# Building a Blueprint for Program-Level Outcomes Assessment with Curriculum Mapping

Franz H. Reneau, Ph.D.
Director of Assessment
Office of Academic Effectiveness

Contact: (404) 385-2552
franz.reneau@gatech.edu

Georgia Tech
CREATING THE NEXT

Session Outcomes

- Know how curriculum maps are defined
- Know why curriculum maps are an effective assessment tool
- Know how to create a curriculum map to guide program-level outcomes assessment
- Learn strategies for leading curriculum mapping exercises

Georgia
Tech

CREATING THE NEXT
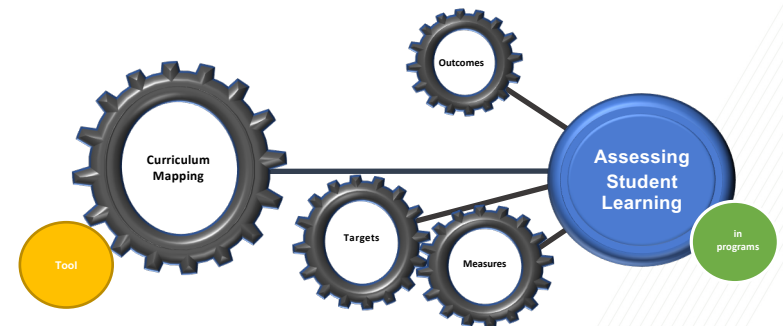
About the Curriculum

The curriculum is a blend of educational experiences and intended outcomes designed to furnish students with the requisite knowledge, skills, and disposition that support success within the discipline and beyond.

11/18/19

Georgia
Tech
CREATING THE NEXT

Definition – Curriculum map

A grid that aligns a program's **courses** with its expected student learning outcomes (Banta & Palomba, 2015).

Two-dimensional matrix representing **courses** on one axis and outcomes on the other (National Institute for Learning Outcomes Assessment, 2018).

A graphical representation of the relationship that exists between a programs **courses** and **co-curricular experiences** and the program's expected student learning outcomes.

Courses and Experiences	Program Level Student Learning Outcomes (PLSLOs)			
	PLSLO 1	PLSLO 2	PLSLO 3	PLSLO 4
Course A				
Course B				
Course C				
Course D				

Georgia Tech
CREATING THE NEXT

Complexities of curricula

Courses
• Required courses
• Prerequisite courses
• Electives

Program Requirements/Other Learning Experiences
• Internship/Field Experience
• Thesis
• Dissertation
• Comprehensive Exams
• Capstone

Complexities of curricula cont....

Design →

← Execution

| Institutional Outcomes | Program Learning Outcomes | Course Outcomes & Objectives |
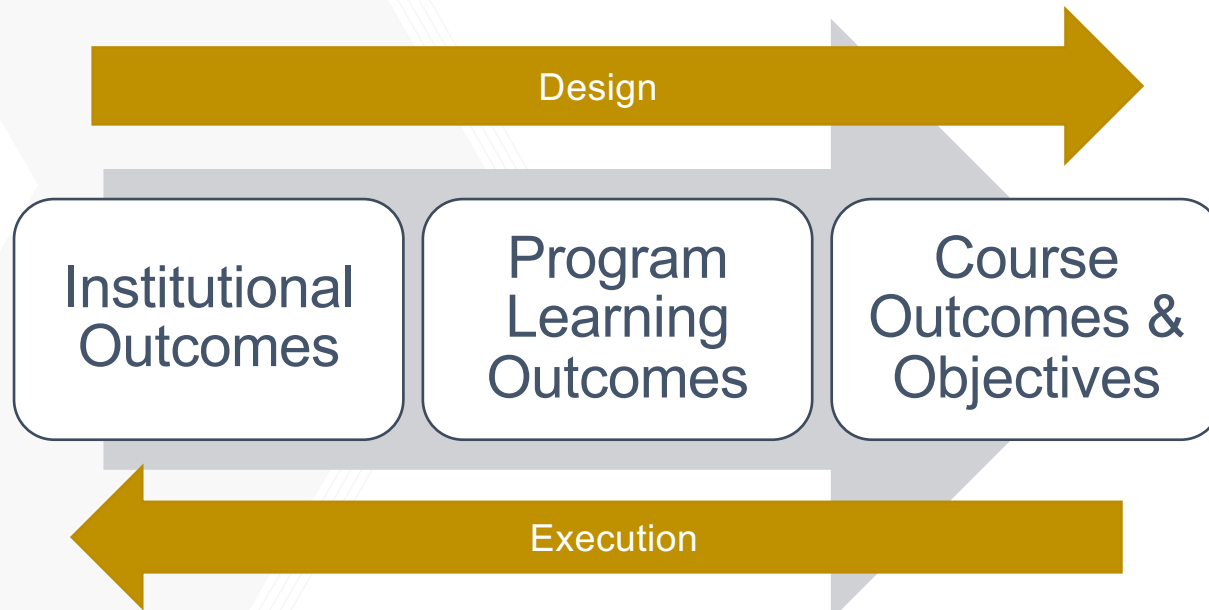
- Intentionality in curriculum design is important.

