some of the situational factors that will influence your course may become a barrier to your students' learning. You will need to consider how you can support your students by removing or overcoming those barriers.

For example, if a large lecture hall environment makes it difficult for your students to contribute to classroom discussions, you can leverage technology to allow students to complete polls or quizzes in class (e.g., clickers, online tools and apps for smartphones).

If your students do not know how to use a new tool or piece of equipment in a lab or workshop, you can plan your lessons to include an orientation to the tool or equipment and opportunities to practice using it.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design based on the premise that learners vary in the ways that they perceive information, navigate a learning environment, and are motivated to learn. Using this framework will help you identify and remove or overcome potential barriers to your students' learning.

For example, a geographic information systems professor could use lecture capture software such as Collaborate to deliver live-stream lectures for an online course so students can participate in the course synchronously and/or watch and review the lectures at their own pace.

Delivery Method

At Fanshawe, there are three methods for course delivery, each of which supports the College's strategic goal to enhance innovative practices for exceptional student learning. All courses, whether they are delivered **face-to-face (web-facilitated)**, in a **blended** format, or fully **online**, will include an e-Learning component as described in Table 2.

e-Learning includes all forms of electronically-supported media, information, and communication technologies used to support teaching and learning. It can occur in or out of the classroom and be self-paced, synchronous, or asynchronous. [FanshaweOnline \(FOL\)](#) is the College's Learning Management System (LMS) used to host online course content. For more information and resources for accessing and using FOL, refer to [Phase 4: Manage Content](#).

Table 2: Key Characteristics of the three delivery methods

Delivery Method	Key Characteristics
Face-to-Face (Web-Facilitated)	<ul style="list-style-type: none"> Course work is completed during normal class hours in a face-to-face format, and the online component is used to supplement face-to-face time. FOL could be used for its gradebook, drop box, and communication tools (or for any of its other features) to complement the students' classroom learning experience.
Blended	<ul style="list-style-type: none"> These courses are sometimes referred to as "hybrid" courses. They combine traditional face-to-face class time with online and out-of-class course work. Blended courses typically deliver some content online and may provide opportunities for online discussions, team projects, and activities. Lecture capture, video, and other forms of rich media and computer-mediated communications may be used in place of classroom hours.
Online	<ul style="list-style-type: none"> All or almost all of the content of these courses is delivered in a web-based format with no or very few face-to-face meetings. These courses make full use of the features and tools FOL has to offer to engage students and facilitate learning.

NOTE: A single course can be delivered using one or more of these delivery methods in subsequent offerings or for different sections of the course offered at the same time.

Regardless of the delivery method or number of delivery methods used for the course, the CLOs must remain the same. Additionally, the teaching and learning activities and evaluation methods that are used to support and measure the achievement of those CLOs should be as similar as possible across the different delivery methods.



"Which delivery method should I use for my course?"

The delivery method for your course will likely have already been selected as part of the [Program Development Process](#) for a new program or as a result of decisions made by the program team for an existing program.

As the Course Developer, you should discuss the delivery method for the course with the other members of your Curriculum Development Team (See [Roles & Responsibilities](#)) to ensure that you have access to all of the information, tools, and resources needed to select and implement the appropriate delivery method(s).

Delivery Environment

If the course is to be delivered face-to-face or in a blended format, the type of classroom (i.e. the **delivery environment**) used for those face-to-face meetings also affects course design. The knowledge, skills, and attitudes that can be taught in a lecture hall may be different than those that can be taught in a laboratory, or, at least, they may be presented in a different way.

As you design your course, think about the type of classroom the course will likely be delivered in and how the course content could be delivered in that type of environment:

- “Traditional” classroom or lecture hall;
- Computer lab or laptop-enabled classroom;
- Laboratory with specialized equipment, tools, machinery, etc.;
- Simulation lab; or
- Field placement, clinical setting, or community setting

Additionally, consider the amount of time that will be spent in a particular delivery environment. For example, if the course you are teaching is 3 hours per week, one hour could be in a traditional classroom and the other two hours could be in a lab.

Contact your Academic Manager and/or Curriculum Lead (See [Roles & Responsibilities](#)) if you have any questions about the delivery environment(s) available for your course.

Characteristics of the Students

As you develop your course, consider these characteristics of your students:

- Intellectual development (Did these students recently graduate from high school or another program, or are they returning to school following an absence?)
- Life situations (How many students are working and/or have family responsibilities outside of school?)
- Cultural background
- Prior knowledge and skill (What will they already know or be able to do in relation to the course content? How well do they know the content? What will they need to relearn or unlearn from their past experiences to be successful in this course?)
- Goals and Expectations (What are their professional goals? What do they expect to gain from this course?)

By considering the characteristics of your students, you will have a better idea of how the course content should be presented or delivered to engage and motivate those students.

If you are not familiar with the students, consult with the Curriculum Lead (See [Roles & Responsibilities](#)) or other faculty members who are teaching in the same or a similar program.

Characteristics of the Teachers

Whether you will be teaching the course you are developing or someone else will be, think about the experience, beliefs, and perspectives that the teaching professor will bring to the course. As you develop the course, think about how your students will learn best, and prepare the teaching and learning materials and activities to meet their learning needs ([Deliverable 3 – Teaching & Learning Materials](#)).

If you will be delivering the course that you develop, think about the unique knowledge and industry experience that you can share with your students to support the Course Learning Outcomes (CLOs). Connect the content you are teaching with your own experiences in the workplace, and explain how you used the knowledge and skills you are teaching in “the real world” to demonstrate the relevance of that knowledge and those skills.

If someone else or multiple professors will be delivering your course, you can still embed your knowledge and experience into the course to support and guide the professor(s) who will teach the course. For example, you can prepare a case study based on your industry experiences that will support the learning outcomes. Then the professor delivering the course could use your example or share a similar one of his or her own.

Nature of the Content

As you develop your course, think about the nature of the content itself as well as how it relates to the content delivered in other courses in the same program.

Professional Competencies

Some programs, such as programs in health sciences and aviation, are accredited or endorsed by an external regulatory body. To maintain program accreditation, the College must be able to demonstrate that a set of **professional competencies** – knowledge, skills, and attitudes – have been taught and evaluated within the program in addition to the MAESD requirements.

Ask your Curriculum Lead or Academic Manager if there are any additional requirements that must be met in your course (See [Roles & Responsibilities](#)).

Is the content for your course primarily theoretical, practical, or a combination of the two? Is the content for your course current, or have there been any important or recent changes or controversies in the field? Does the content deal with sensitive subject matter that the students will need to be prepared for emotionally as well as academically?

Where does your course fit into the program as a whole? That is, consider the program level your course is offered in and the number of other courses that cover a similar topic. What other learning expectations are placed on the course by the College (e.g., globalization, entrepreneurship, research and innovation) and/or an external accrediting body (e.g., professional competencies).

You will expand on this review of your course content as you write the Course Learning Outcomes (CLOs) and identify the Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks that will be addressed in your course ([Deliverable 1](#)).

Deliverable 1 – Course Learning Outcomes & Essential Employability Skills

Before you begin, open or print the following templates and resources, which will be used to prepare this deliverable:

- [Course Learning Outcomes Worksheet](#)
- [Bloom's Taxonomy Resources](#)

In this section, you will brainstorm ideas for the content of your course and translate those ideas into Course Learning Outcomes (CLOs). You will also identify the Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks that will be addressed in your course and propose methods for evaluating how students will achieve the CLOs and EESs/DLS benchmarks for your course.

Course Learning Outcomes (CLOs) reflect the intended knowledge, skills, and/or attitudes that are taught and evaluated in a course. The process of developing CLOs requires expertise in the subject matter and an understanding of key concepts in program and course development, including Bloom's Taxonomy, learning domains, and teaching methodologies.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including the development of learning outcomes. UDL emphasizes learning outcomes that reflect the end goal (e.g., describe the process of photosynthesis) rather than the means to reach that goal (e.g., write a 500 word essay on photosynthesis).

Essential Employability Skills (EESs) are skills that are critical for success in any workplace or in day-to-day living and life-long learning. These skills are transferrable across any program or discipline and include skills in the following categories:

- Communication
- Numeracy
- Critical thinking and problem solving
- Information management
- Interpersonal
- Personal

Note: If your course is part of a Bachelor degree program, these skills are represented in the **Degree-Level Standard (DLS)**.

The complete lists of [EESs](#) and [DLS benchmarks](#) are included at the end of this chapter.

Step 1 – Review Course Information

To prepare or revise the Course Learning Outcomes (CLOs) for your course, you will begin by reviewing the course details including the course description, delivery methods, and alignment with Program Vocational Learning Outcomes (PVLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks at the program level.



“Where can I find the course information?”

If you are preparing CLOs for a new course, you will find the course information in the Stage-Gate 2 Business Plan, which you can obtain from your Academic Manager, Curriculum Lead, or a Curriculum Coach (See [Roles & Responsibilities](#)).

If you are revising the CLOs for an existing course, you will find the course information on the existing course outline and course plan for the course, which you can obtain from your Academic Manager or access in the [Course Outline Management & Mapping System \(COMMS\)](#).

Continuous Quality Improvement

For new programs, courses, including course descriptions, course hours, PVLOs, and EESs, are approved by the Credential Validation Service (CVS) within the Ontario College Quality Assurance Service (OCQAS) and enforced by the Ministry of Advanced Education and Skills Development (MAESD). At Fanshawe College, these are developed in Stage-Gate 2 of the [Program Development Process](#).

Any minor changes or edits that are made to the course description or to the program maps must be approved by an academic manager as part of the [Curriculum Modification Process](#).

Enter the details for your course into Part 1 of the [Course Learning Outcomes Worksheet](#) as illustrated in Figure 7. Click on any of the overlaid numbers in Figure 7 to see more information about each of the components in Part 1 of the worksheet.

PART 1: COURSE INFORMATION		<i>Enter your course development information in the cells below.</i>
Program Name	Fire Inspection and Fire Safety Education Ontario College Advanced Diploma	5
Course Code and Name	FIRE-1002 Science in the Fire Service	
Program Level	Level 1	
Prerequisite(s) for This Course	N/A	1
This Course is a Prerequisite for	N/A	
Delivery Options (Indicate all that apply)	Face-to-Face/Web-facilitated <input checked="" type="checkbox"/> Blended Online	2
Number of Weeks Offered	15	
Hours	Total Course Hours: 45 # of Hours – Classroom: 45 # of Hours – Other:	3

Course Description and Outcomes	
Course Description: Students learn the theory and gain a practical understanding of fire behaviour. This knowledge forms the foundation for both inspection and investigation courses and future work within the fire service. Students will understand how previous knowledge of chemistry and physics applies in the fire service. The understanding of thermal, fluid and gas dynamics forms the basis for an understanding of how smoke and fire travel through a building. This knowledge applies to all fire safety systems and structural design.	4
This course is linked to the following Program Vocational Learning Outcomes (PVLOs): <ul style="list-style-type: none"> • 1 – Conduct field inspections of new or existing single- and multi-use structures to determine code compliance and to evaluate fire protection systems and equipment (e.g., occupation classification and occupant loads; hazardous conditions involving equipment, processes and operations; emergency planning and preparedness procedures; storage, handling and use of hazardous materials, and flammable and combustible liquids and gases; egress and emergency access; fire flows and fire growth potential). <i>(introductory level)</i> • 4 – Investigate and resolve common and complex complaints, recording the complaint information and ensuring the investigation process is initiated and the complaint resolved in accordance with applications codes and standards and the policies and procedures of the jurisdiction. <i>(introductory level)</i> • 5 – Identify the applicable code or standard in response to a fire protection, fire prevention or life safety issue, including those identified in plan review, and recommend modifications to address the problem, need or deficiency in an inspection report or inspection order. <i>(introductory level)</i> • 6 – Participate in legal proceedings, in consultation with legal counsel, regarding the findings of a field inspection, plan review or complaint. <i>(introductory level)</i> • 7 – Review building plans for compliance with applicable codes and standards for fire and life safety (e.g., occupancy classification, occupant load, construction type, construction features, fire protection systems), and verify newly constructed buildings against an approved set of plans and building features. <i>(introductory level)</i> • 9 – Coordinate fire and life safety educational activities by establishing priorities, preparing budgets, scheduling activities, communicating with stakeholders, and documenting activities. <i>(introductory level)</i> 	5

Course Description and Outcomes
<ul style="list-style-type: none"> • 10 – Develop public policy recommendations for management to address a specific fire or injury issue. <i>(introductory level)</i> • 11 – Identify and collaborate with partners and community resources, services and organizations to meet community fire and life safety needs and address current issues, submitting requests for resources were required. <i>(introductory level)</i> • 12 – Design, implement, evaluate and revise a fire and life safety education program that is based on a comprehensive educational strategy, target audience needs, and program goals. <i>(introductory level)</i> • 16 – Examine documentation and evidence to determine the cause of a fire and to assess the progression, extinguishment and containment of the fire. <i>(introductory level)</i> • 17 – Prepare a written report to reflect the findings of a fire investigation, present findings verbally to an intended audience, and testify during legal proceedings. <i>(introductory level)</i> <p>This course is linked to the following Essential Employability Skills (EESs) or Degree-Level Standard (DLS) Benchmarks:</p> <ul style="list-style-type: none"> • 1 – Communicate clearly, concisely, and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. • 2 – Respond to written, spoken or visual messages in a manner that ensures effective communication. • 3 – Execute mathematical operations accurately. • 4 – Apply a systematic approach to solving problems. • 5 – Use a variety of thinking skills to anticipate and solve problems. • 7 – Analyze, evaluate and apply relevant information from a variety of sources. • 10 – Manage the use of time and other resources to complete projects.

*Figure 7: Sample of Part 1 of the Course Learning Outcomes Worksheet – FIRE-1002
Science in the Fire Service*

6

- ① The **program level** and **prerequisites for this course** and courses that **this course is a prerequisite for** will help you to determine how your course fits into a program. That is, this information can give you an idea of the knowledge and skill level of the students entering your course, and it can indicate how the students will use or build on the knowledge and skills they gain in your course.
- ② The **delivery options** for a course will indicate how the program will be delivered whether it is face-to-face/web-facilitated, blended (including face-to-face and online components), or online. One course or different sections of one course may be delivered using one or more of these options, but no matter the delivery method, the course learning outcomes must be the same for each delivery.
- ③ The **number of weeks offered** and the **hours (classroom or other)** will help you to determine how much content can be included in the course, how deeply you can explore a topic, or how you can engage your students with the material. You will also use this information when you develop the lesson plans for your course.



Lesson Plans

- ④ The **course description** should be written in such a way that it markets the course in three to four concise sentences. The course description should capture or describe the scope of the course content and be generic enough that it will not need to be modified every semester. For example, software can change frequently with new versions being released on a regular basis or industry preferences evolving to meet changing demands. Thus, the course description should broadly define the software that will be used, “the latest GIS mapping software available” or “a coding software used most frequently in industry”.

Any changes or edits to the course description must be approved by your academic manager because the course description will appear on the program website, in the program calendar, and on your course outline.



Course Outline & Course Plan

- ⑤ Most courses will be associated with one or more **programs**, each of which will have a set of **program vocational learning outcomes (PVLOs)**. (General Education courses, which are a Ministry of Advanced Education and Skills Development (MAESD) requirement, can be taken simultaneously by students in a wide range of programs.)

PVLOs represent the vocationally specific knowledge, skills, and attitudes that a student must be able to demonstrate at the end of a program. Every program should include a set of vocational outcomes, which sets out the culminating demonstration of learning and achievement and must be addressed over the duration of the program. A single course in a program will likely not address every

PVLO for the program, but each course should contribute to the students' learning for at least one of the PVLOs.

Whether you are preparing the course learning outcomes for a new course or you are revising the course learning outcomes for an existing course, you will see that the PVLOs that your course contributes to have been identified and ranked. The ranking indicates the level of learning achieved in the course as outlined in Table 3:

Table 3: Levels of learning for achieving Course and Program Vocational Learning Outcomes (PVLOs)

Level of Learning	Explanation
Introductory (I)	<ul style="list-style-type: none">• This level of learning is foundational.• Concepts and skills are introduced in a program for the first time.• The student has little or no prior knowledge of or experience with the concepts and skills taught.
Building (B)	<ul style="list-style-type: none">• This level of learning builds on the foundation established by the introductory level of learning.• The student has met the concepts or skills before, but requires additional practice to continue to refine and integrate it with other knowledge.
Culminating (C)	<ul style="list-style-type: none">• This level of learning is the highest stage of learning appropriate to the given credential and for an entry-level practitioner.• This level depends on a solid foundation and on prior opportunities for students to build their knowledge and skills.• At this level, a student can integrate their learning with other concepts and skills.

For example, Figure 7 shows that the course, Science in Fire Service, is part of the Fire Inspection and Fire Safety Education program. In particular, that course contributes to the achievement of several PVLOs including PVLO #10 (Develop public policy recommendations for management to address a specific fire or injury issue) at the introductory level. Thus, the course introduces the foundational knowledge and skills that are needed for the student to later be able to develop a policy recommendation: the components and physical and chemical properties of fire, the classifications and phases of a fire, causes and origins of a fire, and the principles of behavior of a fire within and around structures.

- ⑥ **Essential Employability Skills (EESs)** are skills that are critical for success in any workplace or in day-to-day living and life-long learning. These skills are transferrable across any program or discipline and include skills in the following categories:

- Communication
- Numeracy
- Critical thinking and problem solving
- Information management
- Interpersonal
- Personal

Note: If your course is part of a Bachelor degree program, these skills are represented in the **Degree-Level Standard (DLS)**.

The complete lists of [EESs](#) and [DLS benchmarks](#) are included at the end of this chapter.

Step 2 – Brainstorm Course Content

Brainstorm proposed course content for your course using your expertise in the subject area and the course description, PVLOs, and ESSs/DLS benchmarks as a guide. Content ideas should reflect the knowledge, skills, and attitudes that you want a student to learn in your course.

You may want to begin by writing down any ideas that come to mind, and then organize your ideas into key topics, sub-topics, or themes. Note the connections between the topics. What topics do you need to teach first, next, last? Is there any overlap between topics in terms of the knowledge, skills, or attitudes students will need to develop or demonstrate?



"Where can I find ideas for my course content?"

- Review potential (or existing) course resources (e.g., textbooks, industry materials, cases, workbooks, software, hardware, tools, equipment).
- Consult with other faculty members and/or industry professionals and/or contact professional associations.
 - If you are preparing CLOs for a new course, review the input from the External Focus Group in the Stage-Gate 2 Business Plan, which you can obtain from your Academic Manager (See [Roles & Responsibilities](#)).
 - If you are preparing CLOs for an existing course, review input from the Program Advisory Committee (PAC) in the minutes from their meetings, which you can obtain from your academic manager.

Essential Employability Skills

While the EESs are applicable to any program or discipline, there are often vocation- or discipline-specific examples of how those skills will be applied in the workplace.

For example, construction engineering technicians may need to *consider prices and distances to quarries and processing sites when selecting suppliers of stone materials*. This aligns with EES #7, “analyze, evaluate, and apply relevant information from a variety of sources.”

In the health sciences, practitioners may need to *calculate doses for a variety of clients using dose/kg weight formulas*. This aligns with EES #3, “execute mathematical operations accurately”.

Check out the [Essential Skills Profiles](#) from Job Bank Canada for more examples of the essential skills used in over 350 careers.

Enter your ideas into Part 2 of the [Course Learning Outcomes Worksheet](#) as illustrated in Figure 8.

PART 2: PROPOSED CONTENT

Instructions

- Using your expertise in the subject area, brainstorm proposed course content, using the course description as a guide. Content ideas should reflect the knowledge, performance-based skills, and attitudes that a student will learn in this course.

Helpful Hints

- Organize your ideas into key topics, sub-topics, or themes, and note any connections between topics.
- Consider the learning domains and appropriate level of learning for the course (Review Bloom's Taxonomy).

UNIT 1: INTRODUCTION

Week 1: Basic Principles of Fire

Introduction to the Science of Fire

The Three States of Matter

Elements and Compounds: Atoms and Molecules

Week 2: Components of Fire

Physical and Chemical Properties of Fire

Fire Measurements Using Various Systems of Units

Week 3: Classifications and Phases of Fire

Physical and Chemical Change

Types and Phases of Fire

Week 4: Review of Unit 1 and Test 1

UNIT 2: FIRE DYNAMICS

Week 5: The Process of Fire Combustion

The Process of Ignition

Flow of Fluids

Combustion and Methods of Heat Transfer

Week 6: Causes and Origins of Fire

Fire and Flammability

Effect of Temperature on Fire

PART 2: PROPOSED CONTENT

Week 7: Fire Behaviour

Fuel-controlled Fire Behaviour

Fire Behaviour Within and Around Structures

Week 8: Fire and Fuels

Various fuels and Their Relationships to Fire

Solid, Liquid and Gaseous Combustibles

Week 9: Review of Unit 2 and Test 2

UNIT 3: SCIENCE OF FIRE PREVENTION AND SUPPRESSION

Week 10: Spread of Fire

Compartmentalization and Fire Spread

Factors That Influence Movement of Smoke

Smoke and Fire Containment

Week 11: Fire and Structures I

Non-combustibility and Fire-resistance

Fire Behaviour in Wood-frame or Timber Structures

Week 12: Fire and Structures II

Fire Behaviour in Steel-frame Structures

Fire Behaviour in Concrete Structures

Week 13: Fire Suppression Systems

Water as Fire Suppression Agent - Properties of Water Under Pressure

Science of Non-water Based Fire Suppression Agents

Week 14: Review of Unit 3

Week 15: Final Exam

*Figure 8: Sample of Part 2 of the Course Learning Outcomes Worksheet – FIRE-1002
Science in the Fire Service*

Overview of Bloom's Taxonomy

Domains

Cognitive – Intellectual capability or thinking skills
Affective – Feelings, attitudes, or values
Psychomotor – Manual or physical skills

Levels

Introductory – Foundational level of learning
Building – Builds on the foundation established by the introductory level of learning
Culminating – Highest level of learning dependent on strong foundation and prior opportunities to build on that learning

Note: The definitions above are intended as a guideline to prompt your brainstorming. A CLO may reflect more than one domain.



[Bloom's Taxonomy](#)

Step 3 – Draft Course Learning Outcomes

Now that you know the content for your course, you are ready to draft your CLOs. The CLOs will summarize in 6-10 statements the knowledge, performance-based skills, and/or attitudes that will be achieved by the end of the course.

Note that the stem for all CLOs is *"By the end of this course, the student has reliably demonstrated the ability to..."* Start each outcome with a verb that reflects the domain (cognitive, psychomotor, or affective) and level of learning (introductory, intermediate, and advanced). Verbs associated with specific domains and levels are outlined in the [Bloom's Taxonomy](#) resource described in Step 2.

As you write your CLOs, ensure they link to the PVLOs and/or ESSs that were identified for your course (Step 1). Also ensure that the CLOs can be measured and evaluated by identifying potential evaluation strategies for each outcome.

Enter your CLOs into Part 3 of the [Course Learning Outcomes Worksheet](#) as illustrated in Figure 9. Note the domain and level of learning for each outcome as well as the PVLOs, ESSs, and potential evaluation strategies that each outcomes links with.

PART 3: COURSE LEARNING OUTCOMES (CLOs)

Legend

- Domain: Cognitive (C), Psychomotor (P), Affective (A)
- Level of Learning: Introductory (1), Building (2), Culminating (3)

Course Learning Outcomes <i>By the end of this course, the student has reliably demonstrated the ability to:</i>	Linked to PVLO(s) #	Domain (C, P, A)	Level of Learning (1, 2, 3)	EES(s) # Linked to CLO and/or Evaluation	Possible Evaluation Strategies
1. Outline the physical properties of the three states of matter – solid, liquid and gas.	9, 12	C	1	1, 2, 3	Online Quiz, Test 1
2. Define the components and the physical and chemical properties of fire.	1, 10, 12, 16, 17	C	1	1, 2, 3	Online Quiz, Test 1
3. Distinguish between the classifications and phases of fire.	1, 6, 10, 16	C	2	1, 2	Test 1
4. Recognize the elements of the process of combustion, ignition and methods of heat transfer.	1, 6, 9, 16	C	1	1, 2	Online Quiz, Test 2
5. Identify the causes and origins of fire and the principles of the dynamic behaviour of fire within and around structures.	1, 4, 5, 6, 10, 11, 16, 17	C	1	1, 2, 4, 5	Online Quiz, Test 2
6. Describe various materials and their relationships to fire as fuels.	1, 6, 9, 12, 16, 17	C	1	1, 2, 3	Test 2
7. Analyze the process of compartmentalization and spread of fire, and the movement and methods of containment of smoke.	1, 11, 12, 16	C	2	1, 2, 3, 4, 5, 7	Online Quiz and Final Exam
8. Differentiate between non-combustibility and fire-resistance and various types of structural construction materials such as steel, timber, concrete, etc., and their contrasting behaviors in relation to fire.	1, 7, 11, 16	C	2	1, 2, 3, 7	Online Quiz and Final Exam
9. Discuss the physics and chemistry of both water-based and non-water based fire suppression systems, and their respective suitability.	7, 11, 12	C	1	1, 2, 3, 4, 5	Final Exam

*Figure 9: Sample of Part 3 of the Course Learning Outcomes Worksheet – FIRE-1002
Science in the Fire Service*

Summary

In this section, you identified important situational factors that affect your course including the course prerequisites, duration, and delivery options.

Building on that contextual information, you have brainstormed ideas for the content of your course and developed 6-10 CLOs that align with the PVLOs and EESs that were identified for your course.

Now you are ready to design the teaching and learning activities and the evaluation methods that will support and measure the achievement of those learning outcomes in your course (Figure 10).

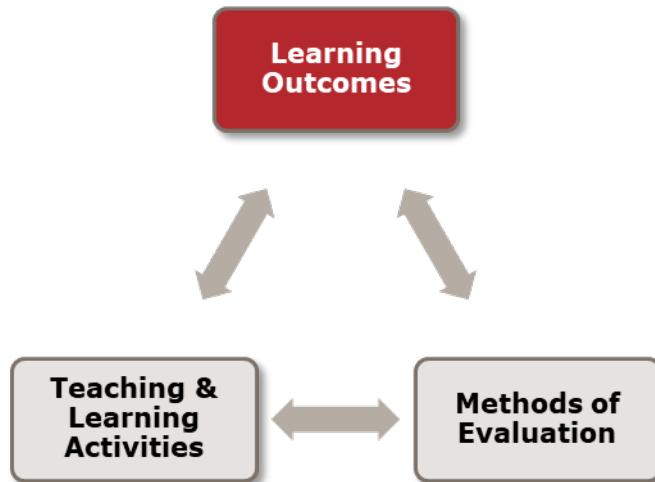


Figure 10: Constructive Alignment – Learning Outcomes

Reflective Practice & Revision

Before you move on, review your Course Learning Outcomes Worksheet:

- Do you need any more information about the context of your course (e.g., breadth and depth of content to be delivered, characteristics of the students, characteristics of the delivery environment, availability of resources)?
- Will all of the relevant PVLOs and EESs be addressed by this course?
- Will any additional PVLOs and/or EESs be addressed by this course?

If you need any additional information, or you have made any changes to the list of PVLOs and EESs that your course will address, contact your Academic Manager, Curriculum Lead, or Curriculum Coach (See [Roles & Responsibilities](#)).

You will now use your CLOs to develop the following materials for your course:

- Lesson Plans ([Deliverable 2](#))
- Learning Materials ([Deliverable 3](#))
- Evaluation Tools ([Deliverable 4](#))
- Evaluation Map ([Deliverable 5](#))
- Course Outline & Course Plan ([Deliverable 6](#))
- FOL Course ([Deliverable 7](#))



Workshops for further learning and training

- Outcomes-Based Education: Linking Outcomes & Curriculum

Course Learning Outcomes Worksheet

For new programs, courses, including course descriptions, course hours, PVLOs, and EESs, are approved by the Credential Validation Service (CVS) within the Ontario College Quality Assurance Service (OCQAS) and enforced by the Ministry of Advanced Education and Skills Development (MAESD). At Fanshawe College, these elements are developed in Stage-Gate 2 of the Program Development Process. Any minor changes or edits that are made to the course description or to the program maps must be approved by an Academic Manager as part of the Curriculum Modification Process.

Course Learning Outcomes (CLOs) reflect the intended knowledge, skills, and/or attitudes that are taught and evaluated in a course. The process of developing CLOs requires expertise in the subject matter and an understanding of key concepts in program and course development, including Bloom's Taxonomy, learning domains, and teaching methodologies.

Essential Employability Skills (EESs) are skills that are critical for success in any workplace or in day-to-day living and life-long learning. These skills are transferrable across any program or discipline and include skills in the following categories:

- Communication
- Numeracy
- Critical thinking and problem solving
- Information management
- Interpersonal
- Personal

Note: If your course is part of a Bachelor degree program, these skills are represented in the Degree-Level Standard (DLS).

Resources Available

Resources, including *The CODE Book*, are available on the portal website for the [Centre for Academic Excellence \(CAE\)](#).

If you are preparing CLOs for a new course, you will find the course information in the Stage-Gate 2 Business Plan, which you can obtain from your academic manager or a Curriculum Coach. If you are revising the CLOs for an existing course, you will find the course information on the existing course outline and course plan for the course, which you can obtain from your academic manager.

COURSE DEVELOPMENT INFORMATION	<i>Enter your course development information in the cells below.</i>
COURSE NAME	
COURSE CODE	
COURSE DEVELOPER	

Part 1 – Course Information

PART 1: COURSE INFORMATION		<i>Enter your course development information in the cells below.</i>
Program Name		
Course Name		
Program Level		
Prerequisite(s) for This Course		
This Course is a Prerequisite for		
Delivery Options <i>(Indicate all that apply)</i>	Face-to-Face/Web-facilitated Blended Online	
Number of Weeks Offered		
Hours	Total Course Hours: # of Hours – Classroom: # of Hours – Other:	

Course Description and Outcomes	
Course Description:	
This course is linked to the following Program Vocational Learning Outcomes (PVLOs):	
This course is linked to the following Essential Employability Skills (EESs) or Degree-Level Standard (DLS) Benchmarks:	

Part 2 – Proposed Content

Overview of Bloom's Taxonomy

Domains

Cognitive – Intellectual capability or thinking skills
Affective – Feelings, attitudes, or values
Psychomotor – Manual or physical skills

Levels

Introductory – Foundational level of learning
Building – Builds on the foundation established by the introductory level of learning
Culminating – Highest level of learning dependent on strong foundation and prior opportunities to build on that learning

Note: The definitions above are intended as a guideline to prompt your brainstorming. A CLO may reflect more than one domain.

PART 2: PROPOSED CONTENT

Instructions

- Using your expertise in the subject area, brainstorm proposed course content, using the course description as a guide. Content ideas should reflect the knowledge, performance-based skills, and attitudes that a student will learn in this course.

Helpful Hints

- Organize your ideas into key topics, sub-topics, or themes, and note any connections between topics.
- Consider the learning domains and appropriate level of learning for the course (Review Bloom's Taxonomy).

Part 3 – Draft Course Learning Outcomes

Draft 6-10 CLOs that summarize the knowledge, performance-based skills, and/or attitudes that will be achieved by the end of the course.

Start each outcome with a verb that reflects the domain (cognitive, psychomotor, or affective) and level of learning (introductory, intermediate, and advanced). Verbs associated with specific domains and levels are outlined in the Bloom's Taxonomy resource described in Part 2.

Link each CLO to the PVLOs and/or EESs identified in Part 1, and ensure that they can be measured and evaluated by identifying potential evaluation strategies for each outcome.

PART 3: COURSE LEARNING OUTCOMES (CLOs)					
Legend					
Course Learning Outcomes <i>By the end of this course, the student has reliably demonstrated the ability to:</i>		Linked to PVLO(s) #	Domain (C, P, A)	Level of Learning (1, 2, 3)	EES(s) # Linked to CLO and/or Evaluation
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Reflective Practice & Revision

Before you move on, review your Course Learning Outcomes Worksheet:

- Do you need any more information about the context of your course (e.g., breadth and depth of content to delivered, characteristics of the students, characteristics of the delivery environment, availability of resources)?
- Will all of the relevant PVLOs and EESs be addressed by this course?
- Will any additional PVLOs and/or EESs be addressed by this course?

If need any additional information, or you have made any changes to the list of PVLOs and EESs that your course will address, contact your Academic Manager or Curriculum Coach (for new course development) or your Program Coordinator (for course revision or re-development).

Essential Employability Skills

Skills Category	Essential Employability Skills
Communication <ul style="list-style-type: none"> • Reading • Writing • Speaking • Listening • Presenting • Visual Literacy 	1. Communicate clearly, concisely, and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. 2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.
Numeracy <ul style="list-style-type: none"> • Understanding and applying mathematical concepts and reasoning • Analyzing and using numerical data • Conceptualizing 	3. Execute mathematical operations accurately.
Critical Thinking and Problem Solving <ul style="list-style-type: none"> • Analyzing • Synthesizing • Evaluating • Decision making • Creative and innovative thinking 	4. Apply a systematic approach to solve problems. 5. Use a variety of thinking skills to anticipate and solve problems
Information Management <ul style="list-style-type: none"> • Gathering and managing information • Selecting and using appropriate tools and technology for a task or a project • Computer literacy • Internet skills 	6. Locate, select, organize, and document information using appropriate technology and information systems. 7. Analyze, evaluate, and apply relevant information from a variety of sources.
Interpersonal <ul style="list-style-type: none"> • Team work • Relationship management • Conflict resolution • Leadership • Networking 	8. Show respect for the diverse opinions, values, belief systems, and contributions of others. 9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.
Personal <ul style="list-style-type: none"> • Managing self • Managing change and being flexible and adaptable • Engaging in reflective practices • Demonstrating personal responsibility 	10. Manage the use of time and other resources to complete projects. 11. Take responsibility for one's own actions, decisions, and consequences.

Degree-Level Standard Benchmarks

Benchmark Categories	Degree-Level Standard Benchmarks
1. Depth and Breadth of Knowledge	<p>1.1 A developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches, and assumptions in a discipline overall, as well as in a specialized area of a discipline</p> <p>1.2 A developed understanding of many of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective how the fields may intersect with fields in related disciplines</p> <p>1.3 A developed ability to</p> <ul style="list-style-type: none"> i. gather, review, evaluate, and interpret information ii. compare the merits of alternate hypotheses or creative options, relevant to one or more of the major fields in a discipline <p>1.4 A developed, detailed knowledge of and experience in research in an area of the discipline</p> <p>1.5 Developed critical thinking and analytical skills inside and outside the discipline</p> <p>1.6 The ability to apply learning from one or more areas outside the discipline</p>
2. Conceptual and Methodological Awareness	<p>An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to</p> <p>2.1 evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques</p> <p>2.2 devise and sustain arguments or solve problems using these methods</p> <p>2.3 describe and comment upon particular aspects of current research or equivalent advanced scholarship</p>
	<p>3.1 The ability to communicate information, arguments and analysis accurately and reliably, orally and in writing, to specialist and non-specialist audiences using structured and coherent arguments, and, where</p>

Benchmark Categories	Degree-Level Standard Benchmarks
3. Communication Skills	appropriate, informed by key concepts and techniques of the discipline.
4. Application of Knowledge	<p>4.1 The ability to review, present, and critically evaluate quantitative and qualitative information to</p> <ul style="list-style-type: none"> i. develop lines of argument ii. make sound judgements in accordance with the major theories, concepts, and methods of the subject(s) of study iii. apply underlying concepts, principles, and techniques of analysis, both within and outside the discipline iv. where appropriate, use this knowledge in the creative process <p>4.2 The ability to use a basic range of established techniques to</p> <ul style="list-style-type: none"> i. initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information ii. propose solutions iii. frame appropriate questions for the purpose of solving a problem iv. Solve a problem or create a new work <p>4.3 The ability to make use of scholarly reviews and primary sources</p>
5. Professional Capacity/Autonomy	<p>5.1 The qualities and transferable skills necessary for further study, employment, community involvement, and other activities requiring</p> <ul style="list-style-type: none"> i. the exercise of initiative, personal responsibility, and accountability in both personal and group contexts ii. working reflectively with others iii. decision-making in complex contexts <p>5.2 The ability to manage their own learning in changing circumstances, both within and outside the discipline, and to select an appropriate program of further study</p> <p>5.3 Behaviour consistent with academic integrity and social responsibility</p>
6. Awareness of Limits of Knowledge	6.1 An understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity, and limits to knowledge and how this might influence analysis and interpretations

Additional Resources

Situational Factors



[A Self-Directed Guide to Designing Courses for Significant Learning](#)

Step 1 – Situational Factors (p 6)
Fink, L. D. (2005)



[Situational Factors to Consider](#)

Faculty Development and Instructional Design Center, Northern Illinois University. (2014).



[Creating a Positive Learning Environment](#) (Fanshawe login required)

Academic Faculty Development
College Educator Development Program (CEDP)

Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks



[Essential Skills Profiles](#) (Occupational Information)

Summary of essential skills used in the workplace for a wide range of occupations.
Job Bank Canada. (2016).



[Program Vocational Standards](#) (Program Information)

Program standards including Program Vocational Learning Outcomes (PVLOs) for some academic programs.
Ministry of Advanced Education and Skills Development (MAESD)
Queen's Printer for Ontario. (2016).



[Writing and Using Learning Outcomes: A Practical Guide](#)

Kennedy, D. (2006).
Cork, University College Cork
Cork Open Research Archive (CORA)



[Outcomes-Based Education](#) (Fanshawe login required)

Academic Faculty Development
College Educator Development Program (CEDP)

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Centre for Excellence in Teaching and Learning, Camosun College. (1996-2016). Designing your Course: Integrated Course Design.

Eberly Center for Teaching Excellence and Educational Innovation, Carnegie Mellon University. (2008, 2015). Design & Teach a Course. [Online]. Retrieved from <http://www.cmu.edu/teaching/designteach/design/yourstudents.html>.

Fink, L.D. (2003). A Self-Directed Guide to Designing Courses for Significant Learning. Jossey-Bass: San Francisco. [Online]. Retrieved from <https://www.deefinkandassociates.com/GuidetoCourseDesignAug05.pdf>.

Fink, L. D. (2005). Idea Paper #42: Integrated Course Design. The IDEA Center: Manhattan, Kansas.



Chapter 5:

Phase 2 – Prepare Materials

Welcome to Phase 2 of the Course Development Process! Now that you have established the context for your course and prepared your Course Learning Outcomes (CLOs), you are ready to begin preparing the materials you will need to deliver the course.

There are three types of materials that should be prepared for a course:

- **Lesson Plans** that will provide structure and order to the course;
- **Teaching and Learning Materials** that will be used by the professor and the students to engage with the course content; and
- **Evaluation Tools** including informal and formal assessments that will be used to measure students' achievement of the learning outcomes.

While those three types of course materials will be presented in that order in this chapter, they do not have to be prepared in that order. You can prepare these materials in any order or work on them all at the same time, and as you do, keep in mind the situational factors and CLOs that you identified and developed in [Phase 1 – Establish Context](#).

Throughout this chapter, you also will be reminded to consider the alignment between your CLOs, teaching and learning activities, and evaluation methods. In [Phase 3](#), you will use the [Evaluation Map](#) to check or confirm that alignment.

Five additional sections have been included in this chapter to support you as you prepare your materials: Universal Design for Learning, Experiential Learning and Authentic Assessment, the Evaluation-Feedback Cycle, Instructional Design Strategies, and Active Learning Strategies. These sections will provide you with strategies for organizing, formatting, and presenting or delivering your course materials to optimize learning.

Core Competencies for Faculty

By the end of this chapter, you will be able to...

- Identify situational factors and their impact on the design and delivery of curriculum (A.1);
- Develop lesson plans and evaluations that align with Course Learning Outcomes (CLOs) (A.1, A.2);
- Incorporate feedback mechanisms and reflective practice into lessons and course planning (A.1);
- Create a variety of learning activities that align with and reinforce learning outcomes and provide appropriate levels of experience for assessment (A.1, B.4);
- Integrate appropriate technology into teaching and learning materials to enhance student learning (A.1, B.6);
- Engage in quality initiatives and reviews to improve curriculum (A.2);
- Adapt evaluation tools to allow alternative methods of assessment (A.3);
- Develop formative and summative assessments to ensure learner readiness for evaluation (A.3);
- Develop authentic assessments and encourage experiential learning as applicable (A.3);
- Provide clear and specific criteria for evaluations through grading schemes such as rubrics (A.3);
- Apply strategies to encourage learners to demonstrate ownership of their own learning (A.3);
- Integrate methods of Universal Design for Learning that develop community and accommodate diverse learner needs (B.5); and
- Prepare Accessibility for Ontarians with Disabilities Act (AODA) compliant educational resources (B.5).

