CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA ACADEMIC SENATE

GENERAL EDUCATION COMMITTEE REPORT TO THE ACADEMIC SENATE

GE-011-156

ENV 1010 - Introduction to Design Theories and Methods Lab

General Education Committee Date: 10/28/16

Executive Committee

Received and Forwarded Date: 11/02/16

Academic Senate Date: 11/09/16

First Reading

BACKGROUND:

The College of Environmental Design introduced a new semester length laboratory for GE Area E.

RESOURCES CONSULTED:

Faculty
Department Chairs
Associate Deans
Deans
Office of Academic Programs

DISCUSSION:

The GE Committee reviewed the ECO for this course and found it to satisfy the GE SLO's and other requirements of GE Area E.

RECOMMENDATION:

The GE Committee recommends approval of GE-011-156, ENV 1010 – Introduction to Design Theories and Methods Laboratory.

ENV - 1010L - Introduction to Design Theories and Methods (GE) Lab

C. Course - New General Education* Updated

College/Department	College of Environmental Design	
Semester Subject Area	ENV	
Semester 101 Catalog Number	OL	
Quarter Subject Area		
Quarter Catalog Number		
Course Title Int	roduction to Design Theories and Methods (GE) Lab	
Units*	(1)	
C/S Classification *	C-16 (Laboratory)	
	tion Long Description click: http://www.cpp.edu/~acader Documents/Curriculum%20Guide/Appendix C CS Class	
tion.pdf		



To view the General Education SubArea definitions, click http://www.cpp.edu/~academic-programs/scheduling/Documents/Ch.3-GeneralEducationProposals.pdf.

I. Catalog Description

Catalog Description

This foundational, First-Year Experience course introduces students to 'design thinking,' exploring the nature of design as a rational, problem-solving activity and the advantages and disadvantages of various

systematic approaches. Includes typical modes of reasoning; philosophies and styles of design; and tools, techniques, and methods relevant in the design process.

11. <u>F</u>	keguirea Cours	Sework and Background
	Prerequisite(s)	
		Co-requisite: ENV1010
	Corequisite(s)	
	Pre or Corequisite(s)	
	Corequisite(s)	

Concurrent

III. Expected Outcomes

List the knowledge, skills, or abilities which students should possess upon completing the course.*

By successfully completing the course students will be able to:

Demonstrate knowledge of the design process and its application in practice.

Think critically about the nature of wicked problems and their resolution.

 Demonstrate activities, techniques, or behaviors that promote intellectual growth (GE area E IV.b.)

Communicate orally, in writing, and graphically for various audiences (GE area E 1.a.)

- the nature of designing, various philosophies and styles of design, and
- b. particular difficulties in designing

Demonstrate understanding of the tools, techniques, and methods in the design process to generate and evaluate alternatives and make decisions.

Demonstrate knowledge about context, stakeholder participation, and user empathy in the design process and their roles in providing design resolutions that improve the environment and quality of life, including:

 Analyze the factors that contribute to individual well-being (GE area E IV.a.)

b.

Engage in communities (campus, regional, etc.) or participate in civic activities for the betterment of personal and public life (GE area E IV.c.)

If this is a course for the major, describe how these outcomes relate to the mission, goals and objectives of the major program.

Explain how the course meets the description of the GE SubArea (s). Please select appropriate outcomes according to the GE Area/SLO mapping.

This course satisfies GE Area E Requirements, as described in Chapter 4 of the *Curriculum Guide*, as it is 'designed to equip learners for lifelong understanding and development of themselves as integrated physiological, social, and psychological beings.' As a First-Year Experience course and introduction to design theories and methods, this course provides a foundation for understanding the nature of design, addressing 'wicked problems' that have social, environmental, and economic impacts on individuals and communities, and utilizing the methods and techniques for resolving them.

Describe how these outcomes relate to the associated GE Learning Outcomes listed below.*

By successfully completing the course students will be able to:

Demonstrate knowledge of the design process and its application in practice.

Think critically about the nature of wicked problems and their resolution.

a.

b.

Demonstrate activities, techniques, or behaviors that promote intellectual growth (GE area E IV.b.)

Communicate orally, in writing, and graphically for various audiences (GE area E 1.a.)

- a.

 the nature of designing, various philosophies
 and styles of design, and
- b. particular difficulties in designing

Demonstrate understanding of the tools, techniques, and methods in the design process to generate and evaluate alternatives and make decisions.

