

Program Curriculum Maps

A curriculum map is a visual tool that allows faculty to collaboratively reflect on curriculum. Many variations of curriculum maps exist. The format used depends on what type of questions faculty have about their curriculum.

A **program-level curriculum map** makes it easy for instructors to see at a glance which courses develop program learning outcomes and to what level. It **clarifies the alignment, gaps, overlaps, inconsistencies and strengths of a program curriculum** and helps instructors answer the following questions:

1. Which program learning outcomes (or components of them) are explicitly taught, practiced and assessed in each course of the program?
2. Are there any program learning outcomes that are only addressed in one course?
3. Are there any program learning outcomes that are addressed in every course?
4. When during the program are students expected to be working at an introductory, developing or proficient level for each program learning outcome?
5. How do we know that students have achieved each program learning outcome? At which points in the program is evidence of this learning is assessed (i.e., capstone projects, portfolios of student work, etc.)?

What are program learning outcomes?

Program learning outcomes are broad statements that describe what students will know and be able to do after completing ALL of the courses in a particular program (certificate, diploma, degree, etc.).

This type of learning outcome reflects complex learning that is the culmination of the discrete knowledge and sub-skills learned in different individual courses. It is only once students have successfully completed all of the courses in the program that they will have been able to achieve all of the program learning outcomes. (See *Developing Learning Outcomes* for more information on program and course level learning outcomes.)

E.g. A program learning outcome for an academic English program might be that students will be able to write a research essay. In order for students to successfully achieve this outcome, they will need to learn and practice many subskills such as how to

- develop an effective research question
- write different types of paragraphs (introduction, body, conclusion)
- write thesis statements
- develop and support arguments
- use discipline-specific vocabulary
- find and evaluate academic sources
- paraphrase and summarize information
- synthesize information from different sources
- explain graphic information in writing
- cite sources in text
- write a list of references

Although writing a research essay is a common academic task, when we really look at what is required to complete this outcome successfully, we see that it contains many subskills, which will take time for students to master. Rather than expecting students learning academic English to be proficient at all of these subskills by the end of just one course, ideally program instructors will divide them up into "learnable" chunks so that they are taught, reviewed and assessed in a few different courses. This ensures that students have adequate opportunities to practice, receive feedback on their progress, and revise their work multiple times as they

develop the knowledge and skills necessary to achieve the broader intended outcome of writing a research essay in another language. A curriculum map allows instructors to see at a glance which courses in the program support that learning pathway.

In all disciplines, it is common for different aspects or components of a program-level learning outcome to be taught in different courses or to be taught at differing levels of complexity. This means information and skills are being broken down for the learners, and they are being given multiple opportunities to review, practice, synthesize and apply what they are learning. Hopefully, it also means that students are getting multiple opportunities to receive feedback on their progress.

However, if every program-level learning outcome is part of every course, there is likely too much overlap in the curriculum. Conversely, if a program-level learning outcome is only covered in one course, students may not be getting enough opportunities to practice, apply and receive feedback on the complex information and skills they are learning.

Mapping the curriculum allows instructors to easily see these gaps, overlaps, and inconsistencies in order to enhance their curriculum.

What does a typical program curriculum map look like?

Below is an example of a simple curriculum map used to reflect on when and how program learning outcomes are addressed in the curriculum (see last page for more complex map).

Curriculum Map for Psychology				
Required Courses	Program Learning Outcomes			
	LO #1: Lorem ipsum . . .	LO #2: Lorem ipsum . . .	LO 3#: Lorem ipsum . . .	LO #4: Lorem ipsum . . .
PSYC 1000	exploring		exploring	
PSYC 1100		exploring		
PSYC 1200		developing		exploring
PYSC 2000	developing		developing	
PYSC 2100		demonstrating		
PYSC . . .			demonstrating	developing

The example curriculum map above uses *exploring (exp)*, *developing (dev)*, and *demonstrating (dem)* to indicate different stages of learning that students move through on their way to achieving the broader program learning outcome. When a concept or skill related to the outcome is *meaningfully* assessed (e.g., by an exam question, a paper, a project, a presentation, a lab assignment, a performance, a creative work etc.) at one of these levels, we place EXP or DEV in the appropriate cell of the table. When the broader program learning outcome is being assessed (e.g., in a capstone project, portfolio, creative work etc.), we place DEM in the cell.

Exploring (EXP): Students learn, practice and are assessed on basic or foundational ideas, concepts or subskills related to the outcome. For example, students are explicitly taught, practice and get feedback on their achievement of 1-2 components, concepts or subskills required to achieve the broader outcome.