- A well integrated curriculum supports students learning and institutional effectiveness.

Georgia Tech
CREATING THE NEXT

Think of a **curriculum map** as your roadmap or blue print for students' academic success.

Activity

At your table, discuss what you believe to be the value of curriculum maps and why programs should consider investing the time to develop them.

Image source: https://www.123rf.com/photo_99082645_stock-vector-discussion-round-at-the-round-table.html

Georgia
Tech
CREATING THE NEXT

Value of curriculum mapping

Image source:
https://impact.chartered.college/article/designing-coherent-english-curriculum/

- Ensures a coherent and meaningful curriculum.

- Aligns instruction with desired learning outcomes.

- Supports student learning and development and increases the likelihood that students achieve program level outcomes.

- Provides students with an overview of all courses in the curriculum and addresses why some courses should be taken in a particular sequence where appropriate.

- Promotes faculty collegiality.

Value of curriculum mapping Cont...

Image source: https://droplr.com/blog/communicate-ux-to-gain-buy-in/

- Communicates a clear picture to students, accreditors, and external stakeholders what students are expected to know, value and be able to do by the end of a program to include the process leading to the end.

- Informs curriculum enhancements.
  - Identifies redundancies and gaps in the curriculum.

- Emphasizes, where applicable, the importance of logical course sequencing and timely exposure to theory and practice relative to the discipline.

Georgia Tech
CREATING THE NEXT

Sample curriculum mapping template

Courses and Experiences	Program Level Student Learning Outcomes (PLSLOs)			
	PLSLO 1	PLSLO 2	PLSLO 3	PLSLO 4
Course A				
Course B				
Course C				
Course D				

Program-Level Student Learning Outcome

Note: You will find the location for courses and PLSLOs flipped in some of the assessment literature. It is a matter of preference.

Georgia Tech
CREATING THE NEXT

Sample curriculum PLSLO's coverage map

Program: BS Architecture				
Courses and Experiences	**Program Level Student Learning Outcomes**			
	Students will be able to communicate effectively orally and in writing within the discipline.	**Students will demonstrate the ability to work collaboratively with diverse design teams.**	**Students will be able to apply theoretical knowledge of the field to address design problems.**	**Students will be able to identify, formulate, and solve design problems.**
Course A	X	X		X
Course B	X	X	X	
Course C	X	X	X	
Course D	X		X	X

Sample curriculum map

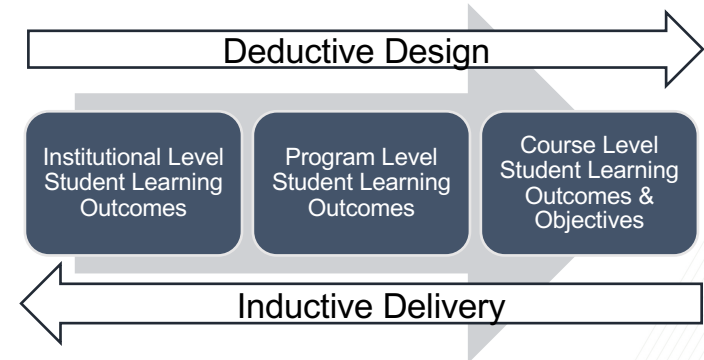| Program: BS Architecture				
Courses and Experiences	**Program Level Student Learning Outcomes**			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
Course A	I	I		I
Course B	R	R	I	
Course C	R	M, A	R	
Course D	M, A		M,A	R

Key: "I"=Competency Introduced; "R"= Competency Reinforced/Practiced/Emphasized; "M"= Mastery; "A"= Competency Assessed (i.e., assessment evidence collected)

