



Biology Curriculum Mapping Project

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Curriculum Mapping Project - Overview

Plan for today:

- . Brief history of project
- . Current status - program level goals survey
 - Review survey components
 - Take survey
- . Reflect on role of goals in your course
- . Record feedback about program-level goals

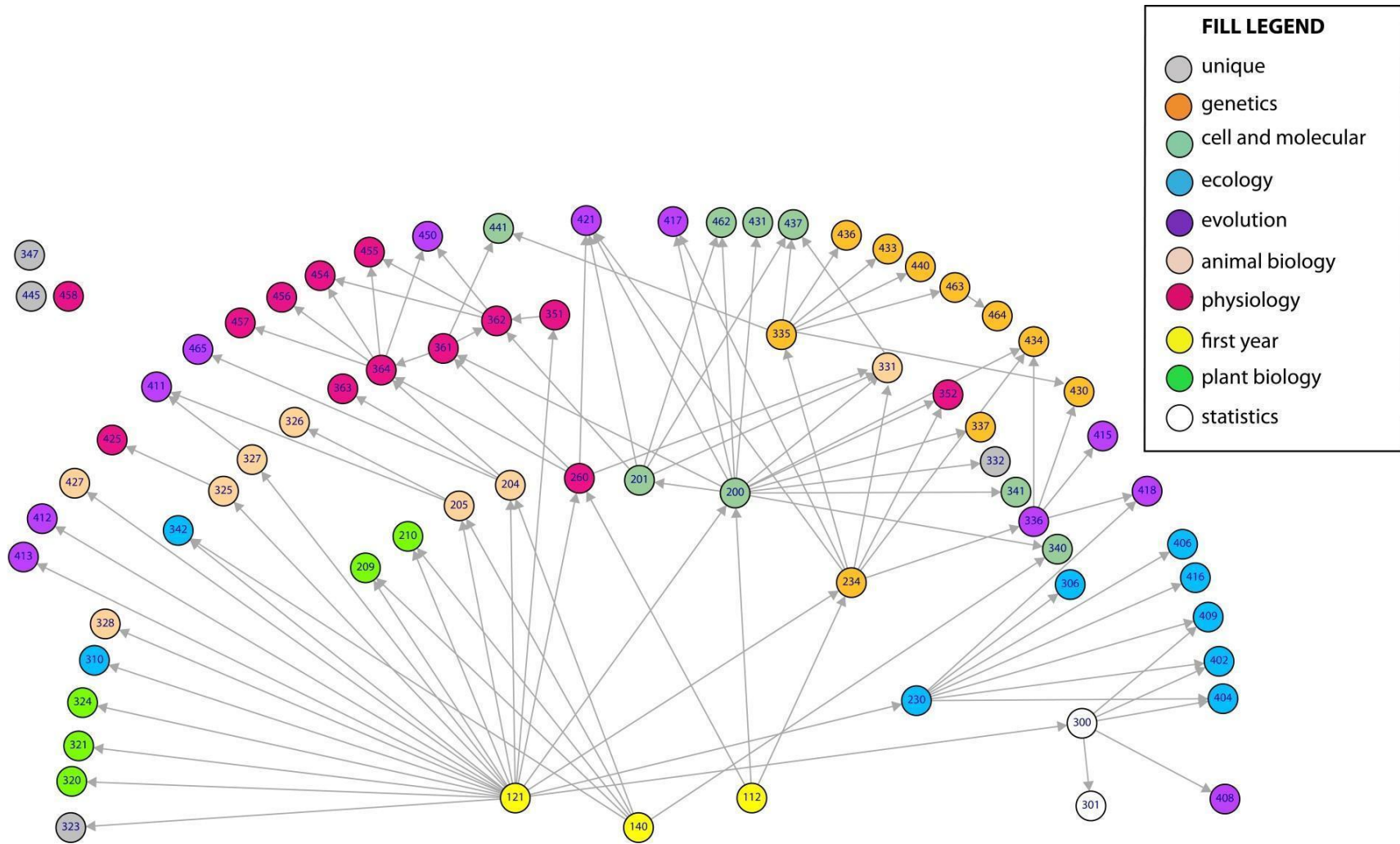


Motivation for Curriculum Mapping

1. Faculty asking “What do students learn in courses prior to *MY* course?”
2. Recent curriculum changes in the Biology program at UBC
3. Determine how and where biology program-level goals are being taught and assessed.