Universal Design for Learning

The **Universal Design for Learning (UDL)** guidelines and principles were introduced in [Chapter 2: Guiding Principles](#). This educational framework guides curriculum design including the development of learning outcomes, teaching and learning materials/activities, and evaluations methods. UDL emphasizes a learner-centered approach based on the premise that learner variability or diversity is the norm and there is no “average” learner (CAST, 2011).

Developed by the Center for Applied Special Technology (CAST), the [UDL Guidelines](#) ↗ represent “a framework for improving and optimizing teaching and learning for all people based on scientific insights into how humans learn” (CAST, 2015).

The following sections will provide you with a set of strategies for implementing each of the UDL principles in your [Lesson Plans](#), [Teaching and Learning Materials](#), and [Evaluation Tools](#).

The [National Center on UDL's website](#) ↗ and the [UDL Guidelines: Full-Text Representation](#) ↗ prepared by CAST (2011) provides additional examples and strategies for implementation.

Principle 1 – Multiple Means of Representation: The “What” of Learning

This principle focuses on *what* students learn and how information or content is represented or presented to them. Learner variability or diversity means that students perceive and comprehend information in different ways (CAST, 2011), so it is important that content and information is represented in multiple ways.

Provide Materials in Multiple Formats

Develop and use materials in a variety of formats. For example, in addition to classroom lectures and supporting PowerPoint presentations, consider providing students with handouts, summaries, glossary sheets, [Quick-Reference Guides](#), articles/textbook readings, videos, animations, etc.

Note: You do not need to duplicate all of your teaching and learning materials in multiple formats. Instead, incorporate a variety of materials and formats across a lesson or a module/unit to introduce, reinforce, and apply key concepts or skills.

Universal Design for Learning (UDL) Principles

There are three **UDL principles** that address *what* students will learn from, *how* they learn and demonstrate their learning, and *why* they learn or want to learn.

Create Accessible Materials

UDL can be used to support accessibility requirements set out by the Accessibility for Ontarians with Disabilities Act (AODA), but it's important to note that creating accessible documents and materials benefits all students not only those with accessibility needs.

For step-by-step instructions on preparing accessible documents, visit the [Centre for Academic Excellence's page](#) on

myFanshawe (the portal). Instructional materials include support for

- Choosing fonts;
- Formatting images, tables, and hyperlinks;
- Creating PowerPoint presentations; and
- Using Microsoft Office's Accessibility Checker.

Built-in Accessibility Features

Adobe Acrobat and Microsoft Office incorporate built-in features for creating and testing the accessibility of documents.

Additional information and support for addressing accessibility requirements is available from Accessibility Services.



[Centre for Academic Excellence](#)

Preparing Accessible Documents



[Accessibility Services](#)

AODA Standards and Accessibility Tools

Keep Content Clear and Concise

As you create your teaching and learning materials and evaluations, ensure that all information, instructions, and questions are clear and concise. Materials that are wordy, vague, or ambiguous can be a problem for all students.

Review the [Instructional Design Strategies](#) section for specific examples of how to ensure that you present materials clearly and concisely.

Principle 2 – Multiple Means of Action and Expression: The “How” of Learning

This principle describes *how* students learn and demonstrate their learning. Learner variability or diversity means that students navigate a learning environment and express what they know in different ways (CAST, 2011). Therefore, it is important that students have multiple options for interacting with material and information and expressing what they know or can do.

Always ensure that graded items target the material being covered and not the learner's ability to overcome a barrier to the learning environment (e.g., time limits, language, social or cultural norms, physical/sensory/cognitive differences). Remove those barriers to learning and expression.

Provide a Variety of Learning Activities and Evaluation Options

As you develop your learning activities, take into consideration the wide range of characteristics of your students as outlined above, and design activities that allow all students to participate. Alternatively, provide a range of different learning activities and evaluations that will allow students to choose how they engage with the learning environment and express what they know.

Release Materials Early and Provide Extended Time for Graded Activities

As you plan your lessons and develop your course materials, think about the amount of time that students may need to process the information they need to understand to be able to complete activities or evaluations. Whenever possible, release lesson materials or assignment instructions early or provide extra time during in-class or online tests and quizzes.

Principle 3 – Multiple Means of Engagement: The “Why” of Learning

This principle focuses on *why* students learn or want to learn. Learners differ in the ways in which they can be engaged or motivated to learn (CAST, 2011). Learner variability or diversity means that students are affected differently by different learning environments and activities as well as the material they are trying to learn.

While grades and employment prospects are important to most students, learners need to see how or why the specific content they are learning or the activities and evaluations they are completing are relevant to them. Additionally, learners can be engaged or disengaged in learning depending on how easy or difficult it is to access or navigate the learning environment.

Support Individual Choice and Autonomy

In addition to supporting the need for multiple means of action and expression, providing a variety of options for how students can learn and express what they know and providing extended time for that learning and expression to occur also support students' need for individual choice and autonomy, which can enhance engagement.

Leverage Community Resources

Whenever possible, leverage community resources to help you demonstrate the relevance of the course content to students' lives or future careers. Guest speakers can offer a different perspective on a topic or issue; site visits or industry tours can provide

opportunities for observing and experiencing the workplace; and community events and activities can support active participation and foster collaboration.

Be sure to also leverage the resources available on campus to support your students' learning:



[Library & Media Services](#)

Library Instruction



[The Learning Centre](#)

Academic Assistance



[Peer Tutoring](#)

Academic Assistance

For more support services, refer to the [Support for Course Development](#) section.

Guide Self-Assessment and Reflection on Feedback

While you develop your course materials, you will identify how and when you will provide feedback to your students (e.g., verbal feedback during in-class discussions, a rubric for an assignment, comments on a test or an exam). Think about how you will also support those students in using the feedback you provide to them and how you can guide them to assess their own learning.

For example, you can review graded assignments or tests in class when you return them to your students. Highlight the things that students did well on the assignment or test, and provide specific examples of how continuing to do those things will make them successful on future assignments and tests. Summarize the most common mistakes that students made on the assignment or test, and provide specific examples of how your students can learn from those mistakes. Focus on both the content-specific mistakes and the mistakes that students made in terms of their study habits (e.g., how or how long they studied for a test).



[The Learning Centre](#)

Academic Assistance – Study Skills



Workshops for further learning and training

- Universal Design for Learning: It's More Than Inclusion!
- Advanced Universal Design for Learning: Developing Expert Learners
- Student Engagement: Motivate Me!
- Teaching Methods – What Fits You?
- Watch Me Flip the Classroom: Engaging Ideas

Experiential Learning and Authentic Assessment

In [Phase 1 – Establish Context](#), you wrote the Course Learning Outcomes (CLOs) for your course based on the Program Vocational Learning Outcomes (PVLOs). Those PVLOs represent the vocationally specific knowledge, skills, and attitudes that students must be able to reliably demonstrate at the end of a program, and they represent the entry-level expectations for employment in a related industry. Employers are also looking for graduates to have “real-world” experience. Thus, your [Learning Activities](#) should provide students with the experiences they need to acquire and refine their knowledge, skills, and attitudes, and your [Evaluation Tools](#) need to measure a student’s ability to demonstrate the knowledge, skills, and attitudes.

Experiential learning is broadly defined as “learning through doing”. That is, learning or the acquisition of the knowledge, skill, or attitude occurs through authentic activities or tasks involving the use of that knowledge, skill, or attitude.

Authentic assessments measure a student’s ability to complete authentic or “real world” tasks, the tasks they will complete when they enter the workplace. The word “authentic” is a measure of how closely the evaluation resembles what an employee in the field actually does.

This section will introduce you to examples of experiential learning and types of authentic assessment; it will provide you with ideas and strategies for integrating experiential learning and authentic assessment into your course. You will notice that an experiential learning activity can be a form of authentic assessment if you evaluate it!

Categories of Experiential Learning

Experiential learning can happen anywhere – in the classroom, the workplace, the College, or the broader community. Experiential learning activities may be components of a program such as a co-operative education work term or a clinical practicum, or they may be integrated into individual courses within a program such as with case studies, simulations, or interdisciplinary projects that connect multiple courses or programs. Additionally, experiential learning can take place outside of the classroom in any of the other activities that students participate in while they are at the College. Table 4 defines five categories of experiential learning activities and provides examples for each category.

Table 4: Categories of experiential learning

Category of Experiential Learning	Definition	Examples
Work-Integrated Learning (WIL)	Learning takes place in a workplace setting and involves a formal relationship with an employer or supervisor.	<ul style="list-style-type: none"> • Apprenticeship • Field placements • Mandatory professional practice • Co-operative education • Internships • Applied research projects (industry-sponsored)
Community-Based Learning	Learning takes place within the community and involves collaboration with community partners and contributions to the community.	<ul style="list-style-type: none"> • Service learning • Internships • Job shadowing/ Observational activities • Mentoring programs • Volunteer experiences
Problem-Based Learning (or Research, Innovation, and Entrepreneurship)	Learning involves exploration of key concepts and questions within a discipline; experimentation with ideas, materials, and technologies; collection of information and data; and formulation and presentation of ideas, products, or solutions.	<ul style="list-style-type: none"> • Case studies • Simulations • Field experiences • Laboratory activities • Studio work • Thesis/Capstone projects • Entrepreneurial activities • Incubators or innovation centres (e.g., Canadian Centre for Product Validation) • Launch pads (e.g., LEAP Junction) • Student Research Day
Diversity and Global Learning	Learning involves engagement with diverse populations and environments.	<ul style="list-style-type: none"> • Interdisciplinary or transdisciplinary projects • Study abroad or student exchange programs • Intercultural experiences
Other Activities	Any other learning that takes place throughout a student's academic career.	<ul style="list-style-type: none"> • Co-Curricular activities such as involvement or participation in athletics, clubs, societies, conferences, competitions, etc. • Career development activities such as resume writing, portfolio development, networking, etc.

Continuum of Authentic Assessment

Evaluations or assessments can be categorized according to their level of authenticity along the **Continuum of Authentic Assessment** (Figure 11). In other words, assessments or evaluations can be categorized according to how close they are to an actual task that a graduate will perform in the workplace.

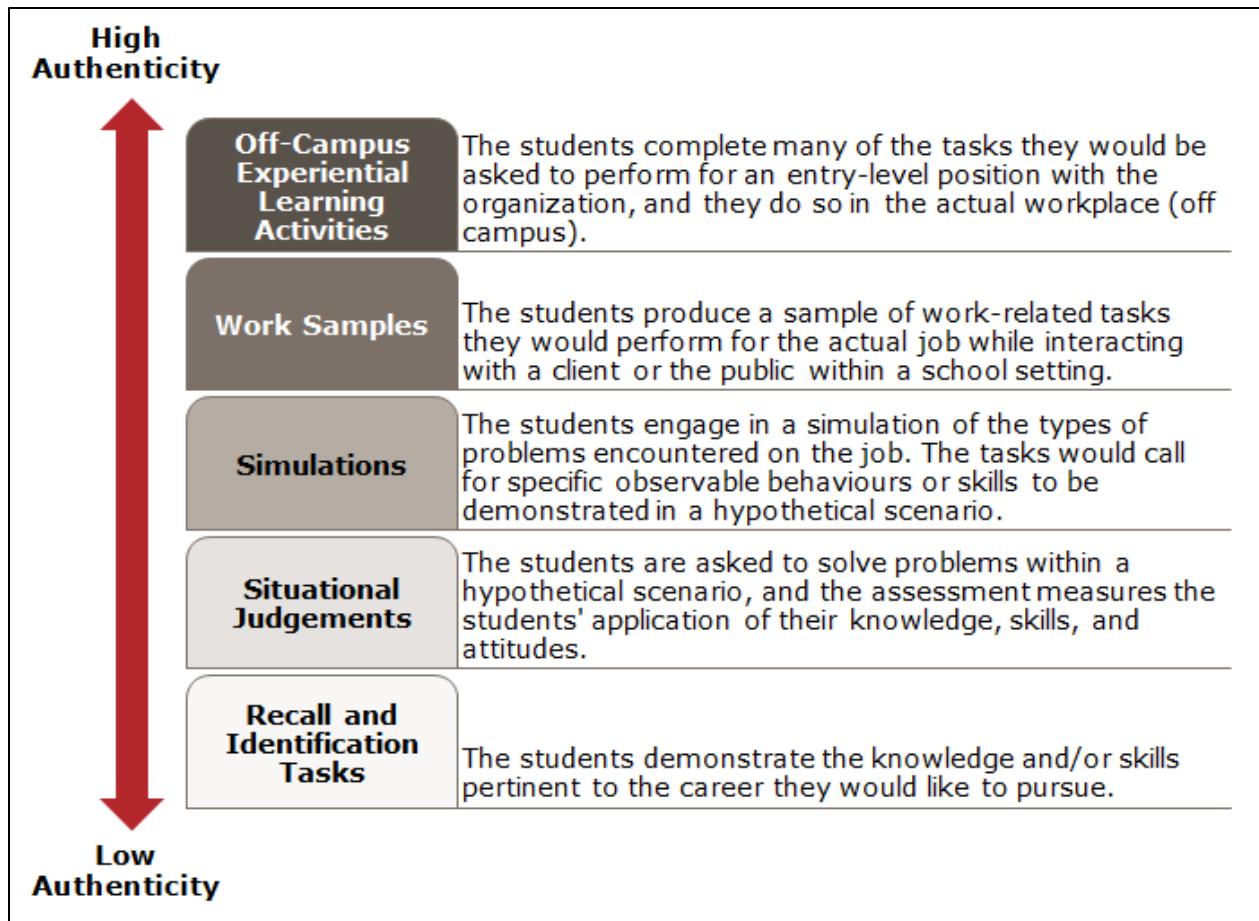


Figure 11: Continuum of Authentic Assessment (adapted from Thornton & Kedharnath, 2013)

Table 5 summarizes the types of authentic assessments and provides a list of examples for each type.

Table 5: Types of authentic assessment (adapted from Thornton & Kedharnath, 2013)

Type of Assessment	Description	Examples
Off-Campus Experiential Learning Activities	<ul style="list-style-type: none"> Evaluate students' ability to do a number of tasks required of an entry-level employee in that career Occur in an actual workplace; students may be paid or unpaid 	<ul style="list-style-type: none"> Unpaid field placement or internship at a local public relations and marketing company at which students perform tasks expected of an entry-level employee (Graphic Design) Paid co-op work term (any discipline) Unpaid clinical placement or practicum requiring students to perform tasks of an entry-level practitioner under the supervision of a licensed practitioner (Health Sciences, Nursing)
Work Samples	<ul style="list-style-type: none"> Evaluate students' ability to complete a portion of the tasks they would perform for an actual job Tasks and situations are not hypothetical Generally used later in a program, in some cases as capstone assignments 	<ul style="list-style-type: none"> Project or assignment asking students to meet with a live client and develop a marketing campaign that the client will actually use (Marketing) Clinical placement requiring students to remove plaque from a client's teeth in an on-campus dental clinic while supervised by their instructors (Dental Hygiene) Work placement requiring students to prepare food for the public in an on-campus deli or restaurant (Culinary Arts)
Simulations	<ul style="list-style-type: none"> Evaluate students' ability to demonstrate some aspect of the job-related knowledge, skills, and/or attitudes Tasks and situations are hypothetical Used throughout a program with increasing levels of complexity 	<ul style="list-style-type: none"> Project or assignment asking students to complete an accounting spreadsheet for a fictional company (Accounting) Simulation requiring students to perform a procedure on a manikin (Health) Surveying report based on measurements taken around campus using a total station (Technology – Surveying)
Situational Judgements	<ul style="list-style-type: none"> Evaluate students' ability to solve problems or respond to scenarios that require some foundational knowledge, skills, and/or attitudes Used throughout a program for scenarios with increasing complexity 	<ul style="list-style-type: none"> Assignment or test asking students to determine the cause of a patient's illness based on a set of symptoms (Health) Case study of a failing enterprise; students are asked to determine the best course of action for that enterprise (Business) Critique of a poster to determine what would improve its effectiveness as a marketing piece (Graphic Design)
Recall and Identification Tasks	<ul style="list-style-type: none"> Evaluate students' ability to recall and identify introductory concepts and information that will be required in their future careers Commonly used in early levels of a program; later in a program, these assessments may also be used to review concepts already taught 	<ul style="list-style-type: none"> Quiz or exam asking students to identify features of a staircase (Building Technology) Test asking students to recall the term used to divide demographic groups into categories (Marketing) Written assignment to label the parts of a transmission on a diagram (Automotive)

Developing Experiential Learning Activities and Authentic Assessments



[Lesson Plans](#); [Teaching and Learning Materials](#); [Evaluation Tools](#)

While many experiential learning activities are developed at the program level (e.g., co-op work term, capstone project, interdisciplinary project), you can also include experiential learning activities and authentic assessments in any course. As you prepare your [Lesson Plans](#), think about how you can include opportunities for students to learn or demonstrate their learning through authentic experiences, consider the following principles of experiential learning:

1. Experiential learning should be learner-centered.

- The learner should be actively involved in the learning process, taking initiative, making decisions, and being accountable for the results.
- The learner should be engaged in the experience on a personal level (e.g., emotionally, intellectually, socially).

2. Experiences should be carefully selected and structured.

- The experience should allow for the achievement of the identified Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks in an appropriate timeframe.
- The experience should allow for the development or strengthening of relationships (e.g., between the learner and self or peers, between the learner and/or College and the community or employers/supervisors).

3. Experiential learning should include reflection, critical analysis, and synthesis.

- The learner should be able to identify the knowledge, skills, and/or attitudes gained through the experience and to adapt or apply what he or she learned to future experiences.

4. Experiential learning should be assessed although it does not have to have grades or credits associated with it.

- Assessment could be of the learning experience itself (i.e. whether or not the task was completed and the outcomes were met) or of the result of the learning experience (i.e. the knowledge, skills, and/or attitudes gained as expressed through reflection, critical analysis, or synthesis as noted above).

5. Experiences should allow for unexpected results or spontaneous learning.

- Unexpected results or spontaneous learning will occur as a result of the experience being learner-centered and involve reflection, critical analysis, and synthesis.

(adapted from Association for Experiential Education; Learn Through Experience, 2017).

As you prepare your [Evaluation Tools](#), think about the tasks your students will need to be able to perform in the workplace after they graduate. Also consider the situational factors governing your course, such as your students' prior knowledge and skill level, the types of learning environments your course will be delivered in, and how your course fits into the rest of the program.

Because the knowledge, skills, and attitudes required by an employee are taught gradually throughout a program, assessments or evaluations that are placed higher on the Continuum of Authentic Assessment are often completed later in the student's program. In most cases, students must first be introduced the foundational knowledge, skills, and attitudes before they can build on that knowledge to solve problems in a simulated environment. After successfully performing tasks required in a simulated environment, students will then be able to progress to culminating activities such as live-client or patient interaction or experiential learning off-campus. Over an entire program, a student may be exposed to assessments or evaluations at all levels of the continuum.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including evaluations. Provide multiple means of action and expression (UDL Principle 2) by giving students choices about how they demonstrate their knowledge and skills

For example, a dental hygiene professor allows her students to deliver their final research project in the form of a written report, informational poster, or oral presentation.

Reflective Practice & Revision

Check those Course Learning Outcomes (CLOs)! Do you need to update your CLOs ([Deliverable 1](#)) to better reflect the experiences that students will have and the ways that they will be evaluated in the course?

Note: An assessment or evaluation type may fall into multiple levels of the continuum depending on how the evaluation is designed. For example, a "project" could be a theoretical research project that evaluates the students' ability to locate and synthesize information (Situational Judgement). Alternatively, a "project" could be a practical research project carried out in collaboration with a community partner to meet a particular need (Work Sample).

As another example, a "marketing plan" assignment could be a Situational Judgement, Simulation, Work Sample, or even an Off-Campus Experiential Learning Activity depending on how and where the assignment is delivered.

For each of your Evaluation Tools, prepare clear instructions, evaluation criteria, and grading schemes to ensure that the students and the professor delivering the course (if you are not delivering the course yourself) are aware of your expectations for that evaluation.

The Evaluation-Feedback Cycle

One of the most important aspects of evaluating students' learning is providing them with information and feedback about their learning in a timely manner. Evaluating students' learning and providing feedback on that learning should be a continuous cycle involving active engagement with both the evaluation details and the feedback given (Figure 12):

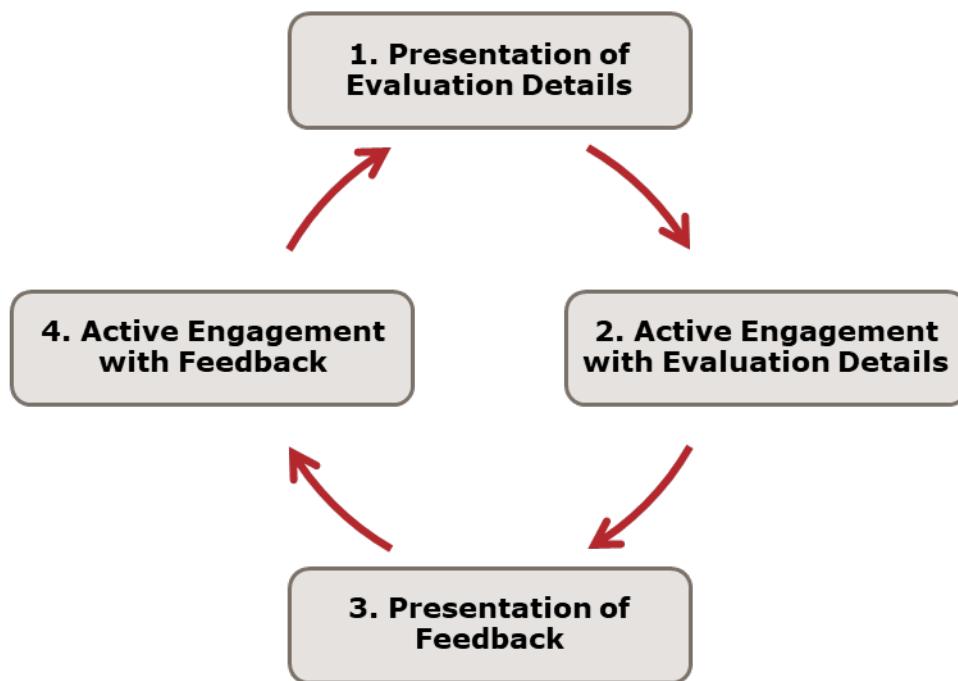


Figure 12: The Evaluation-Feedback Cycle (adapted from Price & O'Donovan in Bryan & Clegg (Eds.), 2006).

The evaluation-feedback cycle applies to both informal (i.e. non-graded) and formal (i.e. graded) evaluations and can involve self-assessment, feedback from peers, and feedback from the professor. For example, an in-class activity to review a case study and answer related questions can be used to check students' knowledge of course content or their ability to analyze a case study:

- **Evaluation Details** – Introduce the case study activity, its purpose (e.g., check knowledge, practice analyzing case studies), and relevant logistics (e.g., time allowed, resources available, individual or collaborative activity)
- **Active Engagement** – Allow students to listen to and/or read the instructions and ask questions as needed.
- **Feedback** – Upon completion of the activity, have students work in groups to review their answers (peer feedback) or compare their answers to an answer key (self-assessment).
- **Active Engagement** – Review the case study and answers with the whole class, explaining how to arrive at the correct answers or to avoid common errors or mistakes.

Another example of informal evaluation in the evaluation-feedback cycle is the integration of [knowledge check](#) activities throughout the online content for a course:

- **Evaluation Details** – Provide details about the knowledge check questions (e.g., content they address, type of question, time limits, expected response format).
- **Active Engagement** – Allow students to read and/or listen to the instructions for completing the knowledge check questions.
- **Feedback** – After submitting their responses, students should be able to view the correct answer.
- **Active Engagement** – In addition to providing the correct answer, refer students to the specific course content that supports that answer. When the students give the incorrect response, they can go back to review that content again.

The following sections will outline the steps in the **evaluation-feedback cycle** with an emphasis on formal evaluations and the characteristics of effective feedback for those formal evaluations.

1. Presentation of Evaluation Details

Before each evaluation, inform your students of the evaluation details to allow them to plan and manage their own learning. Table 6 indicates how you can share the evaluation details for formal evaluations with your students in your course outline, course plan, and on FOL or face-to-face in the classroom. You will develop your course outline, course plan, and FOL course in [Phase 4 – Manage Content](#).

Table 6: Evaluation details to share with students in the course outline, course plan, and FOL course/Face-to-face classroom.

Evaluation Details	Course Outline	Course Plan	FOL/ Face-to-Face
Evaluation type (e.g., test, quiz, project, lab)	✓	✓	✓
Evaluation weight or value (e.g., percentage, pass/fail)	✓	✓	✓
Learning outcomes measured by the evaluation	✓		✓
College grading information for the course	✓		✓
Policies and practices for late/missed evaluations	✓		✓
Academic integrity expectations	✓		✓
Sequence or timing of evaluation		✓	✓
Grading criteria/schemes and options (e.g., timeline/deadline, length, formatting, minimum standards, rubric, checklist)			✓
Example evaluations (e.g., practice questions or tests, samples or exemplars from previous semesters)			✓

2. Active Engagement with Evaluation Details

Active engagement with the evaluation details can begin on the very first day of the course! At the start of the course, review the course outline and course plan with your students to let them know how and when they will be evaluated. Also, inform your students of the policies and practices for late/missed evaluations and expectations for academic integrity.

Encourage students to ask questions and discuss these expectations or send the students on a “scavenger hunt” to find key pieces of information in the course outline, course plan or FOL course.

Let the students know when and where (e.g., in class or on FOL) they can expect to receive the grading criteria/options or example evaluations to review. Be sure to show them how to navigate FOL to find the relevant evaluation details and, where applicable, the online evaluations (See Chapter 7 for more information about [FanshaweOnline](#)).

Reflective Practice & Revision

Have you included time in your [lesson plans](#) to review the evaluation details and feedback with your student?

How will you encourage active engagement with the evaluation details and feedback in your [teaching and learning activities](#)?

In addition to providing students with the details about the evaluations, you should encourage students to actively engage with those details. In other words, give your students the opportunity to practice demonstrating their learning or meeting the evaluation criteria before they complete the graded evaluation. This means that the students need to know the evaluation criteria or see the [grading scheme](#) such as a [rubric](#) before completing the evaluation so they know precisely what is expected of them.

When the students have the rubric or other grading scheme ahead of time, they can actively engage with the evaluation details by comparing their own work with the grading scheme (self-assessment). This learner-centered approach allows students to manage their own learning by identifying their own areas of strength and weakness. It also gives them an opportunity to ask questions and get clarification about the evaluation before they complete it.

Whenever possible, provide students with example evaluations or annotated samples of completed work to review as they work on an assignment or project or as they prepare for an upcoming quiz or exam. As you develop your course, ensure that your teaching and learning materials include examples of how the students will be evaluated (e.g., practice questions or practice tests) or what they are expected to produce (e.g., exemplars of student work from similar courses or previous offerings of the course).



[Library and Media Services](#)

FIRST Repository – Student work samples

3. Presentation of Feedback

As soon as your students hand in their completed assignments or exams, they will start asking about when they will get their marks back! To minimize these questions and reduce student anxiety, tell your students how and when they can expect to receive their grades and feedback throughout the course.

Some Schools have their own practices for assigning grades, returning student work, and providing feedback in all courses. Ask your Academic Manager or Curriculum Lead if there are any practices you will be required to follow in your course (See [Roles & Responsibilities](#)).

A mark or grade represents an evaluation of the students' performance. **Feedback** is the information that you provide to students that lets them know how they are doing in relation to their goal (i.e. achieving the learning outcomes). The purpose of providing feedback is to facilitate learning. To be effective in achieving that purpose, feedback should be

1. Outcomes-focused;
2. Timely and on-going;
3. Consistent;
4. Clear and actionable; and
5. Learner-centered (adapted from Wiggins, 2012).

Outcomes-Focused Feedback

Effective feedback makes the connection between what the student did and what they need to do to achieve the learning outcomes. This is what differentiates feedback from advice (e.g., "Check your work before handing in your test", "Include more references to external sources in your essay", "Personal examples add depth to your report") and from an evaluation or a grade (e.g., "8/10", "C+", "Good work!") (Wiggins, 2012).

Outcomes-focused feedback adds to or rephrases advice or evaluations to give students direction on how to achieve the learning outcomes:

Reflective Practice & Revision

How long will it take to grade and provide feedback on each [evaluation](#) for every student in the class?

Effective feedback should be timely to allow students to actively engage with and learn from that feedback before the next evaluation. Consider the sequence and timing of evaluations as you develop your course materials.

Advice or Evaluation

Include more references to external sources in your essay.

Good work!



Outcomes-Focused Feedback

Include more references to external sources to show support for your ideas.



Good work! Your technical sketches adhere to industry standards and incorporate all of the necessary symbols and reference systems.

Timely and On-going Feedback

Effective feedback is given as soon as possible after the evaluation to help students connect the work they did or the effort they put into their work with the grade or level of achievement they have earned.

Additionally, students need to have feedback on their work before they complete another similar evaluation so they know how to improve. If they do not receive feedback on their work in a timely manner, they will continue to make the same mistakes or struggle with the same tasks in every evaluation.

For example, if you are evaluating your students with a series of assignments leading up to a midterm exam, ensure that you provide feedback for each evaluation early enough to allow students to learn from that feedback before submitting the next assignment and before preparing for the midterm exam:

WEEK	EVALUATION
WEEK 3	Assignment 1 due
WEEK 4	Return Assignment 1 and provide feedback
WEEK 5	Assignment 2 due
WEEK 6	Return Assignment 2 and provide feedback
WEEK 7	Midterm Exam

Effective feedback also occurs throughout the entire course as described in this evaluation-feedback cycle. Use a combination of informal evaluations (e.g., knowledge checks, observations, self-evaluations, peer-evaluations), low-stakes formal evaluations (e.g., quizzes, homework assignments), and high-stakes formal evaluations (e.g., unit tests, major projects, final reports) to provide students with on-going feedback about their learning.

Clear and Actionable Feedback

Effective feedback clearly identifies the item or performance that is being addressed rather than leaving students guessing about what they did wrong or what they did right. Effective feedback is also concrete and gives the students something to do or an action to take:

Unclear or Unactionable Feedback

This needs work.

What specifically needs work?

Nice job!

What was nice about my work?

No one could hear you at the back of the room while you were presenting.

How can I get everyone to hear me at the back of the room?



Clear and Actionable Feedback

This paragraph needs a topic sentence and a transition statement to help it flow with the rest of your essay.



Nice job! Your set of stairs is of solid construction and matches the design exactly.



No one could hear you at the back of the room when you were facing the board/screen with your back to audience while you spoke. When you turned around to face the classroom, you projected your voice and everyone could hear you.

Consistent Feedback

Effective feedback is stable or consistent over time, across evaluations, and for all students. Students can easily become confused about what is expected of them if they receive feedback that conflicts with the feedback they received on another evaluation. If the feedback (or grades) a student receives is different than the feedback his or her peers receive for the same quality or level of performance, the students may complain or request an appeal and, worst of all, their learning may be hindered.

Grading schemes such as rubrics can help you ensure that the feedback you provide students is consistent.

Learner-centered Feedback

Effective feedback is accessible to the student. It is not too technical or does not include information that is irrelevant to the student. Additionally, the feedback should be provided in a format or location that the student will see or access (e.g., on the assignment or test, on the rubric for the evaluation, on FanshaweOnline (FOL)).

Learner-centered feedback is also provided in a way that reflects the individual student's perspective and needs. For example, students in a first-semester course may need more feedback than students in a course in the final semester for a program. Or, if a student is struggling with many parts of an evaluation, you may not want to return an evaluation covered in red ink! In that case, a few targeted points of feedback and a suggestion to see the professor for additional support would give the student a manageable amount of work to do to improve.

4. Active Engagement with Feedback

In addition to planning how and when you will provide students with feedback on their learning, you also need to think about how you will support your students in using the feedback you provide to them and how you can guide them to reflect on their own learning.

For example, you can review graded assignments or tests in class when you return them to your students. Highlight the things that students did well on the assignment or test, and provide specific examples of how continuing to do those things will make them successful on future assignments and tests. Summarize the most common mistakes that students made on the assignment or test, and provide specific examples of how your students can learn from those mistakes. Focus on both the content-specific mistakes and the mistakes that students made in terms of their study habits (e.g., how or how long they studied for a test).

Alternatively, you could have students work independently or in groups to make corrections to their work based on your feedback before you review the results of the evaluations with the whole class.



[The Learning Centre](#)

Academic Assistance – Study Skills

Instructional Design Strategies

Practices that support efficient, targeted learning experiences take into account the limited capacity of working memory. Ensuring our students are not overloaded with additional content that does not directly contribute to learning and organizing relevant content into manageable segments are some of the practices we promote to support our students.

This section presents several strategies for formatting and organizing information to reduce excessive demands on students' working memory. This helps ensure that students have more brainpower to put toward processing the knowledge, skills, and attitudes you most want them to learn.

Establish Context for Students

Just as you began developing your course by establishing the context, ensure that your students are made aware of the context for the course content. The format and order you present course content in is very important in helping to establish context for your students.

To promote student understanding of the context for what they are learning, consider applying the following instructional design strategies:

- Think about the "scannability" of the course materials. Can students scan the page and get a good sense of the big picture?
- Provide cues to key points with judicious use of bolding, colour, and key-boxes.
- Make use of the Key-Leads format to describe key ideas.
- Use descriptive headings and subheadings for each section.
- Describe the big picture and real-world context.
- Relate content to what the students already know.
- Keep a consistent layout and order of educational material for each lesson.
- Ensure navigation is intuitive. The better sense of orientation that students have, the fewer questions they will have and the more trust and confidence they will develop toward the course.
- Break complex information into manageable chunks.
- Ensure content is in alignment with learning outcomes.
- Use a with clearly specified performance criteria.
- Tools such as checklists and progress meters can give students an encouraging sense of progress.
- Provide a summary at the end of each lesson to ensure take-away message is clear.

Cognitive Load Theory (CLT)

According to CLT, learning material is processed and remembered most effectively when it is provided in such a way that it does not overload the learner's mental capacity.

(Chen, Paas, & Sweller, 2017; Leppink, 2016; Plass, Moreno, & Bruken, 2010; Sweller, 1988; Sweller & Chandler, 1994, Sweller, van Merriënboer, & Paas, 1998)

Figure 13 and Figure 14 illustrate the impact of implementing these strategies.

<p>Instructions to Access the Training and Quiz ▾</p> <p>Posted Sep 17, 2013 2:32 PM</p> <p>Welcome to the Respect in the Workplace Training Module.</p> <p>To access the training click HERE.</p> <p>Once you have completed the Module, click HERE to open the quiz. You will need 16 Correct Answers in order to pass.</p> <p>Remember to save your answers and submit your quiz once you are done.</p> <p>Please take some time after completing the course and quiz to fill out this survey.</p> <p>If you have any questions about the course content please contact Organizational Development and Learning at extension 2972.</p>	BEFORE
<p>Respect in the Workplace Training</p> <p>Posted Sep 17, 2013 2:32 PM</p> <p>Welcome to the Respect in the Workplace Training Module.</p> <p>Training: Respect in the Workplace Training. You must complete this training in order to access the quiz.</p> <p>Quiz: Respect in the Workplace Quiz</p> <ul style="list-style-type: none">• You will need 16 Correct Answers in order to pass.• Remember to save your answers and submit your quiz once you are done. <p>Survey: Feedback on module.</p> <p>Questions? Contact Organizational Development and Learning at extension 2972.</p>	AFTER

Figure 13: Sample of how providing cues to key points and using the Key-Leads format will improve the learner's experience

Before (non-descriptive links)	After (descriptive links)
☰  Lesson 2 Video ▾	☰  Video: Know your audience ▾
☰  Week 2 PPT ▾	☰  QRG: Writing and Organizing Paragraphs ▾
☰  Week 2 Reading ▾	☰  Reading: Formatting Positive Messages ▾
☰  test ▾	☰  Assignment: Business Letters Exercise ▾

Figure 14: Sample of how providing descriptive links will improve navigation

Manage Multimedia

Incorporating multimedia such as images, videos, and simulations into a course is a great way to engage students and address learner variability (See [Universal Design for Learning](#) for more information about learner variability). How you incorporate that multimedia into your course is just as important as including it in the first place. Consider the instructional design strategies presented in this section to effectively manage and showcase the multimedia in your course.

Text and Images

To promote understanding of your text and images,

- Avoid irrelevant text, images, video and audio;
- Use a combination of text and visuals rather than text alone to explain complex concepts;
- Keep related text and visuals together;
- Use simplified line drawings rather than realistic, detailed images where possible;
- Use animations to teach physical procedures and still images to teach processes; and
- Combine the capacity of both audio and visual processing modes by offering video modules where possible.

Video and Simulations

Extensive research shows that audiovisual instruction is more effective than visual instruction alone because it optimizes the use of available information processing capacity (eyes and ears instead of eyes only) (Mayer, 2001, Modality principle). Combining auditory learning with visuals can result in significant gains in basic and higher-order learning. Text and images are processed through our visual subsystem and audio is processed through our auditory subsystem. Since each system has limited capacity, learners can learn more effectively if we combine the two as opposed to using just one (Paas, Renkl, & Sweller, 2004).

Short video lectures can be a great way to combine auditory and visual stimuli to present course content. Keep lecture videos short (less than 8 minutes) and interspersed with [formative assessment](#) material.

If you are going to prepare a video to include in your course, you must begin with a script. Consider the following strategies as you prepare a script for a video:

- Emphasize key ideas with limited text and visuals.
- Keep instructor's hands in view whenever practical.
- Use humour and a conversational tone, but remain on point.
- Project an enthusiastic, upbeat, relaxed demeanor.
- Keep videos short (less than 8 minutes).
- Provide formative knowledge checks to reinforce material.

- Make use of metaphor and analogy via green-screen technology background graphics.

Collaborate with an Instructional Design Expert

For additional support with your course, you can consult with an Instructional Design Expert who will work with you to transform your learning materials into optimal educational materials that make learning more efficient, effective, and appealing to students.



Centre for Academic Excellence

Instructional Design Experts

Instructional Design Experts work collaboratively with you, the subject matter expert, to design those optimal educational materials based on the principles of Cognitive Load Theory to achieve the following as illustrated in Figure 15:

- Ensure that key points are emphasized and content is segmented into manageable chunks;
- Help students gather the information they need as effortlessly as possible; and
- Improve the usability and pleasure provided in the interaction between the student and the course material or e-Learning resource.

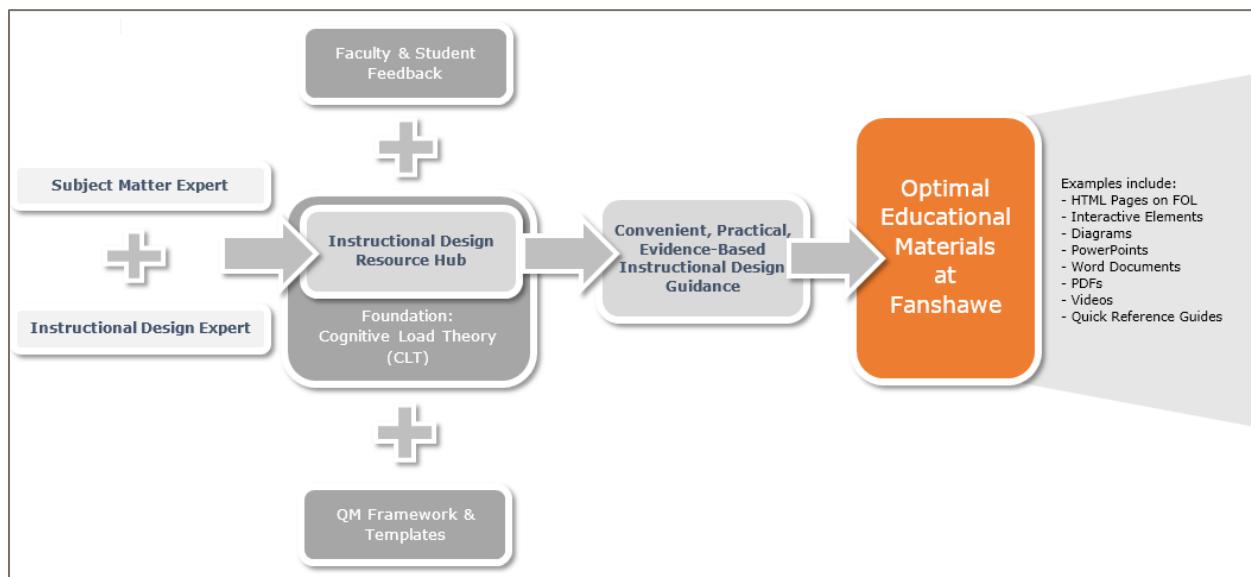


Figure 15: The process of developing optimal educational materials with an Instructional Design Expert



Workshops for further learning and training

- Introduction to e-Learning Resources
- Effective e-Learning
- So, You're Teaching a Blended Course... Now What?

