

# Sustainability Education Curriculum Mapping and Assessment Planning

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**AASHE**

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# The Heart of Curriculum Development

- Program Learning Outcomes (PLOs)
- Course Learning Outcomes (CLOs)
- Course Curriculum (Within and Across Courses)
- Signature Assessments/Assignments aligned with PLOs and CLOs
  
- In this webinar, you will learn how to develop a curriculum map that aligns Program Learning Outcomes, Course Learning Outcomes, course curriculum and signature assignments/assessments for a program to ensure a quality program and systematic assessment process in sustainability education.



# Overview of Curriculum Mapping Process and Assessment Planning

- Develop Program Learning Outcomes (PLOs)
- Create Course Learning Outcomes (CLOs) and Course Program Plan that are aligned with overarching PLOs
- Develop curriculum and signature artifacts/assessments within courses that provide students with the opportunity to demonstrate CLOs (and ultimately PLOs)
- Scaffold coursework and signature assessments so that they build toward meeting PLOs and enable doctoral students to complete their review of the literature, dissertation proposal and dissertation
- Assess the signature artifacts/assessments and competencies as part of each aligned course



# Develop Program Learning Outcomes (PLOs)



# Using Understanding by Design to Develop Program Learning Outcomes

Students understand Educational Sustainability when they:

- Know (Knowledge)
- Can do (Skills)
- Appreciate/value (Dispositions)

The knowledge, skills and dispositions become the core Program Learning Outcomes



# EdD in Education Sustainability (PLOs)

## Students will be able to

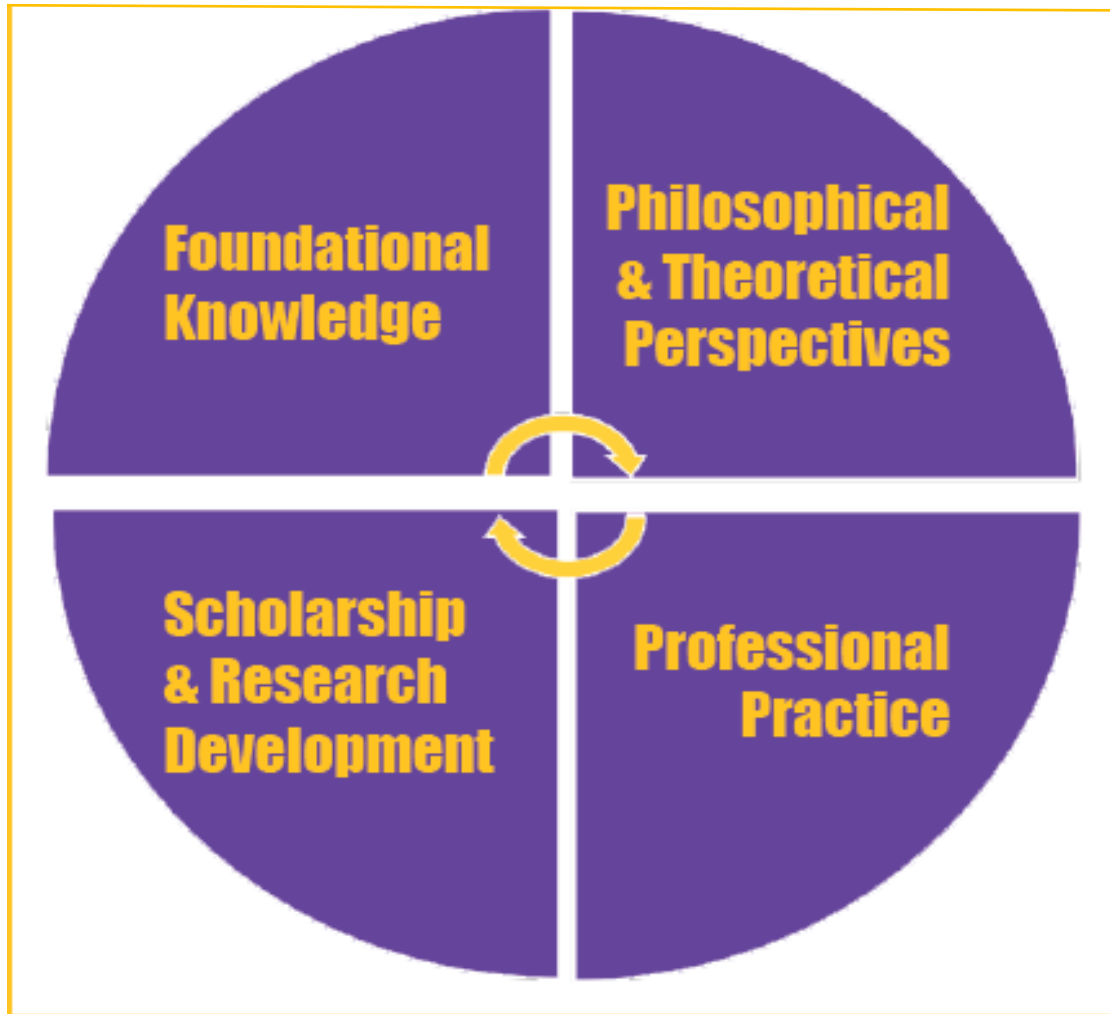
- **PLO #1:** utilize systems thinking and sustainable practices in program development and education
- **PLO #2:** interpret and explore how global environmental change affects the lives of future generations
- **PLO #3:** identify the social, cultural, economic, and political human systems that create a sustainable society
- **PLO #4:** consider diverse audiences and integrate inclusive practice into sustainable environments
- **PLO #5:** implement practices that enhance sustainable education and community environments through shared vision
- **PLO #6:** demonstrate leadership to challenge existing norms, and create a holistic and ecological model for decision making as it relates to educational and community systems
- **PLO #7:** develop a research study that supports the principles of sustainability
- **PLO #8:** use and analyze data for informed decision making in professional practice



