ARCH 100: INTRODUCTION TO DESIGN THEORIES AND METHODS

Originator
zbecker

Justification / Rationale
New Curriculum for the College of the Desert/Cal Poly 2+3 Architecture partnership that will bring a full Architecture Professional degree to the College of the Desert West Valley campus.

Effective Term
Spring 2022

Credit Status
Credit - Degree Applicable

Subject
ARCH - Architecture

Course Number
100

Full Course Title
Introduction to Design Theories and Methods

Short Title
INTRO TO DESIGN THEORY

Discipline

Disciplines List
Architecture

Modality
Face-to-Face
100% Online
Hybrid

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.

Schedule Description
This First-Year 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.

Lecture Units
2
Lecture Semester Hours
36

Lab Units
1
Lab Semester Hours
54

In-class Hours
90

Out-of-class Hours
72

Total Course Units
3
Total Semester Hours
162

Required Text and Other Instructional Materials
Resource Type
Web/Other
Open Educational Resource
Yes

Description
https://www.wickedproblems.com/read.php

Resource Type
Book

Author
Meadows, Donatella

Title
Thinking in Systems: A Primer

Edition
1st

City
White River Junction, VT

Publisher
Chelsea Green

Year
2008

College Level
Yes

ISBN #
978-1-60358-055-7

Resource Type
Book

Author
Norman, Don

Title
The Design of Everyday Things

Edition
Revised and Extended

Publisher
Basic Books

Year
2013

ISBN #
978-0-465-05865-9

Resource Type
Book

Author
Polya, George

Title
How to Solve it: A New Aspect of Mathematical Method

Edition
Paperback

Publisher
ISHI Press International

Year
2014

College Level
Yes

ISBN #
978-4-87187-830-2

Resource Type
Web/Other

Year
2006

Description
http://www.dubberly.com/wp-content/uploads/2008/06/ddo_article_rittel.pdf

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For Text greater than five years old, list rationale:
This course covers historical perspective and materials from older texts and articles are appropriate.

Class Size Maximum
30

Course Content
- 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

Lab Content
- Design projects on all of the lecture content topics.

Course Objectives

	Objectives
Objective 1	Demonstrate knowledge of the design process and its application in practice.
Objective 2	Think critically about the nature of wicked problems and their resolution.
Objective 3	Demonstrate activities, techniques, or behaviors that promote intellectual growth.
Objective 4	Communicate orally, in writing, and graphically for various audiences the nature of designing, various philosophies and styles of design, and particular difficulties in designing.
Objective 5	Demonstrate understanding of the tools, techniques, and methods in the design process to generate and evaluate alternatives and make decisions.
Objective 6	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.
Objective 7	Analyze the factors that contribute to individual well-being.
Objective 8	Engage in communities (campus,regional, etc.) or participate in civic activities for the betterment of personal and public life.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Develop an analytical approach for a myriad of design issues that displays coherent and logical concepts to viable solutions.
Outcome 2	Produce comprehensive graphic solutions that incorporate the essence of the design process.
Outcome 3	Present and support design resolutions that promote and improve issues that affect the physical and social environment.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Lecture	The subject matter and presentation techniques have been selected to fulfill the Course Objectives.
Discussion	Student feedback on in class and online presentations.
Participation	Weekly sequential assignments built on previous assignments.
Collaborative/Team	Small group activities to critique student activities.
Demonstration, Repetition/Practice	Demonstrate activities, techniques, or behaviors that promote intellectual or cultural growth.
Laboratory	Design projects on each of the content topics.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
College level or pre-collegiate essays	5 - 8 Short analytical papers.	Out of Class Only
Student participation/contribution	Group term project including a written report and a presentation.	In and Out of Class
Tests/Quizzes/Examinations	Quizzes on each design topic and a comprehensive examination covering all material presented during the course.	In Class Only

Written homework	After participating in each of the five design exercises, each student will write a paper resolving a design problem.	Out of Class Only
Other	Students will be evaluated based upon the quality of their assignments from the text and hand-outs, weekly quizzes, and participation in classroom discussions. Mid-term and final examinations complete the evaluation process	In and Out of Class
Laboratory projects	Student design projects will be evaluated by instructor and peers for effectiveness in communicating lecture topics.	In Class Only

Assignments

Other In-class Assignments
1. Group projects on each design topic including case studies.
2. Group term project including a 10-15 page informative report and presentation.
3. Design exercises on each of the design topics.
4. Presentation on each of the design topics.