Active Learning Strategies

Active learning refers to any instructional method that engages students in the learning process. As you prepare your course materials and plan your teaching and learning activities, think about how you will engage your students in the learning process. In this section, you will find a series of strategies that you can use to promote active learning.

Worked Examples

Worked examples are step-by-step solutions that allow students to see how a problem is solved by an expert (Clark, Nguyen, Sweller, 2006, p. 190). In the early stages of problem solving, it is more effective for students to study examples than to learn by blindly jumping in and trying to find a solution. Problem solving is best left to the later stages of learning (e.g., Kalyuga, Ayres, Chandler, & Sweller, 2003).

Learners who study worked-examples perform better on test problems than those discovering or constructing a solution to the problem. This phenomenon is known as the "Worked Example Effect" (e.g., Cooper and Sweller 1987). Worked examples allow students to devote more working memory resources to making sense of novel information.

Instead of spending their energy searching around for possible solutions, students can hone their energy towards accurate and meaningfully organized knowledge elements, which they then can use to solve related problems efficiently.

Example-Problem Pairs

Example-problem pairs are worked examples paired with problem-solving tasks. Provide students with expertly solved examples followed by equivalent problems for them to solve. Students can use the worked examples as a reference to solve a similar problem on their own.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including the development of teaching and learning activities. Use **worked examples** to remove barriers to learning in your course by highlighting patterns and critical features of solving a problem, completing a task, or creating a product.

For example, a mathematics professor presents a complete solution to a problem and then changes the numbers for the students to solve it.

An accounting professor sets up a worksheet in Excel and then modifies the parameters to have the students create their own worksheet.

A graphic design professor displays samples of students' logo designs from the previous semester and then changes the theme or product that the new students need to create a logo design for.

To reduce extraneous cognitive load of Worked Examples, reduce the problem space:

- Break examples down into parts with sub-goals made explicit.
- Provide worked examples paired with problem-solving tasks.
- Provide partially worked examples. Students can study the partial solution and complete the remainder themselves (e.g., provide fill in the blank challenges or ask them to identify missing steps).
- Provide systematic fading of examples to problems. Start with fully worked examples, followed by partially worked examples, and then related problem tasks (Renkl & Atkinson, 2003).

The Goal-Free Effect

Start with non-specific goals to reduce cognitive load. Instead of having students jump right into finding a definite solution, start students with learning tasks that have a non-specified goal. For example, ask students to find as many explanations for a list of symptoms as they can, instead of asking them to find the most probable explanation. This approach encourages students to extend their knowledge base without being encumbered with the greater working memory load that comes with finding a definite solution (Paas & Kirschner, 2012; Paas, Renkl, & Sweller, 2004).

Case Studies

The case method is a form of instructor-guided, discussion-based learning. Case studies present realistic stories involving a problem that one or more characters in the case must negotiate. Case studies give students practice identifying the parameters of a problem. They can help students learn to recognize and articulate positions, evaluate courses of action, and argue different points of view. Case studies can strengthen knowledge through the practice of integrating, manipulating, mixing and matching, and testing out other hypothesis (Barkley, Cross, & Major, 2005).



Quick-Reference Guides

Quick-Reference Guides (QRG) are popular, eagerly received documents that highlight the essentials of a given task or set of information. QRGs are often used to outline a procedure or set of facts using a set of step-by-step instructions with lists of critical values or key conceptual diagrams. QRGs are centered on providing a user-friendly format to make them easy to scan and retrieve essential information, make connections, and grasp big picture concepts. QRGs are great for showing connections. They work well as study aids and make an excellent resource for general guidance.

QRGs can come in many formats, although the most popular are the quick-reference card and a printable one-pager. Use the [Quick-Reference Guide Template](#) to organize key topics or processes from your content. Follow the prompts in the template to enter in your information. See the Bloom's Taxonomy Resources in [Appendix A](#) for an example of how the QRG has been used.

Scenarios

After providing an organized, conceptual framework for reference, consider giving students an opportunity to explore aspects and the resolution of a problem through a realistic storyline. Navigating through the decision-points of branching scenarios encourages the application of knowledge, critical thinking and problem solving skills (Holmes, Wieman, & Bonn, 2015).

Knowledge Transfer and Reflection

Students need the ability to adapt their thinking to various contexts. Knowledge is flexible and transferable when it can be pulled out of the context in which it was learned and applied in new contexts.

To help increase reflection and transfer of knowledge, consider implementing some of the following strategies in your course:

- **Diverse Contexts** – Give students opportunities to practice applying skills in various contexts. This helps students learn to consider various angles and organizing structures. Scenarios and worked examples offer good opportunities to present diverse, realistic situations.
- **Structured Comparisons** – Present two scenarios in which the surface features are similar, but the underlying principles at work are different. Or, present two situations in which the surface features are different, but the principle is the same. Structured comparisons like this encourage students to identify and focus on underlying structural similarities and differences. It cautions them not to be fooled by superficial features.
- **“What if”** – Provide a scenario followed by questions with feedback, and then vary the context by asking “what if”. This helps students learn how variables can alter the correct course of action.
- **Reflection** – Encourage students to step back and identify the underlying principle.
- **Argument Analyzation** – Have students evaluate the merits of an argument by identifying the lines of reasoning, considering multiple viewpoints, and listing the strengths and weaknesses.
- **Skills and Context** – Show a set of skills and ask what contexts apply, and then show a context and ask what skills apply.
- **Knowledge Framework** – Provide higher-level conceptual frameworks and strategies (e.g., concept maps)
- **Concept maps** – Provide lists of concepts and ask students to arrange and connect them, labeling the links.
- **Predictions** – Ask students to make and test predictions and justify their reasoning. Generation effect – deeper learning can result from asking students to anticipate new knowledge.
- **Intrigue** – Get students curious. “Wonder is the beginning of wisdom”.
- **Knowledge Types** – Differentiate between declarative knowledge (knowing what and knowing why) from procedural knowledge (knowing how and knowing when) to ensure deeper understanding.

Retrieval Practice

Offer low-stakes, formative retrieval practice with immediate feedback. Retrieval practice is the exercise of retrieving information from memory (e.g. using flashcards).

The Need for Practice

Slower, effortful recall of information from memory strengthens connections in the brain and is much more effective than re-reading, taking notes, or listening to lectures.

Breaking up lessons with low-stakes, formative retrieval practice reinforces the material and gives students the opportunity to construct more "retrieval hooks". Retrieval hooks are mental hooks of related knowledge that allow the learner to retrieve the information from memory. For example, you may follow a slide that presented a new concept with a slide that asks a question about that concept. The student can then pull from memory details about the previous example and reinforce the material into long-term memory.

Knowledge Checks

Knowledge checks are a way to encourage retrieval practice. Knowledge checks are simply outcome-targeted questions dispersed throughout learning material. They are no-pressure, ungraded, optional opportunities for students to strengthen knowledge connections, stay engaged and on track.

The Evaluation-Feedback Cycle

Incorporate knowledge checks into your course to help students actively engage with feedback as part of the [evaluation-feedback cycle](#).

Consider the following strategies for implementing knowledge checks in your course:

- **Immediate feedback** – Provide immediate feedback so students can know if they are on track. Interactive e-Learning modules created with tools such as Adobe Captivate can be used to provide knowledge checks with immediate feedback.
- **Intermittent Delayed Explanation** – Knowledge checks created with tools such as Adobe Captivate can be set to provide correct/incorrect feedback with delayed explanation. The incorrectly answered question can be set to pop-up again later in the module with the full-feedback included at that time. This method of feedback helps students learn to recognize and repair their own errors.
- **Fading Scaffolds** – A fading scaffold is a gradual decrease in the level of guidance. For example, hints can be given for knowledge check questions to support students early on, and then they can be gradually removed so students can develop greater mastery without the supports. Another example of a fading scaffold is to have students start with practicing discrete phases of task and then gradually have them integrate the phases as one complete task.
- **Spaced practice** – Include knowledge checks designed to review content from weeks earlier (e.g., flashcards).
- **Interleaved practice** – Interleaved knowledge checks involve mixing, or *interleaving*, practice on several related topics together. For example, you can

include a knowledge check question relating to a topic from a previous module. This strategy helps students discriminate between subject areas and has been shown to produce significant gains in learning.

Note: The full benefits of feedback can only be realized when students can incorporate that feedback into further practice.

Student Metacognitive Skills

Metacognitive strategies facilitate learning how to learn. Providing students with strategies and techniques for understanding and controlling their own cognitive performance can lead to improved learning outcomes. Students have effective metacognitive skills when they know *what* learning strategies to use and *how* to monitor their learning progress. For examples of strategies that you can share with your students, review the strategies and activities presented in the [Additional Resources](#) section.



Workshops for further learning and training

- Experiential Learning
- Effective e-Learning

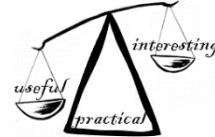


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SubHeading

Double-click the **Main Heading** to edit the title. To exit out of editing the Header, select the **Design** tab and click the **Close Header & Footer** button.



Quick Reference Guides (QRG) are documents designed to highlight the essentials of a given task or set of information. They are often used to outline a procedure or set of facts using a set of minimal step-by-step instructions with lists of critical values or key conceptual diagrams. QRGs should be easy to scan so readers are able to quickly retrieve the information they need, make connections, and grasp the big picture. Quick references can work well as study aids and just-in-time instructions. QRGs are *not* meant to be exhaustive.

NOTE: ALL text & images in this template **MUST** be replaced with your material.

QRG Writing Tips

- Eliminate needless words and images.
- Use succinct, descriptive headings and subheadings so readers can effortlessly locate specific information.
- Think SCANNABILITY. Can your audience scan the page and quickly find what they need?
- Provide cues to key points with judicious use of **bolding**, **colour**, and Key-Boxes.
- Make use of the Key-Leads format to describe key ideas (**Key idea bolded**: followed by a colon and succinct description).
- Use a combination of text and visuals rather than text alone to explain complex concepts.
- Use simplified line drawings rather than realistic, detailed images where possible.
- Consider adding icons to emphasize topic areas.

Positioning Images

To control the position of an image:

1. Select image.
2. Click the Layout Options icon that appears.
3. Select **Tight Text Wrapping** and **Fix position on page**.
4. Click and drag your image to desired position.

Carefully craft your QRG to ensure your readers can easily find what they need. **Subheadings** are great for cueing readers to what lays ahead – use lots of them and be sure to make them descriptive and succinct.

Succinctness Comparison

"Below you will find some tips for writing a QRG" **vs.** "QRG Writing Tips"

Printing your QRG One-Pager

Click **File | Print** and select **Print on Both Sides**

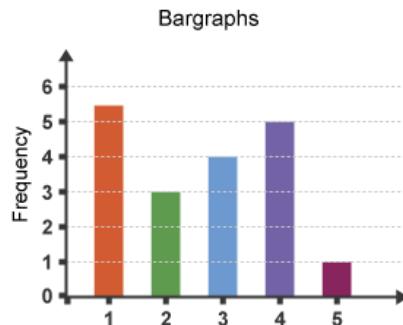
Main Heading

Section Heading

Section SubHeading

Good writing embodies Four Cardinal Virtues:

1. Clarity honors the reader
2. Economy honors the language
3. Precision honors the subject
4. Grace honors writing itself



The Growth Mindset

Single Lines

Pressing **Shift + Enter** in Word inserts a line break.

This is Filler Text. Mindset is a simple idea discovered by world-renowned Stanford University psychologist Carol Dweck in decades of research on achievement and success—a simple idea that makes all the difference.

In a **fixed mindset**, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. They also believe that talent alone creates success—without effort. They're wrong.

In a **growth mindset**, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment. Virtually all great people have had these qualities.



Section Heading

SubHeading

1. **Sample Key Idea:** Description filler text Description **bolded idea** Description filler text Description filler text Description filler text Description filler text Description filler text.
2. **Sample Key Idea:** Description filler text Description **filler text** Description filler text Description filler text Description filler text.
3. **Sample Key Idea:** Description filler text Description descriptive link text Description filler text Description filler text Description filler text.
4. **Sample Key Idea:** Description filler text Description filler text **bolded idea** Description filler text Description filler text.
5. **Sample Key Idea** Description filler text ~~unnecessary sentence deleted~~ Description filler text Description filler text Description filler text Description filler text Description filler text.



Deliverable 2 – Lesson Plans

Before you begin, ensure you have the following materials for your course:

- Course Learning Outcomes & Essential Employability Skills ([Deliverable 1](#))

Open or print the following templates and resources, which will be used to prepare this deliverable:

- [Lesson Plan Template – Basic](#)
- [Lesson Plan Template – Comprehensive](#)

Note: You may want to develop your Lesson Plans, Teaching & Learning Materials ([Deliverable 3](#)), and Evaluation Tools ([Deliverable 4](#)) together at the same time.

In this section, you will prepare the **lesson plans** for your course. To do that, you will link your Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks ([Deliverable 1](#)) with lesson learning objectives. You will also outline the teaching and learning activities that will take place and identify the methods of evaluation you will use to check for understanding.

Lesson plans are dynamic, time-saving documents used in curriculum design and delivery. There are three primary components to effective lesson plans:

1. **Lesson Learning Objectives** that align with the Course Learning Outcomes (CLOs);
2. **Teaching & Learning Activities** that will allow your students to achieve the learning objectives; and
3. **Methods of Evaluation** including non-graded activities (informal evaluations) and formal evaluations to measure students' achievement of the learning objectives.

Constructive Alignment

Within every course, there should be alignment among the desired **learning outcomes**, the **teaching and learning activities**, and the **evaluation methods** used to measure achievement of the learning outcomes.



For more information about constructive alignment, review the [Guiding Principles](#) for the Course Development Process.



"Why do I need to develop and use lesson plans?"

There are many reasons to use lesson plans in your teaching:

- Lesson plans **keep you organized**, which will give you peace of mind and boost your confidence when you are in the classroom.
- They are an **excellent resource** that can be shared with your faculty team and used for future offerings of the course.
- Lesson plans provide you with a **record of the activities** that take place in your course, which is valuable to have for performance evaluations or in the event that a student makes an appeal.
- Lesson plans can be used as a **guide for reflective practice**, and they support continuous quality improvement for you and your course.
- They can also be used as **evidence of quality assurance measures** to meet audit or accreditation requirements for the use of "structured instructional plans" ([CQAAP Requirement 6.2](#)).

Lesson Plan Templates

To guide you in developing your lesson plans, Fanshawe College has two templates: a [basic template](#) and a more [comprehensive template](#). As long as you include the three key components (i.e. lesson learning objectives, teaching and learning activities, and methods of evaluation), you can structure or format your lesson plan however you want to.

Both the basic and the comprehensive templates include sections for you to include general details about your course and lesson (e.g., course code and name, lesson title, the date the lesson will be delivered, and the length of time for the lesson).

Lesson learning objectives, teaching and learning activities, and evaluation methods are also included on both of the lesson plan templates. These key components are highlighted in grey on each template.

The comprehensive lesson plan provides you with a framework for estimating the timing of each activity, identifying any resources you or your students will need, and aligning each activity with an informal or formal evaluation.

Both lesson plan templates also include a section for reflection, which is to be used after you deliver the lesson.



"How long is one lesson? Do I need a separate lesson plan for each class I teach?"

How you define your lessons – by class, by week, by topic or theme – is entirely up to you, and your choice will likely depend on several situational factors, such as the delivery method(s), the delivery environment(s), the schedule/timetable for the course, and the content of the course itself.

For example, if your course will be delivered entirely online, you may want to divide your lessons into topics/themes based on how your students will engage with the course content. For more information about how to structure lessons online, refer to [Deliverable 7 – FOL Course](#).

If you are teaching students face-to-face in both a classroom and a lab environment, you may want a separate lesson plan for each environment, or you may want one lesson plan that includes the teaching and learning activities from both environments.

A course that runs three hours per week may be divided into a two-hour block and a one-hour block. If you are teaching multiple sections of the same course, one section may have the two-hour class first while another begins with the one-hour class. In situations like this, you may prefer to have one lesson plan for the whole week (the full three hours) and divide it as needed for each section.

Remember that lesson plans are meant to be dynamic, time-saving documents. As such, lesson plans can and should be adjusted or modified on an on-going basis.

Step 1 – Identify Lesson Purpose and Draft Lesson Learning Objectives

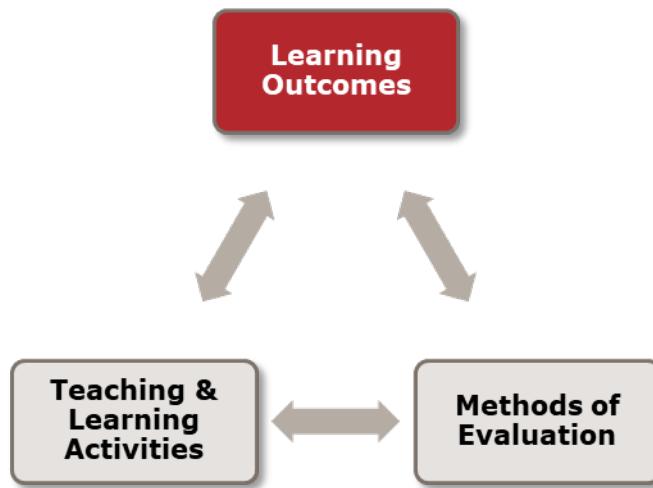


Figure 16: Constructive Alignment – Learning Outcomes

The **purpose of the lesson** is the “why” of the lesson. Why are you teaching this material? Where and how does this lesson fit into the course and program curriculum?

The **lesson learning objectives** describe what the students will know or be able to do by the end of the lesson. These lesson learning objectives should be cross-referenced to or aligned with the CLOs and EESs/DLS benchmarks (Figure 16).



Course Learning Outcomes & Essential Employability Skills/Degree Level Standard Benchmarks

To determine the purpose of the lesson and to prepare lesson learning objectives, begin by referring to the CLOs and EESs/DLS benchmarks for your course ([Deliverable 1](#)). Depending on the scope of the outcome and the length of your lesson, you can use the CLOs or ESSs/DLS benchmarks as your lesson objectives, or you can develop more detailed objectives that expand on those outcomes.

Example #1: Professional Communications Course

In a professional communications course, one of the CLOs may be as follows:

Create a resume and letter of application for use in employment.

In a one-hour lesson, two lesson learning objectives may contribute to the achievement of that CLO:

1. *Distinguish between types of resumes (i.e. chronological, functional, combination, targeted); and*
2. *Choose an appropriate resume type.*

Example #2: Mathematics Course

In a mathematics course, one of the CLOs may be as follows:

Apply the techniques of factoring to simplify fractional expressions and solve fractional equations.

To achieve this CLO, students will first need to be introduced to the techniques of factoring before they can apply them, so there may be a series of lessons (one hour each) that present those techniques:

Lesson 1 – Common Factors

1. *Describe the difference between “term” and “factor”.*
2. *Identify the factors for monomials and identify the factor that is common to multiple terms.*

Lesson 2 – Difference of Squares

1. *Recognize the difference of two squared values (e.g., $x^2 - y^2$, $49 - 25$).*
2. *Identify the two factors for the difference of two squared values (e.g., $(x + y)(x - y)$, $(7 + 5)(7 - 5)$), the product of the sum of the two values and the difference of the two values.*

Lesson 3 – Factoring Trinomials

1. *Recognize the form or structure of trinomial expressions including the coefficients and constants (e.g., $x^2 + (a + b)x + ab$).*
2. *Identify the form of the two factors for the trinomial (e.g., $(x + a)(x + b)$).*
3. *Factor trinomial expressions when the coefficient of the x^2 term is 1 and when the coefficient of the x^2 term is another value.*

Next, the students will need to be introduced to fractional expressions and fractional equations in another series of lessons:

Lesson 4 – Fractions – Review of Fundamentals

1. *Review the fundamental principles of fractions, equivalent fractions, and simplest form/lowest terms.*
2. *Review and perform operations involving fractions: multiplication, division, addition, subtraction.*

Lesson 5 – Fractions – Polynomials

1. *Perform operations involving fractions with polynomials: multiplication, division, addition, subtraction.*
2. *Solve simple equations involving fractions by eliminating the fraction before solving for the unknown.*

Finally, with the knowledge and skills to use a variety of factoring techniques and to work with simple fractional expressions and equations, the students will be ready to achieve the CLO:

Lesson 6 – Fractional Expressions and Equations

- 1. Apply the techniques of factoring to simplify fractional expressions and solve fractional equations.*

While you are preparing your lesson learning objectives, think about the importance of each objective. What are the most important concepts or skills that you want your students to know or be able to do by the end of that lesson? Which concepts or skills could be skipped, presented in another lesson, or delivered from an alternate source (e.g., textbook, online video)?

Identifying the most important concepts or skills and activities for each lesson will help you in Step 2 as you plan your teaching and learning activities and think about the timing and sequencing of each lesson.

Identify your lesson learning objectives and the CLOs that they align with in your lesson plan. Figure 17 provides an example for ERGO 6005, Research in Ergonomics.

Course and Lesson Details	<i>Enter your course details in the cells below.</i>
Course Code and Name	ERGO-6005 Research in Ergonomics
Topic/Title of Lesson	Critical Analysis of Research (Part II)
Purpose of Lesson	To further analyze research articles with a critical eye, identify strengths and weaknesses, interpret findings, assess what gaps exist, and then look to correct ergonomic misconceptions found in public/workplace
Week/Hour/Unit/Module (corresponds to the Course Plan)	4
Total Time for Lesson	3 hours
Date and Section	TBD

Lesson Learning Objectives <i>(What will students know or be able to do by the end of the lesson? Lesson objectives are more specific than course learning outcomes.)</i>	Relevant Course Learning Outcome(s) <i>(from Course Outline)</i>	Related Essential Employability Skill(s) <i>(from Course Outline)</i>
1 Critical thinking – analyzing and dissecting research	CLO #2	EES #4, #5
2 Apply learnings of critical article analysis to begin to question and identify ergonomic misconceptions	CLO #4	EES #4, #5

Figure 17: Sample Lesson Plan – Lesson Learning Objectives – ERGO-6005 Research in Ergonomics

Step 2 – Outline Teaching & Learning Activities

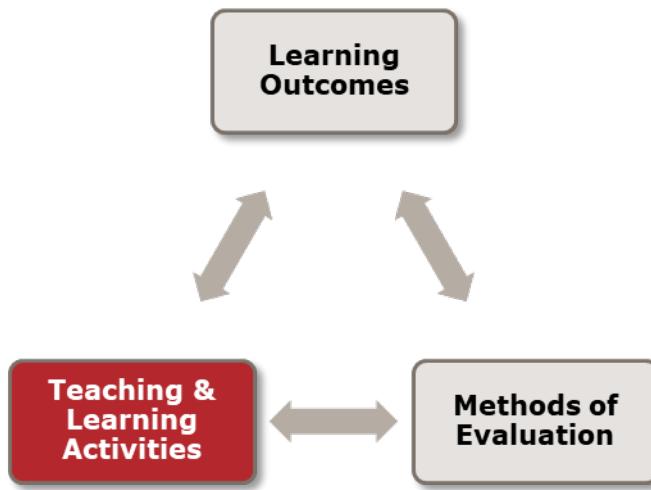


Figure 18: Constructive Alignment – Teaching & Learning Activities

Teaching activities are the activities that you (or the professor delivering the course) will do throughout the course. Teaching activities include how you will deliver the course material and how you will check for student understanding of the CLOs.

Learning activities are the activities that your students will engage in throughout the course. Learning activities refer to how the students will interact with the course material and demonstrate their understanding of the CLOs.

Recall that the teaching and learning activities need to align with the CLOs and the methods of evaluation (Figure 18). Using [Bloom's Taxonomy](#) as a framework, check that the teaching and learning activities allow students ample practice in the same domain and level at which they will be measured.

Reflective Practice & Revision

Check those verbs! Do you need to update your CLOs ([Deliverable 1](#)) based on the teaching and learning activities or evaluation methods you are planning for your course?

While you plan the teaching and learning activities for each of your lessons, you may also want to prepare the teaching and learning materials that will be needed for each of those activities ([Deliverable 3](#)). Additionally, you will need to summarize the learning activities that students will engage in on your Course Outline ([Deliverable 6](#)).



[Teaching & Learning Materials](#)



Course Outline & Course Plan

Lesson Structure

Each lesson should include an introduction and a conclusion. The introduction should catch the students' attention, give an overview of the current lesson, and/or provide a link to the previous lesson. The conclusion should summarize the key points from the lesson and/or provide a preview of the next lesson.

Timing

Estimate the amount of time that each activity in your lesson will take. To do so, keep the following points in mind:

- Students may have questions, instructions may need to be repeated, or technology and equipment may not work properly. Plan a little extra time for each activity to account for any disruptions.
- On the other hand, everything could go smoothly, and you could find that you finish all of the activities early. Plan an extra activity (e.g., additional examples, discussion questions) in case you have time left at the end of the class.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design that supports learner variability through multiple means of representation (Principle 1 – The "What" of Learning).

For example, after students complained about having no context for the lectures in a biology course, the professor began each lesson with a synopsis of the key concepts for that class and how they relate to major themes in the course.

A writing professor receiving similar complaints from her students started posting short videos on FOL before each class as a trailer or teaser for the face-to-face lesson.

When an architectural technology professor finished his lesson earlier than anticipated he had his students take out their smartphones and search for and share examples of buildings designed using the techniques he just taught them.

Describe your teaching and learning activities in your lesson plan. Figure 19 shows a sample of the lesson plan for ERGO-6005, Research in Ergonomics, which was introduced in Step 1.

Time	Content	Teaching & Learning Activities*	Lesson Resources/Materials	Checking for Understanding**
00:00-00:05	Drawing names for <i>Individual Presentation #1 (20%)</i> time slots (weeks 5&6)	N/A	N/A	N/A
00:05-00:10	Housekeeping Collect <i>Group Report #1 (15%)</i>	Brief discussion on how students felt the assignment went? Were there any major challenges? (gathering feedback for course improvement)	N/A	Classroom discussion and reflection
00:10-00:15	Topic Background	Open discussion – have you used a lifting belt before? When? Where? Why?	N/A	Classroom discussion
00:15-00:40	Analyze 1 st ergonomics article	Critically analyze and discuss prescribed journal article Take classroom poll, “where does everyone stand on lifting belts at work as ergonomic aide?” using anonymous polling on smart phones (www.polleverywhere.com)	Example source(s): <ul style="list-style-type: none">• Thomas et al. (1999) And accompanying slide with summary points	Organize into groups and compare individual work sheets. What did you have in common, where did you disagree? Present to your findings to the class
00:40-1:05	Analyze 2 nd ergonomics article	Critically analyze and discuss prescribed journal article Update poll	Example source(s): <ul style="list-style-type: none">• Marley & Diggassani (1996) And accompanying slide with summary points	Organize into (different) groups and compare individual work sheets. What did you have in common, where did you disagree? Present to your findings to the class

Figure 19: Sample Lesson Plan – Teaching and learning activities and checking for understanding – ERGO-6005 Research in Ergonomics

Step 3 – Identify Methods of Evaluation

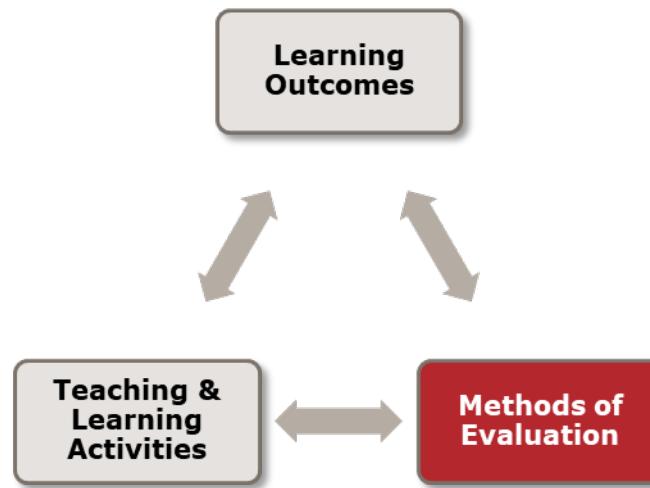


Figure 20: Constructive Alignment – Methods of Evaluation

Evaluations measure student performance of achievement of the learning outcomes, and methods of evaluation include both **informal** checks for understanding and **formal** evaluation tools.

Informal evaluation or assessment refers to the non-graded evaluations that typically take place throughout a lesson to gauge how students are progressing. These can be as simple as observations made while students are working, discussions (in-class or online), practice or knowledge check questions, etc.

Formal evaluation or assessment refers to the graded evaluations that occur throughout the course – tests, quizzes, assignments, projects, exams, etc. In [Deliverable 4 – Evaluation Tools](#), you will learn more about how to prepare and use these types of evaluations in your course.

Authentic Assessment

Authentic assessments measure a student's ability to complete "real world" tasks. Students find highly authentic evaluations useful and engaging because they give them an idea of what they will be doing in the workplace.

As you design your evaluations, think about the tasks your students will need to be able to perform in the workplace. How will they apply their knowledge and skills?

For examples of authentic assessments, refer to the [Continuum of Authentic Assessment](#).



[Evaluation Tools](#)

Recall that the methods of evaluation need to align with the CLOs and the teaching and learning activities. Using [Bloom's Taxonomy](#) as a framework, check that the evaluation methods measure student performance in the same domain and at the same level as the CLOs.

While you plan the methods of evaluation for each of your lessons, you may also want to prepare the evaluation tools that will be needed.

Describe your evaluation methods including the ways that you will check for understanding throughout the lesson and the formal evaluations linked to the lesson content. Figure 19 in Step 2 shows how the professor will check for understanding through the lesson in ERGO-6005, Research in Ergonomics.

Implement the Lesson Plans

You will notice that there is one section left to complete on your lesson plan templates:

Reflection. Lesson plans can and should be adjusted or modified on an on-going basis including in the classroom while you are delivering the lesson and after you have delivered it. Use that section to note the things that went well or did not work in your lesson after you have delivered it. Did you run out of time or have lots of time left over after completing the activities you had planned? Were there any topics or activities that students struggled with? Which topics or activities did they enjoy? Did you have all of the materials or resources you needed to deliver the lesson?

The purpose of engaging in reflective practice after each lesson is to help you to prepare for future lessons: How can you improve the lesson the next time you deliver it? Or, how can you improve your next lesson in this course? Do you need to add or reinforce course content in another lesson or using an alternate source?

Reflective Practice & Revision

Before you move on, review your lesson plans including the lesson objectives, teaching and learning activities, and evaluation methods:

- Have you addressed all of the Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs) in your lessons?
- Have you planned teaching and learning activities that provide opportunities for students to practice in the same domain and level at which they will be measured (Review [Bloom's Taxonomy](#))?
- Will the evaluation methods measure student performance in the same domain and at the same level as the CLOs (Review [Bloom's Taxonomy](#))?

If necessary, review and adjust your CLOs to ensure alignment among the outcomes, teaching and learning activities, and evaluation methods ([Deliverable 1](#)).

You may need to adjust your lesson plans as you prepare the associated learning materials ([Deliverable 3](#)) and evaluation tools ([Deliverable 4](#)).

You will use your lesson plans as you prepare your Course Plan ([Deliverable 6](#)) and FOL Course ([Deliverable 7](#)).



Workshops for further learning and training

- Lesson Plan: Linking Course Outcomes to Lesson Objectives

Lesson Plan
Basic

Course and Lesson Details	<i>Enter your course details in the cells below.</i>
Course Code and Name	
Topic/Title of Lesson	
Purpose of Lesson	
Week/Hour/Unit/Module <i>(corresponds to the Course Plan)</i>	
Total Time for Lesson	
Date and Section	

Lesson Learning Objectives <i>(What will students know or be able to do by the end of the lesson? Lesson objectives are more specific than course learning outcomes.)</i>	Relevant Course Learning Outcome(s) <i>(from Course Outline)</i>	Related Essential Employability Skill(s) <i>(from Course Outline)</i>
1.		
2.		
3.		

Teaching and Learning Activities <i>(What will I do and what will students do to achieve the learning objectives? e.g., demo, lecture, discussion, hands-on practice, group problem solving)</i>

Checking for Understanding <i>(What non-graded activities, also known as classroom assessment techniques or CATs, within this lesson will specifically allow me to check for student understanding? e.g., discussion, in-class exercises, homework, questions, "muddiest point", minute paper, clicker questions)</i>

Evaluation <i>(How will I evaluate learning from this lesson within this course?) Cross reference to "Evaluation" on Course Outline (e.g., quiz, lab, test, project, exam).</i>

Reflection <i>(Were the lesson objectives met? How do I know? What worked well? What didn't work? How can I improve the lesson?)</i>

Key Components of a Lesson Plan (Minimum): Have you included the learning objectives (outcomes), teaching and learning activities, and methods of evaluation for this lesson identified with grey-filled cells in this template?

Universal Design for Learning (UDL): How will I design and deliver my course to be more teacher and student friendly? Do I have a single, one-size-fit-all approach or can I adjust what I do to address the variability of the learners in my class and provide opportunities for them to fully demonstrate their learning?

OCQAS Accreditation Quality Standards 3 and 4

**Lesson Plan
Comprehensive**

Course and Lesson Details	<i>Enter your course details in the cells below.</i>
Course Code and Name	
Topic/Title of Lesson	
Purpose of Lesson	
Week/Hour/Unit/Module (corresponds to the Course Plan)	
Total Time for Lesson	
Date and Section	

Lesson Learning Objectives <i>(What will students know or be able to do by the end of the lesson? Lesson objectives are more specific than course learning outcomes.)</i>	Relevant Course Learning Outcome(s) <i>(from Course Outline)</i>	Related Essential Employability Skill(s) <i>(from Course Outline)</i>
1		
2		
3		
4		

Time	Content	Teaching & Learning Activities*	Lesson Resources/Materials	Checking for Understanding**
	Housekeeping (e.g., announcements, reminders)			
	Introduction (e.g., agenda, attention-getter, link to previous lesson, benefits)			
	Knowledge Check (e.g., review of previous knowledge/skills/attitudes)			
	ADD TOPIC			
	ADD TOPIC			
	ADD TOPIC			
	Conclusion (e.g., link to lesson objectives, preview next lesson, summary of key points)			
	Housekeeping (e.g., homework, reminders)			

***Teaching and Learning Activities:** *What will I do and what will students do to achieve the learning objectives? e.g., demo, lecture, discussion, hands-on practice, group problem solving*

****Checking for Understanding:** *What non-graded activities, also known as classroom assessment techniques or CATs, within this lesson will specifically allow me to check for student understanding? e.g., discussion, individual or group homework exercise, questions, “muddiest point”, minute paper, clicker questions.*

Evaluation

(How will I evaluate learning from this lesson within this course?) Cross reference to “Evaluation” on Course Outline (e.g., quiz, lab, test, project, exam).

Reflection

(Were the lesson objectives met? How do I know? What worked well? What didn’t work? How can I improve the lesson?)

Key Components of a Lesson Plan (Minimum): Have you included the learning objectives (outcomes), teaching and learning activities, and methods of evaluation for this lesson identified with grey-filled cells in this template?

Universal Design for Learning (UDL): How will I design and deliver my course to be more teacher and student friendly? Do I have a single, one-size-fits-all approach or can I adjust what I do to address the variability of the learners in my class and provide opportunities for them to fully demonstrate their learning?

OCQAS Accreditation Quality Standards 3 and 4

Deliverable 3 – Teaching & Learning Materials

Before you begin, ensure you have the following materials for your course:

- Course Learning Outcomes & Essential Employability Skills ([Deliverable 1](#))
- Lesson Plans ([Deliverable 2](#))

Open or print the following templates and resources, which will be used to prepare this deliverable:

- [Teaching & Learning Materials Summary](#)

Note: You may want to develop your Lesson Plans ([Deliverable 2](#)), Teaching & Learning Materials, and Evaluation Tools ([Deliverable 4](#)) together at the same time.

For this deliverable, you will acquire or develop the **teaching and learning materials** that will support the teaching and learning activities you have described in your [Lesson Plans](#) and align with the [Evaluation Tools](#) you will use to measure students' achievement of the Course Learning Outcomes (CLOs).

Teaching

- **Teaching activities** are the activities that you (or the professor delivering the course) will do throughout the course. Teaching activities include how you will deliver the course material and how you will check for student understanding of the CLOs.
- **Teaching materials** are the materials or resources that you will use to carry out those teaching activities. For example, in order to deliver a lecture (the teaching activity), you may need lecture notes and PowerPoint slides (the teaching materials).

Learning

- **Learning activities** are the activities that you will engage your students in throughout the course. Learning activities refer to how the students will interact with the course material and demonstrate their understanding of the CLOs.
- **Learning materials** are the materials or resources that your students will need to use to support the intended learning. For example, if you want your students to engage in a discussion together in class or online about a course topic or a case study (learning activity), you may need to prepare a list of discussion questions or prompts to provide to students in a handout (learning material).

To guide you in developing your teaching and learning materials, Fanshawe College has a [Teaching & Learning Materials Summary Template](#). As long as you keep track of the materials you need to acquire or develop for your course, you can structure or format your summary however you want to.

Step 1 – Identify Learning Resources

Identify the resources that your students may need to obtain to support the intended learning in your course. Later, you will include this information in the “Learning Resources” section on your Course Outline.



[Course Outline & Course Plan](#)

Here are some examples of the types of resources that you may want your students to purchase/provide:

- Publications/Textbooks – Include a full reference for any publications needed (print or e-book format). The reference should include the publication’s title, author(s), publisher, date of publication, and ISBN.
- Instruments/Equipment – Calculators, lab coats, lab kits, tools, uniforms, etc.
- Computing Resources – Software (include the version number), hardware, internet access

Textbooks and Other Course Materials

Contact your Curriculum Lead or Academic Manager for the most up-to-date list of all of the textbook publishers that can be used and to find out what textbooks are being used in other courses from the same program your course is part of.

As the Course Developer, you will be responsible for selecting any textbooks that will be needed in your course. After you have selected the textbook(s) for the course, textbooks will be ordered by Retail Services – Campus Store when you enter your textbook information into the course outline using the Course Outline Mapping and Management System (COMMS) (See [Deliverable 6: Course Outline & Course Plan](#) and [Appendix B: COMMS Course Outline Writer Instructions](#)).



[Retail Services – Campus Store](#)

Textbooks

Contact the Library & Media Services to place high demand course materials including required and recommended textbooks on reserve at the library.



[Library & Media Services](#)

Course Reserves



"How do I choose a textbook for my course?"

First, make note of the textbooks that are being used in other courses that your students will take. You can contact your Curriculum Lead (See [Roles & Responsibilities](#)) for support with identifying the textbooks used in other courses.

Depending on how much overlap there is between your course and another, you may or may not want to use the same textbook. For example, in some programs, if there is a series of mathematics courses that build on each other across various levels of the program, it may be beneficial to select one comprehensive math textbook and use different chapters from it in each course. In other cases, it may be more beneficial to provide students with multiple sources or perspectives throughout the program.

Next, check out the websites for the available textbook publishers to see what textbooks are available and request a "Desk Copy" to review.

While you review a potential textbook, consider the following:

- Is this textbook at the "right" level for the content, program, and students?
- Does the textbook have any special features for students that will enhance their learning (e.g., e-book version, virtual labs or workshops, practice exercises, online lessons or interactive sessions)?
- Does the textbook have any instructor resources (e.g., lectures including PowerPoint slides decks or virtual lessons, lab manuals, online exercises or quizzes/tests, test question banks)?
- What are the costs and restrictions associated with accessing online or e-book materials (e.g., availability of online content after the end of a course)?

Enter your course information and learning resources into Part 1 of the [Teaching & Learning Materials Template](#). Figure 21 provides an example of the learning resources identified for MATH-3011, Mathematics for Technology 2.