# Program Learning Outcomes (PLOs) for EdD in Educational Sustainability

- **Sustainability at Our Core**
- Students explore sustainability in one or more of our core principles: Transformative Learning
- Systems Thinking
- Ecological Thought
- Pluralistic Democracy
- Diversity and Social Justice
- Ethical Action







# Mapping of 4 Quadrants of Curriculum

**F = Foundational**

**PT = Philosophical and Theoretical Perspectives**

**RS = Research and Scholarship**

**PP = Professional Practice**

	Example of Course Mapping							
Learning Outcome	EDSU 810	EDSU 820	EDSU 900	EDSU 901	EDSU 902	EDSU 903	EDSU 904	EDSU 905
#1			F	F	PP	PT		
#2			F		PP		F	
#3	PT	F	F	F				
#4	PT	F	F	F	PP	PT	F	
#5			F			PT	F	
#6	PT	F	F					
#7								RS
#8								RS



# Create Course Learning Outcomes (CLOs) and Curriculum Program Plan that are aligned with overarching PLOs



# Curriculum Alignment

Program Learning Outcomes	Course Learning Outcomes	Courses	Signature Assessments/ Assignments
PLO #1: Students will utilize systems thinking and sustainable practices in program development and education	<p>CLO 1: articulate systems thinking concepts and global sustainability practices</p> <p>CLO 2: develop a plan implementing sustainable practices within their personal and professional practice</p>	<p>EDSU 903 – Reorienting Curriculum and Programs for a Sustainable Future</p> <p>EDSU 913 – Ecological Foundations for a Sustainable Society</p>	<p>Assessment/Artifact: Problem Statement Paper</p> <p>Assignment: Reorienting Curriculum Framework</p> <p>Assessment/Artifact: E-Portfolio Ecological Learning Journal</p>



# Curriculum Program Plan

<u>Year</u>	<u>Summer</u>	<u>Signature Assessment</u>
YEAR 1	EDSU 900 Introduction to Doctoral Studies and Sustainability Literacy	Artifact #1 Graduate Student Biography
	EDSU 911 Global Environmental Change	
	EDSU 908 Historical and Philosophical Foundations of Environmental and Sustainability Education	Artifact #2: Positionality
	EDSU 913 Ecological Foundations for a Sustainable Society	Artifact #3: Problem Statement Paper
	EDSU 903 Reorienting Curriculum and Programs for Sustainable Future	—
	EDSU 904 Transformative Sustainability Teaching and Learning	Artifact #4: First year Experience Concept Poster



Develop curriculum and signature artifacts/assessments within courses that provide students with the opportunity to demonstrate CLOs (and ultimately PLOs)



# Aligning CLOs with PLOs (Example)

## Analysis and Improvement of Programs in Educational Sustainability

- CLO #1 Analyze the Interactive Model of Program Planning to determine how it utilizes systems thinking
  - Related to PLO 1 Utilize systems thinking and sustainable practices in program development and education
  - Signature Assessment 1
- CLO #2 Analyze an existing program plan to determine how components of the *Interactive Model of Program Planning* have been utilized to implement practices that enhance sustainable education and community environments.
  - Related to PLO 5 Implement practices that enhance sustainable education and community environments through shared vision
  - Signature Assessment 2
- CLO #3 Develop a program plan implementing practices that enhance sustainable education and community environments.
  - Related to PLO 5 Implement practices that enhance sustainable education and community environments through shared vision
  - Signature Assessment 3



# Aligning Signature Assessments/Assignments with CLOs

Signature Assessments/ Assignments	Brief Description	Program Learning Outcomes	Course Learning Outcomes
Signature Assessment/ Project 2	Choose 3 - 4 of the eleven components from The Interactive Model of Program Planning to use as a lens to examine and analyze an existing sustainability program.	<p>PLO 1 - Utilize systems thinking and sustainable practices in program development and education.</p> <p>PLO 5 - Implement practices that enhance sustainable education and community environments through shared vision.</p>	CLO 4 Analyze an existing program plan to determine how components of the Interactive Model of Program Planning have been utilized to implement practices that enhance sustainable education and community environments.



