

# Curriculum Mapping Primer

## Mapping Courses to Program Level Outcomes

### What is curriculum mapping?

Curriculum mapping is a process of documenting and analyzing aspects of a curriculum. The most common level is at the program level, illustrating how individual courses work together to support student success through each year of study. It involves collecting, recording and analyzing data about curriculum structure based on the achieved program learning outcomes. Other levels that can be mapped include core concepts, University Graduate Attributes, topics, year of study, accreditation requirements etc..

### Why map a curriculum? What are the benefits?

Curriculum mapping has many benefits for students, individual Faculty members, for Departments and Faculties and for the Institution as a whole.

#### For everyone

(Including employers, prospective students, current students, parents, and community members)

- Communicates what knowledge, skills and attributes University of Windsor graduates will possess
- Provides a visual of what is being taught, when it is being taught, and how it is being assessed

#### For students

- Clarifies what they are learning, and how the courses they are taking fit into the “big picture”
- Helps them communicate achievements to employers
- Improves their engagement when used for intentional curriculum development

#### For faculty/departments

- Improves collective understanding of curriculum and individuals’ contributions to the effectiveness of the curriculum
- Identifies program strengths
- Helps improve retention and time to completion by identifying programs gaps, bottlenecks or trouble-spots
- Improves program efficiency and use of teaching resources by enabling departments to reduce duplication
- Helps orient new instructors to course and program requirements, and how their courses fit into programs
- Engages faculty in collegial dialogue about learning and curriculum and in reflection on course outcomes, assessment strategies, and expected levels of student achievement
- Enables identification of where students have opportunities to engage in high impact practices
- Supports demonstration of alignment with accreditation standards

#### For the University

- Facilitates reporting for quality assurance practices
- Assists in the communication of skills and expertise of graduates of a given program to employers, prospective students, parents, and community members
- Supports the requirements of the Strategic Mandate Agreement

### What does curriculum mapping tell us?

When completed, program curriculum maps are very helpful for identifying gaps, unintended redundancies and misalignments that might cause trouble-spots where students may struggle with the current program structure. It also identifies strengths in the program and visually shows how courses fit together and flow between years of progression.

### What do we mean by “aligned curriculum” and alignment of outcomes?

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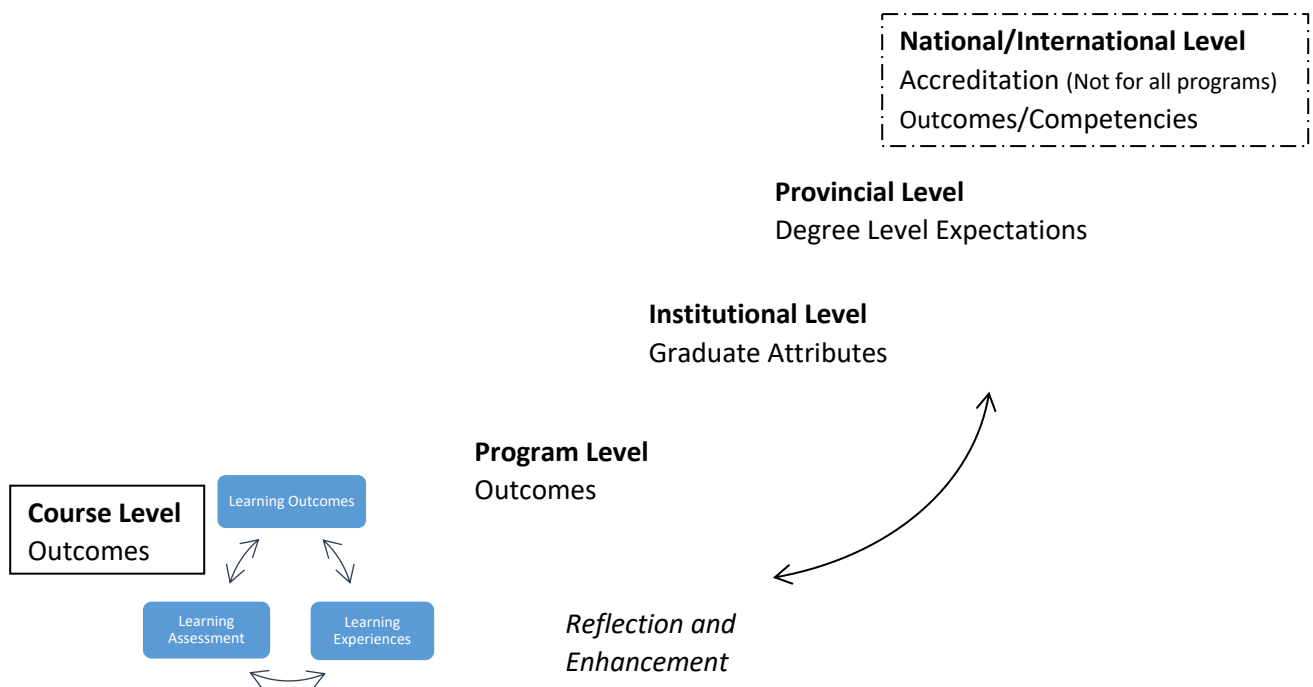


Figure 1: Learning Outcome Alignment from at the course to the national level

### What do we need to know to map a program curriculum?

You will need the following information to complete your curriculum map.

- Program Learning Outcomes (PLOs) aligned with Undergraduate or Graduate Degree Level Expectations and University of Windsor Graduate Attributes
- Information about which courses in your program achieve which outcomes
- The level of expectation for each PLO achieved in each course (introduction, reinforcement or mastery)
- Assessments used in your program’s courses
- Teaching methods used in your program’s courses, including experiential learning or high impact practices

Note: not all of this information needs to be collected at one time. At a minimum, you will need the first 3 items to create a program learning outcome map aligned to courses.