Textbooks: Desk Copies

Publishing companies will send you a "Desk Copy" or "Examination Copy" of a textbook to review for your course free of charge.

E-mail the representatives from the publishing companies using your Fanshawe College e-mail address. A list of representatives is available from the bookstore.

Be sure to ask the publishing company to send you any access codes or instructions so that you can access or set up any online components of the textbook.

PART 1: LEARNING RESOURCES		<i>Enter learning resources in the cells below.</i>
REQUIRED LEARNING RESOURCES		<ul style="list-style-type: none"> • Textbook <ul style="list-style-type: none"> • TITLE: <i>Basic Technical Mathematics with Calculus (Latest Edition)</i> • AUTHOR: - Allyn J. Washington • PUBLISHER:- Addison-Wesley • ISBN:- 0-201-51903-8 • An approved CEY2 Program Calculator for use during all class tests and examinations: <ul style="list-style-type: none"> • <i>CASIO fx-300 or fx-300ES,</i> • <i>SHARP EL-351 or EL-W535, and</i> • <i>All TI 30x models</i> • NOTE: Model extensions are acceptable for these calculators (e.g., EL-531XBWH)
RECOMMENDED LEARNING RESOURCES		N/A

Figure 21: Sample of Part 1 of the Teaching and Learning Materials Template – MATH-3011 Mathematics for Technology 2

Step 2 – Identify Materials and Locate Sources

For each lesson in your course, identify the teaching and learning activities that will take place. Then, for each teaching and learning activity, identify the materials or resources you will need to acquire or develop (e.g., lecture notes, PowerPoint slides, textbook readings, handouts, videos, summaries, case studies).

Enter this information into Part 2 of the [Teaching & Learning Materials Template](#).

After you have identified the teaching and learning materials you will need for your course, you will need to locate sources you can use to acquire or develop those materials.

Make note of your sources and/or any additional information related to each lesson (e.g., materials to develop or modify at a later date, instructions for releasing materials on FOL) in Part 2 of the [Teaching & Learning Materials Template](#).

Figure 22 provides an example of the teaching and learning activities, materials, and sources for MATH-3011, Mathematics for Technology 2.

PART 2: TEACHING & LEARNING MATERIALS			
LESSON #	ACTIVITIES	MATERIALS TO SUPPORT ACTIVITIES	ADDITIONAL INFORMATION (e.g., sources, materials to add)
1 Intro.; Factoring	Teaching Activities: <ul style="list-style-type: none"> • Ice-breaker/Introduction • Lecture • Demonstrations • In-Class Practice Questions Learning Activities: <ul style="list-style-type: none"> • In-Class Practice Questions • Homework 	Teaching Materials: <ul style="list-style-type: none"> • Ice-breaker materials • Course Outline • PowerPoint slides • Whiteboard markers or chalk • Practice questions • Textbook • Calculator Learning Materials: <ul style="list-style-type: none"> • Calculator • Practice questions • Textbook 	<ul style="list-style-type: none"> • Homework: Textbook Chapter 6, Exercise 6.1 #7, 13, 25, 33, 37, 41, 51, 59, 81 • Optional Homework: Review Chapter 1, Exercises 1.2, 1.4, 1.7, 1.8, 1.9 • Prepare solutions to in-class practice questions
2 Factoring	Teaching Activities: <ul style="list-style-type: none"> • Lecture • Demonstrations • In-Class Practice Questions Learning Activities: <ul style="list-style-type: none"> • In-Class Practice Questions • Homework 	Teaching Materials: <ul style="list-style-type: none"> • PowerPoint slides • Whiteboard markers or chalk • Practice questions • Textbook • Calculator Learning Materials: <ul style="list-style-type: none"> • Calculator • Practice questions • Textbook 	<ul style="list-style-type: none"> • Textbook Chapter 6, Exercise 6.2 #5, 13, 17, 27, 29, 45, 49, 53, 55 • Prepare solutions to in-class practice questions
3 Factoring; Fractions	Teaching Activities: <ul style="list-style-type: none"> • Lecture • Demonstrations • In-Class Practice Questions Learning Activities: <ul style="list-style-type: none"> • In-Class Practice Questions • Homework 	Teaching Materials: <ul style="list-style-type: none"> • PowerPoint slides • Whiteboard markers or chalk • Practice questions • Textbook • Calculator Learning Materials: <ul style="list-style-type: none"> • Calculator • Practice questions • Textbook 	<ul style="list-style-type: none"> • Homework: Textbook Chapter 6, Exercise 6.3 #9, 23, 31, 45, 49, 51, 53; Exercise 6.4 #7, 13, 21, 23 • Prepare solutions to in-class practice questions

Figure 22: Sample of Part 2 of the Teaching and Learning Materials Summary – MATH-3011 Mathematics for Technology 2



"Where can I find teaching and learning materials for my course, or what resources are available to help me develop my own materials?"

Review potential (or existing) course resources (e.g., textbooks, industry materials, cases, workbooks, software, hardware, tools, equipment) for content and instructor resources.

If you are revising an existing course or developing a new course that is similar in content and scope as another existing course at the College, consult with your Curriculum Lead (See [Roles & Responsibilities](#)) and other faculty members to find if any teaching and learning materials have already been developed.

Review resources available online or consult with professional associations, community organizations, and/or other educational institutions.

Be sure to adapt the teaching and learning materials to ensure a proper fit or alignment with the CLOs and evaluation methods in your course. Also ensure that you are adhering to the relevant copyright requirements.

You can also leverage community and campus resources to help you identify content and prepare materials for your course:



[Library and Media Services](#)

Resource recommendations, library instruction, and research databases



[Centre for Research and Innovation](#)

Information and skills development resources

For more support services, refer to the [Support for Course Development](#) section.

Textbooks and Instructor Resources

Many textbooks include a variety of instructor resources including the following:

- Teaching materials (e.g., PowerPoint slide decks, virtual lessons, lab manuals);
- Multimedia (e.g., figures, diagrams, videos)
- Evaluation materials (e.g., question banks, online quizzes or tests)

Use any of these resources as a starting point for preparing the materials for your course.

Step 3 – Prepare Materials

Using your [Teaching & Learning Materials Template](#) and [Lesson Plans](#) as a guide, you are now ready to prepare the teaching and learning materials for your course.

Keep in mind the principles of [Universal Design for Learning \(UDL\)](#) as you prepare your materials and as you decide when and how to provide the learning materials to your students. Also review the [Instructional Design Strategies](#) and [Active Learning Strategies](#) to help you organize, format, and present or deliver your materials to optimize learning.

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including teaching and learning materials/activities. Provide multiple means of representation (Principle 1 – The “What” of Learning) by developing materials in a variety of formats (e.g., text, video, audio) or with options for customization (e.g., accessible electronic documents).

For example, a nursing professor created and narrated animations to illustrate the functions of various tissues and organs in response to a medical intervention. He shares these in class and posts them on FOL for students to review as they work through the textbook.



“When do I need to develop all of these materials?”

If you were hired to develop a course prior to its delivery, refer to your contract and consult with your Project Lead (Academic Manager) and Curriculum Lead to confirm the materials that need to be developed prior to the start of the course.

If you were hired to develop a course at the same time that you are teaching it, develop your teaching and learning materials as you need them, but begin with a plan or a summary of the materials you are going to need throughout the course ([Teaching & Learning Materials Template](#)).

Accessibility

Using accessible documents and materials benefits all students not only those with accessibility needs. As you acquire or development the teaching and learning materials for

your course, ensure that those materials support the accessibility requirements set out by the Accessibility for Ontarians with Disabilities Act (AODA).

For step-by-step instructions on preparing accessible documents, visit the [Centre for Academic Excellence's page](#) on myFanshawe (the portal). Instructional materials include support for

- Choosing fonts;
- Formatting images, tables, and hyperlinks;
- Creating PowerPoint presentations; and
- Using Microsoft Office's Accessibility Checker.

Built-in Accessibility Features

Adobe Acrobat and Microsoft Office incorporate built-in features for creating and testing the accessibility of documents.

Additional information and support for addressing accessibility requirements is available from Accessibility Services.



[Centre for Academic Excellence](#)

Preparing Accessible Documents



[Accessibility Services](#)

AODA Standards and Accessibility Tools

Copyright

As you acquire or develop the teaching and learning materials for your course, ensure that you adhere to the relevant copyright requirements and policies ([Policy A204](#)). Copyright Services, a division of the Library and Media Services, offers the [Copyright Services Guide](#), which includes an overview of copyright requirements for course materials and course packs and for use in the classroom and online.



[Library and Media Services](#)

Copyright Services

Summary

In this section, you have identified the learning resources that your students may need to obtain to support the intended learning in your course.

You have also identified the materials that you will need to acquire or develop to support the teaching and learning activities you have planned for your course, and you have located some potential sources for helping you to prepare those materials.

Reflective Practice & Revision

Before you move on, review your teaching and learning materials:

- Have you addressed all of the Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs)?
- Have you planned teaching and learning activities that provide opportunities for students to practice in the same domain and level at which they will be measured (Review [Bloom's Taxonomy](#))?
- Do all of your materials adhere to the copyright requirements and policies and accessibility standards?

If necessary, review and adjust your teaching and learning activities/materials, CLOs ([Deliverable 1](#)), lesson plans ([Deliverable 2](#)), and/or evaluation tools ([Deliverable 4](#)) to ensure alignment among the outcomes, activities, and evaluation methods.



Workshops for further learning and training

- Universal Design for Learning: It's More Than Inclusion
- Experiential Learning
- Teaching Methods – What Fits You?
- Watch Me Flip the Classroom: Engaging Ideas
- 5 Ideas to Get Students to Think Critically
- 5 Ways to Bring Project-Based Learning into Your Class
- Social Media in the Classroom - #GoForIt!
- Raise Your Smartphone: Innovating in the 21st Century Classroom
- Effective e-Learning
- Blackboard™ Collaborate Ultra – Web Conferencing & Lecture Capture
- So You're Teaching a Blended Course... Now What?

Teaching & Learning Materials Template

Teaching and learning materials support the teaching and learning activities and align with the evaluation methods that measure students' achievement of the Course Learning Outcomes (CLOs).

Teaching

- **Teaching activities** are the activities that you (or the professor delivering the course) will do throughout the course. Teaching activities include how you will deliver the course material and how you will check for student understanding of the CLOs.
- **Teaching materials** are the materials or resources that you will use to carry out those teaching activities. For example, in order to deliver a lecture (the teaching activity), you may need lecture notes and PowerPoint slides (the teaching materials).

Learning

- **Learning activities** are the activities that you will engage your students in throughout the course. Learning activities refer to how the students will interact with the course material and demonstrate their understanding of the CLOs.
- **Learning materials** are the materials or resources that your students will need to use to support the intended learning. For example, if you want your students to engage in a discussion together in class or online about a course topic or a case study (learning activity), you may need to prepare a list of discussion questions or prompts to provide to students in a handout (learning material).

Resources Available

Resources, including *The CODE Book*, are available on the portal website for the [Centre for Academic Excellence \(CAE\)](#).

COURSE DEVELOPMENT INFORMATION	<i>Enter your course development information in the cells below.</i>
COURSE NAME	
COURSE CODE	
COURSE DEVELOPER	

Part 1 – Learning Resources

Identify the resources that support the intended learning in your course. You will include this information in the “Learning Resources” section on your Course Outline.

Here are some examples of the types of resources that you may want your students to purchase/ provide:

- Publications/Textbooks – Include a full reference for any publications needed. The reference should include the publication’s title, author(s), publisher, date of publication, and ISBN.
- Instruments/Equipment – Calculators, lab coats, lab kits, tools, uniforms, etc.
- Computing Resources – Software (include the version number), hardware, internet access

PART 1: LEARNING RESOURCES	<i>Enter learning resources in the cells below.</i>
REQUIRED LEARNING RESOURCES	
RECOMMENDED LEARNING RESOURCES	

Part 2 – Teaching & Learning Materials

Identify the teaching and learning materials that need to be prepared for each lesson in your course. Materials may include PowerPoint slides, lecture notes, handouts, recorded lectures, learning objects, articles, case studies, videos/DVDs, links to online resources, etc. (in compliance with copyright requirements).

PART 2: TEACHING & LEARNING MATERIALS			
LESSON #	ACTIVITIES	MATERIALS TO SUPPORT ACTIVITIES	ADDITIONAL INFORMATION (e.g., sources, materials to add)
Example 1	Teaching Activities: - Lecture Learning Activities: - Small Group Discussion (Case Study Analysis)	Teaching Materials: - PowerPoint slides Learning Materials: - Case Study - Handout (Case Study Discussion Questions)	- Review>Select case study from current news stories
	Teaching Activities: Learning Activities:	Teaching Materials: Learning Materials:	
	Teaching Activities: Learning Activities:	Teaching Materials: Learning Materials:	
	Teaching Activities: Learning Activities:	Teaching Materials: Learning Materials:	

Deliverable 4 – Evaluation Tools

Before you begin, ensure you have the following materials for your course:

- Course Learning Outcomes & Essential Employability Skills ([Deliverable 1](#))
- Lesson Plans ([Deliverable 2](#))

Open or print the following templates and resources, which will be used to prepare this deliverable:

- [Evaluation Tool Template](#)

Note: You may want to develop your Lesson Plans ([Deliverable 2](#)), Teaching & Learning Materials ([Deliverable 3](#)), and Evaluation Tools together at the same time.

For this deliverable, you will develop the evaluation tools that you will use in your course. Evaluations measure students' achievement of the learning outcomes, and methods of evaluation include both **informal** checks for understanding and **formal** evaluation tools.

Informal evaluation or assessment refers to the non-graded evaluations that typically take place throughout a lesson to gauge how students are progressing. These can be as simple as observations made while students are working, discussions (in-class or online), practice or knowledge check questions, etc. When you prepare the [Lesson Plans](#) for your course, make note of when and how you will include informal evaluations within the course.

Formal evaluation or assessment refers to the graded evaluations that occur throughout the course – tests, quizzes, assignments, projects, exams, etc.

To guide you in developing your formal evaluation tools, Fanshawe College has an [Evaluation Tool Template](#). Each evaluation tool should have its own evaluation summary and be accompanied by a grading scheme. You can structure or format the summary of your evaluations however you want as long as you can clearly identify the Course Learning Outcomes (CLOs) and Essential Employability Skills (ESSs)/Degree-Level Standard (DLS) benchmarks that are evaluated, the criteria for the evaluation, and how the evaluation will be graded.

Types of Evaluations

As you prepare your evaluation tools, think about the tasks your students will need to be able to perform in the workplace after they graduate. [Authentic assessments](#) measure a student's ability to complete "real world" tasks, tasks they will complete when they enter the workplace. The word "authentic" is not a judgement on an evaluation's validity or complexity; instead, it is a measure of how closely the evaluation resembles what an

employee in the field actually does. For more information about authentic assessments and the [Continuum of Authentic Assessments](#), review that section earlier in this chapter.

In addition to considering the level authenticity of the evaluations, you should think about whether the evaluation is **diagnostic**, **formative**, or **summative** (Figure 23).

Diagnostic	Formative	Summative
<ul style="list-style-type: none">• Low stakes with no grade or minimal marks• Used to determine your students' level of knowledge or skill or their strengths and weaknesses so you can adapt your teaching and learning activities accordingly• Examples: pre-tests, self-assessments, reflection exercises, observations	<ul style="list-style-type: none">• Low stakes with minimal marks• Used to monitor student learning or progress throughout the course• Examples: quizzes, discussion questions, concept maps, lab exercises, project proposals, drafts of final projects	<ul style="list-style-type: none">• High stakes with majority of marks for course• Used to evaluate student learning after it takes place at the end of a unit or module or at the end of the course; used to measure students' achievement of the Course Learning Outcomes (CLOs)• Examples: midterm and final exams, major papers or reports, capstone projects

Figure 23: Types of evaluations

Include a combination of diagnostic, formative, and summative evaluations in your course to support your teaching and your students' learning.



"Can I assign marks for attendance?"

No. You cannot assign marks towards a final course grade as a reward for attendance ([Policy A113](#) ↗). Marks should be awarded for demonstrating achievement of the learning outcomes not simply showing up to class.

You can establish attendance/participation requirements for your course if attendance is necessary for the achievement of the learning outcomes and/or professional responsibilities. For example, there are attendance requirements in the Aviation Technician programs so that students can earn credit (hours) toward training for their technician licenses through Transport Canada.

Consult with your Academic Manager and Curriculum Lead (See [Roles and Responsibilities](#)) to find out if there are any attendance/participation requirements you need to include in

your course, and ensure that you clearly specify those requirements for your students in the course materials (e.g., course outline and course plan, FOL course).



“What grades or feedback do I give students at midterm in a course?”

At the middle of the semester for all post-secondary courses, the professor will need to submit a midterm grade of “S” for Satisfactory or “U” for Unsatisfactory for each student.

A midterm grade of “U” or Unsatisfactory is meant to indicate that the student is achieving less than a C grade at the time the mid-semester grade is due ([Policy A112](#)). If a “U” grade is given, the professor will also need to select a statement from a bank of comments to let the student know how he or she can improve that grade.

The School will provide deadlines and instructions for submitting mid-semester grades each semester.

As you develop your course materials, keep this mid-semester grade in mind to ensure that your students have completed some of their evaluations and received feedback on them prior to that point.

Grading Schemes

Grading schemes are the tools used to measure and assign a grade to students’ ability to achieve the learning outcomes for the course (e.g., rubric, checklist, answer key, rating scale). There should be a grading scheme for every evaluation tool, and the grading schemes should be shared with students before they complete an evaluation.

Rubrics

Rubrics are a type of grading scheme used for evaluating students’ performance using a set of criteria. Rubrics are arranged in a grid structure and include the task or performance, criteria, levels of performance, descriptors for each level of performance (optional), and a score or grade (Figure 24).

1 History Research Paper Rubric			
2 Criteria	3 Excellent	Good	Poor
	4 3	2	1
Number of sources referenced	Ten to twelve	Five to nine	One to four
Historical accuracy	No apparent inaccuracies	Few inaccuracies	Several inaccuracies
Organization	Easy to identify connections between information and sources	Difficult to identify connections between information and sources	Impossible to identify connections between information and sources
Bibliography	Contains all relevant bibliographic information	Contains most of the relevant bibliographic information	Contains little of the relevant bibliographic information

1. Task/Performance
 2. Criteria
 3. Levels of Performance
 4. Score or Grade
 5. Descriptors

Figure 24: Sample simplified rubric (adapted from Northern Illinois University Faculty Development and Instructional Design Center, 2016)

There are two types of rubrics defined by the number of judgements made or scores given with the rubric:

- **Holistic rubrics** give one judgement or one score for all criteria or the overall performance on a task.
- **Analytic rubrics** include levels of performance for each criterion for evaluating or providing separate scores for each criterion.

Holistic rubrics are effective for evaluating simple tasks or performances (e.g., reading proficiency, completion of a homework brief assignment, contributions to class discussion). They provide students with summative feedback on their overall performance. Figure 25 illustrates a sample holistic evaluation used to assess a student's presentation skills.

Presentation Skills		
Level	Description	Feedback
Mastery 75% or more	<ul style="list-style-type: none"> Usually makes eye contact Volume is always appropriate Enthusiasm is expressed throughout the presentation Summary is complete and accurate 	
Proficiency 50% or more 70%	<ul style="list-style-type: none"> Usually makes eye contact ✓ Volume is usually appropriate ✓ Enthusiasm is expressed in most of the presentation ✓ Only one or two errors were made in the summary 	<p>Too quiet</p> <p>Check terminology validation vs. verification.</p>
Developing 25% or more	<ul style="list-style-type: none"> Sometimes makes eye contact Volume is sometimes appropriate Enthusiasm is expressed occasionally during the presentation Some errors were made in the summary 	
Inadequate 0% or more	<ul style="list-style-type: none"> Never or rarely makes eye contact Volume is inappropriate Enthusiasm is rarely expressed during the presentation Many errors were made in the summary 	

Figure 25: Sample holistic rubric for presentation skills

Analytic rubrics are most effective for evaluating complex or multi-faced tasks or performances (e.g., research project, marketing plan, assembly or repair of machinery). These rubrics provide the professor with diagnostic information (e.g., what topics or skills to review or re-teach) and the student with formative feedback (e.g., what areas they are strong in and how they can improve).

Figure 26 and Figure 27 show samples of analytic rubrics with and without descriptors, respectively. Additional feedback or annotations (e.g., editorial marks, specific comments or suggestions) would be given to students directly on their work to support these workshops. For more information about providing effective feedback, review the [Characteristics of Effective Feedback](#) earlier in this chapter.

Research Report Presentation Grading Rubric				
Criteria	Excellent (4)	Very Good (3)	Good (2)	Poor (1)
Preparation	Clearly put exceptional effort into preparation & design.	Demonstrated very good presentation & design.	Work showed some evidence of preparation.	Work appeared to have been done at the last minute.
Visual Aids	Visual aids added greatly to the presentation.	Visual aids were clear and helpful.	Visual aids were used, but were very wordy or could have been more helpful.	Visual aids were not particularly helpful or were not used.
Organization	Presentation was exceptionally logical and superbly organized. Strong introduction and conclusion. Clear transitions from one speaker to another and from one topic to another.	Work had a clear introduction, body and conclusion. Good transitions between speakers and topics.	Presentation was generally organized, but lacked some clarity. Transitions were generally missing or not clearly linked.	Work was poorly organized or ideas were presented randomly. No transitions between speakers and/or topics.
Research	Ideas were fully supported with clear research and examples.	Most ideas were supported with research and examples.	Some research was used or referenced.	Research was either not referenced or was not helpful.
Precision	Presentation was laser-focused on the topic.	Presentation covered all the main points of the topic.	Presentation covered the topic, but occasionally took detours.	Presentation strayed from the main topic significantly.
Time Mgmt.	Showed exceptional time management skills.	Finished within the allotted time.	Went over the time limit, or went far too under the time limit.	Seemed unaware of the time or how to manage it.
Articulation	Excellent and clear verbal articulation of major and minor points. Very concise and coherent. Speed was perfect. Tone was engaging.	Good articulation of major and minor points. Concise and coherent. Speed was a little fast/slow. Tone was good.	Articulation was not always clear and at times hard to understand (coherent). Speed was very fast/slow. Tone somewhat flat.	Poor articulation – not clear, not concise, not coherent. Speed was inappropriate for presentation. Monotone.
Eye Contact	Strong eye contact with audience and among team members. Overall, did not read ppts or notes.	Good eye contact with audience and team. Referred to ppts or notes for guidance occasionally.	Eye contact with audience was fair. Read from ppts or notes too much.	No eye contact with audience. Completely read from ppts or notes.
Overall Quality	Outstanding overall quality. A powerful, professional and memorable presentation.	Covered all the main points and was generally well delivered.	Could have put in more effort during the preparation and design stages to increase overall quality.	Generally sloppy. Weak presentation skills. Could have been much better.
Totals:	—	18	6	—
PRESENTATION TOTAL:	24/36			

Figure 26: Sample analytic rubric (with descriptors) for a research report presentation in COMM-6019 Advanced Professional Communications

Assessment	Excellent	Good	Fair	Needs Improvement	Not Included or Incomplete
	4	3	2	1	0
CONTENT					
Clear, relevant thesis and supporting points		✓			
Clear, engaging intro and conclusion		✓			
Sufficient examples/quotations to prove thesis points		✓			
Source material integration			✓		
Analysis of appropriately chosen myths/stories		✓			
ORGANIZATION					
Proper, coherent essay structure used	✓				
Paragraphs flow with transitions and topic sentences		✓			
Paragraphs set up an appropriate comparison/contrast between texts		✓			
GRAMMAR and STYLE					
Academic/formal language and tone used	✓				
No sentence-level errors (including incomplete or fused sentences or comma splices)		✓			
No punctuation errors (apostrophes, commas, periods, etc.)		✓			
No spelling errors or word choice errors	✓				
Sentence variety and coherence		✓			

Figure 27: Sample analytic rubric (without descriptors) for an essay evaluation in INDS-1059 Myth, Folktale, & Fairy Tale.

There are numerous tools and websites to help you create your rubrics. Refer to the [Additional Resources](#) section of this chapter to access those resources. You can also create rubrics in [FanshaweOnline \(FOL\)](#).



“How do I evaluate group projects?”

Group work can be an effective way for students to develop their communication and interpersonal skills, but there are some considerations that should be made before you evaluate students in a group:

- Ensure that you are able to evaluate that each student in the group has been able to reliably demonstrate that he or she has achieved the learning outcomes.
- Balance the weighting of grades assigned to the group and grades assigned to the individual to ensure adequate opportunities for each student to demonstrate his or her learning.

- Provide instructions on how to work in a group (i.e. teach the communication and interpersonal skills they will need to use for the project).
- Ensure that the evaluation of group work is authentic for the workplace.

Step 1 – Identify Outcomes to Evaluate

Before you create the evaluations for your course, review the Course Learning Outcomes (CLOs) and Essential Employability Skills (ESSs)/Degree-Level Standard (DLS) benchmarks. Collectively, the evaluation tools for your course will need to measure that your students can reliably demonstrate all of the knowledge, skills, and/or attitudes described in those outcomes. Each evaluation tool should evaluate at least one outcome for the course.

When you wrote your CLOs ([Deliverable 1](#)), you identified possible evaluation strategies for each outcome. Use that list as a starting point for developing your evaluation tools.



[Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks](#)

You will need to prepare one evaluation summary for each evaluation tool in your course (i.e. each test, quiz, assignment, or project). Begin by completing Part 1 of the [Evaluation Tool Template](#) for each evaluation tool:

- Identify the evaluation tool;
- Assign the weight of the final mark for the evaluation tool; and
- Identify the specific CLOs and ESSs that will be measured by the evaluation tool.

Figure 28 shows an example of Part 1 of the Evaluation Tool Template for a unit test for MATH-3011, Mathematics in Technology 2.

Constructive Alignment

Within every course, there should be alignment among the desired **learning outcomes**, the **teaching and learning activities**, and the **evaluation methods** used to measure achievement of the learning outcomes.



For more information about constructive alignment, review the [Guiding Principles](#) for the Course Development Process.

PART 1: EVALUATION SUMMARY		Enter course and evaluation information in the cells below.
Course Code and Name	MATH-3011 Mathematics for Technology 2	
Evaluation Title	Unit Test 1 – Factoring and Fractions	
Evaluation Weight of Final Mark	30%	

OUTCOMES
This evaluation tool evaluates the following Course Learning Outcomes (CLOs): <ul style="list-style-type: none"> • Apply the techniques of factoring in simplifying of combining fractional expressions and solving fractional equations;
This evaluation tool evaluates the following Essential Employability Skills (EESs) or Degree-Level Standard (DLS) Benchmarks: <ul style="list-style-type: none"> • Execute mathematical operations accurately • Apply a systematic approach to solving problems • Use a variety of thinking skills to anticipate and solve problems

Figure 28: Sample of Part 1 of the Evaluation Tool Template – MATH-3011 Mathematics for Technology 2

In [Phase 3 – Check Alignment](#), you will prepare a course [Evaluation Map](#), which will illustrate the alignment between the CLOs and evaluation tools for the course and help you to identify any gaps or overlap in your evaluation methods. You may want to begin preparing the evaluation map while you develop the evaluation tools.



[Evaluation Map](#)

Step 2 – Describe Evaluation Criteria

Now that you have identified the outcomes that each evaluation tool will measure, you can begin to describe each of those evaluation tools in more detail:

- Outline the instructions for the professor delivering the evaluation and for the students completing the evaluation;
- Set out the timeline and/or deadline for students to complete the evaluation;
- Define the length of the evaluation in terms of content (e.g., number of questions, minimum/maximum page requirements);
- Identify the formatting requirements and minimum standards for the completed evaluation; and
- Describe the academic integrity expectations for the evaluation including the established consequences for offences.

Enter these details about the evaluation tool into Part 2 of the [Evaluation Tool Template](#), and/or summarize this information on the evaluation tool as the students will see it ([Step 3](#)). Figure 29 provides an example of the Evaluation Tool Template for a unit test for MATH-3011, Mathematics in Technology 2.

PART 2: EVALUATION DESCRIPTION & CRITERIA

Evaluation Description:

This is a unit test covering factoring, solving quadratic equations (algebraically and graphically), and fractional expressions.

Evaluation Criteria	<i>Enter the criteria for grading the evaluation in the cells below.</i>
INSTRUCTIONS (for professor and/or students) <i>(e.g., how to deliver evaluation, how to complete evaluation, tools or equipment needed – textbook chapters, lab book, personal protective equipment, laptop)</i>	Instructions: <ul style="list-style-type: none"> Explain your answer step-by-step (i.e. show your work) and <u>underline</u> your final answer clearly. Answer all questions. Follow instructions in each question for rounding and significant digits as applicable. Only approved calculators will be allowed to be used for the test. A formula sheet is attached to the test.
TIMELINE/DEADLINE <i>(e.g., deadline given to students, amount of time to work on it, number of hours for test or exam, drop box deadline, lateness penalty/consequences)</i>	<ul style="list-style-type: none"> Designed to be completed in 1.25 hours. Give students the full 2 hours of class time to complete the test.
LENGTH and TYPE <i>(e.g., number and types of questions, minimum/maximum page requirements or word counts)</i>	<ul style="list-style-type: none"> 13 questions; 3 have two parts to the question
FORMATTING <i>(e.g., font size, spacing, use of ruler, use of pen/pencil on a written test, figure/image specifications, design specifications, use of specific software)</i>	<ul style="list-style-type: none"> Students will need to use a ruler to draw the graph. Students should use a pencil; if they use a pen, it should have blue or black ink
MINIMUM STANDARDS <i>(e.g., grammar, spelling, punctuation, notation, completeness, design specifications)</i>	<ul style="list-style-type: none"> Follow instructions in each question for rounding and significant digits as applicable. Explain your answer step-by-step (i.e. show your work) and <u>underline</u> your final answer clearly. All axes, equations, and points on a graph must be labelled.
ACADEMIC INTEGRITY <i>(e.g., citation style required, consequences for offences)</i>	<p>Review the Academic Integrity Policy (Policy A203) with your students.</p> <ul style="list-style-type: none"> Only approved calculators will be allowed to be used for the test. A formula sheet is attached to the test, and is the only study aid available during the test. Students will complete the test independently. Consequences: Removal from the testing room and zero on the test; consultation with SSA and Chair.

Figure 29: Sample of Part 2 of the Evaluation Tool Template – MATH-3011 Mathematics for Technology 2

Step 3 – Prepare the Evaluation Tool

Now that you have identified the outcomes that the evaluation tool will measure and the criteria by which the students' performance will be measured, you are ready to create the evaluation tool (i.e. the test, quiz, assignment, or project).

For example, if the evaluation is a test or quiz, you will need to select or write the questions or prompts to assign to the students. If the evaluation is a simulation, you will need to develop the scenario as it will be presented to the students and others involved in running the simulation (e.g., background information or scripts for live actors).

Universal Design for Learning (UDL)

Always ensure that graded items target the material being covered and not the learner's ability to [overcome a barrier to the learning environment](#) (e.g., time limits, language, social or cultural norms, physical/sensory/cognitive differences).

For example, when a computer systems professor noticed that several of her international students frequently left questions blank on an exam, she started scheduling exams that should take one hour to write during a two-hour timeslot. Not only were the international students able to complete all of the questions because they had enough time to read and interpret them, but all students' responses were more thorough. The students' test anxiety decreased too.



"When do I need to develop the evaluations for my course?"

If you were hired to develop a course prior to its delivery, refer to your contract and consult with your Project Lead (Academic Manager) and Curriculum Lead (See [Roles & Responsibilities](#)) to confirm the evaluations that need to be developed prior to the start of the course.

If you were hired to develop a course at the same time that you are teaching it, you will need identify the outcomes to evaluate and describe the evaluation tools before the start of the course so that you can include that information on your course outline and course plan. However, you may not need to develop the actual evaluation until it is needed in the course. For example, you could decide at the start of the course that you will include a test or a case study analysis and then write the questions for the test or choose the case to be examined while you are delivering the course.

Step 4 – Prepare the Grading Scheme

For each evaluation tool, you must also prepare a **grading scheme** that details how the students' performance will be graded or how the evaluation criteria identified in Step 2 will be weighted. Examples of grading schemes include rubrics, answer keys and marking schemes, checklists, and rating scales. Students should be informed of how they will be graded when they are first assigned the evaluation (e.g., on the course outline and on FanshaweOnline).

Figure 30 provides an example of the Evaluation Tool Template for a unit test for MATH-3011, Mathematics in Technology 2. An answer key for the test would be created to show where each mark is earned or lost in each question.

PART 3: GRADING SCHEME	
<i>Describe or attach the grading scheme or tool (e.g., total marks allotted, checklist, rubric, answer key)</i>	
Answer key attached	
Q1 - /2 marks	
Q2 - /2 marks	
Q3 - /3 marks	
Q4 - /3 marks	
Q5 - /3 marks	
Q6 - /2 marks	
Q7 - /3 marks	
Q8 - /2 marks	
Q9 - /4 marks (Parts a and b /2 marks each)	
Q10 - /3 marks	
Q11 - /2 marks (Parts a and b /1 mark each)	
Q12 - /4 marks (Parts a and b /2 marks each)	
Q13 - /7 marks	
Total: 40 marks	

Figure 30: Sample of Part 3 of the Evaluation Tool Template – MATH-3011 Mathematics for Technology 2

For further support on developing effective evaluations and grading schemes, review the [Additional Resources](#) section at the end of this chapter, and sign up for a Teaching & Learning workshop through [FanshaweLearns](#) .

Summary

In this section, you reviewed the CLOs and EESs you established for your course in [Phase 1 – Establish Context](#) and identified evaluation methods for measuring students' achievement

of each of those outcomes. You also outlined the criteria for each evaluation and prepared the evaluation tool and grading scheme.

In [Phase 3 – Check Alignment](#), you will prepare a course [Evaluation Map](#), which will illustrate the alignment between the CLOs and evaluation tools for the course and help you to identify any gaps or overlap in your evaluation methods.

Reflective Practice & Revision

Before you move on, review your evaluation tools:

- Have you addressed all of the Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs) in your evaluations?
- Will the evaluation methods measure student performance in the same domain and at the same level as the CLOs (Review [Bloom's Taxonomy](#))?

If necessary, review and adjust your evaluation tools, CLOs ([Deliverable 1](#)), lesson plans ([Deliverable 2](#)), and/or teaching and learning activities ([Deliverable 3](#)) to ensure alignment among the outcomes, activities, and evaluation methods.

You will identify the evaluation methods and the outcomes they measure on your Course Outline ([Deliverable 6](#)).



Workshops for further learning and training

- Evaluation Strategies
- Creating Rubrics
- Creating Multiple Choice Questions
- PLAR (Prior Learning Assessment & Recognition): Faculty Roles & Responsibilities

Evaluation Tool Template

Evaluations measure students' achievement of the learning outcomes and methods of evaluation include both **informal** checks for understanding and **formal** evaluation tools.

Informal evaluation or assessment refers to the non-graded evaluations that typically take place throughout a lesson to gauge how students are progressing. These can be as simple as observations made while students are working, discussions (in-class or online), practice or knowledge check questions, etc.

Formal evaluation or assessment refers to the graded evaluations that occur throughout the course – tests, quizzes, assignments, projects, exams, etc.

Use this Evaluation Tool Template to prepare the formal evaluations you will use in your course.

Resources Available

Resources, including *The CODE Book*, are available on the portal website for the [Centre for Academic Excellence \(CAE\)](#).

COURSE DEVELOPMENT INFORMATION	<i>Enter your course development information in the cells below.</i>
COURSE NAME	
COURSE CODE	
COURSE DEVELOPER	

Part 1 – Evaluation Summary

Summarize the evaluation, and identify the Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs) or Degree-Level Standard (DLS) Benchmarks to be evaluated.

PART 1: EVALUATION SUMMARY		<i>Enter course and evaluation information in the cells below.</i>
Course Code and Name		
Evaluation Title		
Evaluation Weight of Final Mark		

OUTCOMES

This evaluation tool evaluates the following Course Learning Outcomes (CLOs):

This evaluation tool evaluates the following Essential Employability Skills (EESs) or Degree-Level Standard (DLS) Benchmarks:

Part 2 – Evaluation Description & Criteria

Provide a copy of the evaluation tool (if applicable), and summarize any additional evaluation criteria not already included on the evaluation tool.

PART 2: EVALUATION DESCRIPTION & CRITERIA	
Evaluation Description:	

Evaluation Criteria	<i>Enter the criteria for grading the evaluation in the cells below.</i>
INSTRUCTIONS (for professor and/or students) <i>(e.g., how to deliver evaluation, how to complete evaluation, tools or equipment needed – textbook chapters, lab book, personal protective equipment, laptop)</i>	Instructions:
TIMELINE/DEADLINE <i>(e.g., deadline given to students, amount of time to work on it, number of hours for test or exam, drop box deadline, lateness penalty/consequences)</i>	
LENGTH and TYPE <i>(e.g., number and types of questions, minimum/maximum page requirements or word counts)</i>	
FORMATTING <i>(e.g., font size, spacing, use of ruler, use of pen/pencil on a written test, figure/image specifications, design specifications, use of specific software)</i>	
MINIMUM STANDARDS <i>(e.g., grammar, spelling, punctuation, notation, completeness, design specifications)</i>	
ACADEMIC INTEGRITY <i>(e.g., citation style required, consequences for offences)</i>	<i>Review the Academic Integrity Policy (A203) with your students.</i>

Part 3 – Grading Scheme

PART 3: GRADING SCHEME

Describe or attach the grading scheme or tool (e.g., total marks allotted, checklist, rubric, answer key)

Additional Resources

Universal Design for Learning



[National Center on Universal Design for Learning](#)

UDL guidelines, advocacy, implementation, research, and resources
Center for Applied Special Technology (CAST) (2012)



[UDL on Campus: Universal Design for Learning in Higher Education](#)

UDL examples, initiatives and resources for course design
Center for Applied Special Technology (CAST)



Teaching Every Student in the Digital Age – Universal Design for Learning
Rose, D. H. & Meyer, A.

Alexandria, Virginia: Association for Supervision and Curriculum Development
(2002).



A Practical Reader in Universal Design for Learning

Rose, D. H. & Meyer, A.

Harvard Education Press (2006).

Instructional Design and Active Learning Strategies



[The Three-Pronged Approach](#) (FOL Module)

Practical techniques for fine-tuning your e-Learning content.

Flook, J. (2016)

Centre for Academic Excellence, Fanshawe College



[Lesson Planning and Active Learning](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



[Integrating Technology](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



[How to Use Retrieval Practice to Improve Learning](#)

Agarwal, P. K., Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2013)

Institute of Education Sciences, Washington University, St. Louis



[Getting the Big Idea: Concept-Based Teaching and Learning](#)

World View University of North Carolina (UNC) (2013)



[Flashcards \(Software\)](#)

Create your own electronic flashcards and decks
Anki



[Online Course Design Guide](#)

Web 2.0 tools to develop dynamic, engaging learning activities.
(2016)



[Interface Design for Learning \(Blog\)](#)

UX, Interface, & Multimedia Design for Learning Experiences
Peters, D.



[UX for Learning: Design Guidelines for the Learner Experience](#)

Peters, D. (2012)



[Pedagogical Principles of Using Case Studies](#)

Center for Learning Enhancement, Assessment, and Redesign (CLEAR), University of North Texas (2016)



[The Interleaving Effect: Mixing it up Boosts Learning](#)

Pan, S. C. (2015).
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[10 Rules of Good Studying](#)

Oakley, B. (2014). Excerpted from *A Mind for Numbers: How to Excel in Math and Science (Even if You Flunked Algebra)*, Penguin, July, 2014.



[How Can I Bring Growth Mindset Learning to My School?](#)

Mindset Works
[Mindset Works – Free Resources](#)



[The Pomodoro Technique \(for Time Management\)](#)

Cirillo Company

Lesson Plans



[Outcomes-Based Education \(Fanshawe login required\)](#)

Academic Faculty Development
College Educator Development Program (CEDP)



[Lesson Planning and Active Learning \(Fanshawe login required\)](#)

Academic Faculty Development
College Educator Development Program (CEDP)

Teaching and Learning Materials



[Teaching, Learning, and Research Guide](#)

Library & Media Services, Fanshawe College



[E-Text Considerations](#)

Centre for Academic Excellence, Fanshawe College



[Instructional Guide for University Faculty and Teaching Assistants](#)

Faculty Development and Instructional Design Center, Northern Illinois University (2016)



[Outcomes-Based Education](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



[Lesson Planning and Active Learning](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



[Integrating Technology](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)

Evaluation Tools



[Outcomes-Based Education](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



[Introduction to Assessment](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



Learning Assessment Techniques (Book – Copy available for review from Centre for Academic Excellence)

Barkley, E. F. & Major, C. H.