Other Out-of-class Assignments
1. Reading assignments from required text and/or instructor "handouts".
2. Writing assignments based on lectures, reading and visual presentation.
3. Prepare for classroom discussions on "architectural periods".
4. Prepare for student presentations and discussions of assigned topics.
5. Short analytical papers after each of the design exercises.
6. Group term project including a 10-15 page informative report and presentation.

Grade Methods
Letter Grade Only

Distance Education Checklist

Include the percentage of online and on-campus instruction you anticipate.

Online %
50
On-campus %
50

Lab Courses

How will the lab component of your course be differentiated from the lecture component of the course?
Lab assignments include design projects assigned based on the readings and content topics of the course.

From the COR list, what activities are specified as lab, and how will those be monitored by the instructor?
Lab activities include design projects based on the readings and content topics of the course.

How will you assess the online delivery of lab activities?
Students will submit design projects for grading by the instructor and feedback by peers.

Instructional Materials and Resources

If you use any other technologies in addition to the college LMS, what other technologies will you use and how are you ensuring student data security?
The college LMS will be the only technology used to hold student data.

Effective Student/Faculty Contact

Which of the following methods of regular, timely, and effective student/faculty contact will be used in this course?

Within Course Management System:

Discussion forums with substantive instructor participation
Online quizzes and examinations
Regular virtual office hours
Timely feedback and return of student work as specified in the syllabus
Weekly announcements

External to Course Management System:

Direct e-mail
E-portfolios/blogs/wikis
Posted audio/video (including YouTube, 3cmediasolutions, etc.)

For hybrid courses:

Scheduled Face-to-Face group or individual meetings

Briefly discuss how the selected strategies above will be used to maintain Regular Effective Contact in the course.

Timely feedback and return of student work as specified in the syllabus
Discussion forums with substantive instructor participation
Project presentations
Weekly announcements

If interacting with students outside the LMS, explain how additional interactions with students outside the LMS will enhance student learning.

Design critique is the standard method of peer, instructor, or panelist feedback that is significant for student learning.

Other Information

Comparable Transfer Course Information
University System
CSU
Campus
California State Polytechnic University, Pomona

Course Number
ENV 1010
Course Title
Introduction to Design Theories and Methods

Catalog Year
2015

Rationale
This new COD course is part of a partnership between College of the Desert and Cal Poly, designed to provide students with a full 2+3 Architecture professional degree at the College of the Desert West Valley Campus.

MIS Course Data

CIP Code
04.0901 - Architectural Technology/Technician.

TOP Code
020100 - Architecture and Architectural Technology

SAM Code
C - Clearly Occupational

Basic Skills Status
Not Basic Skills

Prior College Level
Not applicable

Cooperative Work Experience
Not a Coop Course

Course Classification Status
Credit Course

Approved Special Class
Not special class

Noncredit Category
Not Applicable, Credit Course

Funding Agency Category
Not Applicable

Program Status
Stand-alone

Transfer Status
Transferable to CSU only

General Education Status
Y = Not applicable

Support Course Status
N = Course is not a support course

Allow Audit
No

Repeatability
No

Materials Fee
No

Additional Fees?
No

Files Uploaded

Attach relevant documents (example: Advisory Committee or Department Minutes)
ARCH 100_CO Approval Ltr 0616.pdf

Approvals

Curriculum Committee Approval Date
4/15/2021

Academic Senate Approval Date
4/22/2021

Board of Trustees Approval Date
5/21/2021

Chancellor's Office Approval Date
6/16/2021

Course Control Number
CCC000625513