# Template for Designing Signature Assessments/Assignments

- Collaborate with Center for Inclusive Teaching and Learning to build our course templates for entire curriculum
- 3 Projects using a Project-based Learning Approach

## EDSU 913 Ecological Foundations for a Sustainable Society

Core Projects	Brief Description	Learning Outcomes Met (#)
Project #1: Ecological Learning Journal	Students will be asked to observe nature and society in your daily life. Write about it. This will start to train you to see the world ecologically.	SLO (1, 2)
Project #2: Systems View of Life	Students will actively participate in the supplemental Capra Course, flip grid discussion, and map and identified problem.	SLO (3, 4, 5)
Project #3: Ecological Dissection	The dissection project will give you the opportunity to study ecological foundations as a theoretical framework and how authors are putting it into practice given various contexts. It will allow you to focus your energy on "dissecting" one article and create a Sway presentation. You will be able to learn about other articles through peer presentations at the end of the semester.	SLO (2,3,4)





Scaffold coursework and signature assessments so that they build toward meeting PLOs and enable doctoral students to complete their review of the literature, dissertation proposal and dissertation



# Embedding and Scaffolding Signature Assessments

- Dissertation Proposal/Dissertation Review of the Literature
  - EDSU 900 Introduction to Doctoral Studies and Educational Sustainability
    - Introduction to reviewing literature and capturing key ideas
  - EDSU 918 Scholar Mentorship
    - Continuing to review literature/developing main themes
  - EDSU 920 Dissertation Writing and Seminar
    - Fleshing out multiple themes of the literature review to support research proposal and writing of research proposal



# Signature Assessments/Assignments Related to the Completion of the Dissertation

- **PLO 7** Develop a research study that supports the principles of sustainability

## **CLOs from EDSU 918 Scholar Mentorship**

- **CLO 1** Students will be able to identify and review professional literature related to their topic of interest/study
- **CLO 2** Students will be able to discern key ideas from professional articles and organize them in an annotated bibliography
- **CLO 3** Students will be able to synthesize main ideas/themes/strands across professional articles to begin to develop main themes/strands for their review of the literature
- **CLO 4** Students will be able to create a narrative that develops one main idea/theme/strand of a literature review. The narrative will draw from across scholarly and professional sources, provide support for the main idea/theme/strand, and include references/citations in APA format



- Assess the signature artifacts/assessments and competencies as part of each aligned course



# Rubric for Assessing CLOs/Signature Assessments

Components	Unacceptable	Acceptable	Target
Review of the theoretical and empirical literature, organized according to a specific and logical pattern	Failed to provide an adequate review of the relevant literature.	Moderately well organized; includes an adequate description of related research samples and methodologies.	Comprehensive review of literature relevant to the study; well organized; clearly describes the breadth of related research.
Synthesis of what previous research has shown and how it relates to the study	No synthesis, critique, or rationale.	Main themes/ideas from previous research are identified and connected to proposed study	Main themes/ideas, as well as gaps/contradictions in previous research are identified, synthesized, and connected to proposed study
Explanation of the theoretical underpinnings of the study	Insufficient description of prior research and related theory.	Theoretical perspectives are presented.	Theoretical perspectives are clearly articulated and explained.
Definition of relevant terms not defined elsewhere	No terms defined	Most terms, not defined elsewhere, are included and defined	All terms, not defined elsewhere, are clearly defined



# Assessment Timeline

## Timeline for Continuous Review and Assessment of the Doctoral Program

- **Year 1 –**
- analyze data from course evaluations to assess course rigor, instructor effectiveness, and instructional delivery.
- **Year 2 and 3**
  - analyze data from course evaluations to assess course rigor, instructor effectiveness, and instructional delivery.
  - analyze evidence using student signature assessments for select courses.
- **Year 4 –**
  - analyze data from course evaluations to assess course rigor, instructor effectiveness, and instructional delivery, and share their findings with the department Assessment Committee to discuss possible program revisions.
- **Year 5 –**
  - comprehensive assessment report for the doctoral program in Educational Sustainability, which includes survey data, signature assessments, and course evaluations, will be submitted to the UW-Stevens Point Assessment Subcommittee for their review and report to HLC for reaccreditation.



# Reflections on Evolving Programing and Curriculum Mapping

- Requires strong leadership
- Alignment and integration is improved as course instructors collaborate and communicate across the curriculum
- PLOs and CLOs need to be refined as program is implemented and student work is assessed
- Artifacts and competencies are embedded and scaffolded
  - Components of the dissertation are introduced, developed, and completed within coursework
  - Students responsible for tracking artifacts and competencies



# Questions?

- How might you go about curriculum mapping if you are starting from scratch?
- How do you get involved stakeholders on your campus to champion the program, collaborate and/or communicate?
- How do you address the diversity of student backgrounds and interests in your sustainability program and curriculum map?





# Contact Information

If you have questions or interested in educational sustainability consultation services for your university or organization, please contact us!

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