San Francisco, CA: Jossey-Bass (2016).



The Assessment Primer: Creating a Flow of Learning Evidence (Book – Copy available for review from Centre for Academic Excellence)

Stiehl, R. & Lewchuk, L.

Corvallis, OR: Strategic Concepts Inc. for the Learning Organization (2008)



[Instructional Guide for University Faculty and Teaching Assistants](#)

Faculty Development and Instructional Design Center, Northern Illinois University
(2016)



[BASICS Rubric \(Building Assessment Scaffolds for Intellectual Cognitive Assessments\)](#)

Web-based application for constructing rubrics for cognitive skills
Learning Outcomes Project, Queen's University



[How to Create and Use Rubrics for Formative Assessment and Grading](#)

Book Excerpt: Chapter 1: What are Rubrics and Why are They Important?
Brookhart, S. M. from the Association for Supervision and Curriculum Development (ASCD) (2017)



[Writing Good Multiple Choice Test Questions](#)

Guide with examples
Brame, C. (2013)

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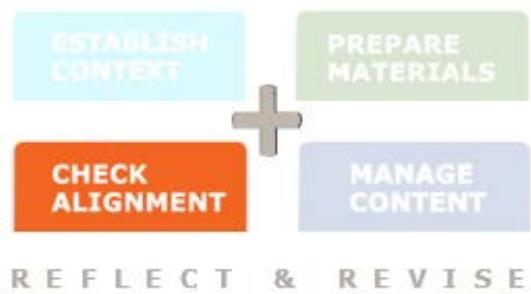
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Chapter 6:

Phase 3 – Check Alignment

Phase 3! You are well on your way to finishing the development of your course! While you drafted your Course Learning Outcomes (CLOs) and prepared your course materials – the lesson plans, teaching and learning materials, and evaluation tools – you were encouraged to consider the need for constructive alignment. In this chapter, you are going to review your CLOs and course materials to check for that alignment by creating an **Evaluation Map**.

Core Competencies for Faculty

By the end of this chapter, you will be able to...

- Map Course Learning Outcomes (CLOs) to vocational standards (Program Vocational Learning Outcomes (PVLOs)) and Essential Employability Skills (EESs) (A.2);
- Ensure CLOs are linked to assessments and evaluations (A.2); and
- Engage in quality initiatives and reviews related to curriculum improvement (A.2).

Deliverable 5 – Evaluation Map

Before you begin, ensure that you have the following materials for your course:

- Course Learning Outcomes ([Deliverable 1](#))
- Lesson Plans ([Deliverable 2](#))
- Teaching and Learning Materials ([Deliverable 3](#))
- Evaluation Tools ([Deliverable 4](#))

Open or print the following templates and resources, which you will use in this module:

- [Evaluation Map Template](#)
- [Bloom's Taxonomy Resources](#)

The **evaluation map** is a tool used to check for and ensure constructive alignment within your course.

If you are developing a new course, the evaluation map will help you to establish or affirm alignment among the learning outcomes, teaching and learning activities, and evaluation methods.

Any time you want to make changes to your course, the evaluation map will help you to identify the strengths and areas for improvement within your course and prevent curriculum drift.

In Figure 31, you will see that the evaluation map is divided into four components:

1. Learning Outcomes (CLOs, PVLOs, and ESSs)
2. Evaluations
3. Map of CLOs and Evaluations
4. Alignment Check

The following sections will guide you through the completion of each of those four components for your course.

Constructive Alignment

Within every course, there should be alignment among the desired **learning outcomes**, the **teaching and learning activities**, and the **evaluation methods** used to measure achievement of the learning outcomes.



For more information about constructive alignment, review the [Guiding Principles](#) for the Course Development Process.

LEGEND:			Example											
DOMAIN: Cognitive (C), Psychomotor (P), Affective (A) LEVEL OF LEARNING: Introductory (1), Building (2), Culminating (3) T, P, or T/P: T = theory; P = practical; T/P = both theory and practical (circle what applies)			Test #1											
COURSE LEARNING OUTCOMES By the end of this course, the student has reliably demonstrated the ability to:			Linked to VLO(s) #	Associated DOMAIN C, P, A	Level of LEARNING 1, 2 OR 3	(circle)	T P T/P	Total % of final grade that measures the outcome	Estimated % of time spent teaching the outcome.	Is there alignment between A & B?				
1							5%							
2							5%							
3							15%							
4														
5														
6														
7														
8														
9														
10														
Percentage (%) of the evaluation towards final grade			25%	%	%	%	%	%	%	%	%	Total % of final grade that measures the outcome	Estimated % of time spent teaching the outcome.	Is there alignment between A & B?
Identify the Essential Employability Skills (EES) associated with each evaluation			#1, 5, 8											

Figure 31: Evaluation Map Template

Step 1 – Identify and Map Learning Outcomes

In the [Evaluation Map Template](#), enter each CLO for your course, and identify the Program Vocational Learning Outcomes (PVLOs) that each CLO supports or aligns with as shown in Figure 32.

Next, identify the domain and level of learning described by each CLO using [Bloom's Taxonomy](#). Focus on the verbs in each CLO.

Overview of Bloom's Taxonomy

Domains

- Cognitive** – Intellectual capability or thinking skills
- Affective** – Feelings, attitudes, or values
- Psychomotor** – Manual or physical skills

Levels

- Introductory** – Foundational level of learning
- Building** – Builds on the foundation established by the introductory level of learning
- Culminating** – Highest level of learning dependent on strong foundation and prior opportunities to build on that learning

Note: The definitions above are intended as a guideline to prompt your brainstorming. A CLO may reflect more than one domain.



[Bloom's Taxonomy](#)

For example, Figure 32 shows the CLOs for the Theory of Structures course (CIVL-3002), which is delivered in Level 4 of the Civil Engineering Technology program. For reference, those CLOs align with the following PVLOs for the Civil Engineering Technology program (MTCU 63002)²:

1. Assemble, analyze, and appropriately apply civil engineering data from existing graphics, reports, and other documents.
6. Assist in planning, designing, inspecting, supervising, and constructing civil engineering projects.
8. Use electronic technology to support civil engineering projects.
9. Apply the principles of mathematics and science to analyze and solve technical problems related to civil engineering projects.
10. Manage and maintain systems for civil engineering project records, logs, and inventories.
12. Take into account the interdependence of the architectural, structural, mechanical, and electrical disciplines relating to civil engineering projects.

All of the CLOs represent skills in the cognitive domain, which is appropriate for the theoretical nature of the course content. The level of learning is predominately at the building level, which is appropriate for this upper year course.

² Note: The program standard and PVLOs for the Civil Engineering Technology program (MTCU 63002) were revised in 2016. The course presented here is aligned with the PVLOs from 2004.

	EVALUATION MAP			
COURSE NAME: Theory of Structures, Civil Engineering COURSE CODE: CIVL-3002				
LEGEND:				
DOMAIN: Cognitive (C), Psychomotor (P), Affective (A) LEVEL OF LEARNING: Introductory (1), Building (2), Culminating (3) T, P, or T/P: T = theory; P = practical; T/P = both theory and practical (circle what applies)				
COURSE LEARNING OUTCOMES <i>By the end of this course, the student has reliably demonstrated the ability to:</i>				
		Linked to PVLO(s) #	Associated DOMAIN C, P, A	Level of LEARNING 1, 2 OR 3
1	Evaluate the equilibrium and stability of a structure.	1,9	c	2
2	Determine the maximum shears and moments due to the effect of gravity loads and lateral forces.	1,9	c	2
3	Evaluate axial forces in beams, frames and columns.	1,9,8	c	2
4	Compute values and draw representative graphs of the maximum shears and moments for beams and frames.	1,9,8	c	2
5	Compute forces and trusses using method of sections and method of joints.	1,9,8	c	2
6	Compute the deflections of trusses.	1,9,12	c	2
7	Determine the controlling conditions for the safe design of a structure as defined in the Ontario Building Code.	1,6,9,10	c	1
8				
9				
10				
Percentage (%) of the evaluation towards final grade				
Identify the Essential Employability Skills (EES) associated with each evaluation				

Figure 32: Sample of the Evaluation Map Template – Learning Outcomes



“Where can I find the Program Vocational Learning Outcomes (PVLOs) for my course/program?”

Whether you are developing a new course or revising an existing one, the PVLOs and ESSs that should be addressed in your course will have already been identified in the program maps.

For a new course that has not been delivered before, you will find the program maps in the Stage-Gate 2 Business Plan, which you can obtain from your Academic Manager, Curriculum Lead, or a Curriculum Coach (See [Roles & Responsibilities](#)).

If you are revising an existing course, you will find the course information on the existing course outline and course plan for the course, which you can obtain from your Academic Manager or access in the [Course Outline Management & Mapping System \(COMMS\)](#).

Continuous Quality Improvement

For new programs, courses, including course descriptions, course hours, PVLOs, and ESSs, are approved by the Credential Validation Service (CVS) within the Ontario College Quality Assurance Service (OCQAS) and enforced by the Ministry of Advanced Education and Skills Development (MAESD). At Fanshawe College, these are developed in Stage-Gate 2 of the [Program Development Process](#).

Any minor changes or edits that are made to the course description or to the program maps must be approved by an academic manager as part of the [Curriculum Modification Process](#).

Step 2 – Identify and Classify Evaluations

Review your evaluation tools and enter a title or descriptor for each evaluation into the boxes at the top of the evaluation map. As you do, note the focus of each evaluation in the [Evaluation Map Template](#): theory-based (T), practical (P), or a combination of both (T/P).

At the bottom of the [Evaluation Map Template](#), note the total percentage or weight for each evaluation. Figure 33 provides an example of how to complete this component of the evaluation map, building on the example illustrated in Figure 32 (Theory of Structures course (CIVL-3002)).



EVALUATION MAPPING WORKSHEET								
COURSE NAME: Theory of Structures, Civil Engineering COURSE CODE: CIVL-3002				METHOD OF EVALUATION				
LEGEND:								
DOMAIN: Cognitive (C), Psychomotor (P), Affective (A)								
LEVEL OF LEARNING: Introductory (1), Building (2), Culminating (3)								
T, P, or T/P: T = theory; P = practical; T/P = both theory and practical (circle what applies)								
COURSE LEARNING OUTCOMES <i>By the end of this course, the student has reliably demonstrated the ability to:</i>				4 Written Assignments	Test #1	Test #2	Test #3	
				T P T/P	T P T/P	T P T/P	T P T/P	T P T/P
1	Evaluate the equilibrium and stability of a structure.	1,9	c	2				
2	Determine the maximum shears and moments due to the effect of gravity loads and lateral forces.	1,9	c	2				
3	Evaluate axial forces in beams, frames and columns.	1,9,8	c	2				
4	Compute values and draw representative graphs of the maximum shears and moments for beams and frames.	1,9,8	c	2				
5	Compute forces and trusses using method of sections and method of joints.	1,9,8	c	2				
6	Compute the deflections of trusses.	1,9,12	c	2				
7	Determine the controlling conditions for the safe design of a structure as defined in the Ontario Building Code.	1,6,9,10	c	1				
8								
9								
10								
Percentage (%) of the evaluation towards final grade					40%	15%	20%	25%
Identify the Essential Employability Skills (EES) associated with each evaluation					%	%	%	%

Figure 33: Sample of the Evaluation Map Template – Evaluations

Step 3 – Map Learning Outcomes and Evaluations

Consider each evaluation one at a time as you map them to the CLOs. Estimate how much of each evaluation addresses each CLO, and enter the weighted percentage in the appropriate box in the [Evaluation Map Template](#). Ensure that each column adds up to the total percentage of weight for that evaluation as you noted in Step 2.

Note: When you prepared your evaluations in [Deliverable 4](#), you were already asked to identify the CLOs and ESSs that are evaluated by each evaluation tool. Use that information as a starting point for completing the evaluation map.

Figure 34 shows the percentage of each evaluation that addresses each CLO in the Theory of Structures course (CIVL-3002). In that example, it was convenient to group together CLOs #2, #3, and #4 as well as CLO #5 and #6 because those CLOs were covered together and in equal amounts on those evaluations. An alternate representation would divide that up so that CLO #5 and CLO #6 are each worth 7.5% for “Test 1”.

EVALUATION MAPPING WORKSHEET																					
COURSE NAME: Theory of Structures, Civil Engineering COURSE CODE: CIVL-3002				METHOD OF EVALUATION																	
LEGEND:																					
DOMAIN: Cognitive (C), Psychomotor (P), Affective (A) LEVEL OF LEARNING: Introductory (1), Building (2), Culminating (3) T, P, or T/P: T = theory; P = practical; T/P = both theory and practical (circle what applies)																					
COURSE LEARNING OUTCOMES <i>By the end of this course, the student has reliably demonstrated the ability to:</i>				Linked to PVLO(s) #	Associated DOMAIN C, P, A	Level of LEARNING 1, 2 OR 3	4 Written Assignments	Test #1	Test #2	Test #3											
1	Evaluate the equilibrium and stability of a structure.	1,9	c	2		5%		5%	5%				Total % of final grade that measures the outcome								
2	Determine the maximum shears and moments due to the effect of gravity loads and lateral forces.	1,9	c	2									Estimated (%) of time spent teaching the outcome.								
3	Evaluate axial forces in beams, frames and columns.	1,9,8	c	2		20%		10%	10%				Is there an alignment between A & B?								
4	Compute values and draw representative graphs of the maximum shears and moments for beams and frames.	1,9,8	c	2									Y or N								
5	Compute forces and trusses using method of sections and method of joints.	1,9,8	c	2		10%	15%														
6	Compute the deflections of trusses.	1,9,12	c	2																	
7	Determine the controlling conditions for the safe design of a structure as defined in the Ontario Building Code.	1,6,9,10	c	1		5%		5%	10%												
8																					
9																					
10																					
Percentage (%) of the evaluation towards final grade							40%	15%	20%	25%	%	%	%								
Identify the Essential Employability Skills (EES) associated with each evaluation													FANSHAWE								

Figure 34: Sample of the Evaluation Map Template – Map of CLOs and Evaluations

Step 4 – Check Alignment

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including evaluations and recommends using a variety of evaluation strategies to support learner diversity (Principle 2 – The “How” of Learning).

For example, when a mechanical engineering professor realized that every evaluation in his course was a written test or assignment, he decided to make some changes to include a variety of evaluation types. All students seemed more engaged in the course, and those who struggled with written evaluations excelled with the practical tasks and oral presentations.

To check for constructive alignment within your course, you will need to first review the weighting of each CLO. To do so, add up the percentages in each row to determine the total percentage of the final grade for each CLO. Check that this column adds up to 100%.

Next, think about how much time you will spend teaching each CLO in the course. Use your [Lesson Plans](#) to help you estimate the percentage of time spent on each CLO throughout the course. For example, for a 45 hour course, if you spend 1.5 weeks or approximately 4.5 hours on an outcome, you have spent approximately 10% of the course teaching that CLO.

Enter the estimated percentage of time spent on each CLO in the second last column in the evaluation map, and check that this column adds up to 100%.

Finally, compare the total percentage of the final grade for an outcome with the percentage of time spent teaching that outcome. Are those values similar to each other? Note your response in the final column of the evaluation map as shown in Figure 35 for the Theory of Structures course (CIVL-3002).

EVALUATION MAPPING WORKSHEET																				
COURSE NAME: Theory of Structures, Civil Engineering COURSE CODE: CIVL-3002				METHOD OF EVALUATION							A	B	Alignment							
LEGEND:																				
DOMAIN: Cognitive (C), Psychomotor (P), Affective (A)																				
LEVEL OF LEARNING: Introductory (1), Building (2), Culminating (3)																				
T, P, or T/P: T = theory; P = practical; T/P = both theory and practical (circle what applies)																				
COURSE LEARNING OUTCOMES <i>By the end of this course, the student has reliably demonstrated the ability to:</i>				Linked to PVLO(s) #	Associated DOMAIN C, P, A	Level of LEARNING 1, 2 OR 3	4 Written Assignments	Test #1	Test #2	Test #3	Total % of final grade that measures the outcome	Estimated (%) of time spent teaching the outcome	Is there an alignment between A & B?							
1	Evaluate the equilibrium and stability of a structure.	1,9	c	2		5%		5%	5%		15%	15%	Y							
2	Determine the maximum shears and moments due to the effect of gravity loads and lateral forces.	1,9	c	2																
3	Evaluate axial forces in beams, frames and columns.	1,9,8	c	2		20%		10%	10%		40%	40%	Y							
4	Compute values and draw representative graphs of the maximum shears and moments for beams and frames.	1,9,8	c	2																
5	Compute forces and trusses using method of sections and method of joints.	1,9,8	c	2		10%	15%				25%	25%	Y							
6	Compute the deflections of trusses.	1,9,12	c	2																
7	Determine the controlling conditions for the safe design of a structure as defined in the Ontario Building Code.	1,6,9,10	c	1		5%		5%	10%		20%	20%	Y							
8																				
9																				
10																				
Percentage (%) of the evaluation towards final grade							40%	15%	20%	25%	%	%	100% 100%							
Identify the Essential Employability Skills (EES) associated with each evaluation											#3,4,6,9	#3,4,5	#3,4,5							
											FANSHAWE									

Figure 35: Sample of the Evaluation Map Template – Alignment Check



"Does my evaluation of the Course Learning Outcomes (CLOs) align with the amount of time I spend teaching those CLOs? What if those values don't align in my course?"

As you prepare the evaluation map for your course, you might find that the percentage of the final grade associated with each CLO is not exactly the same as the estimated percentage of time spent teaching each CLO as was shown in the example in Figure 35.

There may still be alignment between the evaluation of the CLOs and the amount of time spent teaching them if those percentages are similar (e.g., up to 15% difference), and that is for you as the Course Developer or Professor to decide. For example, a CLO may be

foundational for the entire course, requiring you to spend a greater percentage of time teaching it than the percentage you allot for evaluating it because the remaining CLOs represent the culminating knowledge, skill, or attitudes for the course.

If there is a larger or unexplained difference between the percentages for evaluation and teaching time, you may need to revise your course to improve alignment among the learning outcomes, teaching and learning activities, and evaluation methods.

Reflective Practice & Revision

Before you move on, review your evaluation map:

- Have you addressed all of the Course Learning Outcomes (CLOs), Program Vocational Learning Outcomes (PVLOs), and Essential Employability Skills (EESs) in your course?
- Will the evaluation methods measure student performance in the same domain and at the same level as the CLOs (Review [Bloom's Taxonomy](#))?
- Have you planned teaching and learning activities that provide opportunities for students to practice in the same domain and level at which they will be measured (Review [Bloom's Taxonomy](#))?
- Is there a balance between the amount of time spent teaching each outcome and the weighting (grade percentage) of the evaluations that measure students' achievement of each outcome?

If necessary, review and adjust your CLOs ([Deliverable 1](#)), teaching and learning activities ([Deliverable 3](#)), and/or evaluation methods ([Deliverable 4](#)) to ensure alignment among the three.



Workshops for further learning and training

- Evaluation Mapping: A Tool for Curriculum Alignment
- PLAR (Prior Learning Assessment & Recognition): Faculty Roles & Responsibilities

Evaluation Mapping Template

Additional Resources



[Outcomes-Based Education](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)



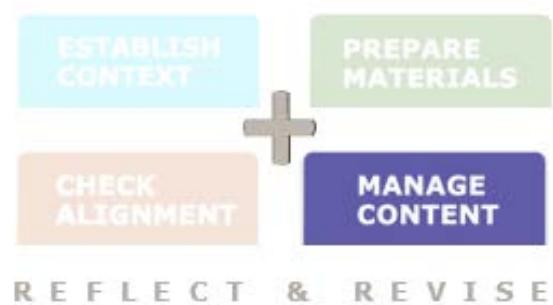
[Introduction to Assessment](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)

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- Ministry of Training, Colleges, and Universities (MTCU). (2003, Revised 2005). *MTCU College Framework for Programs of Instruction*. Retrieved October 13, 2015, from <http://www.tcu.gov.on.ca/pepg/documents/FrameworkforPrograms.pdf>.



Chapter 7:

Phase 4 – Manage Content

Congratulations on reaching this phase in the course development process! Now that you have prepared your course learning outcomes, developed your lesson plans and teaching and learning materials, created your evaluation tools, and completed the evaluation mapping process, you are ready to prepare the **Course Outline** and **Course Plan** for your course and to create your **FanshaweOnline (FOL)** course.

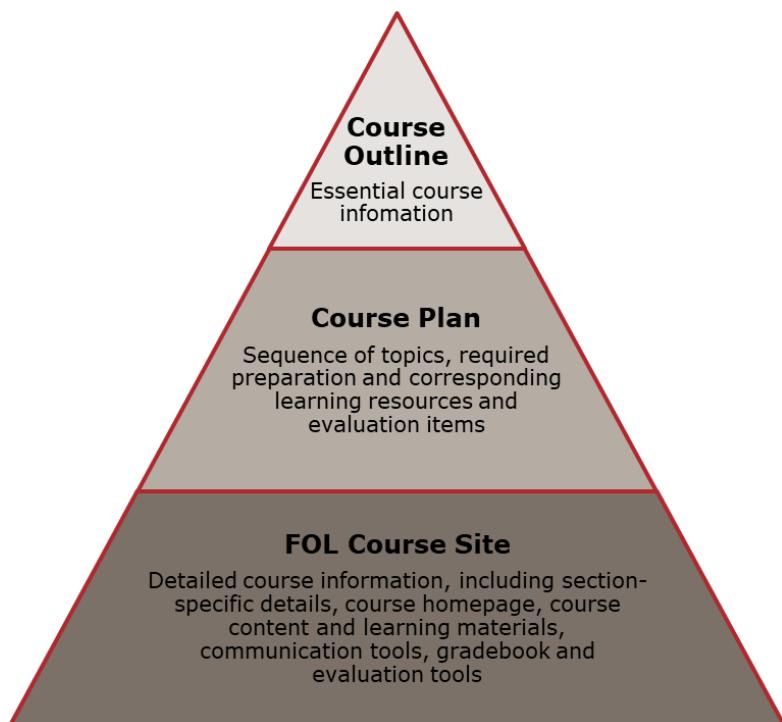


Figure 36: Level of detail about a course shared on the course outline, course plan, and FOL course site.

Your course outline, course plan, and FOL course represent a summary of all of the other decisions you have made and materials you have prepared for your course, and each present a different level of detail about your course to your students and others (Figure 36).

The course outline is available internally to all faculty, staff, administrators, and students at the College and externally to the public; the course plan is available internally to all faculty, staff, and administrators at the College as well as the students enrolled in the course; and the FOL course site is available internally to only the faculty, staff, and students involved in the course.

The course outline and course plan are archived each year in the Course Outline Mapping and Management System (COMMS). See [Appendix B](#) for instructions on how to access archived documents.

The FOL course or the content it contains can be archived or rolled over from year to year in FOL, the Learning Management System (LMS), but not in COMMS.

Throughout this chapter, you will be prompted to review the materials you prepared earlier in the Course Development Process with the following icon:



Deliverable

For example, your course outline will include the Course Learning Outcomes (CLOs) that will be addressed in the course, so you will see the following icon to refer you to Deliverable 1 – Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks:



[Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks](#)

If you are preparing the course outline for a brand new course, the [CLO Worksheet](#) will take you through the process of writing those learning outcomes. If you need to revise the CLOs for your course, the CLO Worksheet will help you to identify the impact of those revisions on the learning activities and evaluations in the course.

Core Competencies for Faculty

By the end of this chapter, you will be able to...

- Prepare a comprehensive Course Outline & Plan that shows the alignment between Course Learning Outcomes (CLOs), teaching and learning activities, and evaluation methods;
- Integrate appropriate technology into teaching and learning materials to enhance student learning (A.1, B.6);
- Evaluate course elements using tools such as Quality Matters (QM) (A.2);
- Prepare Accessibility for Ontarians with Disabilities Act (AODA) compliant educational resources (B.5); and
- Use the Learning Management System (LMS) to support students and enhance communication and feedback for students (B.6, C.8).

Deliverable 6 – Course Outline & Course Plan

Before you begin, ensure that you have the following materials for your course:

- Course Learning Outcomes ([Deliverable 1](#))
- Lesson Plans ([Deliverable 2](#))
- Teaching and Learning Materials ([Deliverable 3](#))
- Evaluation Tools ([Deliverable 4](#))
- Evaluation Map ([Deliverable 5](#))

Open or print the following templates and resources, which will be used in this module:

- [Course Outline Template](#)
- [Course Plan Template](#)
- [Bloom's Taxonomy Resources](#)

This section will take you through the process of preparing (or updating) your course outline and course plan by examining each component of the two documents. By the end of this section, you will be able to prepare a comprehensive course outline and course plan for each of your courses.

A course outline

- Summarizes essential course information including learning outcomes and evaluations in a standardized format;
- Identifies responsibilities and expectations of the students, professor, and College through descriptions of learning activities and resources as well as lists of academic policies and program-specific needs; and
- Represents a contractual arrangement between the College and the students that supports the achievement of learning outcomes and academic progression ([Policy A113](#) ↗).

A course plan

- Outlines the topics that support the Course Learning Outcomes (CLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks to be taught and evaluated in a course; and
- Expands on the information provided in the course outline to describe the sequence of topics, required preparation for each topic, and corresponding learning resources and evaluation items.

Together your course outline and plan will represent a summary of all of the other decisions you have made and materials you have prepared for your course.

Each course will have **one** course outline that will apply to all sections and deliveries of that course for a given academic year ([Policy A111](#) ↗). A course may have multiple course plans each representing a different section or delivery method of the course. The course plan may

change during the delivery of a course according to students' learning needs and/or unanticipated disruptions provided that students are notified of any significant changes via FanshaweOnline (FOL) prior to changes being implemented as specified in [Policy A113](#) and noted on the course plan template.

Both documents are archived each year in the Course Outline Mapping and Management Systems (COMMS). The course outline is available to the public; the course plan is available internally at the College. See [Appendix B](#) for instructions on how to access archived course outlines and course plans.

Course Outline Mapping and Management System (COMMS)

Fanshawe College uses the **Course Outline Mapping and Management System (COMMS)** to manage course outlines. To access your course outline in COMMS, you will login using your Fanshawe College login and password at fanshawe.ecoursemap.com.

Figure 37 outlines the general process for the submission and approval of course outlines and plans. Note that each School may have its own process, so you should consult with your Curriculum Lead (Program Coordinator) and/or Academic Manager (Chair or Program Manager) to confirm roles, responsibilities, and deadlines (See [Roles & Responsibilities](#)).

In COMMS, if you have been assigned the role of **Course Outline Writer**, it will be your responsibility to create or revise the course outline and course plan. Your **COMMS School Administrator** will assign your courses to you in COMMS. After you submit your course outline and course plan in COMMS, the Curriculum Lead (Program Coordinator) and Academic Manager (Chair or Program Manager) will review them. They will also review the [program maps](#) generated from the course outlines for all of the courses in the program.

All course outlines are prepared and reviewed within COMMS, so if there are any changes that need to be made, your Curriculum Lead, Chair, and/or Program Manager can send you feedback through COMMS. You will receive an e-mail notification in your Fanshawe College account when a course outline has been approved or returned for further editing, so you will know when to log in to COMMS.

After the Chair has approved your course outline, the Educational Support Technologist for your School will upload your course outline and course plan into FanshaweOnline. The Program Coordinator and Chair will also review the course plan, but it may be updated each semester as needed.

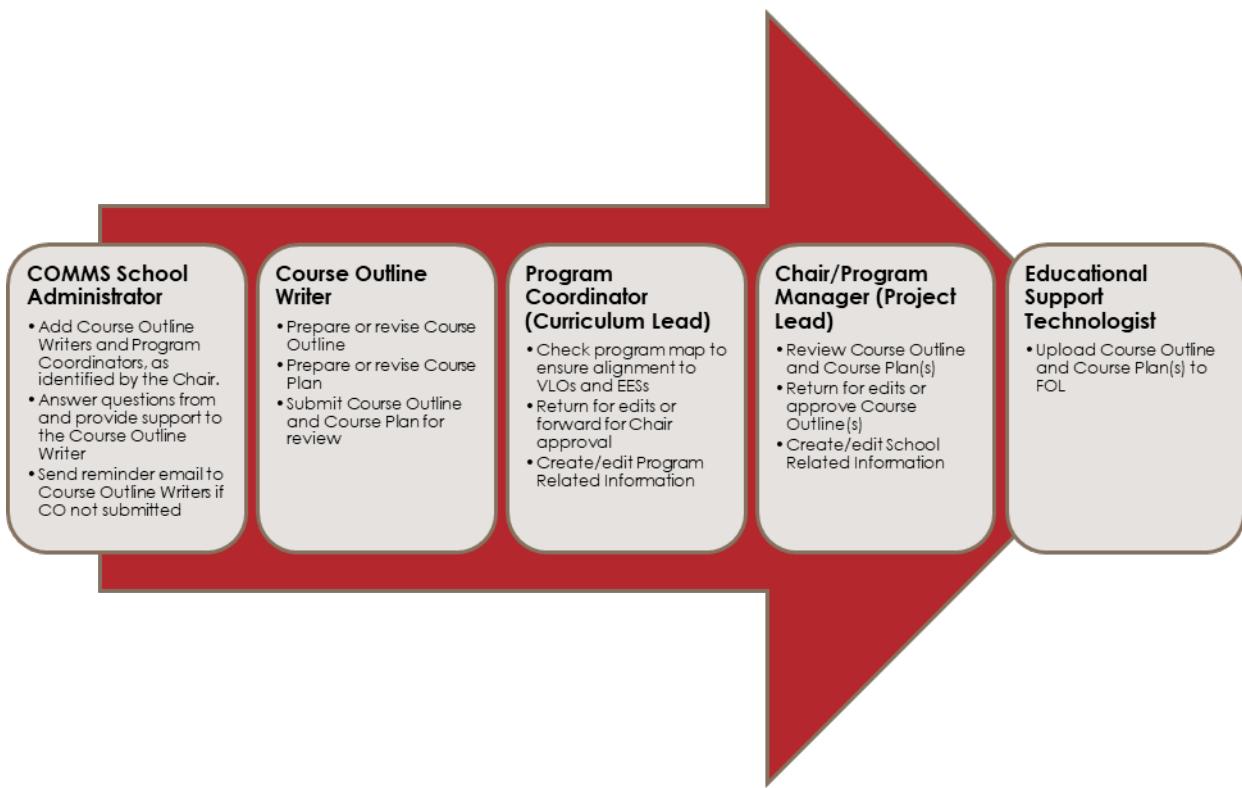


Figure 37: Course outline and course plan submission and approval process

Step 1 – Prepare the Course Outline

This section will describe each section of the course outline as it appears in COMMS. For additional instructions on using COMMS to enter in the information about your course, see [Appendix B](#).

Course Information

Your **course description** should be written in such a way that it markets the course in three to four concise sentences. The course description should capture or describe the scope of the course content and be generic enough that it will not need to be modified every semester.

The course description on your course outline will be the same as the course description published on the program website and in the program calendar. As the Course Outline Writer, you will not be able to edit the course description directly in COMMS. If the description for your course needs to be updated, contact your Academic Manager (See [Roles & Responsibilities](#)) to discuss the changes that need to be made.

Course Learning Outcomes (CLOs)



[Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks](#)

Course learning outcomes (CLOs) reflect the intended skills, knowledge and/or attitudes taught and evaluated in a course. The process of developing CLOs requires expertise in the subject matter and an understanding of key concepts in program and course development, including Bloom's Taxonomy, learning domains, and teaching methodologies.

Essential Employability Skills



[Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks](#)

Essential Employability Skills (EESs) are skills that are critical for success in any workplace or in day-to-day living and life-long learning. These skills are transferrable across any program or discipline and include skills in the following categories:

- Communication
- Numeracy
- Critical thinking and problem solving
- Information management
- Interpersonal
- Personal

Note: If your course is part of a degree program, these skills are represented in the **Degree-Level Standard (DLS) benchmarks**.

You will identify the EESs or DLS benchmarks that are taught and evaluated in your course. You are not expected to address every EES or DLS benchmark in each course; however, all of the EESs and DLS benchmarks need to be addressed or achieved somewhere in a program.

Review the lists of [EESs](#) and [DLS benchmarks](#) in [Phase 1 – Establish Context](#).

Program Vocational Learning Outcomes



Course Learning Outcomes & Essential Employability Skills/Degree-Level Standard Benchmarks

Most courses will be associated with one or more programs, each of which will have a set of **program vocational learning outcomes (PVLOs)**. (General Education courses, which are a Ministry of Advanced Education and Skills Development (MAESD) requirement, can be taken simultaneously by students in a wide range of programs.)

PVLOs represent the vocationally specific knowledge, skills, and attitudes that a student must be able to reliably demonstrate at the end of a program. Every program should include a set of vocational outcomes, which sets out the culminating demonstration of learning and achievement and must be addressed over the duration of the program. A single course in a program will likely not address every PVLO for the program, but each course should contribute to the students' learning for at least one of the PVLOs.

Whether you are preparing the course outline for a new course or you are revising the course outline for an existing course, you will see that the PVLOs that your course contributes to have been identified and ranked. The ranking indicates the level of learning achieved in the course as outlined in Table 7. As the Course Outline Writer, you will need to ensure that the PVLOs are identified and ranked correctly for your course.

Continuous Quality Improvement

For new programs, courses, including course descriptions, course hours, PVLOs, and EESs, are approved by the Credential Validation Service (CVS) within the Ontario College Quality Assurance Service (OCQAS) and enforced by the Ministry of Advanced Education and Skills Development (MAESD). At Fanshawe College, these are developed in Stage-Gate 2 of the [Program Development Process](#).

Any changes or edits that are made to the course description or to the program maps must be approved by an academic manager as part of the [Curriculum Modification Process](#).

Table 7: Levels of Learning for achieving Course and Program Vocational Learning Outcomes (PVLOs)

Level of Learning	Explanation
Introductory (I)	<ul style="list-style-type: none"> This level of learning is foundational. Concepts and skills are introduced in a program for the first time. The student has little or no prior knowledge of or experience with the concepts and skills taught.
Building (B)	<ul style="list-style-type: none"> This level of learning builds on the foundation established by the introductory level of learning. The student has met the concepts or skills before, but requires additional practice to continue to refine and integrate it with other knowledge.
Culminating (C)	<ul style="list-style-type: none"> This level of learning is the highest stage of learning appropriate to the given credential and for an entry-level practitioner. This level depends on a solid foundation and on prior opportunities for students to build their knowledge and skills. At this level, a student can integrate their learning with other concepts and skills.

When you make changes to how the PVLOs are addressed in your course (or when you are identifying the PVLOs for the first time), think about how your course fits within the context of the whole program (See [Phase 1 – Establish Context](#)). When your Curriculum Lead and Chair review your completed course outline, they will also review the PVLO map for the program to ensure that all PVLOs are addressed or achieved.

Elements of Performance (EoP) & Professional Competencies

Your course outline may also identify the **Elements of Performance (EoP)** associated with the PVLOs for a program and/or **professional competencies** required by an external regulatory body that provides accreditation for a program. Only complete these sections of the course outline if your Curriculum Lead or Academic Manager has requested that you complete them.

Elements of Performance (EoP) are connected with the PVLOs for those programs. The EoP for each PVLO defines and clarifies the level and quality of performance necessary to meet the requirements of that PVLO. EoP indicate the means by which the student may perform the PVLO.

You will identify the level of learning achieved for the EoP as you did for the PVLOs if you have been asked to do so by your Curriculum Lead or Academic Manager.

Some programs, such as programs in health sciences and aviation, are accredited by an external regulatory body. To maintain program accreditation, the College must be able to

demonstrate that a set of **professional competencies** – knowledge, skills, and attitudes – have been taught and evaluated within the program in addition to the MAESD requirements.

You will identify the professional competencies that are taught and evaluated in your course if you have been asked to do so by your Curriculum Lead or Academic Manager.

Evaluation Methods and Map



Evaluation Tools

Your course outline will identify the evaluations that will be used in the course, their weighting or percentage of the students' final grade, and their alignment with the learning outcomes for the course.



Evaluation Map

Your course outline will also identify the learning outcomes – PVLOs, EESs, and CLOs – that are validated by each evaluation method. In COMMS, all learning outcomes will need to be validated by at least one evaluation tool in the course. A single evaluation might not validate all of the learning outcomes, but it must validate at least one.

Note: Each course will have one course outline for the academic year. If your course includes multiple sections and/or delivery methods, ensure that your evaluation tools, weighting, and alignment are consistent across all sections and deliveries of the course. The course plan will provide more specific details about the evaluations used in each section and/or delivery of the course.

For example, if a course is delivered both online and face-to-face, the course outline may show a “Written Assignment” evaluation worth 10% and addressing CLOs #3 and #5, PVLO #1, and EES #1, #2, and #4. For the online delivery, that written assignment may be a required post on the discussion board; for the face-to-face delivery, that written assignment may be a response to a prompt given in class. Those details will be given on the course plan for each delivery, and both versions of the assignment will be worth 10% and measure the students' achievement of the same outcomes as indicated above.

Learning Resources



Lesson Plans; Teaching & Learning Materials

This section of your course outline should clearly indicate the items that your students may need to obtain to support the intended learning. It should indicate the resources that are required and the resources that are recommended.

Here are some examples of the types of resources that you may want your students to purchase/provide:

- Publications/Textbooks – Include a full reference for any publications needed. The reference should include the publication's title, author(s), publisher, date of publication, and ISBN.
- Instruments/Equipment – Calculators, lab coats, lab kits, tools, uniforms, etc.
- Computing Resources – Software (include the version number), hardware, internet access

Delivery Methods/Learning Activities



Lesson Plans; Teaching & Learning Materials

This section of your course outline will describe how your students will be exposed to a learning experience (i.e. the delivery method and environment): lectures, hands-on lab activities, seminars, online learning, field placement, etc.

Figure 38 provides an example of how this information could be presented on the Course Outline.

Learning Activities to support the intended learning
<ul style="list-style-type: none">• Lectures and tutorials - discussion of course material• In-class problem solving• Online quizzes and assignments• Case analysis

Figure 38: Sample of the Course Outline – Learning activities

Prior Learning Assessment & Recognition (PLAR)

Fanshawe College's **Prior Learning Assessment and Recognition (PLAR)** process involves the evaluation of the knowledge and skills gained through experiential and/or non-formal learning for the purposes of obtaining credit. PLAR uses a variety of tools to help learners reflect on, identify, articulate, and demonstrate past learning that was acquired through work experience, unrecognized training, independent study, volunteer activities, and hobbies that are not recognized through mechanisms for formal transfer of credit ([Policy A124](#)).

Your course outline will identify the method of assessment that could be used to evaluate that the student challenging for credit has met the learning outcomes for your course.

All post-secondary credit courses including continuing education credits are usually eligible for PLAR. When courses are exempt, written rationale must be provided by the School Chair.

Typically, a challenge evaluation/exam or a portfolio is used to measure a candidates' learning against the CLOs ([Policy A124](#)). The method of assessment for PLAR must evaluate both theoretical and practical knowledge and skill, and it must be comparable to the forms of evaluation used in the course. That is, the method of assessment used for PLAR should be no easier and no harder to complete than the methods of assessment used in the course.

A challenge evaluation/exam measures the candidates' learning achievement against the CLOs. The challenge evaluation/exam can measure learning through written/oral exam and/or demonstration for the purpose of awarding credit. It is developed and evaluated by a faculty member who is a subject matter expert.

A portfolio is a collection of material that identifies an individual's achievements and documents work and life experiences. The PLAR candidate develops and organizes the portfolio to demonstrate completion of the learning outcomes of one or more courses, and a subject matter expert evaluates the portfolio. Details on what is included in a portfolio will vary depending on the field of study.

Contact your Academic Manager (See [Roles and Responsibilities](#)) for more information about the requirements for PLAR for your course.

Other Information (Passing Grade)

Your course outline will detail the grading system used for your course. All courses are required to have 50% as the passing grade unless the Senior Vice President Academic has approved an alternate passing grade (e.g., 60% passing grade, pass/fail). Alternate grading systems are typically only permitted for courses in programs that are regulated by an external accrediting body.

If your course is part of a program that is regulated by an external accrediting body, state the minimum grade required by the regulatory body in the Course Related Information section of the course outline.

Details about the grading systems can be found in [Policy A112](#).

