UNIVERSITY OF CALGARY
Taylor Institute for Teaching and Learning

COURSE DESIGN WORKBOOK

FOUNDATIONS OF COURSE DESIGN

AUTHORED BY:
Lorelei Anselmo, MEd., Lin Yu, MEd., Patrick Kelly, MSc.

Course Design Workbook

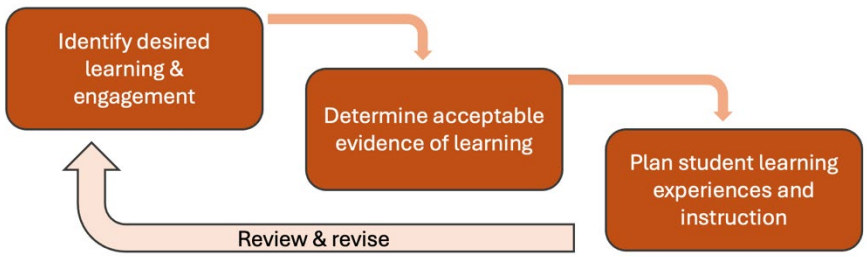
This workbook has questions to reflect on and answer, and guiding prompts to design

Contextual information

Course Title			
Dates and times (Lecture / Labs / Tutorials)			
Course Description			
Number of students		**Modality (In person / Online / Other)**	
Departmental requirements (assessments, grading, final grades, etc)			

What additional factors are worth noting that will impact the course design?

Using Backward Design: Backward design works backwards from the end desired learning for students to identify and align course learning outcomes, instruction and activities, and student assessments together. (ref)



Constructive Alignment: Ensures that assessment, instruction, learning activities and course content are consistent with student-centred course learning outcomes. (ref)

Stage 1: Identify desired learning outcomes

Course learning outcomes provide the direction for student learning and course design.

<table>
<tr><td colspan="2">Established Goal(s)/Content Standard(s):
What relevant goals (e.g., content standards, course or program objectives, learning outcomes) will this course address?</td></tr>
<tr><td>Impactful understanding(s)

• What are the big ideas or questions for the course?
• What key knowledge, skills and capabilities are associated with the profession/career in the field.
• What misunderstandings/misconceptions are predictable?
• Are there any professional standards or benchmarks that students need to achieve?</td><td>Essential Question(s):

What intriguing questions will foster inquiry, understanding, and transfer of learning?</td></tr>
<tr><td>Students will…

Related misconceptions…</td><td></td></tr>
</table>

Course Learning Outcomes

Identify what knowledge, skills and capabilities that students should acquire by the end of the course. Course learning outcomes are measurable actions (key verb) from the cognitive, affective or psychomotor domains. Not all domains need to be included in a course.

BLOOMS TAXONOMY with key verbs

Cognitive domain: knowledge and the development of intellectual abilities

Remember: Can the students recall or remember the information? [Tell, list, describe, locate, label, identify, memorize, define]

Comprehension: Can the students explain ideas or concepts? [Explain, discuss, describe, compare, generalize, summarize, extend, paraphrase]

Apply: Can the students use the information in a new way? [Solve, show, illustrate, model, draw, classify, use]

Analyze: Can the students distinguish between the different parts? [investigate, separate, defend, predict, differentiate, break down]

Evaluate: Can the students justify a stand or decision? [Judge, select, decide, debate, justify, verify, argue, assess, prioritize]

Create: Can the students create new products or points of view? [Produce, invent, predict, design, devise, formulate, infer, hypothesize]

Example:

By the end of this course, students should be able to formulate a research hypothesis based on a critical evaluation of the current literature.

Affective domain: values, appreciation, enthusiasm, motivation, and attitudes

Receive: Open to experience; willing to listen. [ask, listen, discuss, acknowledge]

Respond: React and participate actively. [respond, seek, contribute, question, discuss]

Value: Identify values and express personal opinions. [demonstrate, propose, affirm differentiate]

Conceptualize values: Reconcile internal conflicts; develop value system. [formulate, defend, relate, verify, modify]

Internalize values: Adopt belief system and philosophy. [act, influence, propose, defend, organize]

Example: By the end of the course students should be able to recognize biases in their own decision making.

Psychomotor domain: physical movement, coordination, and use of the motor skills

Imitate: Observe and replicate an action. [copy, follow, replicate, repeat]

Execute: Reproduce activity from instruction or memory. [re-create, perform, implement]

Perform: Execute a skill reliably and independently. [complete, show, demonstrate]

Adaption: Adapt and integrate expertise for a new objective. [solve, combine, develop, illustrate]

Naturalize: Create a new movement to fit a specific situation or problem. [design, invent, create, plan]

Example: By the end of this course students should be able to perform a titration to within provided specifications

(write the course learning outcomes here) By the end of the course, students will be able to …

Alignment = course learning outcomes + assessment + activities

Stage 2: Determine Acceptable Evidence

Through what performance tasks will students demonstrate the desired understandings, knowledge, and skills? By what criteria will performances of understanding be evaluated?