Georgia Tech
CREATING THE NEXT

Steps in creating a curriculum map

Step 1: Identify/list the program's intended student learning outcomes. These should reflect what you want students to know, value and/or be able to do by the end of the degree program and should take into consideration:

- Discipline specific knowledge and skills
- Accreditation and other external accountability standards.
- Licensure/certification requirements
- Distinguishing characteristics (program/institution)

Deductive Design

| Institutional Level Student Learning Outcomes | Program Level Student Learning Outcomes | Course Level Student Learning Outcomes & Objectives |

Inductive Delivery

Important: PLSLOs should be agreed on by collective body of program faculty.
Be reminded that course level student learning outcomes help students achieve program level outcomes.

Georgia Tech
CREATING THE NEXT

Steps in creating a curriculum map Cont...

Step 2: Select template and begin to create the map.

- Be reminded that the location of PLSLOs and courses and experiences can be flipped.
- Enter PLSLOs and courses and experiences where appropriate into the template.

Program:				
Courses and Experiences	**Program Level Student Learning Outcomes**			
	PLSLO 1	**PLSLO 2**	**PLSLO 3**	**PLSLO 4**
Course A				
Course B				
Course C				
Course D				

Georgia Tech
CREATING THE NEXT

Steps in creating a curriculum map Cont…

Step 3: On the map indicate where PLSLOs are covered.

Program: BS Architecture				
Courses and Experiences	Program Level Student Learning Outcomes			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
ARCH 1854 Fundamentals of Design I	X			
Arch 1854 Fundamentals of Design II	X			
ARCH 2011 Design Studio I	X	X		X
Arch 2012 Design Studio II	X	X		X

Indicates where PLSLOs are covered at the course level

iecn
CREATING THE NEXT

Steps in creating a curriculum map Cont...

Image source:
https://www.internetsociety.org/blog/2014/04/netmundial-variations-on-a-theme-multistakeholder-consensus-building-in-action/

Step 4: Consensus building around where outcomes are:

- **I** - Introduced
- **R** – Reinforced (there should be sufficient opportunities in the curriculum for students to practice the skill.)
- **M** – Mastered (at this level students should be able to demonstrate mastery)
- **A – Assessed (indicates where evidence might be collected and evaluated to support PLSLO assessment.)**

Steps in creating a curriculum map Cont...

Program: BS Architecture

Courses and Experiences	Program Level Student Learning Outcomes			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
ARCH 1854 Fundamentals of Design I	I			
ARCH 2011 Design Studio I		I		
ARCH 2010 Design Studio II	R	R	R	R
Arch 3855 Design Studio III	R	R		R
ARCH 3856 Design Studio IV	R	R	R	
ARCH 4855 Design Studio V	M/A	M/.A	R	

You curriculum map should look something like this.

Georgia Tech
CREATING THE NEXT
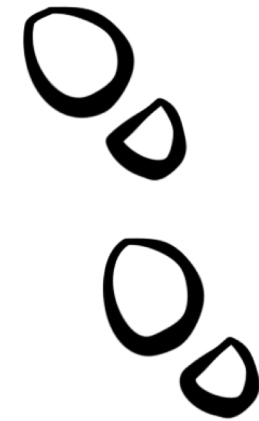
Steps in creating a curriculum map Cont...

Step 5: Review curriculum map.

- Ensure that there are no gaps in what students are expected to know, value and be able to do.
- Natural progression towards mastery.

- Ensure that each PLSLO is introduced, reinforced/practiced, mastered and assessed where appropriate.

  *Note: Each outcome should have at **minimum two points,** where evidence is collected to support program-level outcomes assessment.*

Georgia
Tech
CREATING THE NEXT

Next steps in curriculum mapping

CREATING THE NEXT

Program: BS Architecture

Courses and Experiences	Program Level Student Learning Outcomes			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
ARCH 1854 Fundamentals of Design I	I			
ARCH 2011 Design Studio I	I			
ARCH 2010 Design Studio II	R	R	R	R
Arch 3855 Design Studio III	R	R		R
ARCH 3856 Design Studio IV	R	R	R	
ARCH 4855 Design Studio V	M/A **Capstone Project Assessed with Oral and Written Communications Rubric**	M/A **Design Group Project assessed with Grading Rubric, Student Self-Reflection and Peer Evaluation**	R	