Biology Program at UBC





Curriculum Mapping Approach

STEP 1: Collected course materials from almost all biology courses (~80% of BIOL courses) including syllabi, learning goals, teaching materials (some courses)

STEP 2: Pooled and summarized information to summarize biology content and skills covered across the program

STEP 3 (in progress): Survey – faculty to complete survey to rank how program-level goals are dealt with in their biology courses.



Example– Summarizing content categories across curriculum

Course	Category	Broad Topic	Detailed subtopics
112	Cell & Developmental	Cells	proteins, RNA, carbohydrates, lipids
121	Ecology & Evolution	General introduction	Population characteristics
140	General Biology	Scientific Thinking/ Experimental Design	Make observations, record data
201	Biochemistry, Cell & Developmental	Protein Structure	Polypeptide Folding/Oligomerization: Importance
204	Physiology, Systematics and Biodiversity	Muscles	
234	Molecular Bio and Genetics	Mutations & Phenotype	Effects on RNA, protein form and function
260	Physiology, Ecology & Evolution	Reproduction	Reproduction in Plants Population growth (no density dependence)
301	Biomathematics/Ecology	Models in one variable	
306	Ecology & Evolution	food webs	trophic levels, biomass pyramids
351	Physiology	Photosynthesis	Photosynthesis: Carbon Assimilation
412	Systematics & Biodiversity	biogeography	seaweeds
433	Molecular Bio & Genetics	Plant genetics	Biochemistry & metabolism
465	Physiology	salinity tolerance	



What to do with this information

- 1) Examining pre-requisites
 - What students were exposed to prior to your course (and knowing where to go for more information)

- 2) Examining Experiential Components of Biology Program:
 - Are there opportunities to increase exposure to particular skills?

- 3) Use to inform course development and change:
 - Integrate information to provide a useful student advising database
 - Make information easily accessible (& editable) to faculty



Curriculum Mapping – Phase 2

Goal: Determine where biology program-level goals are being taught and assessed.

Biology Program Level Goals

- Content
- General cognitive
- Skills



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Curriculum Mapping – Phase 2

Rank how each goal is handled in your course:

	Expected Prior Knowledge	Mentioned	Taught	Assessed	Feedback	Not Applicable
All living things have evolved from a common ancestor, through processes that include natural selection and genetic drift acting on heritable genetic variation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

something students are expected to understand or know how to do, but no class time is spent and they may or may not be directly assessed on this skill/topic.



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All living things have evolved from a common ancestor, through processes that include natural selection and genetic drift acting on heritable genetic variation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

the skill/topic is briefly discussed, students are expected to apply this skill/topic and they may or may not be directly assessed.



Curriculum Mapping – Phase 2

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All living things have evolved from a common ancestor, through processes that include natural selection and genetic drift acting on heritable genetic variation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

at least 10 minutes is spent in class discussing the skill/topic, students are expected to apply this skill/topic and they may or may not be directly assessed.



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any form of assessment on the skill/topic such as clicker questions, quizzes, homework assignments, tutorial problem sets (that are checked for completeness), in-class worksheets, midterms, final exams



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students receive some form of feedback on their success at mastering the skill/topic *beyond* just receiving their mark.



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the skill/topic described in the objective is not a component of your course.



Take the survey!

- <http://tinyurl.com/UBCbiologysurvey>

Complete for at least one course you teach.



Post-Survey Reflection

Were there any **program-level goals** you came across that you realize you value but don't incorporate into your teaching?

Write that down on your reflection card.



Post-Survey Feedback: Are there any program-level goals that you feel were missed?

Write down 1-3 **program-level** goals you think should be part of the list, but are not currently represented.

These should reflect what you think are goals for the **first and second year “core” curriculum in Biology-** that is, students will achieve these goals by going through the first and second year core courses.

Please phrase your program-level goals by completing this sentence:

**By the end of the core curriculum,
students should be able to...**



Thank you for your time and input!

We are happy to discuss this project further,
if you are interested.

Our contact info is on the retreat page,
or come and chat with us at the retreat today.

Thank you!