Course Related Information (Practices and Procedures)

As the Course Outline Writer, you are required to add in your own practices and procedures for late assignments, missed evaluations, classroom etiquette, expectations for using

FanshaweOnline (FOL), etc. Before you add your own practices and procedures, ensure that you have reviewed the College policies and the College-, School-, and program-specific practices and procedures to avoid any duplication or contradictions.

Step 2 – Prepare the Course Plan



[Lesson Plans](#); [Teaching & Learning Materials](#); [Evaluation Tools](#)

Universal Design for Learning (UDL)

The [UDL](#) framework guides curriculum design including the course outline and course plan, which details the “what”, the “how”, and the “why” of learning (Principles 1 – 3).

For example, when a marketing professor noticed that her students were frequently unprepared for class, she added more detail to her course plan and reviewed it with her students on the first day of class. Now that her students know what is expected of them for each class, they show up with the materials and resources they need to learn.

Course plans are prepared in a Word document and uploaded into COMMS to support the course outline. The [Course Plan Template](#) is shown at the end of this section. You may need to include multiple course plans to represent different sections or delivery methods (e.g., face-to-face, online) for the course. Consult with your Academic Manager (See [Roles & Responsibilities](#)) to determine the specific requirements for your course plan(s).

The first section of your course plan contains the details about your course and the semester and section that course plan will apply to as illustrated in Figure 39.



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COURSE PLAN

Course Information		<i>Enter course information into the cells below.</i>
Course Title:	Research in Ergonomics	
Course Code:	ERGO-6005	
Program:	Advanced Ergonomics Studies	
Program Level:	1	
School:	Public Safety	
Duration:	45 total course hours	
Term:	Winter	
Prepared by:		

Figure 39: Sample of the Course Plan – Section details – ERGO-6005 Research in Ergonomics

The second section of your course plan outlines the detailed content for your course and displays the alignment among the topics covered, the resources required by students, and the evaluations that are used. See Figure 40 for sample course plan for ERGO-6005, Research in Ergonomics.

Time	Topic	Delivery Details: Preparation and/or Learning Resource(s)	Delivery Details: Evaluation
1	Course Introduction & History of Ergonomics Research	<ul style="list-style-type: none"> • Carmines & Zeller (1979) • Franco & Fusetti (2004) • Karwoski & Marras (1998) • Moray (2005) • Waters et al. (2006a) • Waters et al. (2006b) 	
2	Introduction to Research Methodology & Critiquing	<ul style="list-style-type: none"> • Brighton et al. (2003) • Concato et al. (2000) • Dul & Neumann (2009) • Rose (1991) • Virzi et al. (1993) 	Quiz #1
3	Critical Analysis of Research (Part I)	<ul style="list-style-type: none"> • Jellema et al. (2001) • Young & Solomon (2009) 	
4	Critical Analysis of Research (Part 2)	<ul style="list-style-type: none"> • Marley & Duggasani (1996) • Lavender et al. (1999) 	Group Report #1 (15%)
5	Individual Research Critique Presentations (Part 1)	N/A	Individual Presentation #1 (20%)
6	Individual Research Critique Presentations (Part 2)	N/A	Individual Presentation #1 (20%)
7	Guest Lecturers in Ergonomics Research	Readings TBA (pending confirmation of guest speakers)	

Figure 40: Sample of the Course Plan – ERGO-6005 Research in Ergonomics

Summary

Your course outline and course plan represent a summary of all of the decisions that you have made about your course and act as a contractual agreement between the College and your students. Ensure that you review these documents with your students on the first day of class and refer to them throughout the course.

If you need to make any minor changes to the information presented on your course plan (e.g., switching the order of a lecture, moving the due date for an assignment) during the semester, make sure that you inform your students of those changes and how those changes will affect their learning experience via FOL prior to implementing those changes ([Policy A113](#); noted on the course plan template). If you need to make any more significant changes (e.g., weight of an evaluation) during the semester, contact your Academic Manager for approval first.

Reflective Practice & Revision

The course outline and plan have required you to review all of the decisions you have made about your course. Before you submit your course outline and plan for approval, ensure that you have checked the following:

- **Content:** Is there anything you need or want to change in your lesson plans, teaching and learning materials, and/or evaluation tools?
- **Outcomes & Evaluations:** Have you linked all of the outcomes to an evaluation? (The COMMS software will alert you if anything has been missed and will require you to complete this step before you can submit your course outline.)
- **Spelling/Grammar/Formatting:** Have you previewed your Course Outline? (See [Appendix B](#) for instructions.) The text box editors in COMMS will allow you to edit, check spelling, and format your course information as you enter it in.



Workshops for further learning and training

- Course Outlines Revisited: Aligning Outcomes, Evaluation, and Methodology
- Student Appeals, Policy, and Fairness



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COURSE OUTLINE

Course Information	<i>Enter course information into the cells below.</i>
Course Title:	
Course Number:	
Co-Requisites	
Pre-Requisites	
Applicable Program(s): <i>(Indicate if course is core or elective in each program)</i>	
Prepared by:	
Approved by:	
Approval Date:	
Approved for Academic Year:	
Normative Hours:	

Refer to FOL course site for additional information (e.g., professor's office hours and contact information, professor introduction, classroom procedure and netiquette expectations, expectations for student participation, first steps to get started, professor response time for marking and email, etc.).

Course Description

Course Learning Outcomes (CLOs)
<i>Upon successful completion of this course, you will be able to reliably demonstrate the following Course Learning Outcomes which will be taught and evaluated:</i>

Essential Employability Skills (EES)
<i>Upon successful completion of this course, you will be able to reliably demonstrate the following Essential Employability Skills (EES):</i>

Essential Employability Skills (EES)**Relationship to Vocational Learning Outcomes (VLO)**

This course provides the opportunity for you to achieve the following Program Vocational Learning Outcomes (VLO) which will be taught and evaluated at an introductory (Rank 1), building (Rank 2) or culminating (Rank 3) level:

Evaluation

The following list provides evidence of this course's learning achievements and the outcomes they validate:

Evaluation Category	Weighting	Evaluates CLOs	Evaluates EESs	Evaluates PVLOs

Refer to the FOL course site for detailed description and evaluation criteria and/or rubrics that will be used to evaluate your course work.

Learning Resources to support the intended learning

Learning Activities to support the intended learning

Prior Learning Assessment and Recognition (PLAR)

If you intend to apply for prior learning assessment and recognition (PLAR) to earn college credits for learning and skills acquired through previous life and work experience,

Prior Learning Assessment and Recognition (PLAR)

you will need to demonstrate competency at a postsecondary level in the course learning outcomes outlined above. The type of evaluation method used will be determined by a subject matter expert and evidence of intended learning will be demonstrated by a:

Drop down menu (select all that apply):

Challenge

Portfolio

Other

If this course is to be excluded from PLAR, the reason for this exclusion is:

College Grading

(default; unless otherwise approved by Chair and Office of Registrar)

Final Grade	Mark Equivalent (%)	Grade Point Average
A+	90-100	4.2
A	80-89	4.0
B+	75-79	3.5
B	70-74	3.0
C+	65-69	2.5
C	60-64	2.0
D+	55-59	1.5
D	50-54	1.0
F	0-49	0
P	Greater than 50	<i>Does not contribute to GPA</i>
I	Incomplete	
N	No credit achieved	
W	Withdrawn	
X	Audit only	

Course Specific Information (i.e. practices and procedures)
School Related Information (i.e. practices and procedures)

Provided by Chair

College Information

Fanshawe College and the Fanshawe Student Union (FSU)

The College and FSU are committed to offer the highest quality education, learning experience and student life to all who attend Fanshawe College. The principles set forth within the *Statement of Rights and Responsibilities* guide that commitment. For more information on the College and FSU responsibilities or Student rights and responsibilities visit: <http://www.fsu.ca/rights-responsibilities.php>

Policies

Fanshawe College has a number of academic and administrative policies that

- define procedures to resolve complaints, launch academic appeals, and protect human rights;
- define the expectations the College has about student behavior and responsibilities, including sanctions which may be applied when offences occur and;
- provide information which can impact the college experience, including refund and withdrawal dates, or rules for academic progression.

It is important you are aware of the policies which apply to you, what they are about, and how to get to them. College policies are available on the Fanshawe College web site at www.fanshawec.ca/policies and myFanshawe.

Academic Integrity

Academic Integrity means holding yourself and others accountable for consistently performing all academic work with honesty and integrity and is integral to the academic mission at Fanshawe College.

The Following are Examples of an Academic Offence (see Policy A203 for a complete list)

- Copying and/or submitting another person's academic work as your own (Plagiarism)
- Submitting the same assignment, essay, project, etc. multiple times for evaluation/marking
- Using unauthorized materials/aids on coursework or assessments
- Allowing another person to take a test in your place
- Including a quotation taken from a website or from a text book etc. without citing the source

College Information

Penalties for an Academic Offence

Faculty and students have the responsibility to uphold academic integrity. Academic offences are not taken lightly and can lead to failure of assignments and classes as well as expulsion. Please take precautionary measures in your coursework to ensure academic integrity is being upheld. You have the right to appeal decisions related to Academic Offences and associated penalties if you believe you have been treated unfairly.

To learn more about Academic Integrity and Academic Offences, the Appeals Process and Resources on how to be successful in your coursework, please see www.fsu.ca/donutcheat.

If you need assistance with policy information or academic integrity, contact Counselling and Accessibility Services, Fanshawe Student Union, School or Campus Office, or the Ombuds Office.

Student Services

Whether you're a new student looking for a peer-tutor to help you get a handle on a tough class or an experienced student looking for career counselling, take advantage of the many services available to you as a Fanshawe student at:

<https://www.fanshawec.ca/student-life/student-services>

Office of the Registrar

For all admissions and registration related information, visit:

<https://www.fanshawec.ca/admissions/registrars-office>



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COURSE PLAN

Course Information		<i>Enter course information into the cells below.</i>
Course Title:		
Course Code:		
Program:		
Program Level:		
School:		
Duration:		
Term:		
Prepared by:		

The Course Plan provides an outline of topics that support the course learning outcomes and essential employability skills. It also provides an overview with respect to the scheduling of topics, required preparation for each topic and corresponding learning resources and evaluation items. Using the course plan will help you manage your time to get the most from the course and complete the evaluation items on time.

Time	Topic	Delivery Details: Preparation and/or Learning Resource(s)	Delivery Details: Evaluation
Example: 3 hours, Week 1	Example: How to measure blood	Example: Chapter 1, p. 1-14; watch YouTube video	Example: Lab 1 – 3%

The Course Plan may change according to students' learning needs and/or unanticipated disruptions. You will be notified of any significant change via FOL prior to changes being implemented as specified in Policy A113.

FanshaweOnline (FOL)

[FanshaweOnline \(FOL\)](#) is the College's Learning Management System (LMS). FOL is a cloud-based LMS hosted by D2L. You will use FOL to prepare some course materials and manage course content. FOL contains a flexible suite of tools for creating custom content for courses and users.

In this section, you will find an overview of the key features of FOL and the technical support resources available as well as an introduction to additional tools and capabilities you may want to use in or with FOL. The next section, [Deliverable 7 – FOL Course](#), will provide you with step-by-step instructions for setting up the essential components of your web-facilitated, blended, or online course.

Key Features – FOL Home Page

There are several key features of the FOL Home page (Figure 41) that you should be familiar with: navigation buttons, announcements, user links, tasks, courses, and resources.

The screenshot shows the FanshaweOnline (FOL) Home Page. At the top, there is a header with the FOL logo, a search bar, and a user profile for Albert Einstein. Below the header, there are several navigation buttons: 'Resources' (circled 2), 'Announcements' (circled 3), 'User Links' (circled 4), 'Tasks' (circled 5), and 'My Courses' (circled 6). The 'Announcements' section displays a welcome message and a recent post from Feb 16, 2018. The 'User Links' section shows links to Google and LFACS. The 'Tasks' section lists two items: 'Send final communication' (Overdue Mar 30, 2018) and 'Meet with Trevor James' (Overdue Apr 9, 2018). The 'My Courses' section lists three courses: ABST-1009-01 First Nations Studies, ARCH-1006-01-18W History of Architecture, and ARCH-3016-18S - Architectural Design & Project 4. There are also buttons for adding immediate or someday tasks.

Figure 41: FOL Home Page

- ① **Navigation Links** – The links on the FOL Home Page allow you to quickly access your course, update your profile and settings, and receive the following types of alerts:
 - **Message Alerts** – Notifies you when you have new e-mails or instant messages in FOL.
 - **Subscription Alerts** – Notifies you with a summary of activity for courses you have subscribed to.
 - **Update Alerts** – Notifies you when there are new system-wide or course-specific announcements.
- ② **Resources** – These links connect you with additional services you may need to use to support your course development and/or delivery, including Accessibility Services and the Copyright Management System.
- ③ **Announcements** – This section includes system-wide announcements such as notification of upcoming FOL system maintenance or academic deadlines.
- ④ **User Links** – This section allows you to create your own personal “quick links” to navigate to regularly-accessed external websites.
- ⑤ **Tasks** – This section allows you to create your own personal calendar items that you do not want to be reflected in a course calendar. These items are personal and not seen by other users.
- ⑥ **My Courses** – This section of the FOL Home Page will include the courses you are developing and/or delivering as well your employee training modules including six Academic Development Faculty modules (See [Faculty Support](#) for more information about these modules).

Key Features – Courses

In general, the key features that you will use for your FOL course website relate to communication, teaching and learning materials, evaluation tools, and enrolment statistics. For detailed instructions on how to set up and use these features, access any of the available [Technical Support Resources](#) outlined in the next section.

Communication

FOL provides tools to facilitate **asynchronous** and **synchronous communication** and collaboration among faculty and students.

Asynchronous communication involves participants engaging in the conversation or exchange of information at different times. The following communication and collaboration tools support asynchronous communication:

- **E-mail** – The full-featured e-mail system automatically associates messages with course offerings.
Note: Your FOL e-mail address is different from your Fanshawe e-mail address.
- **Discussions** – The online forum allows students to participate in discussions facilitated by the professor.
- **Announcements** – Faculty can post important information about the course such as reminders for assignments or tests, additional instructions or supplementary material available, or changes to the course delivery (e.g., class cancellation or room change).
- **Notifications** – Faculty and students can receive instant notifications about course events such as announcements, discussion postings, submissions, and grades.
- **e-Portfolio**: The e-Portfolio tool allows faculty and students to organize, store, reflect on, and share items that represent the individual learner.

Synchronous communication happens in real-time with all participants engaging in the conversation or exchange of information at the same time. The following communication and collaboration tools support synchronous communication:

- **Instant Messages** – Faculty and students can connect with other users and send private messages.
- **Collaborate** – This interface allows faculty and students to connect in multiple ways including two-way voice chat, video sharing, instant messaging, multimedia files, and applications.

Faculty and students can also add their social profiles such as LinkedIn, Facebook, Twitter, and Google+ to their FOL profiles to connect with friends, mentors, colleagues, or peers as an integrated part of the learning process.

Communicating with Students

Incorporate multiple methods of communication into your course, and make sure that you set clear expectations for how you and your students will communicate throughout the course.

For example, you should let students know how soon they can expect to receive an e-mail response from you if they e-mail you with a question or request.

Students will also need to be reminded of etiquette for posting on discussion boards or participating in live chats. For more information about how to use the FOL communication tools, visit the [FanshaweOnline Help Documentation](#)



Teaching and Learning Materials

In FOL, teaching and learning materials and activities are referred to as **Content**.

[Deliverable 7 – FOL Course](#) provides you with more information about how to manage your online content in FOL. Review [Phase 2 – Prepare Materials](#) for instructions and strategies for developing the teaching and learning materials for your course.

There are several other features of FOL that will help you organize and present your teaching and learning materials:

- **Locker** – All faculty members and students have a locker separate from any specific course where they can store files they are working on or using for a course.
- **Groups** – Within a course, students can be divided into groups to work on projects or assignments. Each group can have its own discussion forums, assignment folders, and locker area.
- **Calendar** – Use the calendar tool to arrange and visualize course events such as due dates for assignments, activities, and tests or exams.
- **Manage Files** – This tool allows you to organize and upload files associated with your course.

Online Course Development

If you are developing a course that another faculty member will deliver, one of the easiest ways to share files is to use FOL's **Manage Files** tool. You can upload and organize all of your lesson plans, teaching and learning materials, and evaluation tools to FOL.

For more information, about how to use the Manage Files tool, visit the [FanshaweOnline Help Documentation](#)

↗, and contact your Educational Support Technologist (See [Roles & Responsibilities](#)) to ensure all professors delivering the course have access to the FOL course website.

Evaluation Tools

FOL includes a **submissions folder** that students can use to submit their assignments electronically as well as a **quizzes** tool that will allow you to develop and deliver quizzes completely online. Use the **rubrics** tool to provide students with detailed grading schemes for their assignments.

For support with developing your evaluation tools before you create or upload them in FOL, review [Deliverable 4 – Evaluation Tools](#).

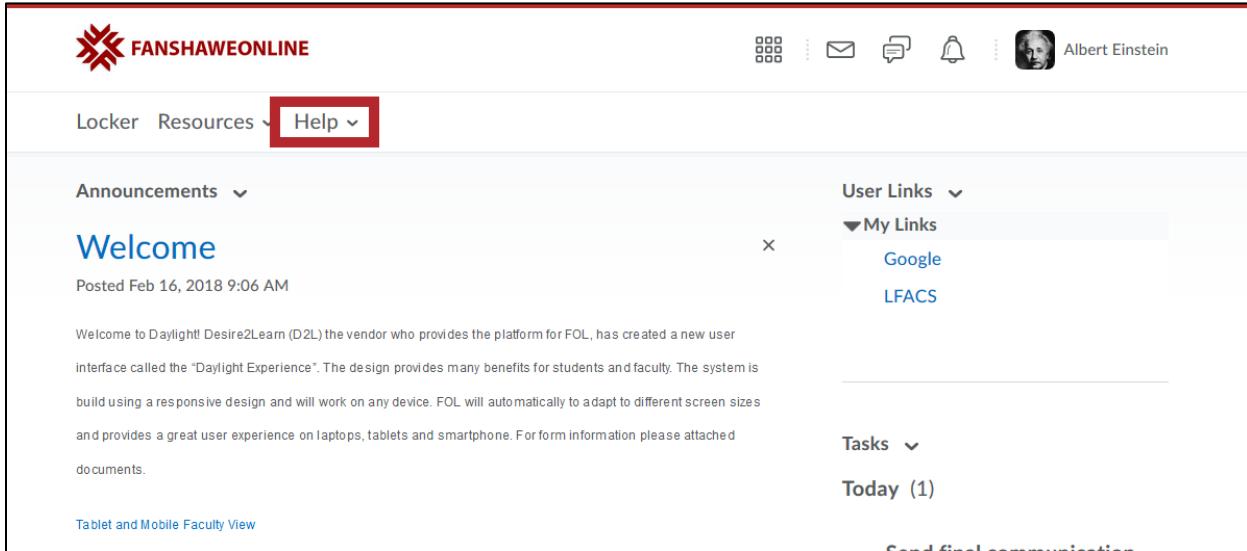
Progress Data

Within FOL, you will have access to a list of all of the students in your class (**Classlist**), and you can use FOL to track **attendance**. FOL will also give you access to **user progress** data, which include information on when and how often your students log into the course, what content they view, how many quiz attempts they make, and what submissions they have completed.

Manage and enter **grades** into FOL to allow students to monitor their own progress and achievement throughout the course. The grades can be linked with evaluation tools that you have created in your course so that they update automatically when you have evaluated an assignment or quiz.

Technical Support Resources

The [FanshaweOnline Help Documentation](#)  is accessible from any page in FOL by clicking on “FanshaweOnline Help” under the “Help” menu near the top left of the screen (Figure 42). This comprehensive resource provides technical support for the key features of FOL through step-by-step instructions, instructional videos, and answers to frequently asked questions. It also provides technical support for each of the additional features highlighted in the next section.



The screenshot shows the FOL dashboard. At the top, there's a navigation bar with icons for grid, announcements, messages, notifications, and user profile (Albert Einstein). Below the bar, there are dropdown menus for 'Locker Resources' (with 'Help' highlighted in red), 'Announcements', 'User Links' (including 'My Links' with entries for Google and LFACS), and 'Tasks'. A 'Welcome' announcement is displayed, followed by a message about the Daylight Experience. At the bottom, there's a link for 'Tablet and Mobile Faculty View'.

Figure 42: FOL Help Button

FOL Workshops

Organizational Development & Learning (OD&L) offers a full suite of workshops to support faculty in using FOL in all of your courses. We recommend that you begin with the following two workshops:

- FOL Essentials Introduction – Part 1 Communication: E-mail, News, and Calendar
- FOL Essentials Introduction – Part 2 Gradebook, Content, and Attendance



A full list of FOL information sessions and training workshops is available through Fanshaweelearns. Register online today!

FOL Ambassadors and Student Orientation Sessions

While you should always provide students with an overview of your FOL course website and the features and tools you will be using in your course, there are additional services available to assist students with using FOL.

The **FOL Ambassador Program** is a student volunteer program that provides peer-to-peer support for students using FOL. Additionally, in-person **FOL Student Orientations** are available upon request for students willing and able to attend. Those sessions will take students through the login process and answer any of their questions about FOL. For more information about the FOL Ambassador Program and Student Orientation sessions, e-mail FOlambassadors@fanshawec.ca.

Additional Tools and Capabilities

FanshaweOnline has several additional tools and capabilities that are useful for faculty and students.

Grades Transfer

The **Grades Transfer** tool was created to streamline the process of exporting final grades from FOL and importing them into Colleague (WebAdvisor) where they are connected with students' academic records.

For more information about using the Grades Transfer tool, visit the [FanshaweOnline Help Documentation](#) .

Mobile Solutions

A number of the online tools in FanshaweOnline can be used with mobile devices:

- **Assignment Grader** – This app provides professors with the ability to access and provide feedback on student submissions on the go.
- **Binder** – Students can view, download, and save FOL content on their mobile device. They can also organize, annotate, search, or tag and rank their documents to help focus their studies.
- **Brightspace Pulse** – This mobile app can help students stay connected and on track with their courses in FOL. It provides one easy view of course calendars, readings, assignments, evaluations, grades, and news. The app can help them make better decisions about how to handle workload, when to submit assignments, and when to prepare for tests.
- **e-Portfolio App** – Students can access their FOL e-Portfolios on their mobile phones to record, reflect on, and share their learning experiences with others while on the go.
- **Notifications** – Students can receive updates via e-mail or text message (SMS) when a grade is released in FOL or the professor updates course announcements. Students can set up instant or daily updates.

For more information about installing and using these mobile solutions, visit the [FanshaweOnline Resource Centre](#).

Blackboard Collaborate

Blackboard Collaborate is a real-time collaboration interface that allows faculty and students to connect in multiple ways including two-way voice chat, video sharing, instant messaging, multimedia files, and applications. Collaborate has many accessibility features including closed captioning, support for screen readers, keyboard/shortcut inputs, a customizable user interface, and session recordings.

For more information about using Collaborate, visit the [FanshaweOnline Help Documentation](#).

Respondus 4.0

Respondus 4.0 provides a secure test environment when using FOL quizzes. When students are taking a quiz that is Respondus 4.0-enabled, they are not able to copy, paste, print, or access the internet or any other applications on their computer system. Respondus 4.0 will also allow you to retrieve a course quiz from FOL when you need an electronic copy that can be converted to an alternate format or used by a student who requires assistive technology to complete it.

For more information about installing and using Respondus 4.0 for your online quizzes, visit the [FanshaweOnline Help Documentation](#).

Privacy

At Fanshawe, appropriate safeguards are used to assure the authentication of student identity and the integrity of student work for online courses and programs. Our policies and procedures assure the security of students' confidentiality and privacy when assessments and evaluations are administered as well as in the dissemination of the results.

Student's FOL accounts are deactivated 14 months after their last active course registration. FOL courses are retained for three years to ensure the information is available for grade appeals, fee appeals, and other academic matters.

Accessibility

D2L integrates their accessibility program into the research, design and development of products. Brightspace is checked for compliance with WCAG 2.0 AA (Web Content Accessibility Guidelines 2.0 Intermediate) standards to ensure they meet international accessibility standards, including the Accessibility for Ontarians with Disabilities Act (AODA).

Personal Settings

Personal settings enable users to change how they interact with FOL. Most of these settings offer choices that benefit many users, while some improve the interactions between assistive technology and FOL. Examples of personal settings you and your students can modify include the way that information is displayed and organized (e.g., font size, input options, discussion panes, e-mail features).

For more information about personal setting options, visit the [FanshaweOnline Help Documentation](#) .

Built-in Web Accessibility Features

Whether or not a user is accessing a website using assistive technology, the majority of users will scan websites to locate information rather than reading everything on the page. This includes looking for familiar items (e.g., headings, links, menus, search functions) and expecting them to be in the same place as they move through the site. FOL includes those familiar items and meets those expectations for users and screen reading technologies by using consistent navigation features and page layouts, offering an HTML editor for content creation, and allowing for a range of file formats (e.g., text, audio, and video) to be uploaded into the course.

For more information about FOL's built-in web accessibility tools, visit the [FanshaweOnline Help Documentation](#) .

FOL-Integrated Technologies

In addition to Respondus 4.0 and Blackboard Collaborate introduced in the previous section, [**ReadSpeaker®**](#)  **Enterprise Highlighting** and **docReader** are cloud-based text-to-speech applications that integrate with FOL course content to seamlessly present content bimodally. Once enabled in a course, ReadSpeaker automatically adds voice and highlighting to FOL content.

For more information about ReadSpeaker, visit the [FanshaweOnline Help Documentation](#) .



[**Accessibility Services**](#)

AODA Standards and Accessibility Tools

e-Learning Elements

To support the development of e-Learning content, Fanshawe has implemented FOL Essentials and adopted [Quality Matters™ \(QM\)](#). These two quality assurance frameworks will help you to identify the essential elements for the online component of your course.

Essential FOL Elements

To support Fanshawe's e-Learning Strategy, a set of essential FOL elements have been identified as the minimum standard for all courses ([Policy A115](#)). These elements have been integrated into the [Course Quality Assurance \(CQA\) Checklist](#), which was adapted from the Quality Matters™ rubric.

Quality Matters™



Fanshawe College has adopted [Quality Matters™ \(QM\)](#) as an overarching quality assurance framework for e-Learning. QM has been adopted by other post-secondary institutions across North America, and it provides a variety of tools and resources including a self-assessment tool that you can use to ensure the high quality of the online components of your course. Many of the elements of the QM framework can also be applied to the measurement of quality for the traditional face-to-face components of your course.

The Course Quality Assurance (CQA) Checklist

Checklist outlines the FOL elements that are required for all courses regardless of the delivery method as well as the other critical elements of a course relating to the following categories:

1. Course Overview and Introduction
2. Course Learning Outcomes & Objectives
3. Assessment & Measurement
4. Instructional Materials
5. Learner Activities & Learner Interaction
6. Course Technology
7. Learner Support
8. Accessibility & Usability

Reflective Practice & Revision

Is anything missing from your course website? Use the [Course Quality Assurance \(CQA\) Checklist](#) to identify the elements that you should add to your course website in FOL.

If you use the [FOL Templates](#) to manage your course website, you will be well on your way to addressing the critical elements on the CQA Checklist. The FOL Templates were designed to align with the FOL Essentials and Quality Matters frameworks.

Component	Criteria
Essential FOL Elements Required for All Course Modes	<ul style="list-style-type: none"> A. Instructor's full name and college contact information is available and course communication expectations/details are outlined. B. Current Course Outline & Plan are complete, signed, and posted. C. College policy, health and safety, and student support information are published in the course content section. D. Course/supplemental resources are published in the course content section. E. Complete assignment instructions, due dates, and submission guidelines are provided for each assessment in the Course Outline. F. Course uses an appropriate organizational structure to deliver content (i.e. modules, weeks, units, or themes). G. Complete gradebook customized for the course is available at the start of the semester with the same grade items, categories, and weights as indicated on the Course Outline. H. All links are active and current, text formatting is consistent, and course material is free of grammatical and mechanical errors. I. Course components comply with Fanshawe's copyright policy (Policy A204) and Accessibility policy and guidelines (Policy A203).
Course Overview & Introduction	<ul style="list-style-type: none"> 1.1. Instructions make clear how to get started and where to find various course components. 1.2. Learners are introduced to the purpose and structure of the course 1.3. Etiquette expectations for online discussions, email, and other forms of communication are clearly stated. 1.4. Course and/or institutional policies with which the learner is expected to comply are clearly stated, or a web link is provided. 1.5. Minimum technology requirements are clearly stated and instructions for use provided. 1.6. Prerequisite knowledge in the discipline and/or any required competencies are clearly stated. 1.7. Minimum technical skills expected of the learner are clearly stated. 1.8. The self-introduction by the professor is appropriate and is available online. 1.9. Learners are asked to introduce themselves to the class.
Course Learning Outcomes & Objectives	<ul style="list-style-type: none"> 2.1. The course learning outcomes are measurable. 2.2. The module/unit learning objectives are measurable and align with the course-level outcomes 2.3. All learning outcomes and module objectives are stated clearly and written from the learner's perspective. 2.4. The relationship between learning outcomes and course activities/assessments is clearly stated. 2.5. The course learning outcomes are suited to the level of the course.
Assessment & Measurement	<ul style="list-style-type: none"> 3.1. The assessments measure the stated learning outcomes. 3.2. The course grading policy is stated clearly. 3.3. Specific and descriptive criteria are provided for the evaluation of learners' work and are tied to the course grading policy. 3.4. The assessment methods selected are sequenced, varied, and suited to the learner work being assessed. 3.5. The course provides learners with multiple opportunities to track their learning progress.
Instructional Materials	<ul style="list-style-type: none"> 4.1. The instructional materials contribute to the achievement of the stated course learning outcomes 4.2. Both the purpose of instructional materials and how the materials are to be used for learning activities are clearly explained. 4.3. All instructional materials used in the course are appropriately cited. 4.4. The instructional materials are current (where appropriate). 4.5. A variety of instructional materials is used in the course. 4.6. The distinction between required and optional materials is clearly explained.
Learner Activities & Learner Interaction	<ul style="list-style-type: none"> 5.1. The learning activities promote the achievement of the stated course learning outcomes 5.2. Learning activities provide opportunities for interaction that support active learning. 5.3. The professor's plan for student inquiries and providing feedback on assessments is clearly stated. 5.4. The requirements for learner interaction are clearly stated.
Course Technology	<ul style="list-style-type: none"> 6.1. The technology used in the course supports the course learning outcomes and module objectives. 6.2. Course technology promotes learner engagement and active learning. 6.3. Links are provided to privacy policies for all external tools required in the course. 6.4. Technologies required in the course are readily obtainable 6.5. The course technologies are current.
Learner Support	<ul style="list-style-type: none"> 7.1. The course instructions articulate or link to a clear description of the technical support offered and how to obtain it. 7.2. Course instructions articulate or link to the institution's accessibility policies and services. 7.3. Course instructions articulate or link to an explanation of how the institution's academic support services and resources can help learners succeed in the course and how learners can obtain them. 7.4. Course instructions articulate or link to an explanation of how the institution's student services and resources can help learners succeed and how learners can obtain them.
Accessibility and Usability	<ul style="list-style-type: none"> 8.1. Course navigation/components facilitate ease of use. 8.2. Information is provided about the accessibility of all technologies required in the course. 8.3. The course provides alternative means of access to course materials in formats that meet the needs of diverse learners. 8.4. The course design facilitates readability. 8.5. Course multimedia facilitates ease of use.

Deliverable 7 – FanshaweOnline Course

Before you begin, ensure that you have the following materials for your course:

- Lesson Plans ([Deliverable 2](#))
- Teaching and Learning Materials ([Deliverable 3](#))
- Evaluation Tools ([Deliverable 4](#))
- Course Outline & Plan ([Deliverable 6](#))

Open the following resources that will be used in this module:

- [Course Quality Assurance \(CQA\) Checklist](#)

Finally, log in to [FanshaweOnline](#), and open your course website in FOL.

In this section, you will manage your course content using [FanshaweOnline \(FOL\)](#), the College's Learning Management System (LMS).

At Fanshawe, all courses, whether they are delivered face-to-face (web-facilitated), in a blended format, or fully online, will include an e-Learning component. **e-Learning** includes all forms of electronically-supported media, information, and communication technologies used to support teaching and learning.

While the delivery method for your course will influence the amount and type of content you post on FOL, ensure that you have reviewed the [Course Quality Assurance Checklist](#) for the [Essential FOL Elements](#) and the [Quality Matters™](#) elements that apply to all courses.

Throughout this section, you will be prompted to review the decisions you made and the materials you prepared earlier in the Course Development Process with the following icon:



Deliverable

Flexible Delivery Methods

Face-to-Face (Web-Facilitated):

Course work is completed during normal class hours in a face-to-face format, and the online component is used to supplement face-to-face time.

Blended: This model combines traditional, face-to-face class time with online and out-of-class course work.

Online: All or almost all of the content is web-based with no or very few face-to-face meetings.

See [Phase 1: Establish Context](#) for more information about flexible delivery methods.

If you are re-developing a course or modifying your course for a different delivery method, use those prompts to review and revise your existing course materials as needed to maintain alignment among the Course Learning Outcomes (CLOs), the teaching and

learning activities, and the methods of evaluation (See [Guiding Principles](#) for more information about constructive alignment of the curriculum).

Existing Course Content



Course Outline & Course Plan

Before you begin developing the online content for your course, the Educational Support Technologist/FOL Administrator assigned to your School or Faculty (See [Roles & Responsibilities](#)) will create the shell of the course in FOL. In doing so, the Educational Support Technologist will upload or input the following components or materials:

- The course outline and plan ([Deliverable 6](#));
- The Classlist;
- Standard College-specific materials for College policies, student services, software and technical support, and library resources;
- Standard School-specific home page components or content (where applicable); and
- Any additional online content from a previous offering of the course (if available and requested).

Your Educational Support Technologist/FOL Administrator can also provide you with technical and administrative support as you develop your online course content in FOL.

Step 1 – Set up Course Home Page

The course home page is the first screen that the students will see when they access your course in FOL. You can customize the home page for your course to highlight the information that will be most important to your students by selecting the widgets you would like to display. Standard system **widgets**, or information tools, that are typically used on a course home page include the following:

- Announcements;
- Calendar;
- Content Browser and Bookmarks;
- Google Search; and
- Updates.

For example, you can use the Announcements widget to post a welcome message that provides an introduction to the course and describes the first things you would like the students to view or do in FOL.

In the following steps, you will prepare the information or content that will be shown in the widgets that are displayed on your course home page.

Note: Some Schools have developed a standard format or set of requirements for a course home page in FOL. Ask your Curriculum Lead or Educational Support Technologist/FOL

Administrator (See [Roles & Responsibilities](#)) if there are any specific requirements for your course.

Step 2 – Prepare Online Course Content

There are templates available in FOL to support you in developing the online content for your course. All of those templates have been designed to incorporate the [Quality Matters™](#) elements for Accessibility and Usability for the online course content (QM 8.0) and to support the principles of [Universal Design for Learning \(UDL\)](#).

To access these templates, click on “**Content**” on the “**Quick Links**” menu for your course.

On the Content page, under the Table of Contents, click the “**Add a module...**” text box and enter a descriptive title for the module or course component (e.g., “Course Overview”, “Assignment 1 Description”, “Lesson 1: Effective Communication”).

The module will open in the main pane on the right side of the screen. In that main pane, you can modify the dates and restrictions governing who can access the material and when they can access it, and you can add a description of the module.

When you are ready to add a file or document to the module, click on the “**Upload/Create**” button, and select “**Create a File**” from the options available.

A new screen will open where you can create a file using the text editor. Click on the “**Select a Document Template**” button to access the available templates. Update the templates with your own course content.

Organize Course Content



[Lesson Plans; Teaching & Learning Materials](#)

Each of your lessons, modules, or units in FOL will likely include sub-modules containing a variety of resources for the students (i.e. the learning activities and materials such as PowerPoint slides, videos, PDF documents, or links to web resources). It is important that you organize these resources in a consistent and logical manner that makes it easy for your students to navigate through your online course materials.

Begin by using a distinctive title for each lesson, module, or unit to improve the ease of navigation for students. Figure 43 illustrates the difference between a set of lessons that differ only by number and a set of lessons with distinctive headings. With the distinctive headings, students will know exactly which lesson to look at to find specific information about a topic in the course.

BEFORE	AFTER
<ul style="list-style-type: none"> ≡ Lesson 1 ≡ Lesson 2 ≡ Lesson 3 ≡ Lesson 4 ≡ Lesson 5 	<ul style="list-style-type: none"> ≡ Lesson 1: Grammar Begins September 23 ≡ Lesson 2: Effective Communication Begins October 4 ≡ Lesson 3: Business Letters Begins October 17 ≡ Lesson 4: Style & Tone ≡ Lesson 5: Resumes & Cover Letters

Figure 43: Sample of how providing distinctive lesson titles improves ease of navigation

For more information about navigating in FOL, see the [FanshaweOnline \(FOL\)](#) section of this chapter, review the [FanshaweOnline Resource Centre](#) ↗, register for a workshop through [FanshaweLearns](#) ↗, and/or contact your Educational Support Technologist/FOL Administrator.

Step 3 – Set up Communication Tools

There are many ways to communicate with your students using FOL as described earlier in this chapter (See [Communication](#) in the [FanshaweOnline \(FOL\)](#) section). Before the course begins, prepare for the communication that will take place throughout the course:

- Set up the communications that you will use (e.g., announcements, e-mail, discussion boards, chat);
- Post communication expectations for your students (e.g., e-mail you if they are going to miss a class, netiquette for discussion boards) and for yourself (e.g., how quickly you will respond to e-mails); and
- Identify important dates and deadlines on the [Calendar](#).

For more information about using the communication tools in FOL, see the [FanshaweOnline \(FOL\)](#) section of this chapter, review the [FanshaweOnline Resource Centre](#) ↗, register for a workshop through [FanshaweLearns](#) ↗, and/or contact your Educational Support Technologist/FOL Administrator.

Step 4 – Set up Gradebook and Evaluation Tools



Evaluation Tools

You will use the FOL Gradebook to track students' grades throughout the course. Before the course begins, create entries in the Gradebook for each of the evaluations in the course. Ensure that the evaluations and weightings on FOL match the evaluations and weightings indicated on the [course outline and course plan](#).

Set up the FOL evaluation tools (e.g., assignment drop boxes, quizzes, rubrics) that you will be using in your course. For support with developing your evaluations before you create or upload them in FOL, review [Deliverable 4 – Evaluation Tools](#).

For more information about using the evaluation tools in FOL, see the [FanshaweOnline \(FOL\)](#) section of this chapter, review the [FanshaweOnline Resource Centre](#) , register for a workshop through [FanshaweLearns](#) , and/or contact your Educational Support Technologist/FOL Administrator.

Reflective Practice & Revision

Before you move on, review your course website in FanshaweOnline:

- Have you included all of the Essential FOL elements and Quality Matters requirements? Use the [Course Quality Assurance Checklist](#) to find out.



Workshops for further learning and training

- Introduction to e-Learning Resources
- Effective e-Learning
- So You're Teaching a Blended Course... Now What?
- FOL Essentials Introduction (Part 1 and Part 2)
- FOL Quiz Tools: Respondus 4.0
- FOL Tools: ePortfolio Introduction
- FOL Tools: Quizzes
- FOL Tools: Rubrics & Assignments
- Improve Your Teaching Now: Using FOL for Small Data in the Classroom

Additional Resources



[FanshaweOnline Resource Centre](#)

Includes Educational Support Technologist/FanshaweOnline Administrator contact list



[Integrating Technology](#) (Fanshawe login required)

Academic Faculty Development

College Educator Development Program (CEDP)

Chapter 8:

Reflect & Revise

In addition to the College-wide quality assurance initiatives that may prompt [curriculum modifications](#), all faculty members are responsible for engaging in reflective practice by reviewing and renewing their courses on a regular and on-going basis to maintain the quality and currency of the curriculum in an ever-changing world.

Reflection and revision are integral to the Course Development Process and can (and should) occur throughout all phases. **Reflect** on the choices that are made for the course, and **revise** course components to continuously improve the quality and alignment of the learning outcomes, teaching and learning activities, and evaluation methods.

Throughout *The CODE Book*, you were prompted to reflect on the decisions you were making and the deliverables you were preparing. Now that you have developed your course, we ask that you reflect on the whole course for completeness and quality before you (or another professor) delivers the course, while you are delivering the course, and after each time the course is delivered. Revise your course any time that the context of the course changes (See [Phase 1 – Establish Context](#)).