Demonstrate knowledge about context, stakeholder participation, and user empathy in the design process and their roles in providing design resolutions that improve the environment and quality of life, including:

- Analyze the factors that contribute to individual well-being (GE area E IV.a.)
 - Engage in communities (campus, regional, etc.) or participate in civic activities for the betterment of personal and public life. Civic engagement activities may include students attending and reporting on a public city council/community planning/historic commission meeting or volunteering for Habitat

for Humanity or similar construction project work days (GE area E IV.c.)

General Education Outcomes*

Ia. Write effectively for various audiences

IVa. Analyze the factors that contribute to individual wellbeing (such as physical, mental, nutritional, emotional, intellectual, spiritual, financial, social, or environmental)

IVb. Demonstrate activities, techniques, or behaviors that promote intellectual or cultural growth.

IVc. Engage in communities (campus, regional, etc.) or participate in civic activities for the betterment of personal and public life.

To view the mapping, click https://www.cpp.edu/~academic-programs/Documents/GE%20SLO%20Mapping.pdf

IV. Instructional Materials

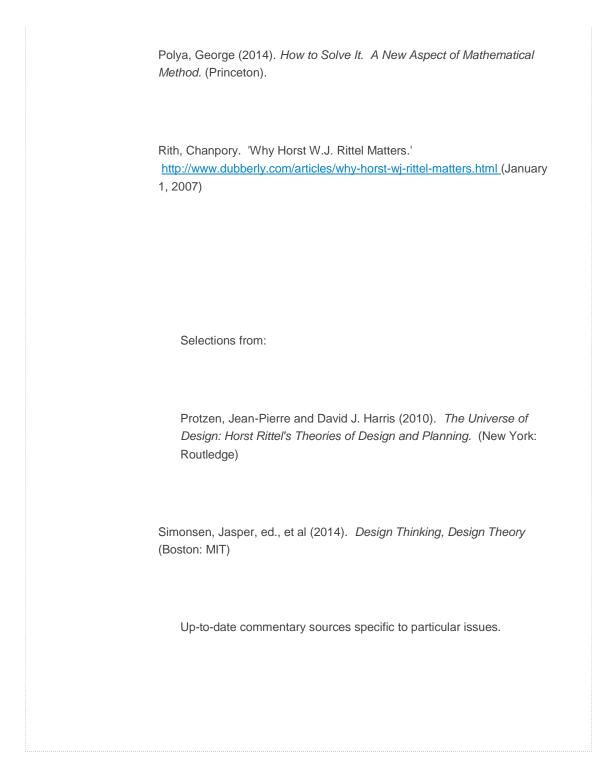
Provide bibliography that includes texts that may be used as the primary source for instruction, and other appropriate reference materials to be used in instruction. The reference list should be current, arranged alphabetically by author and the materials should be listed in accepted bibliographic form.

Instructional Materials*

Austin Center for Design. *Wicked Problems, Problems Worth Solving* (downloadable text) https://www.wickedproblems.com/read.php

Meadows, Donatella (2008). *Thinking in Systems: A Primer.* (Chelsea Green Publishing).

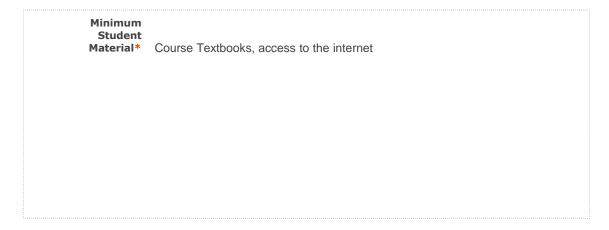
Norman, Don (2013). *The Design of Everyday Things – Revised and Expanded Edition* (Basic Books).



Faculty are encouraged to make all materials accessible. Indicate with an asterisk those items that have had accessibility (ATI/Section 508) reviewed. For more information, http://www.cpp.edu/~accessibility

V. Minimum Student Material

List any materials, supplies, equipment, etc., which students must provide, such as notebooks, computers, internet access, special clothing or uniforms, safety equipment, lockers, sports equipment, etc. Note that materials that require the assessment of a fee may not be included unless the fee has been approved according to University procedures.



VI. Minimum College Facilities

List the university facilities/equipment that will be required in order to offer this class, such as gymnastic equipment, special classroom, technological equipment, laboratories, etc.

Minimum College
Facilities*

Computer Labs, Library, Course management software (e.g. Blackboard)

VII. Course Outline

Describe specifically what will be included in the course content. This should not be a repetition of the course description but an expansion that provides information on specific material to be included in the class, e.g. lecture topics, skills to be taught, etc. This should not be a week-by-week guide unless all instructors are expected to follow that schedule.