### What is it meant by “introduced”, “reinforced” and “mastered”?

These terms are used to describe the level of achievement of each program learning outcome within a course. In a constructively aligned program, these levels are scaffolded, meaning the level of achievement increases as students move from first to final year of enrollment.

- An introduced program learning outcome typically familiarizes students with definitions, key concepts and processes to establish foundational knowledge, skills and/or competencies related to the outcome. This level assumes limited or no prior knowledge related to the outcome.
- A reinforced program learning outcome assumes introduction in a pre-requisite course or program. Knowledge and skills are further enhanced and strengthened and become more complex.
- A mastered program learning outcome will mean that students have met all requirements of the outcome that are consistent with the standards and level of the program.

### Sample Curriculum Map

Undergraduate Degree Level Expectations →	Breadth and Depth of Knowledge		Knowledge of Methodologies		Application of Knowledge		Communication Skills	Awareness of Limits of Knowledge	Autonomy and Professional Capacity	
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6				
Program Learning Outcomes →	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10
GENL1000	I									
GENL1200		I					I			
GENL2000	R	R			I			I	I	
STAT2000			I	I		I	M		I	
GENL2500				I	R					I
STAT3000	R	R				R	R		I	R
GENL3200	M	R			R			R		
GENL3500		R		R	M	R	R	R	I	R
POLI4500		M		R		M	M	M	I	
GENL4000		M	M	M		M	M	M		M

Table 1: A curriculum map visualizing the course alignments to both program learning outcomes (PLOs) and Undergraduate Degree Level Expectations. The courses are listed in the left-hand column in the order that summarizes the typical student pathway through the program. The levels of achievement are articulated as Introduction (I), Reinforcement (R), and Mastery (M) of those PLOs. By reading down each column, it is easy to spot those outcomes that seem underemphasized or where there may be unintended redundancy. Reading across the rows gives information about which courses may be taking on too much – or too little. Note that this information still requires further analysis, as there may be very good reasons behind the identified course structures. If you choose the CuMA tool, assessment and teaching methods may also be indicated, which can help with more detailed analysis.

### Mapping your curriculum

Allyson Skene, Christie Stewart & Erika Kustra, Centre for Teaching and Learning, University of Windsor, June 2018

We have created resources and a curriculum mapping aid to guide you in your curriculum mapping process. These can be found on the CTL website.

### What is the Curriculum Mapping Aid (CuMA)?

- A mapping and reporting tool to help envision, plan or revise curriculum
- A searchable database for programs, courses, and their learning outcomes
- CuMA is ready to use for anyone to start a project to begin mapping!
- Access to the tool, a list of features and instructions on how to use the tool can be found on the CTL website. The tool can be found at <https://ctl2.uwindsor.ca/cuma>
- The CTL is also available to conduct one-on-one or small group training sessions or workshops on how to use the tool

### You have mapped your curriculum. Now what?

It is important to remember that the questions asked in the analysis of a curriculum map need to be discussed and reflected upon in the context of the program and what it is intending to achieve.

Reflect on how the curriculum functions as a whole and how courses are connected to each other (e.g. pre-requisite knowledge, course sequence, required vs elective courses and their learning outcomes). Develop recommendations and discuss challenges regarding your curriculum based on what you find in answering the questions below and reflecting on the curriculum map.

### Questions to ask:

- What have we done well in developing the program curriculum? What are the program strengths?
- Do you see any issues that you might need to address?
  - Are there any unintentionally over/underemphasized PLOs?
  - Any misalignments in the progression from introduction to mastery?
  - Is the achievement level appropriate for the year and course?
  - Are the PLOs reasonably achievable?
  - Are there any PLOs that are taught but not assessed?
  - Is mastery level achievable for each PLO within program?
  - Are the assessments aligned to the PLOs and other teaching methods?

### General guidelines for curriculum map analysis

What do we want to see with a well-aligned curriculum?	What should we avoid with curriculum development?
All PLOs achieved and assessed	Gaps: PLOs that are not achieved and/or assessed
Balanced and intentional progression for each PLO from Introduction (I) to Reinforcement (R) to Mastery (M), with all levels of achievement present for each PLO	<ul style="list-style-type: none"> <li>• Expectations of mastery without sufficient introduction or reinforcement</li> <li>• Misalignments: e.g. backtracking to introductory levels after reinforcement</li> <li>• Unintended redundancies: e.g. repeated achievement level without purpose</li> </ul>
Mastery level is achieved for all PLOs	Mastery level is not achieved for all PLOs
All outcomes assessed at mastery level	Lack of assessment of an outcome at the mastery level

Student pathways through the program are designed to ensure that successful students will meet all PLOs at the mastery level

Student pathways allow cases where successful students may not achieve all PLOs at the mastery level

### Next Steps

Once you have had time to reflect and analyze the curriculum map, discuss within your department/program/unit possible avenues you might take to improve the curriculum and remedy any issues uncovered during your assessment.

If you would like assistance with this process curriculum design or would like to explore the impact of curriculum changes, the CTL provides one-on-one instructor consultations and departmental/faculty meetings. Workshops and courses are also available. For more details and registration, visit CTL Events: <http://ctl.uwindsor.ca/ctl/events-and-courses>

### Resources

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Allyson Skene, Christie Stewart & Erika Kustra, Centre for Teaching and Learning, University of Windsor, June 2018

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