Specify artifacts to be assessed to include method of assessment

21

Georgia Tech
CREATING THE NEXT

Edward Johnson University – College of Architecture

Program: BS Architecture

Courses and Experiences	Program Level Student Learning Outcomes			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
ARC 3181	R	I	I	
ARC 3320		R		R, A
ARC 3321	I	R	R	
ARC 3463				R
ARC 3505		R	R	
ARC 3610	R			
ARC 3743	R			I
ARC 4220				
ARC 4322			R	R
ARC 4323	R, A	R	R, A	R, A
ARC 4620	A	M, A		M, A
Other: Exit Interview	A	A	A	A

Georgia Tech
CREATING THE NEXT

Issues with previous map

- Competencies being reinforced and in some instances assessed at the program level before they are introduced.

- Assessment at the mastery level was missing for two of the four PLSLOs. In both instances it was not clear where students were required to demonstrate mastery of the competencies.

- There was one course that did not seem to contribute to students' realization of the PLSLOs.

Georgia Tech
CREATING THE NEXT

Edward Johnson University – College of Architecture

Program: BS Architecture

Courses and Experiences	Program Level Student Learning Outcomes			
	Students will be able to communicate effectively orally and in writing within the discipline.	Students will demonstrate the ability to work collaboratively with diverse design teams.	Students will be able to apply theoretical knowledge of the field to address design problems.	Students will be able to identify, formulate, and solve design problems.
ARC 3181	I	I	I	
ARC 3320		R		I
ARC 3321	R	R	R	
ARC 3463				R
ARC 3505		R	R	
ARC 3610	R			R
ARC 3743	R			R
ARC 4220	R	M, A	R	
ARC 4322			R	M, A
ARC 4323	R, A		R, A	
ARC 4620	M, A		M, A	
Other: Exit Interview	A	A	A	A

Things to consider after developing your curriculum map

Share with all stakeholders

Post on educational program's website

Put relevant part on syllabus to help students see where course fits into their curriculum

Useful information for orienting new/ adjunct faculty

- When new faculty asked to teach existing course, show them the map so they will teach what is expected for them

Strategies for leading Curriculum Mapping Exercise

- Identify someone to facilitate curriculum mapping exercise.

- Set aside time to engage faculty in the exercise. Consider, **Faculty Retreat**, Department Faculty Meeting etc.)
  - May vary based on the size of the program.

- Gather program curriculum and course syllabi.

- Plan and be clear and transparent about the desired outcome(s) of the session.
  - e.g., You may want to start small by validating with program faculty that the existing PLSLOs reflect what faculty expect students to know, value and or be able to do by the end of the degree program and then focus on a **coverage map**.

Georgia
Tech

CREATING THE NEXT

Strategies for leading Curriculum Mapping Exercise Cont....

- Use a space large enough to draw the mapping grid (e.g., white board, large flip chart sheets etc.)

- List program courses in the grid.

- Follow guidelines for curriculum mapping (i.e., Steps 1-5).

- Consensus building is the key. Get faculty to agree where competencies are introduced, reinforced/practiced, mastered and assessed.

Note: If you are just starting out with curriculum mapping, consider breaking the process down into two to three phases.

- **Phase I – Focus on PLSLOs and curriculum coverage (Curriculum Coverage Map)**

- **Phase II – Focus on where competencies are I,R/P, M, A.**

- **Phase III – Focus on identification of key artifacts for mastery assessment and how artifacts will be assessed.**

Georgia Tech
CREATING THE NEXT

Activity

Image source: https://www.123rf.com/photo_99082645_stock-vector-discussion-round-at-the-round-table.html

Moving the conversation to action. At your table, discuss how you might start the conversation of curriculum maps to guide program-level outcomes assessment with key stakeholders in your department.

Georgia Tech
CREATING THE NEXT

Final Thought

A growing body of research suggest that students learn most when they understand course and program goals and see coherence in their learning.

Make the time to be more intentional about what you expect students to know, value and or be able to do by the end of your degree program and how those things are scoped and where appropriate sequenced over a student's matriculation in your degree program.

Georgia Tech
CREATING THE NEXT

Discussion, Questions, Comments, etc.)

Franz H. Reneau, Ph.D.
Office of Academic Effectiveness
237 Uncle Heinie Way
A. French Building Room 003
E-mail: franz.reneau@gatech.edu
Phone: (404) 385-25520

GT Assessment Toolkit -
https://academiceffectiveness.gatech.edu/assessment-
toolkit/

11/18/19