Core Competencies for Faculty

By the end of this chapter, you will be able to...

- Engage in reflective practice by reviewing and renewing courses and lesson plans (D.11).

Course Deliverables Checklist

Have you established the context for your course? Have you developed all of the materials you will need to deliver it? Did you check for alignment among the learning outcomes, teaching and learning activities, and evaluation methods? Have you managed the content of the course in your course outline and plan and on your FOL course website?

Table 8 is a checklist to help you review your course and ensure that you have completed all of the deliverables required for development.³ The checklist includes the key criteria for each deliverable as presented throughout *The CODE Book* and is also available in the Course Development Quick-Reference Guide:



[Course Development](#)

³ Consult with your Project Lead or Academic Manager (See [Roles & Responsibilities](#)) to identify the deliverables you have been hired to develop and to discuss the timeline for developing those deliverables.

Table 8: Course Deliverables Checklist

Complete (Check)	Deliverable	Quality Criteria
<input type="checkbox"/>	1. Course Learning Outcomes & Essential Employability Skills	<ul style="list-style-type: none"> • 6 to 10 Course Learning Outcomes (CLOs) describe the vocationally-specific knowledge, skills, and/or attitudes students must be able to reliably demonstrate by the end of the course. • CLOs align with the Program Vocational Learning Outcomes (PVLOs) and Essential Employability Skills (EESs)/Degree-Level Standard (DLS) benchmarks identified for the course. • CLOs are measurable.
<input type="checkbox"/>	2. Lesson Plans	<ul style="list-style-type: none"> • One lesson plan was prepared for each class/week/module as required. • Lesson plans include <ul style="list-style-type: none"> ◦ Lesson learning objectives that align with the CLOs; ◦ Teaching and learning activities that align with CLOs and provide appropriate levels of experience for assessment; and ◦ Evaluation methods (informal checks for understanding and formal evaluation tools).
<input type="checkbox"/>	3. Teaching & Learning Materials	<ul style="list-style-type: none"> • Materials support the teaching and learning activities described in the lesson plans. • Learning resources for students were selected. • Sources of information and/or teaching and learning materials were located. • Materials align with the principles of Universal Design for Learning (UDL) and comply with AODA standards.
<input type="checkbox"/>	4. Evaluation Tools	<ul style="list-style-type: none"> • Evaluation tools measure students' achievement of the CLOs in the same learning domain and at the same level of learning. • Each evaluation tool includes <ul style="list-style-type: none"> ◦ Reference to the CLOs and EESs/DLS evaluated; ◦ Criteria for evaluation; and ◦ Grading scheme. • Evaluations align with the principles of UDL and comply with AODA standards.
<input type="checkbox"/>	5. Evaluation Map	<ul style="list-style-type: none"> • Map shows alignment between CLOs and PVLOs. • Map shows alignment among CLOs, evaluation methods, and teaching activities.
<input type="checkbox"/>	6. Course Outline & Plan	<ul style="list-style-type: none"> • All sections of the course outline and plan are complete. • Course outline was submitted in the Course Outline Mapping & Management Systems (COMMS). • Course plan(s) was (were) uploaded into COMMS.
<input type="checkbox"/>	7. FOL Course	<ul style="list-style-type: none"> • FOL Course Home Page was developed. • FOL Course content is prepared. • FOL communication tools were prepared. • FOL gradebook and evaluation tools were prepared. • Course Quality Assurance Checklist was completed.

Additional Resources



[The Teaching Professional](#) (Fanshawe login required)
Academic Faculty Development
College Educator Development Program (CEDP)



[Core Competencies for Faculty](#) (myFanshawe document; Fanshawe login required)
Performance Reviews, Human Resources
Fanshawe College

Appendix A: Bloom's Taxonomy Resources

There are two documents available to support you with using Bloom's Taxonomy to write your Course Learning Outcomes (CLOs), plan your teaching and learning activities, and select your evaluation methods:



[Bloom's Taxonomy](#)



[Bloom's Taxonomy Verbs Resource](#)



Bloom's Taxonomy

Overview

Bloom's Taxonomy is a hierarchical model that categorizes ways of learning by the **domain** in which the learning takes place and the **level** of complexity of that learning.

This model was developed by educational psychologist Dr. Benjamin Bloom in 1956 with the purpose of promoting higher forms of thinking in education. Even today, Bloom's Taxonomy is still used to ensure alignment of the learning outcomes, teaching and learning activities, and evaluation methods for a course or a program.

Learning Domains

According to Bloom's Taxonomy, there are three domains into which all learning can be divided: the **cognitive**, **affective**, and **psychomotor** domains.

Domain	Explanation
Cognitive	<ul style="list-style-type: none">Intellectual capability or thinking skills
Affective	<ul style="list-style-type: none">Feelings, attitudes, or values
Psychomotor	<ul style="list-style-type: none">Manual or physical skills

Levels of Learning

Bloom's Taxonomy classifies learning within each domain according to the complexity of that learning. While Bloom's Taxonomy divides each domain into five to seven categories of learning, at Fanshawe College, those categories have been divided into three levels for simplicity:

Level of Learning	Explanation
Introductory	<ul style="list-style-type: none">This level of learning is foundational.
Building	<ul style="list-style-type: none">This level of learning builds on the foundation established by the introductory level of learning.
Culminating	<ul style="list-style-type: none">This level of learning is the highest level of learning dependent on a strong foundation and prior opportunities to build on that learning.

Bloom's Taxonomy Verbs

The Bloom's Taxonomy Verbs resource provides examples of verbs that can be used to describe the learning that takes place within each domain and each level of learning within each domain. This resource is available on the myFanshawe portal site for the Centre for Academic Excellence.

Applications in Course Development

Within every course, there should be alignment among the desired **learning outcomes**, the **teaching and learning activities**, and the **evaluation methods** used to measure achievement of the learning outcomes.

For more information about **constructive alignment** and course development, refer to the CoDe Book: Course Development Guide.

Writing Course Learning Outcomes (CLOs)

Use the Bloom's Taxonomy Verbs resource to identify the cognitive, affective, and psychomotor actions that you would like your students to be able to perform by the end of the course.

Example 1: By the end of a course, students reliably demonstrate the ability to *identify the causes and origins of fire and the principles of combustion, ignition, explosion, and methods of heat transfer (cognitive, introductory)*.

Example 2: By the end of a course, students reliably demonstrate the ability to *assemble build-in and stand-alone cabinetry (psychomotor, building)*.

Selecting Methods of Evaluation

Select and develop methods of evaluation that measure student performance in the same domain and at the same level as the Course Learning Outcomes (CLOs).

Example 1: Multiple-choice quiz or test

Example 2: Project: Assemble cabinetry independently

Planning Teaching and Learning Activities

After you have written your CLOs, plan teaching and learning activities that will provide students with ample practice in the same domain and level at which they will be measured.

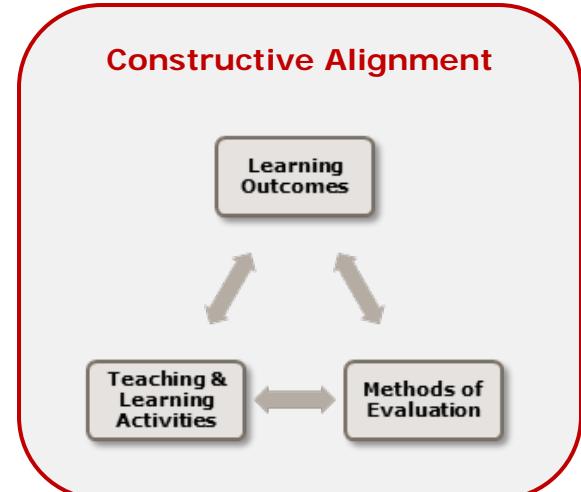
Example 1: Teaching Activities – deliver a lecture, provide examples, present case studies, facilitate discussion, make or show a video; Learning Activities – read textbook chapter, watch a video, work through examples, review case study samples, participate in a discussion

Example 2: Teaching Activities – provide instructions or demonstrations of tool use, cabinetry assembly techniques; Learning Activities – use tools, practice assembly techniques, follow instructions or demonstration to assemble cabinetry

References

Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.

Chapman, A. (2006). Bloom's Taxonomy of Learning Domains. [Online]. Retrieved from <http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm>



COGNITIVE DOMAIN

(Bloom, et al, 1956)

Some possible verbs for stating cognitive outcomes

	KNOWLEDGE	COMPREHENSION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
	<ul style="list-style-type: none"> . Remembering previously learned information 	<ul style="list-style-type: none"> . Understanding the meaning of information 	<ul style="list-style-type: none"> apply change demonstrate discover dramatize employ illustrate interpret manipulate modify operate practice predict schedule shop show sketch use 	<ul style="list-style-type: none"> . Breaking down information into its separate components so that its structure can be understood 	<ul style="list-style-type: none"> analyse arrange assemble choose collect combine compose construct create design develop devise formulate manage organize plan prepare propose rearrange set up show relationship synthesize 	<ul style="list-style-type: none"> . Judging the value of information or material based on personal or given criteria
EXAMPLES	<ul style="list-style-type: none"> Recite a policy. Quote prices from memory. Know the safety rules. 	<ul style="list-style-type: none"> Explain in own words the steps for performing a complex task. Translate an equation into a spreadsheet. 	<ul style="list-style-type: none"> Use a manual to calculate employee's vacation time. Apply laws of statistics to evaluate the reliability of a test. 	<ul style="list-style-type: none"> Troubleshoot a piece of equipment by using logical deduction. Gather information from a department and select the required tasks for training. 	<ul style="list-style-type: none"> Write a company operations or process manual for a machine to perform a specific task. Integrate training from several sources to solve a problem. 	<ul style="list-style-type: none"> Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget.
	INTRODUCTORY	INTRODUCTORY	BUILDING	BUILDING	CULMINATING	CULMINATING

Adapted from: *Making the Grade: Evaluating Student Progress* Scarborough, Ontario Prentice Hall Canada Inc. 1987. and <http://www.nwlink.com/~donclark/index.html>

AFFECTIVE DOMAIN

(Bloom, et al, 1956)

Some possible verbs for stating affective outcomes

RECEIVING PHENOMENA	RESPONDING TO PHENOMENA	VALUING	ORGANIZATION	INTERNALIZING VALUES
. Awareness, willingness to hear, selected attention.	. Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).	.The worth or value a person attaches to a particular object, phenomenon, or behaviour. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behaviour and are often identifiable.	.Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating an unique value system. The emphasis is on comparing, relating, and synthesizing values.	.(characterization): Has a value system that controls their behaviour. The behaviour is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).
asks chooses describes follows gives holds identifies locates names points to selects sits erects replies uses	answers assists aids complies conforms discusses greets helps labels performs practices presents reads recites reports selects tells writes	completes displays differentiates explains follows forms initiates invites joins justifies proposes reads reports selects shares studies works	adheres alters arranges combines compares completes defends explains formulates generalizes identifies integrates modifies orders organizes prepares relates synthesizes	acts discriminates displays influences listens modifies performs practices proposes qualifies questions revises serves solves verifies
EXAMPLES	Listen to others with respect. Listen for and remember the name of newly introduced people.	Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them.	Displays a belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with the commitment. Informs management on matters that one feels strongly about.	Recognizes the need for balance between freedom and responsible behaviour. Accepts responsibility for one's behaviour. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self.
				Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revisees judgments and changes behaviour in light of new evidence. Values people for what they are, not how they look.
				CULMINATING
				CULMINATING

Adapted from: <http://www.nwlink.com/~donclark/index.html>

INTRODUCTORY

INTRODUCTORY

BUILDING

CULMINATING

CULMINATING

PSYCHOMOTOR DOMAIN

(Bloom, et al, 1956)

Some possible verbs for stating psychomotor outcomes

Adapted from: <http://www.pwlink.com/~donclark/index.html>

Appendix B: COMMS Course Outline Writer Instructions

Fanshawe College uses the **Course Outline Mapping and Management System (COMMS)** to manage course outlines. To access your course outlines in COMMS, you will login using your Fanshawe College login and password at fanshawe.ecoursemap.com. You can also access COMMS from the “Links” menu on [myFanshawe](#).

Figure B.1 outlines the general process for the submission and approval of course outlines and plans. Note that each School may have its own process, so you should consult with your Curriculum Lead (Program Coordinator) and/or Academic Manager (Chair or Program Manager) to confirm roles, responsibilities, and deadlines (See [Roles & Responsibilities](#)).

In COMMS, if you have been assigned the role of **Course Outline Writer**, it will be your responsibility to create or revise the course outline and course plan. Your **COMMS School Administrator** will assign you to your courses in COMMS. After you submit your course outline and course plan in COMMS, the Curriculum Lead (Program Coordinator) and Academic Manager (Chair or Program Manager) will review them. They will also review the [program maps](#) generated from the course outlines for all of the courses in the program.

All course outlines are prepared and reviewed within COMMS, so if there are any changes that need to be made, your Curriculum Lead, Chair, and/or Program Manager can send you feedback through COMMS. You will receive an e-mail notification in your Fanshawe College account when a course outline has been approved or returned for further editing, so you will know when to log in to COMMS.

After your course outline has been approved by the Chair, the Educational Support Technologist for your School will upload your course outline and course plan into FanshaweOnline. The course plan will also be reviewed by the Program Coordinator and Chair, but it may be updated each semester as needed.

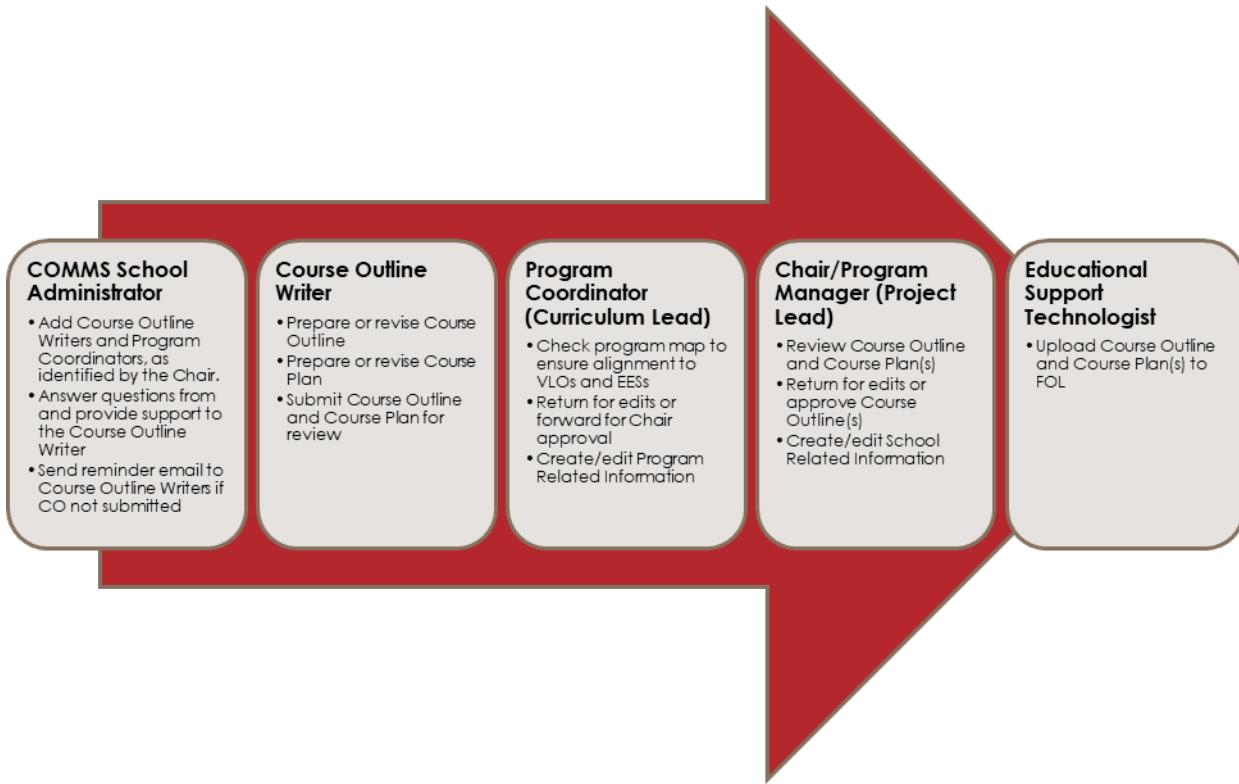


Figure B.1: Course outline and course plan submission and approval process

COMMS Login

All course outlines are prepared in COMMS. To access your course outlines in COMMS, you will login using your Fanshawe College login and password at fanshawe.ecoursemap.com through the College's Central Authentication Service (CAS).

When you log in to COMMS, your Home page will present you with a list of the courses for which you are the Course Outline Writer. When you are ready to begin preparing or editing your course outline, click the "Quick Edit" link next to the course (Figure B.2).

The screenshot shows the COMMS home page with the following details:

- Header:** FANSHawe logo and "Course Outline Mapping and Management System".
- Breadcrumbs:** COMMS Home » Home.
- Left Sidebar:** Navigation menu with options: Home, Course Outline Writer, Search Course Outlines, View All Course Outlines, Generate Reports.
- Main Content Area:**
 - Section Header:** HOME
 - Welcome Message:** Welcome to COMMS, your Course Outline Mapping and Management System.
 - Section Header:** Course Outline Writer
 - Text:** You are responsible for writing and editing the following course outlines.
 - Table:** A grid of course outlines with "Quick Edit" links.

Quick Edit	Course ID	Course Name
Quick Edit	BUSI-6008	Practical Implementation of BIM
Quick Edit	CADD-6001	BIM Technology 1
Quick Edit	CADD-6002	Computer Imaging for Construction
Quick Edit	COMP-6046	BIM Software Integration
Quick Edit	ENGR-6001	Building Energy Modelling
Quick Edit	INDS-6001	BIM Technology 2 (Capstone)
Quick Edit	MGMT-6099	BIM Management 1
Quick Edit	MGMT-6100	Integrated Practice for AEC Sector
Quick Edit	MGMT-6101	BIM Management 2
 - Text:** To access the course outlines, click [here](#).

Figure B.2: COMMS home page – Quick Edit

Navigation

After choosing a course from the Home page, you can move between screens or sections of the course outline using the navigation buttons at the bottom of each screen or by using the “Quick Links” on the right (Figure B.3).

The screenshot shows the COMMS interface for editing a course outline. At the top left is the Fanshawe logo. The top center displays the title "Course Outline Mapping and Management System". Below the title, it says "Course Outline Editor: CADD-6001 BIM Technology 1". The main content area is titled "COURSE INFORMATION". It contains several sections: "Contribution to Program" (Fanshawe Course Information - IMPLEMENTATION), "Course Description" (describing the course as exploring various Building Information Modelling (BIM) technologies and practices using BIM-enabled software like Autodesk Revit), "Co-Requisites" (No Co-Requisites), and "Pre-Requisites" (No Pre-Requisites). At the bottom of this section are "Edit" and "Next >" buttons. To the right of the main content is a vertical "QUICK LINKS" sidebar. This sidebar lists various links: Course Outline Section(s) in red require your attention, Course Outline, Course Information, Course Learning Outcomes, Essential Employability Skills, Vocational Learning Outcomes, Predefined Evaluation/Earning Credit, Learning Resources, Delivery Methods/Learning Activities, Prior Learning Assessment and Recognition, Other Information, Course Related Information, Submit, Options, Preview Course Outline, Compare to Previous Academic Year, and Go Home. The "Go Home" link is highlighted with a red border.

Figure B.3: Navigation buttons in COMMS

To return to your Course Outline Writer screen, click on the “Go Home” link at the very bottom of the “Quick Links” panel (Figure B.3).

To return to the main COMMS Home page (Figure B.2), click on the “COMMS Home” part of the breadcrumb navigation at the top left corner of the screen when you are on the Course Outline Writer screen (Figure B.4).

COURSE OUTLINE WRITER

You are responsible for writing and editing the following course outline(s):

Edit	Course ID	Course Name
Edit	BUSI-6008	Practical Implementation-BIM
Edit	CADD-6001	BIM Technology 1
Edit	CADD-6002	Comp Imaging for Construction
Edit	COMP-6046	BIM Software Integration
Edit	ENGR-6001	Building Energy Modelling
Edit	INDS-6001	BIM Technology 2-Capstone
Edit	MGMT-6099	BIM Management 1
Edit	MGMT-6100	Int. Practice for AEC Sector
Edit	MGMT-6101	BIM Management 2
Edit	ZOO1813	Communications I

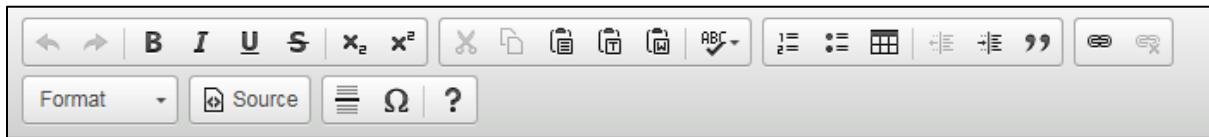
You have submitted the following course outline(s) for departmental approval:

Either no Course Outlines that have been submitted for Departmental Approval have been approved
OR
No Course Outlines have been submitted for Departmental Approval.

Figure B.4: Course Outline Writer screen – Access COMMS Home page

Text Editor

The COMMS text editors use similar icons as the Microsoft suite (Word, Excel, etc.) to represent the formatting options available:



Note: To paste text into a text editor, use one of the following icons:



Paste as plain text: This removes any formatting from the text before pasting.



Paste from Word: This maintains any formatting from Word and ensures that it will display in web format.

Step 1 – Prepare the Course Outline

Before you begin, ensure that you have the following materials for your course:

- Course Learning Outcomes ([Deliverable 1](#))
- Lesson Plans ([Deliverable 2](#))
- Teaching and Learning Materials ([Deliverable 3](#))
- Evaluation Tools ([Deliverable 4](#))
- Evaluation Map ([Deliverable 5](#))

Course Information

The “Course Information” screen is the first one you will see after choosing to edit a course in COMMS, and it must be updated first before you will be able to enter in the other information for your course.

On this screen (Figure B.5), you will see your course description and an option for choosing the course outline template that will be used for your course outline (“Contribution to Program”). Click on the “Edit” button to update the “Contribution to Program”. As a default, the “Contribution to Program” will be set as “*Unspecified*”.

The screenshot shows the 'Course Outline Mapping and Management System' interface. At the top left is the Fanshawe College logo. The main title 'Course Outline Mapping and Management System' is centered at the top. Below the title, the course information is displayed: 'Course Outline Editor: CADD-6001 BIM Technology 1'. A dark red header bar contains the text 'COURSE INFORMATION'. Underneath, a message says 'Please specify a Program Contribution.' with a question mark icon. To the right, a sidebar titled 'QUICK LINKS' lists 'Course Outline', 'Options', 'Preview Course Outline', 'Compare to Previous Academic Year', and 'Go Home'. The main content area contains course details: 'Contribution to Program: Unspecified', 'Course Description: In this course, students will explore the various Building Information Modelling (BIM) technologies and practice BIM processes using BIM-enabled software. Autodesk Revit will be the primary platform used by students to further develop BIM models and apply advanced modeling techniques.', 'Co-Requisites: No Co-Requisites', and 'Pre-Requisites: No Pre-Requisites'. A red-bordered 'Edit' button is located at the bottom of the main content area.

Figure B.5: Course Information screen

Figure B.6: Course Information screen – Edit Contribution to Program

Select “**Fanshawe Course Information – IMPLEMENTATION**” from the drop down menu (Figure B.6) unless your Curriculum Lead or Academic Manager (See [Roles & Responsibilities](#)) instructs you to select a different option.⁴ The option you select will determine the content that will be included on your course outline.

After you save your change to the “Contribution to Program” option, the list of Quick Links on the right side of your screen will change to reflect the content that you will include on your course outline.

Course Learning Outcomes

Course learning outcomes (CLOs) reflect the intended knowledge, skills, and attitudes taught and evaluated in a course.

To enter your CLOs in COMMS, click on the “Add New CLR” button in the middle of the screen (Figure B.7).

Complete this step in COMMS before you start the Evaluations section of your course outline. COMMS will require that you identify the CLOs for your course first because you will need to connect your evaluation tools to those CLOs. (See the [Predefined Evaluation/Earning Credit](#) section)

⁴ Other course outline templates are available for courses in apprenticeship programs, degree programs, and continuing education programs. There are also templates available for programs need to have the elements of performance or professional competencies included on the course outline to address external regulatory requirements.

Course Learning Outcomes
When you have earned credit for this course, you will have demonstrated the ability to:
Add New CLR
< Previous
Next >

Figure B.7: Course Learning Outcomes screen

A text editor will open, and you can enter in your first CLO. Each CLO will need to be entered in separately, and COMMS will number the CLO based on the order they are listed in.

When you have entered in your first CLO, click on the “Save” button at the bottom of the screen, and repeat for the rest of your CLOs.

You can use the arrow buttons associated with each CLO to reorder the CLOs in your list (Figure B.8). Edit or remove a CLO you have already entered using the pencil icon and the ‘x’ icon respectively.

COURSE LEARNING OUTCOMES					
Course Learning Outcomes					
When you have earned credit for this course, you will have demonstrated the ability to:					
1. develop and apply advanced template creation techniques by creating templates for bim models;					
 					
2. explore, design and develop advanced bim objects including parametric family elements;					
 					
3. apply and define view standard of bim models by defining and creating templates;					
 					
4. practice the application of worksets and worksharing within a bim environment;					
 					
5. create, apply and execute advanced modelling techniques for site creation and topography, align and orient models globally;					
 					
6. review, apply and execute the various linking opportunities within bim environments by importing a variety of external file types from variety of platforms;					
 					
Add New CLO					
< Previous					
Next >					

Figure B.8: Course Learning Outcomes screen – Ordering

Essential Employability Skills or Degree-Level Standard

Essential Employability Skills (EESs) are skills that are critical for success in any workplace or in day-to-day living and life-long learning. These skills are transferrable across any program or discipline. These skills must be taught and evaluated in all programs.

Note: If your course is part of a degree program, these skills are represented in the **Degree-Level Standard (DLS)**, and you will need to select a different course outline template from the “Course Information” screen (“Contribution to program” drop down menu; Figure B.6). Review the lists of [EESs](#) and [DLS benchmarks](#) in [Phase 1 – Establish Context](#).

To include the Degree-Level Standard on your course outline, select “Fanshawe Course Information – DEGREES” from the “Contribution to program” drop down menu. After you save your change to the “Contribution to Program” option, the list of Quick Links on the right side of your screen will change to reflect the “Degree Level Standards” instead of the “Essential Employability Skills”.

As the Course Outline Writer, you will identify the EESs or DLS benchmarks that are taught and evaluated in your course. You are not expected to address every EES or DLS benchmark in each course; however, all of the EESs and DLS benchmarks need to be addressed or achieved by the end of the program. When your Program Coordinator and Chair review your completed course outline, they will also review the EES or DLS [map for the program](#) to ensure that all EESs or DLS benchmarks are addressed or achieved (See [Generate COMMS Reports](#) for more information about viewing program maps in COMMS).

Complete this step in COMMS before you start the Evaluations section of your course outline. COMMS will require that you identify the EESs addressed in your course first because you will need to connect your evaluation tools to those EESs. (See the [Predefined Evaluation/Earning Credit](#) section)

At the bottom of the screen, click on the “Edit” button, which will allow you to make changes to the check boxes next to each EES. Check/Uncheck the boxes to indicate which EESs are taught and evaluated in your course, and click the “Save” button at the bottom of the screen when you are finished (Figure B.9).

ESSENTIAL EMPLOYABILITY SKILLS	
 This course contributes to your program by helping you achieve the following Essential Employability Skills learning outcomes:	
Essential Employability Skill Description	Taught & Evaluated
1. Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.	<input checked="" type="checkbox"/>
2. Respond to written, spoken or visual messages in a manner that ensures effective communication.	<input checked="" type="checkbox"/>
3. Execute mathematical operations accurately.	<input type="checkbox"/>
4. Apply a systematic approach to solve problems.	<input checked="" type="checkbox"/>
5. Use a variety of thinking skills to anticipate and solve problems.	<input checked="" type="checkbox"/>
6. Locate, select, organize and document information using appropriate technology and information systems.	<input checked="" type="checkbox"/>
7. Analyze, evaluate and apply relevant information from a variety of sources.	<input type="checkbox"/>
8. Show respect for diverse opinions, values, belief systems and contributions of others.	<input type="checkbox"/>
9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.	<input type="checkbox"/>
10. Manage the use of time and other resources to complete projects.	<input checked="" type="checkbox"/>
11. Take responsibility for one's own actions, decisions and consequences.	<input checked="" type="checkbox"/>

Save Cancel

Figure B.9 Essential Employability Skills screen

Vocational Learning Outcomes

Program Vocational Learning Outcomes (PVLOs) represent the vocationally specific knowledge, skills, and attitudes that a student must be able to reliably demonstrate at the end of a program.

As the Course Outline Writer, you will identify how your course contributes to the achievement of the PVLOs for each program the course is connected with. At the top of the screen (Figure B.10), a drop down menu will include a list of all of the programs that your course is associated with. You will need to select each program, one at a time, to display the PVLOs for each program.

VOCATIONAL LEARNING OUTCOMES

This Course has not been associated with any Vocational Learning Outcomes from one or all of the Programs it is associated with. [?](#)

Select the program for which you want to associate Vocational Learning Outcomes:

BIM1 - BIM and Integrated Practice (BIM1-BLD-20178) [▼](#)

This course contributes to your program by helping you achieve the following Vocational Learning Outcomes:

Vocational Learning Outcomes Description	I	B	C
1. Develop an implementation plan for Building Information Modelling (BIM) and Integrated Project Delivery (IPD) in the Architecture, Engineering, and/or Construction industries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Formulate strategies for leadership and personnel management, and apply team building skills in an interdisciplinary setting to develop collaborative design and construction solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Analyze BIM processes and execute appropriate BIM management techniques to facilitate Integrated Project Delivery from project conceptualization to facilities management.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Conduct project risk analysis using BIM and IPD processes to optimize project outcomes for all stakeholders.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Deploy BIM computer platforms to create virtual building information models and generate presentation elements.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Integrate various suites of BIM applications into project design, construction, and facilities management to improve the transfer of information between different disciplines and during all phases of a building's life cycle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<- Previous [Edit](#) Next ->

Figure B.10: Program Vocational Learning Outcomes – Select program

At the bottom of the screen, click on the “Edit” button, which will allow you to make changes to the check boxes next to each PVLO (Figure B.10). Check/Uncheck the boxes to indicate the level of learning achieved for the PVLOs that are addressed in your course, and click the “Save” button at the bottom of the screen when you are finished.

Vocational Learning Outcomes

I = Introductory

B = Building

C = Culminating

When you make changes to how the PVLOs are addressed in your course (or when you are identifying the PVLOs for the first time), think about how your course fits in with the rest of the courses in a program. When your Program Coordinator and Chair review your completed

course outline, they will also review the PVLO [map for the program](#) to ensure that all PVLOs are addressed or achieved (See [Generate COMMS Reports](#) for more information about viewing program maps in COMMS).

Complete this step in COMMS before you start the Evaluations section of your course outline. COMMS will require that you identify the PVLOs addressed in your course first because you will need to connect your evaluation tools to those PVLOs (See the [Predefined Evaluation/Earning Credit](#) section). This step must also be completed before you start the [Elements of Performance](#) section of your course outline, if that section is required.

Elements of Performance (EoP) and Professional Competencies

Your course outline may also identify the **Elements of Performance (EoP)** associated with the PVLOs for a program and/or **professional competencies** required by an external regulatory body that provides accreditation for a program. Only complete these sections of the course outline if your Program Coordinator or Academic Manager has requested that you complete them.

If either of these components is required for your course outline, you will need to select a different course outline template from the "Course Information" screen ("Contribution to program" drop down menu; Figure B.6).

- To include EoP on your course outline, select "Fanshawe VLO + EoP" from the "Contribution to program" drop down menu.
- To include professional competencies, select "Fanshawe VLO + Competencies" from the drop down menu.

After you save your change to the "Contribution to Program" option, the list of Quick Links on the right side of your screen will change to reflect the content that you will include on your course outline.

Elements of Performance (EoP) are connected with the PVLOs for a program. The EoP for each PVLO defines and clarifies the level and quality of performance necessary to meet the requirements of that PVLO. EoP indicate the means by which the student may perform the PVLO.

Before completing this section of your course outline in COMMS, ensure that you have already completed the PVLOs section of your course outline. Notice that the EoP that are listed on this screen are only the EoP associated with the PVLOs you checked off in the PVLOs section of your course outline.

Some programs, such as the Magnetic Resonance Imaging (MRI) and Medical Radiation Technology (MRT) programs, are accredited by an external regulatory body. In those examples, the external regulatory body is the Canadian Medical Association. To maintain program accreditation, the College must be able to demonstrate that a set of **professional competencies** – knowledge, skills, and values – have been taught and evaluated within the program.

Predefined Evaluation/Earning Credit

Your course outline will identify the evaluations that will be used in the course, their weighting or percentage of the students' final grade, and their alignment with the learning outcomes for the course.

Note: Each course will have one course outline for the academic year. If your course includes multiple sections and/or delivery methods, ensure that your evaluation tools, weighting, and alignment are consistent across all sections and deliveries of the course. The course plan will provide more specific details about the evaluations in each section and/or delivery of the course.

In COMMS, you will first enter in each of the **evaluation tools** that will be used in your course by clicking "Add New Earning Credit" (Figure B.11).

Earning Credit The following will provide evidence of your learning achievement:	Validates Outcomes This activity validates the following course learning outcome and/or EES learning outcomes:
Add New Earning Credit	
< Previous	Next >

Figure B.11 Predefined Evaluation/Earning Credit screen

Select one of the evaluation tools that you will use in your course from the "Select an evaluation definition" drop down menu (Figure B.12).

Select the evaluation scheme – Percentage or Pass/Fail – that will be used for that evaluation tool from the "Select an evaluation scheme" drop down menu (Figure B.12). If you select "Percentage" as the evaluation scheme, enter the percentage in the text box that appears.

PREDEFINED EVALUATION/EARNING CREDIT

Earning Credit
The following will provide evidence of your learning achievement:

Select an evaluation definition:

Select an evaluation scheme:

What percentage does this evaluation contribute to your course's grade scheme?

Please note: If you cannot find the appropriate evaluation type listed in the drop down menu please contact COMMS Support to discuss a potential addition.

Figure B.12: Predefined Evaluation/Earning Credit screen – New earning credit

Click “Save” to add the evaluation to your course outline and return to the main Predefined Evaluation/Earning Credit screen (Figure B.12). Repeat that process to add each evaluation tool to your course outline.

Use the arrow buttons associated with each evaluation to reorder the evaluations in your list (Figure B.13). Edit or remove an evaluation you have already entered using the pencil icon and the ‘x’ icon respectively.

Your course outline will identify the learning outcomes – PVLOs, EESs, and CLOs – that are validated with each evaluation tool.

Before completing this section of your course outline in COMMS, ensure that you have already completed the [Vocational Learning Outcomes](#), [Essential Employability Skills or Degree-Level Standard](#), and [Course Learning Outcomes](#) sections in COMMS. If your course outline must include [Elements of Performance and/or Professional Competencies](#), those sections must also be completed in COMMS before you will be able to finalize the Evaluations section.

On the Predefined Evaluations/Earning Credit screen in COMMS, click on the pencil icon at the bottom of the second column to identify the outcomes validated by each evaluation tool (Figure B.13).

PREDEFINED EVALUATION/EARNING CREDIT	
Earning Credit The following will provide evidence of your learning achievement:	Validates Outcomes This activity validates the following course learning outcome and/or EES learning outcomes:
Assignment(s) (25%)    	<p>Course Learning Outcomes</p> <p>None Selected</p> <p>Essential Employability Skills</p> <p>None Selected</p> <p>Vocational Learning Outcomes</p> <p>None Selected</p> <p></p>
Lab Activity(ies) (50%)    	<p>Course Learning Outcomes</p> <p>None Selected</p> <p>Essential Employability Skills</p> <p>None Selected</p> <p>Vocational Learning Outcomes</p> <p>None Selected</p> <p></p>
Final Exam (25%)    	<p>Course Learning Outcomes</p> <p>None Selected</p> <p>Essential Employability Skills</p> <p>None Selected</p> <p>Vocational Learning Outcomes</p> <p>None Selected</p>

Figure B.13: Predefined Evaluation/Earning Credit screen – with Evaluations

Check off each of the learning outcomes – PVLOs, EESs, and CLOs – that are validated by the evaluation tool you have selected and click “Save” (Figure B.14). Notice that the only PVLOs, EES, and CLOs that are available to be checked off are the ones that you identified in the previous sections of your course outline.

PREDEFINED EVALUATION/EARNING CREDIT

Validates Outcomes

The activity 'Quiz(zes)/Test(s)' validates the following Course Learning Outcomes and/or Essential Employability Skills and/or Aboriginal Learning Outcomes and/or Vocational Learning Outcomes and/or Program Competencies:

Course Learning Outcomes

- [CLO 1] - develop and apply advanced template creation techniques by creating templates for bim models;
- [CLO 2] - explore, design and develop advanced bim objects including parametric family elements;
- [CLO 3] - apply and define standard of bim models by defining and creating templates;
- [CLO 4] - practice the application of worksets and worksharing within a bim environment;
- [CLO 5] - create; apply and execute advanced modelling techniques for site creation and topography, align and orient models globally;
- [CLO 6] - review, apply and execute the various linking opportunities within bim environments by importing a variety of external file types from variety of platforms;

Essential Employability Skills

- [EES 1] - Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.
- [EES 2] - Respond to written, spoken or visual messages in a manner that ensures effective communication.
- [EES 3] - Execute mathematical operations accurately.
- [EES 4] - Apply a systematic approach to solve problems.
- [EES 5] - Use a variety of thinking skills to anticipate and solve problems.
- [EES 6] - Locate, select, organize and document information using appropriate technology and information systems.
- [EES 7] - Analyze, evaluate and apply relevant information from a variety of sources.
- [EES 8] - Show respect for diverse opinions, values, belief systems and contributions of others.
- [EES 9] - Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.
- [EES 10] - Manage the use of time and other resources to complete projects.
- [EES 11] - Take responsibility for one's own actions, decisions and consequences.

Vocational Learning Outcomes

BIM1 - BIM and Integrated Practice

- [VLO 1] - Develop an implementation plan for Building Information Modelling (BIM) and Integrated Project Delivery (IPD) in the Architecture, Engineering, and/or Construction industries.
- [VLO 2] - Formulate strategies for leadership and personnel management, and apply team building skills in an interdisciplinary setting to develop collaborative design and construction solutions.
- [VLO 3] - Analyze BIM processes and execute appropriate BIM management techniques to facilitate Integrated Project Delivery from project conceptualization to facilities management.
- [VLO 4] - Conduct project risk analysis using BIM and IPD processes to optimize project outcomes for all stakeholders.
- [VLO 5] Deploy BIM computer platforms to create virtual building information models and generate presentation elements.
- [VLO 6] - Integrate various suites of BIM applications into project design, construction, and facilities management to improve the transfer of information between different disciplines and during all phases of a building's life cycle.

Figure B.14 Predefined Evaluation/Earning Credit screen – Identify outcomes validated

Repeat that process to identify the learning outcomes validated by each of the evaluation tools in your course. All learning outcomes will need to be validated by at least one evaluation tool in the course. A single evaluation tool may not validate all of the learning outcomes, but it must validate at least one. If an evaluation or a learning outcome is missed, COMMS will not allow you to [submit the course outline for approval](#).

Enhanced Learning Resources

This section of your course outline should indicate the items (e.g., publications/textbooks, instruments/equipment, computing resources) that your students may need to purchase and/or provide in order to complete the course. It should indicate the resources that are required and the resources that are recommended.

In COMMS, click on the “Add New” buttons (Figure B.15) to a specific type of resource: textbooks/bundle/digital (Figure B.16), course materials (non-textbook) (Figure B.17), kits (Figure B.18), course packs (Figure B.19), or other technology (Figure B.20). Retail Services will use the information you provide here to order textbooks for your students.

The screenshot shows a web-based application titled "ENHANCED LEARNING RESOURCES MODULE". The interface is organized into five main sections, each with an "Add New" button:

- Textbook(s)/Bundle/Digital**: Contains an "Add New" button highlighted with a red box.
- Course Material(s) (Non-textbook)**: Contains an "Add New" button.
- Kit(s)**: Contains an "Add New" button.
- Course Packs**: Contains an "Add New" button.
- Other Technology**: Contains an "Add New" button.