Developing (DEV): Students learn additional information and/or skills required to achieve the outcome and demonstrate their knowledge or ability at an increasingly complex level. In assessment tasks, they may be

asked to demonstrate understanding of the relationships between concepts or events, synthesize 2-3 key concepts, and/or apply 2-3 skills to solve a problem or produce a work.

Demonstrating (DEM): Students demonstrate that they can accomplish the program learning outcome at a level expected from a successful graduate of the program. Assessment tasks may require them to synthesize and generalize what they've learned to novel topics and/or situations, draw on what they've learned to creatively solve complex novel problems or produce new work, or reflect on and explain how a portfolio of their work demonstrates achievement of the program learning outcomes. Common types of assessment used include capstone projects, portfolios, performance pieces, research papers etc. that require students to demonstrate knowledge and skills they've gained from the program overall rather than from only one course.

This type of evidence of student learning (achievement of the program-level learning outcomes) can be regularly collected, reviewed and discussed by all instructors in the program to evaluate whether or not students are achieving the program learning outcomes and how the curriculum could be enhanced to further support student learning.

What should I look for in my curriculum map?

As mentioned above, a curriculum map is a tool to help instructors identify the alignment, gaps, overlaps, inconsistencies and strengths of a program curriculum. It allows us to see if students have enough opportunities to develop, demonstrate and receive feedback on their knowledge and skills across multiple courses.

Overlap in the curriculum can be seen when every cell below a particular learning outcome is filled. This suggests that information related to that learning outcome may be covered in too many courses.

Curriculum Map for Psychology				
Required Courses	Program Learning Outcomes			
	LO #1: Lorem ipsum . . .	LO #2: Lorem ipsum . . .	LO 3#: Lorem ipsum . . .	LO #4: Lorem ipsum . . .
PSYC 1000	EXP		EXP	
PSYC 1100	EXP	EXP	DEV	
PSYC 1200	DEV	DEV		EXP
PYSC 2000	DEV		DEM	DEV
PYSC 2100	DEV	DEM		

Each course should support at least one and ideally more than one program learning outcome. However, *meaningfully* assessing all program learning outcomes in one course, even at an introductory level, may not be possible and should not be the goal. This may suggest that too much is being covered in that one particular course.

Gaps in the curriculum can be seen when very few cells under a particular learning outcome are filled or when an EXP, DEV, or DEM is missing. This suggests that students may not have enough opportunities to learn and practice the knowledge and/or skills related to that learning outcome.

Curriculum Map for Psychology				
Required Courses	Program Learning Outcomes			
	LO #1: Lorem ipsum . . .	LO #2: Lorem ipsum . . .	LO 3#: Lorem ipsum . . .	LO #4: Lorem ipsum . . .
PSYC 1000	EXP		EXP	
PSYC 1100		EXP	DEV	
PSYC 1200		DEV		EXP
PYSC 2000	DEV		DEM	
PYSC 2100	DEM	DEM		

Finally, **inconsistencies in the curriculum** can be seen if a required course does not seem related to any program learning outcome. Instructors may want to discuss whether the course should still be required or whether an important program learning outcome has been missed.

Curriculum Map for Psychology				
Required Courses	Program Learning Outcomes			
	LO #1: Lorem ipsum . . .	LO #2: Lorem ipsum . . .	LO 3#: Lorem ipsum . . .	LO #4: Lorem ipsum . . .
PSYC 1000	EXP		EXP	
PSYC 1100		EXP	DEV	
PSYC 1200				
PYSC 2000	DEV		DEM	
PYSC 2100	DEM	DEM		

Adapted from: California State University, *Creating a Curriculum Map*

<http://www.ced.csulb.edu/offices/assessment-office/creating-curriculum-map>

See *Example Program Curriculum Map* handout for more detailed example.

References

Borin, P. (2010). *Mapping the Curriculum*. Retrieved from:

<http://www.ryerson.ca/lt/programs/curriculum/MappingCurriculum.pdf>

Kopera-Frye, K., Mahaffy, J. & Messick Svare, G. (2008). *The Map to Curriculum Alignment and*

Improvement. Retrieved from: <http://celt.uwindsor.ca/ojs/leddy/index.php/CELT/article/view/3171>

Maki, P. (2010). *Assessing for Learning: Building a Sustainable Commitment across the Institution* (2nd ed.). Sterling, VA: Stylus Publishing

Other information and resources on curriculum mapping can be found at the following links.

Simon Fraser University

<http://www.sfu.ca/tlc/development/curriculumplanning/mapping.html>

University of Guelph

<http://www.uoguelph.ca/vpacademic/avpa/outcomes/curriculummap.php>

University of Hawaii (n.d.). *Curriculum Mapping*. Retrieved from:

<https://manoa.hawaii.edu/assessment/howto/mapping.htm>

California State University

<http://www.ced.csulb.edu/offices/assessment-office/creating-curriculum-map>