Student assessment examples

Cognitive domain	Affective domain	Psychomotor domain
Multiple choice exam questions Matching exam questions Definitions Graphic organizers (such as concept maps or charts) Essay Research paper or report Case study assignment Simulations (with write- up) Observation and analysis Create and implement a survey instrument Self-evaluation Presentations Design projects Create an action plan Portfolio of work	Portfolio Student reflections Journals Minute paper Peer evaluation Infographic Position paper Persuasive argument	Copy Replicate Perform Observe Follow instructions Create

The nature of each assessment needs to align to its associated course learning outcome(s). Here are some guiding points to assist you with deciding on assessments for your courses:

1. Select assessment methods that best match the course learning outcomes.
    - Revise either the outcome or assessment to achieve alignment.

2. Use a variety of assessment methods to support diversity in thinking, representation, cultures, strengths, and learning.
    - Consider the course modality (online, classroom, blended), class size, and other factors when selecting appropriate assessments.
    - Include both **formative** and **summative** assessments. Formative provides low stake opportunities for practice and feedback, while summative contribute larger %s to student grades and measure overall learning.

3. Provide opportunities for practice and feedback
    - Students should have the opportunity to practice; the first time they try an activity shouldn't be on the assessment. Practice is part of the formative feedback process.

4. Consider the number of students and assessments:
    - The assessment methods you can use in a large class often differ from those that work well in a small class due to logistics and time constraints.
    - Assessment items need to be manageable for students as well. Consider both your workload and your students. Have you included so many assessment items and approaches that students can't complete them all, or is the workload unrealistic for you?
    - Use this Student Course Time Estimator to help you plan your assessments.

5. Weight assessments to reflect importance and connection to course learning outcomes.
    - For example, if a 20-page paper is only worth 5% of the course grade, students will not put much effort into the paper.
    - Any 1 assessment worth more than 30% of the final grade is considered high stakes. Support students through practice and feedback prior to the assessment. Another strategy is to break down large assessments into smaller chunks, such as a short proposal or draft to provide feedback on.

6. Plan to have sufficient time between assessments for students to incorporate feedback.
    - Plan an early assessment for students to get a feel for the course, grading and feedback.
    - Use this Workload Estimator to help you with the timing of your assessments.

7. Check assessment and grading policies before the course starts.
    - Does your department use criterion-based or norm-referenced grading practices? What leeway do you have?
    - Review the UCalgary Academic Assessments and Examination policies at *https://calendar.ucalgary.ca/uofcregs/university-regulations/academic-assessments*

8. Create grading rubrics and other assessment material such as instructions, expectations, grading criteria as early as possible.
    - Rubrics help with grading, feedback, and communicating expectations. Creating rubrics is also a valuable method to reflect on the assessment's purpose.
    - Provide exemplars to students where possible.
    - Design transparent assessments: https://taylor-institute.ucalgary.ca/resources/transparent-assignment-instructions-template

Create an assessment blueprint

An assessment blueprint helps to see all the assessments in a course at once, and their relationship to each other, the course learning outcomes, sequencing, and the overall learning experience. Include any ungraded items with noting.

Assessment Item	% of Grade	Formative / Summative	Associated course learning outcome	Date(s)	Purpose

Reflective question: How will students reflect upon or self-assess their own learning?

Stage 3: Plan student learning experiences and instruction

What teaching and learning experiences will you use to: • achieve the desired results identified in Stage 1? • equip students to complete the assessment tasks identified in Stage 2?
Where are your students headed? Where have they been? How will you make sure the students know where they are going? What experiences do the learners bring to the unit? How have the interests of the learners been ascertained? Have the learners been part of the pre-planning in any way? What individual needs do you anticipate will need to be addressed? Learning environment: Where can this learning best occur? How can the physical environment be arranged to enhance learning?

Once you have highlighted some key activities create an ***alignment chart*** that connects course elements.

Course learning outcomes	Activities	Assessments	Due dates	Topics and resources

Week-by-Week Course Plan

Creating a week-by-week plan enables you to see the sequencing of the course, and the spacing/flow between assessments, timelines, practice and feedback.

Week	Topics/Content	Associated Course Learning Outcome(s)	General notes on activities and assessments *(practice, feedback, due dates)*
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

Stage 4: Reflect and Revise

Considerations	Comments
Is there alignment between outcomes, student assessment and learning activities? Revisions can be made to the outcome, assessment, or activities to establish alignment.	
Course Learning Outcomes: Does each course outcome use an action verb consistent with levels in Bloom's Taxonomy that can be measured with at least one graded assessment? Be prepared to explain the meaning of each outcome to provide further guidance to students.	
Student Assessments: Is each assessment clearly aligned with at least one course learning outcomes?	
Are the assessment methods valid? (i.e., does each assessment effectively assess the intended course learning outcomes?)	
Do the assessment weightings reflect the degree of work required and the importance of the work?	
Can the assignments be reasonably completed within the given time frame?	
Teaching and Learning Activities: Does your course include a variety of teaching and learning activities (e.g., lecture, discussion, case study, group work, projects, presentations, etc.)?	

Do the teaching and learning activities support student learning of the course outcomes? (e.g., if you want students to apply concepts, do they have opportunities to practice prior to a graded assignment?)	
Mental Health and Wellness: Approximately how many hours per week are students expected to work on the course? Is this reasonable?	
Are there "high-stakes" assessments (i.e., one item weighted 30% or more towards final grade)? How are students supported	
How is student mental health supported? (i.e. practice time, specific and timely feedback, appropriate level of challenge, flexibility, relationships, etc)	

Adapted from: Wiggins, Grant and J. McTighe. (1998). *Understanding by Design*, Association for Supervision and Curriculum Development, ISBN # 0-87120-313-8 (pbk)