Course Outline*

The Reasoning of the Designer and the Planner; Designers' Self-Images

What is Design? The Nature of Design Projects; Doctrines of Creativity; Recurring Issues

Generating Alternatives: Morphological and Topological Methods

Values in Design and the Formation of Judgement

Evaluating Alternatives: Methods for Individuals and Groups

Anticipating the Context of Design: The Unknown User and Unknown Context

Conflict and Decisions: Consensus-Building and Decision-Making Techniques

First Generation Theories: Survey and Critique of Systematic Approaches

Orders of Magnitude; Procedural vs Prescriptive Theories

Design as Information Processing and Decomposition; Communication Systems

Second Generation Theories: Paradoxes of Rationality and Wicked Problems

Design as Argumentation

Designing for Others: Empathy and The Role of Participation

Design as Reflection-in-Action

VIII. Instructional Methods

Describe the type(s) of method(s) that are required or recommended for the instruction of this course (lectures, demonstrations, etc.). Include any method that is essential to the course, such as the use of particular tools or software.

Instructional Methods*

A variety of instructional methods will be used to help students achieve expected course outcomes. They include the following:
1. Lecture
2. Discussion of assigned reading
3. Small group activities
4. In class and online presentations
5. Student feedback on in class and online presentations
There may be a course management component (e.g. Blackboard) to this course. If so, students will be expected to check the course
management site regularly, contribute to online discussions, and get course information and submit course work through the site.

IX. Evaluation of Outcomes

Describe the methods to be used to evaluate students' learning, i.e. written exams, term papers, projects, participation, quizzes, attendance, etc.*

Quizzes (QU), Discussion (DS), Short Papers or Analyses (SP), Design Exercises (DE), Design Projects (DP), Term Papers (TP), and Presentations.

Describe the meaningful writing assignments to be included.*

5 short analytical papers. After participating in each of the five design exercises, each student will write a paper of 800-1000 words. The exercise and subsequent papers will focus on resolving a design problem of the student's choosing related to the environmental design disciplines.

The group term project will include a written report of 10-15 pages and a presentation to be delivered either in class or online. The assignment will bring students together around a common design problem, but each will be accountable individually (grade-wise) for preparing a substantive part of the project, report, and presentation.

Discuss how these methods may be used to address the course and program outcomes, as

Learning outcome

Assessment too

oriate. attach align		Individual
uation to the mes.*	Demonstrate knowledge of the design process and its application in practice	QU (2 IC or OL
	Think critically about the nature of wicked problems and their resolution	DIS (5 IC or 0)
	Communicate orally, in writing, and graphically for various audiences, about the nature of designing and particular difficulties in designing	DE (5 IC of OL
	Demonstrate understanding of the tools, techniques, and methods in the design process to generate and evaluate alternatives and make decisions	DE (5 IC or OL
	Demonstrate knowledge about stakeholder participation and user empathy in the design process and its role in providing design resolutions that improve the environment and quality of life	

If this is a general education course, discuss how these methods may be

Courses in GE Area E shall fulfill the following General Education Learning Outcomes:

1a. Write effectively for various audience.

used to address
the associated GE
Learning
Outcomes listed
below. Include or
attach a matrix
to align the
evaluation
methods to the
outcomes.*

4a. Analyze the factors that contribute to individual well-being (such as physical, mental, nutritional,

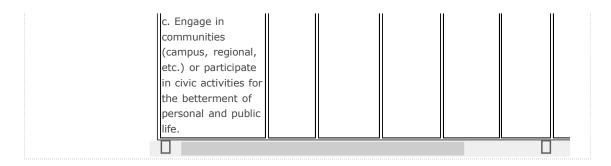
emotional, intellectual, spiritual, financial, social, or environmental)

- 4b. Demonstrate activities, techniques, or behaviors that promote intellectual or cultural growth.
- 4c. Engage in communities (campus, regional, etc.) or participate in civic activities for the betterment of

personal and public life.

The following matrix shows what course attributes fulfill what GE SLOs for GE Area E:

GE Outcomes	Quizzes	Discussion	Short Papers or Analyses	Design Exercises	Design Projects	Ter Pa p
1 Acquire foundation	nal skills a	nd capacities	5.			
a. Write effectively for various audiences.			x			x
4 Develop capacities	for contin	nued develop	ment and lif	elong learni	ing.	
a. Analyze the factors that contribute to individual wellbeing (such as physical, mental, nutritional, emotional, intellectual, spiritual, financial, social, or environmental)	x	x	x	x	x	x
b. Demonstrate activities, techniques, or behaviors that promote intellectual or cultural growth.	x	х	x	x	x	x
		х		х	Х	



$\underline{X.This\ OPTIONAL\ Section\ is\ for\ describing\ Course/Department/College}$ specific requirements.

Department/ College Required ECO Information (Optional)	