At the bottom of the screen are navigation buttons: "< Previous" and "Next >".

Figure B.15 Enhanced Learning Resources screen

Add Textbook(s)/Bundle/Digital

ISBN/SKU	<input type="text"/>
Title/Description	<input type="text"/>
<input checked="" type="radio"/> Required	
<input type="radio"/> Recommended	
Author	<input type="text"/>
Edition	<input type="text"/>
Publisher	<input type="text"/>

Figure B.16 Add Textbook(s)/Bundle/Digital

Add Course Material(s) (Non-textbook)

Item	<input type="text"/>
Colour	<input type="text"/>
Size	<input type="text"/>
<input checked="" type="radio"/> Required	
<input type="radio"/> Recommended	
Special Order	<input checked="" type="radio"/> Yes <input type="radio"/> No

Figure B.17 Add Course Material(s) (Non-textbook)

Add Kit(s)

Description	<input type="text"/>
SKU	<input type="text"/>

Figure B.18 Add Kit(s)

Add Course Packs

ISBN/SKU	<input type="text"/>
Title/Description	<input type="text"/>
<input checked="" type="radio"/> Required	
<input type="radio"/> Recommended	
Author	<input type="text"/>
Edition	<input type="text"/>
Publisher	<input type="text"/>

Figure B.19 Add Course Packs

Add Other Technology

Description	<input type="text"/>
-------------	----------------------

Figure B.20 Add Other Technology

Learning Resources – Computer Lab Requirements

This section of your course outline will outline the software and peripheral requirements for your course in the computer labs (Figure B.21). IT Services will use this information to ensure that the software and peripherals are installed in the computer lab for your course.

Click on the “Add New” link for each section as applicable to your course: Computer Software Titles & Plugins, Software Customizations, and Computer Peripherals. You will then be prompted to enter the relevant information into a text box. You can modify your entries using the “Edit” and “Delete” links beneath each entry.

LEARNING RESOURCES - COMPUTER LAB REQUIREMENTS

Computer Software Titles & Plugins

• Software Example(s): Microsoft Office, AutoCAD, Adobe Creative Cloud, Google Chrome
• Plug-in Example(s): Web Browser Extensions, Audio Packs, Font Packs
◦ Defined: Plug-ins are additional software components that add features to an existing software title

[Add New](#)

Title/Description: Microsoft Office Suite 2010

[Edit | Delete](#)

Software Customizations

• Defined: Any changes needing to be made to a software title after it is installed in order for it to operate or display in a specific way
• Note: Leave blank if not applicable

[Add New](#)

Computer Peripherals

• Peripheral Example(s): Transcription Foot Pedals, Wacom Pen Tablets
◦ Defined: Additional devices connected to the workstations; typically USB devices
• Note: Leave blank if not applicable

[Add New](#)

Figure B.21: Learning Resources – Computer Lab Requirements screen – Add new, edit, and delete

Delivery Methods/Learning Activities

This section of your course outline will describe how your students will be exposed to a learning experience: lectures, hands-on activities, seminars, online learning, field placement, etc.

In COMMS, click on the “Edit” button at the bottom of the screen (Figure B.22) to open a text editor that will allow you to enter a list of the learning activities that your students will participate in or complete.

During this course you are likely to experience the following activities:

There are no Learning Activities defined for this course.

[<- Previous](#) [Edit](#) [Next ->](#)

Figure B.22: Delivery Methods/Learning Activities screen

Tip: Use the formatting options available in the text editor to create a bulleted or numbered list.

Prior Learning Assessment and Recognition (PLAR)

Fanshawe College's **Prior Learning Assessment and Recognition (PLAR)** process involves the evaluation of the knowledge and skills gained through experiential and/or non-formal learning for the purposes of obtaining credit. PLAR uses a variety of tools to help learners reflect on, identify, articulate, and demonstrate past learning that has been acquired through work experience, unrecognized training, independent study, volunteer activities, and hobbies that is not recognized through formal transfer of credit mechanisms ([Policy A124](#)).

Your course outline will identify the method of assessment that could be used to evaluate that the student challenging for credit has met the learning outcomes for your course.

All post-secondary credit courses including continuing education credits are usually eligible for PLAR. When courses are ineligible, written rationale must be provided by the Academic Manager. In COMMS, click on the "Edit" button at the bottom of the screen (Figure B.23) to identify the method of assessment that could be used to evaluate that the student challenging for credit has met the learning outcomes for the course.

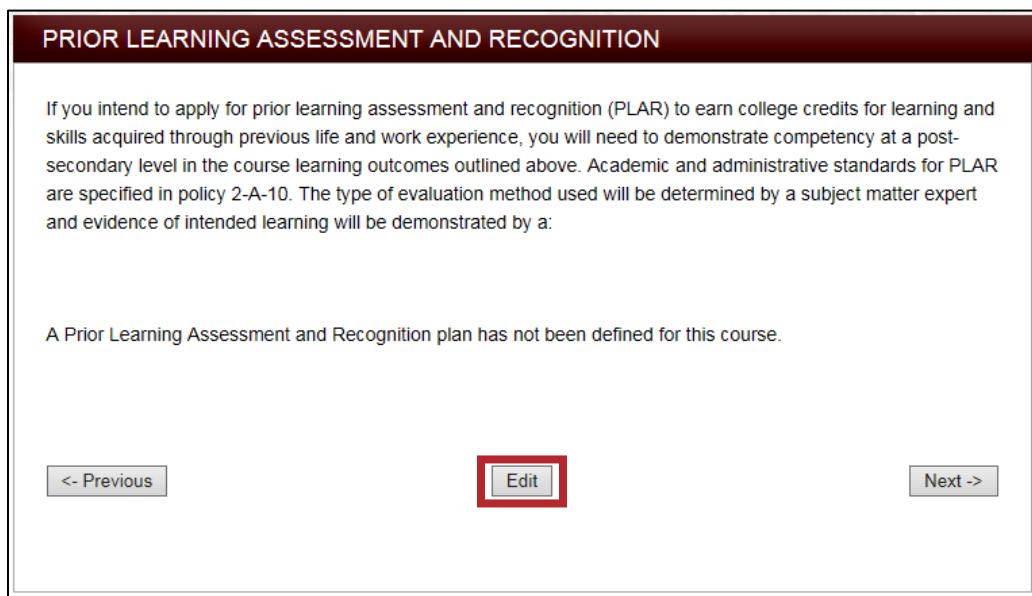


Figure B.23 Prior Learning Assessment and Recognition (PLAR) screen

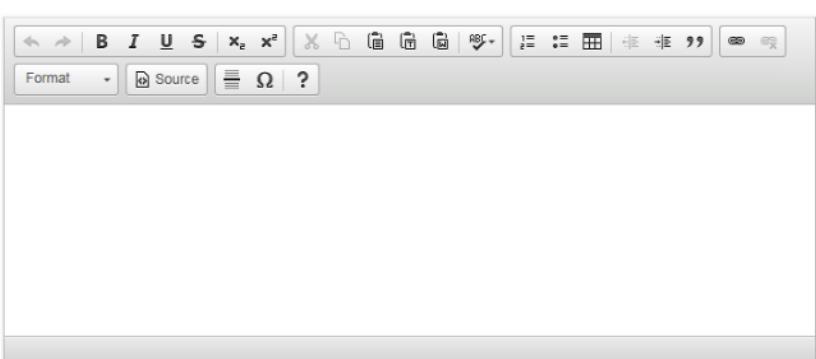
Check the method of assessment that could be used for PLAR in your course (See the [PLAR section](#) in Chapter 7 for definitions of each method). All post-secondary credit courses including continuing education credits are usually eligible for PLAR. When courses are ineligible, written rationale must be provided by the Academic Manager. If you check "Exempt" or "Other" you will need to enter that written rationale from the Academic Manager into the text box editor (Figure B.24).

PRIOR LEARNING ASSESSMENT AND RECOGNITION

If you intend to apply for prior learning assessment and recognition (PLAR) to earn college credits for learning and skills acquired through previous life and work experience, you will need to demonstrate competency at a post-secondary level in the course learning outcomes outlined above. Academic and administrative standards for PLAR are specified in policy 2-A-10. The type of evaluation method used will be determined by a subject matter expert and evidence of intended learning will be demonstrated by a:

Exempt
 Portfolio
 Challenge Exam
 Other

Define the 'other' Prior Learning Assessment and Recognition activity:



Save Cancel

Figure B.24: Prior Learning Assessment and Recognition (PLAR) screen – Options

To upload a PLAR Learner Guide for your course, follow the instructions for uploading the Course Plan as described below (See [Step 2 – Prepare Course Plan](#)). Instead of clicking on “Course Plan Documents” from the Course Outline Writer menu (Figure B.32), click on “PLAR Learner Guide”.

Other Information (Grading System)

Your course outline should also detail the grading system used for your course. All courses are required to have 50% as the passing grade unless the Registrar’s Office has approved an alternate grading systems (e.g., 60% passing grade, 70% passing grade, pass/fail). Alternative grading systems are typically only permitted for courses in programs that are regulated by an external accrediting body.

If your course is part of a program that is regulated by an external accrediting body, state the minimum grade required by the regulatory body in the [Course Related Information](#) section of the course outline.

Details about the grading systems can be found in [Policy A112](#).

In COMMS, you will need to select the grading system that will be used for your course from the drop down menu on the Other Information screen (Figure B.25). As a default, the menu option will be “*Do Not Display Grade Scheme*”.

The screenshot shows the 'OTHER INFORMATION' screen. At the top, there is a section titled 'Include the following information in the course outline'. Below it is another section titled 'Include College Grading Numerical Equivalent Table'. A dropdown menu is open, showing the option 'Do Not Display Grade Scheme' with a red border around it. There is also a checkbox labeled 'Include Program Related Information' which is unchecked. At the bottom of the screen are navigation buttons: '< Previous' on the left and 'Next >' on the right.

Figure B.25: Other Information screen

When you select the grading system option from the drop down menu (Figure B.26), the screen will refresh to show the grading system details.

The screenshot shows the 'OTHER INFORMATION' screen after selecting a grading system. The 'Include the following information in the course outline' section is present. The 'Include College Grading Numerical Equivalent Table' section is expanded, showing a table with the following data:

Final Grade	Mark Equivalent	Numeric Value	Final Grade	Mark Equivalent	Numeric Value
A+	90% - 100%	4.2	A	80% - 89%	4.0
B+	75% - 79%	3.5	B	70% - 74%	3.0
C+	65% - 69%	3.0	C	60% - 64%	2.5
D+	55% - 59%	2.0	D	50% - 54%	1.5
F	0% - 49%	0	P	Greater than 50	n/a
I	Incomplete	n/a	N	No credit achieved	n/a
W	Withdrawn	n/a	X	Audit Only	

Below the table, the 'Include Program Related Information' checkbox is checked and has a red border around it. Navigation buttons '< Previous' and 'Next >' are at the bottom.

Figure B.26: Other Information screen – *Include College Grading Information* and *Include Program Related Information*

Ensure that the “Include Program Related Information” check box at the bottom of the screen is checked (Figure B.26).

Course Related Information (Practices and Procedures)

As the Course Outline Writer, you are required to add in your own practices and procedures for late assignments, missed evaluations, classroom etiquette, expectations for using FanshaweOnline (FOL), etc. Before you add your own practices and procedures, ensure that you have reviewed the College policies and the College-, School-, and program-specific practices and policies to avoid any duplication or contradictions.

In COMMS, the College policies and the College-, School-, and program-specific practices and policies are displayed on the Course Related Information screen.

Note: The “Include Program Related Information” checkbox at the bottom of the Other Information screen (Figure B.26) must be checked off so that the program-specific practices and procedures will appear on the course outline.

To enter your course-specific practices and procedures in COMMS, click on the “Edit” button at the bottom of the screen (Figure B.27) to open the text editor.

Note: This is a required field.

The screenshot shows a user interface for managing course-specific information. At the top, there is a message in red text: "There is no course specific information defined." Below this message are three buttons: "<- Previous" on the left, "Edit" in the center, and "Next ->" on the right. The "Edit" button is highlighted with a red border, indicating it is the active or intended button to be clicked.

Figure B.27 Course Specific Information screen

Submit Course Outline for Approval

Review your course outline prior to submitting it for approval:

- Check each section of the course outline to ensure you have entered in all of the required information.
- Preview your course outline in PDF format.
- Compare your course outline to the outline from the previous year if the course was offered previously.
- Review the PVLO and EES maps for the program(s) your course is offered in.

Note: Once you have submitted the course outline for approval, you will not be able to make any additional changes to it unless your Program Coordinator or Chair returns it to you for further editing.

To submit your course outline in COMMS, fill in your name and title and click on the "Submit for Approval" button (Figure B.28).

SUBMIT COURSE OUTLINE

Fill out your name and title in the fields below.

If the course outline is complete, submit it for departmental approval or come back at another time to continue editing.

Prepared By:

Title (of Outline Creator):

<- Previous Exit **Submit for Approval**

Figure B.28: Submit Course Outline screen

Before you submit your course outline for approval, you will need to ensure that you have completed every section and addressed all errors noted throughout. Sections that are incomplete will appear in red on the list of Quick Links (Figure B.29). Click on those links to return to those sections to complete them. On those screens, the task that needs to be completed or corrected will be noted in red at the top of the screen.

Figure B.30 and Figure B.31 show two sample error messages.

- If you see the first message on your screen, you will need to identify how your course addresses the PVLO(s) for each program your course is part of. See the [Vocational Learning Outcomes](#) section of this Appendix for more information about identifying PVLOs for multiple programs.
- If you see the second message, you will need to ensure that every PVLO that you identified for your course is linked to one or more evaluations. Return to the [Vocational Learning Outcomes](#) and [Predefined Evaluation/Earning Credit](#) sections of this Appendix for instructions on selecting PVLOs and linking evaluations with outcomes.

QUICK LINKS

Course Outline Section(s) in red require your attention

- [Course Outline](#)
- [Course Information](#)
- [Course Learning Outcomes](#)
- [Essential Employability Skills](#)
- [Vocational Learning Outcomes](#)
- [Predefined Evaluation/Earning Credit](#)
- [Enhanced Learning Resources](#)
- [Module](#)
- [Learning Resources - Computer Lab Requirements](#)
- [Delivery Methods/Learning Activities](#)
- [Prior Learning Assessment and Recognition](#)
- [Other Information](#)
- [Course Related Information](#)
- [Submit](#)

Figure B.29: Quick Links – Sections to Complete

VOCATIONAL LEARNING OUTCOMES

This Course has not been associated with any Vocational Learning Outcomes from one or all of the Programs it is associated with. ?

Select the program for which you want to associate Vocational Learning Outcomes:

BIM1 - BIM and Integrated Practice (BIM1-BLD-20178) ▾

This course contributes to your program by helping you achieve the following Vocational Learning Outcomes:

Vocational Learning Outcomes Description	I	B	C
1. Develop an implementation plan for Building Information Modelling (BIM) and Integrated Project Delivery (IPD) in the Architecture, Engineering, and/or Construction industries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Formulate strategies for leadership and personnel management, and apply team building skills in an interdisciplinary setting to develop collaborative design and construction solutions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Analyze BIM processes and execute appropriate BIM management techniques to facilitate Integrated Project Delivery from project conceptualization to facilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Figure B.30: Sample COMMS Error – Vocational Learning Outcomes

PREDEFINED EVALUATION/EARNING CREDIT	
Not all of the Vocational Learning Outcomes defined are used in the Earning Credit section.	
Earning Credit The following will provide evidence of your learning achievement:	Validates Outcomes This activity validates the following course learning outcome and/or EES learning outcomes:
Evaluation Assignment(s) (40%) 	Course Learning Outcomes <ul style="list-style-type: none"> [CLO 1] - apply advanced bim techniques to aid in the creation, development and modification of a BIM in an integrated project delivery contract framework; [CLO 2] - facilitate the adoption of various management techniques for the creation of a BIM; and apply management strategies to complete a project simulation;

Figure B.31: Sample COMMS Error – Predefined Evaluation/Earning Credit

After you have addressed all of the issues identified by COMMS, when you click on the “Submit for Approval” button, your course outline will become locked while your Curriculum Lead and Chair review it. You will not be able to make any additional changes unless they return it to you for further editing.

Other COMMS Options for Course Outlines

While you are developing or editing your course outline in COMMS, you can also preview the course outline and compare your outline to the outline from the previous year if the course was delivered in a previous year.

Preview Course Outline

At any time while you are preparing your course outline, you can click “Preview Course Outline” on the Quick Links panel on the right side of any course outline screen in COMMS. This link will open the PDF version of your course outline, which you can review or print.

You will need to have a PDF reader, such as Adobe Acrobat Reader, installed on your computer to be able to preview your course outline.

Compare to Previous Academic Year

At any time while you are preparing your course outline, you can click “Compare to Previous Academic Year” on the Quick Links panel on the right side of any course outline screen in COMMS. This link will open a new internet browser tab, which displays the previous and current course outlines side by side.

Step 2 – Prepare Course Plan

Course plans are prepared in a Microsoft Word document and uploaded into COMMS to support the course outline. The course outline is updated once every academic year, and the course plan may need to be updated every semester. Additionally, you may need to include multiple course plans to represent different sections or delivery methods (e.g., face-to-face, blended, online) for the course. Consult with your Academic Manager to determine the specific requirements for your course plan(s).

The first section of your course plan contains the details about your course and the semester and section that course plan will apply to.

The second section of your course plan outlines the detailed content for your course and displays the alignment between the topics covered, the resources required by students, and the evaluations that are used.

To upload your completed course plan into COMMS for review by your Curriculum Lead and Chair, you will need to be on the Course Outline Writer screen in COMMS.

- To access the Course Outline Writer screen from the COMMS Home screen, click on “Course Outline Writer” on the menu at the left side of the screen (Figure B.2).
- To access the Course Outline Writer screen from any screen or section of a course outline, click on “Go Home” at the bottom of the Quick Links panel on the right side of the screen (Figure B.3).

On the Course Outline Writer screen, click on “Course Plan Documents” on the menu on the left side of the screen (Figure B.32).

COURSE OUTLINE WRITER

You are responsible for writing and editing the following course outline(s):

Edit	Course ID	Course Name
Edit	BUSI-6008	Practical Implementation-BIM
Edit	CADD-6001	BIM Technology 1
Edit	CADD-6002	Comp Imaging for Construction
Edit	COMP-6046	BIM Software Integration
Edit	ENGR-6001	Building Energy Modelling
Edit	INDS-6001	BIM Technology 2-Capstone
Edit	MGMT-6099	BIM Management 1
Edit	MGMT-6100	Int. Practice for AEC Sector
Edit	MGMT-6101	BIM Management 2
Edit	ZOO1813	Communications I

You have submitted the following course outline(s) for departmental approval:

Either no Course Outlines that have been submitted for Departmental Approval have been approved
OR
No Course Outlines have been submitted for Departmental Approval.

Figure B.32: Course Outline Writer Screen – Course Plan Documents

Identify the course you would like to add a course plan for using the drop down menu (Figure B.33). The page will refresh to show the updated course information in the box titled “Add a Course Plan document”.

COURSE PLAN DOCUMENTS

This section allows you to add Course Plan documents to a course.

Courses: BUSI-6008 - Practical Implementation-BIM

Add a Course Plan document:

Academic Year: 2017-2018
Course: BUSI-6008
Instructor Username: mbarnard
Section: _____
Term: _____
File: _____ [Browse...](#)
(Course Plan documents must be uploaded in PDF format.)

Submit Document

Current Course Plan Documents

Currently, there are no Course Plan documents associated with this course.

Figure B.33: Course Section Information Documents screen – Select course

Enter your name and course section information into the text boxes and select the term (year and semester; e.g., 2016F) from the drop down menu (Figure B.34).

Click on “Choose file” (Figure B.34) and follow the directions on the screen to locate your course plan file and select it for upload.

Add a Course Plan document:

Academic Year: 2017-2018
Course: BUSI-6008
Instructor Username: _____
Section: _____
Term: _____
File: _____ [Browse...](#)
(Course Plan documents must be uploaded in PDF format.)

Submit Document

Figure B.34: Course Section Information Documents screen – Upload Course Plan

Click "Submit Document" to submit your course plan to your Program Coordinator and Chair for review.

If you are required to prepare multiple course plan documents for a single course, you will need to upload and submit each file individually. Use the "Section" textbox, as outlined above, to distinguish between the documents.

Generate COMMS Reports

COMMS will generate reports about numerous aspects of a program in real time. As a Course Outline Writer, you may want to view the following reports to see how your course fits in with the rest of the courses in a program:

- **Vocational Learning Outcomes by Program, Level, and Course** shows how the PVLOs are addressed across the program;
- **Essential Employability Skills by Program, Level, and Course (or Degree Level Summary)** shows how the EESs are addressed across the program;
- **Evaluation Summary** shows the evaluations for each course in the program;
- **Program Overview** provides a brief summary of each course including course description, grading scheme, learning outcomes, evaluations, resources, delivery methods/learning activities, prerequisites, and hours;
- **Learning Resource Summary** lists all of the learning resources used in each course in the program; and
- **Program Completion Rates** provides links to the course outlines and course plans for each course in the program

These are the reports that your Program Coordinator and Chair will review to assess the impact of changes at the course level on the overall program.

To review reports in COMMS, you will need to return to the main COMMS Home page. To return to the main COMMS Home page from any screen or section of the course outline, first click on the “Go Home” button at the bottom of the Quick Links panel on the right side of the screen (Figure B.3). That will bring you to the Course Outline Writer home screen. From the Course Outline Writer screen, click on the “COMMS Home” part of the breadcrumb navigation at the top left corner of the screen (Figure B.4).

On the main COMMS Home page, click on “Generate Reports” on the menu at the left side of the screen (Figure B.35).

The screenshot shows the FANSHAWE Course Outline Mapping and Management System (COMMS) homepage. At the top right, the title "Course Outline Mapping and Management System" is displayed. On the left, there is a sidebar with links: "COMMS Home » Home", "Home", "Course Outline Writer", "Search Course Outlines", "View All Course Outlines", and "Generate Reports". The "Generate Reports" link is highlighted with a red box. The main content area has a header "HOME" and a welcome message: "Welcome to COMMS, your Course Outline Mapping and Management System". Below this, a section titled "Course Outline Writer" lists courses with "Quick Edit" links: BUSI-6008 (Practical Implementation of BIM), CADD-6001 (BIM Technology 1), CADD-6002 (Computer Imaging for Construction), COMP-6046 (BIM Software Integration), ENGR-6001 (Building Energy Modelling), INDS-6001 (BIM Technology 2 (Capstone)), MGMT-6099 (BIM Management 1), MGMT-6100 (Integrated Practice for AEC Sector), and MGMT-6101 (BIM Management 2). At the bottom of this list is a link "To access the course outlines, click here."

Figure B.35: COMMS home page – Generate Reports

Select the details about the report you would like to generate from the drop down menus: report, academic year, department, and program (Figure B.36). Click on the “Run Report” button to generate the report, which will open in a new internet browser tab.

The screenshot shows the "Generate Reports" screen of the COMMS system. At the top right, the title "Course Outline Mapping and Management System" is displayed. On the left, there is a sidebar with links: "COMMS Home » Generate Reports" and "GENERATE REPORTS". The "GENERATE REPORTS" link is highlighted with a red box. The main content area contains instructions: "Use the drop down boxes provided below to select the report you want to run." Below this are four dropdown menus: "Report" (set to "Vocational Learning Outcomes by Program, Level and Course"), "Academic Year" (set to "2016-2017"), "Department" (set to "Donald J Smith School of Building Technology (BLD)" with a "Department Legend" link), and "Program" (set to "BIM1 - BIM and Integrated Practice (BIM1-BLD-20167)"). At the bottom left is a "Run Report" button, which is highlighted with a red box. Below the button is a note: "NOTE: Disable your pop up blocker to allow reports to display properly." and a link "Follow the instructions provided HERE".

Figure B.36: Generate Reports screen

Retrieve Course Outlines and Course Plans

The course outline and course plan are archived each year in the Course Outline Mapping and Management System (COMMS). Currently, the following are available in the COMMS archive:

- Approved course outlines for 2017/2018;
- Course outlines created and approved in COMMS for 2016/2017 (from the first stage of COMMS implementation);
- Course plans uploaded into COMMS for 2016/2017 and 2017/2018; and
- Course Information Sheets (CISs) (old format) dating back to 2004/2005.

The following sections provide instructions for accessing archived course outlines and course plans. Course outlines are accessible internally and externally; course plans are accessible internally only.

Retrieve Archived Course Outlines

On the main COMMS Home page, you can click on “Search Course Outlines” on the menu at the left side of the screen (Figure B.35) to search for a specific course outline, or you can click on “View All Course Outlines” to browse all available course outlines. Alternatively, you can use the [Generate COMMS Reports](#) function to access the “Course Outlines and Plans” report.

Archived course outlines can also be accessed by the public from the [Pathways](#)  and [Registrar's Office](#)  websites.

The screenshot shows the COMMS home page with a sidebar on the left containing links: Home, Course Outline Writer, Search Course Outlines (which is highlighted with a red box), View All Course Outlines (also highlighted with a red box), and Generate Reports. The main content area has a dark header bar with the text 'HOME'. Below it, a sub-header says 'Course Outline Writer'. A message states 'Welcome to COMMS, your Course Outline Mapping and Management System'. It then says 'You are responsible for writing and editing the following course outlines:' followed by a table listing course codes and titles. At the bottom of the table is a link 'To access the course outlines, click here.'

Quick Edit	BUSI-6008	Practical Implementation of BIM
Quick Edit	CADD-6001	BIM Technology 1
Quick Edit	CADD-6002	Computer Imaging for Construction
Quick Edit	COMP-6046	BIM Software Integration
Quick Edit	ENGR-6001	Building Energy Modelling
Quick Edit	INDS-6001	BIM Technology 2 (Capstone)
Quick Edit	MGMT-6099	BIM Management 1
Quick Edit	MGMT-6100	Integrated Practice for AEC Sector
Quick Edit	MGMT-6101	BIM Management 2

Figure B.37: COMMS home page – Search Course Outlines and View All Course Outlines

If you clicked on “Search Course Outlines” from the main COMMS home page, you will be presented with the search screen (Figure B.38) where you can enter the course code or title into the search box.

The screenshot shows the 'Search Course Outlines' page. The sidebar on the left includes links: Home, Course Outline Writer, Search Course Outlines (highlighted with a red box), View All Course Outlines, and Generate Reports. The main content area has a dark header bar with the text 'SEARCH COURSE OUTLINES'. Below it, a message says 'This section allows you to search for Course Outlines by Course Codes or Titles'. There is a search input field and a 'Find Course Outline' button. A question mark icon is located in the top right corner of the content area.

Figure B.38: Search Course Outlines

A search will yield a list of any related courses sorted by academic year and semester (Figure B.39). For each version of the course outline, you can view a PDF copy or a side-by-side comparison of the version of course outline chosen and the most recent version of the course outline for that course.

The screenshot shows the 'Course Outline Mapping and Management System' interface. At the top right, it says 'Course Outline Mapping and Management System'. On the left, there's a sidebar with links: 'COMMS Home', 'Search Course Outlines', 'View All Course Outlines', and 'Generate Reports'. The main area is titled 'SEARCH COURSE OUTLINES' and contains a sub-instruction: 'This section allows you to search for Course Outlines by Course Codes or Titles'. Below this is a table with columns: 'Course Code', 'Academic Year', 'Course Name', 'Department Code', 'Writer', and 'Status'. The table lists several entries for 'COMM-7001' from 2011-2012 to 2017-2018. The first row has a red box around the 'PDF Compare' link under the 'Academic Year' column. A question mark icon is in the top right corner of the table header.

Course Code	Academic Year	Course Name	Department Code	Writer	Status
COMM-7001	Find Course Outline				
COMM-7001	2017-2018	Introductory Communications	GEN	jdouglas	Department Approved
COMM-7001	2016-2017	Introductory Communications	GEN	jdouglas	Department Approved
COMM-7001 (15F)	2015-2016	Introductory Communications	GEN	Not Identified	Department Approved
COMM-7001 (14F)	2014-2015	Introductory Communications	GEN	Not Identified	Department Approved
COMM-7001 (13F)	2013-2014	Introductory Communications	GEN	Not Identified	Department Approved
COMM-7001 (12F)	2012-2013	Introductory Communications	GEN	Not Identified	Department Approved
COMM-7001 (11F)	2011-2012	Introductory Communications	GEN	Not Identified	Department Approved

Figure B.39: Search Course Outlines – View a PDF or Compare Versions

Retrieve Archived Course Plans

Archived course plans are only accessible internally through COMMS using the [Generate COMMS Reports](#) function. Course plans are available on the “Course Outlines and Plans” report.

Glossary

A

Academic Manager or Project Lead	The individual tasked with managing the people, budget, contracts, deadlines, and risks for the Curriculum Development Team; assigns, reviews, and approves course deliverables; typically a Chair or Program Manager
Accessibility for Ontarians with Disabilities Act (AODA)	Outlines the requirements that all organizations must meet to identify, remove, and prevent barriers for people with disabilities
Active learning	Any instructional method that engages students in the learning process
Annual Program Quality Assurance Self-Assessment (APQASA)	A quality assurance process for reviewing program curriculum and data and Program Advisory Committee (PAC) feedback; occurs annually
Asynchronous communication	Participants engage in the conversation or exchange of information at different times (e.g., e-mail, online discussion boards or announcements)
Authentic assessment	Measures a student's ability to complete "real world" tasks; "authentic" refers to how closely an evaluation resembles what an employee in the field actually does

B

Blended delivery	Course delivery model that combines traditional, face-to-face class time with online and out-of-class course work
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B

Bloom's Taxonomy

A hierarchical model that categorizes ways of learning by the domain in which learning takes place and the level of complexity of that learning

C

College Educator Development Program (CEDP)

Multi-phase, inter-college training for new full-time faculty that focuses on the scholarship of teaching and learning (SOTL)

College Quality Assurance Audit Process (CQAAP)

An institutional-level process involving the regular and cyclical review of the college's quality assurance mechanisms

COMMS School Administrator

Support staff member responsible for administrative duties in the Course Outline Mapping & Management System (COMMS) (e.g., providing course access to Course Outline Writers)

Constructive Alignment

An outcomes-based approach to course design that involves identifying learning outcomes, designing evaluation methods and teaching and learning activities that measure and support students' achievement of those outcomes

Continuum of Authentic Assessment

Categorizes assessments or evaluations according to how close they are to an actual task that a graduate will perform in the workplace

Core Competencies for Faculty

Outline the expectations for faculty performance relating to curriculum design, course delivery, engagement, and professional development

Course component or deliverable

The products or outputs for each phase of course development (e.g., course learning outcomes, lesson plans, course outline and course plan)

Course description

A brief summary of the breadth and depth of the content to be taught in a course

Course developer

The individual tasked with developing or redeveloping a course; typically a member of a Curriculum Development Team

C

Course Development Process	The process for developing (or re-developing) and ensuring alignment among the components or deliverables of a course; involves establishing context, preparing materials, checking alignment, and managing content
Course Learning Outcomes (CLOs) (Deliverable)	Represent the knowledge, skills, attitudes, and experiences that are taught and evaluated in a course
Course Outline (Deliverable)	A document that summarizes essential course information, identifies responsibilities and expectations of students, professors, and the College, and represents a contractual agreement
Course Outline Mapping and Management System (COMMS)	The software used to create and manage course outlines, course plans, and program maps
Course Outline Writer	Professor responsible for creating and revising the course outline and course plan in the Course Outline Mapping & Management System (COMMS)
Course Plan (Deliverable)	A document that outlines the topics, sequence, timing, resources, and evaluations in a course and supports the information provided in the course outline
Course Quality Assurance (CQA) Checklist	A list of critical course and FanshaweOnline elements for all courses regardless of the delivery method
Credential Validation Service (CVS)	Validates programs of instruction using an outcomes-based credentialing model and framework
Curriculum Coach	A faculty member responsible for providing guidance on the Curriculum Development Process to the Curriculum Development Team or Course Developer
Curriculum Consultant	A faculty member from the Centre for Academic Excellence who is responsible for coordinating and facilitating quality assurance initiatives including program and course development, program review, and other curriculum-related activities

C

Curriculum Development Team	A team of faculty, staff, and managers who work together to support the development and continuous improvement of programming; may include the course developer, project lead or academic manager, curriculum lead, curriculum coach, and support staff
Curriculum Lead	The individual tasked with coordinating curriculum development at the program level and facilitating curriculum-related communication among Curriculum Development Team members; typically a Program Coordinator or an internal or external subject matter expert

D

Degree-Level Standard	Knowledge and skills expected of graduates of degree programs
Deliverable or course component	The products or outputs for each phase of course development (e.g., course learning outcomes, lesson plans, course outline and course plan)
Delivery environment	The location or type of classroom in which a course is delivered (e.g., lecture hall, lab, field, clinic)
Delivery method	The way in which a course is delivered; face-to-face (web-facilitated), blended, or online
Diagnostic evaluations	Low-stakes evaluations (i.e. no or minimal marks); used to identify students' strengths and weaknesses to inform teaching methods (e.g., pre-tests, self-assessments, reflection exercises)

E

e-Learning	All forms of electronically-supported media, information, and communication technologies used to support teaching and learning
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E

Elements of Performance (EoP)	Define and clarify the level and quality of performance necessary to meet the requirements of a Program Vocational Learning Outcome
Essential Employability Skills (EESs)	Skills that are critical for success in any workplace or in day-to-day living and life-long learning; skills that are transferrable across any program or discipline
Evaluation Map (Deliverable)	Tool used to check for and ensure constructive alignment of outcomes and evaluations within a course
Evaluation Tool/Method of Evaluation	Task or tool used to measure students' achievement of the Course Learning Outcomes
Experiential Learning	Learning through doing; includes work-integrated learning activities as well as collaborative assignments, undergraduate research, capstone projects, global learning experiences, and entrepreneurship activities

F

Face-to-Face (Web-Facilitated) delivery	Course delivery model in which course work is completed during normal class hours in a face-to-face format, and the online component (FanshaweOnline) is used to supplement face-to-face time
FanshaweLearns	System for registration in College-wide workshops and training activities
FanshaweOnline (FOL)	The College's Learning Management System (LMS) for creating, hosting, and editing online learning resources; hosted by Desire2Learn (D2L)/Brightspace
FanshaweOnline (FOL) Course (Deliverable)	The online learning resources associated with an academic course; includes elements outlined in the Course Quality Assurance (CQA) Checklist
FanshaweOnline Administrator or Educational Support Technologist	Provides technical and administrative support for the educational technologies used in the teaching and learning process

F

FIRST	Open-access repository that showcases Fanshawe's Innovation, Research, Scholarship, and Teaching activities
Formal Evaluations	The graded evaluations that occur throughout the course (e.g., tests, quizzes, assignments, projects, exams)
Formative evaluations	Low-stakes evaluations (i.e. minimal marks); used to monitor student learning or progress throughout the course (e.g., quizzes, discussion questions, concept maps, lab exercises, project proposals, drafts of final reports)

G

Grading scheme	A tool used to measure and assign a grade to students' ability to achieve the Course Learning Outcomes (e.g., rubric, checklist, answer key, rating scale); a grading scheme should accompany each evaluation tool
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I

Informal evaluation or assessment	The non-graded evaluations that typically take place throughout a lesson to gauge how students are progressing (e.g., observations, discussions, practice or knowledge check questions)
Instructional design	The process of creating instructional experiences and materials that support learning; typically involves collaboration between a subject matter expert and an Instructional Designer
Integrated course design	Process of designing a course by considering the situational factors (e.g., delivery environment, student characteristics) that influence the decisions about the components of a course

L

Learning Activities	Activities the students will engage in throughout the course; includes how the students will interact with the course material and demonstrate their understanding of the CLOs
Learning Domains – Affective	Learning that involves feelings, attitudes, or values
Learning Domains – Cognitive	Learning that involves intellectual capability or thinking skills
Learning Domains – Psychomotor	Learning that involves manual or physical skills
Learning Management System (LMS)	Web-based system for creating, hosting, editing, and managing online learning resources
Learning Materials (Deliverable)	Materials or resources the students will need to use to support the intended learning (e.g., textbook, calculator, uniform, worksheets)
Lesson Learning Objectives	Describe what the students will know or be able to do by the end of the lesson; align with and further clarify the Course Learning Outcomes
Lesson plan (Deliverable)	The plan or outline used by the professor for designing, delivering, and reflecting on a lesson; includes three main components: lesson learning objectives, teaching and learning activities, and methods of evaluation
Levels of Learning – Building	Builds on prior learning and experiences; allows for students to practice refining and integrating learning with other concepts and skills
Levels of Learning – Culminating	The highest stage of learning appropriate for the credential; depends on a solid foundation and prior opportunities for students to build their knowledge, skills, attitudes, and/or experiences; students integrate learning with other concepts and skills
Levels of Learning – Introductory	The foundational level of learning; concepts and skills introduced for the first time; student has little or no prior knowledge or experience

M

myFanshawe	A web-based platform with College information, resources, and services; also known as "the portal"
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O

Online delivery	Course delivery model in which all or almost all of the content is web-based with no or very few face-to-face meetings; course delivery can be synchronous or asynchronous
Ontario College Quality Assurance Service (OCQAS)	Quality assurance agency for the public college system in Ontario
Orientation to College Teaching (OCT)	Orientation program for new part-time faculty

P

Prior Learning Assessment and Recognition (PLAR)	The process for evaluating knowledge and skills gained through experiential and/or non-formal learning for the purposes of granting credit recognition
Professional competencies	Knowledge, skills, and attitudes taught and evaluated within a program as required by an external regulatory or accrediting body
Program Advisory Committee (PAC)	Industry professionals, employers, practitioners, graduates, and other community representatives who advise the College on the development, currency, and community acceptance of its programs; typically each academic program or cluster of related programs will have its own PAC
Program Excellence Model	Fanshawe College's framework for program development, continuous quality improvement, and review

P

Program Map	A graphical representation of the relationship between the courses and the program outcomes; indicates where and how each outcome (i.e. PVLOs, EESs) is addressed in each course across the program
Program Review	A quality assurance process for reviewing program curriculum and data and current or emerging industry and trends; typically occurs every five years
Program Vocational Learning Outcomes (PVLOs)	Represent the vocationally-specific knowledge, skills, attitudes, and experiences that a student must be able to reliably demonstrate at the end of a program
Project Lead or Academic Manager	The individual tasked with managing the people, budget, contracts, deadlines, and risks for the Curriculum Development Team; assigns, reviews, and approves course deliverables; typically a Chair or Program Manager

Q

Quality Matters™ (QM)	A quality assurance framework for e-Learning
Quick-Reference Guides (QRG)	Brief, user-friendly resources that outline a procedure or set of facts in a format that allows readers to quickly and easily scan and retrieve information, make connections, and grasp big-picture concepts

R

Rubric	A type of grading scheme used for evaluating students' performance using a set of criteria; arranged in a grid structure; include the task or performance, criteria, levels of performance, descriptors for each level of performance (optional), and a score or grade
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S

Situational factors	Factors that may influence decisions made during the course development process (e.g., delivery method and environment, characteristics of students and professors, nature of the course content, relationship among the course and other courses in a program)
Stage-Gate Program Development Process	Fanshawe College's quality assurance process for the strategic development and delivery of current or new, compelling, and competitive curriculum
Summative evaluations	High-stakes evaluations (i.e. majority of marks); used to evaluate student learning after it takes place at the end of a unit or module or at the end of the course (e.g., midterm and final exams, major papers or reports, capstone projects); measures students' achievement of the Course Learning Outcomes
Synchronous communication	Participants engage in the conversation or exchange of information at the same time or in real-time (e.g., in-class, live-streaming video, chats, instant messages)

T

Teaching Activities	Activities that the professor will do throughout the course; includes how the professor will deliver the course material and check for students' achievement of the Course Learning Outcomes (CLOs)
Teaching Materials (Deliverable)	Materials or resources the professor will use to carry out the teaching activities (e.g., notes, PowerPoint slides, equipment, worksheets)

U

Universal Design for Learning (UDL)	A learner-centered approach to curriculum design to address learner variability or diversity and remove barriers to learning.
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W

Work-Integrated Learning

Learning through doing in a workplace setting; includes apprenticeship, field placements, mandatory professional practice, co-op, internship, applied research projects, and service learning