ARCH160 : Architectural Computer Aided Drafting Laboratory

General Information

Author:	• David D Martin
Course Code (CB01) :	ARCH160
Course Title (CB02) :	Architectural Computer Aided Drafting Laboratory
Department:	ARCH
Proposal Start:	Spring 2025
TOP Code (CB03) :	(0201.00) Architecture and Architectural Technology
CIP Code:	(04.0901) Architectural Technology/Technician.
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000533649
Curriculum Committee Approval Date:	05/22/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	05/22/2024
Course Description and Course Note:	ARCH 160 provides practice using computer-aided drafting (CAD) software. Students will complete architecture-related projects of their own choosing to further develop their CAD skills. Students will also improve their architectural design skills by completing increasingly complex architectural projects.
Justification:	Mandatory Revision
Academic Career:	• Credit
Author:	

Academic Senate Discipline

Primary Discipline:	• Architecture
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

☐ Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

Transferability & Gen. Ed. Options

General Education Status (CB25)

Not Applicable

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours

Summary

Minimum Credit Units (CB07)	2
Maximum Credit Units (CB06)	2
Total Course In-Class (Contact) Hours	108
Total Course Out-of-Class Hours	0
Total Student Learning Hours	108

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	0	0
Laboratory Hours	6	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	0
Laboratory	108
Studio	0
Total	108
Course Out-of-Class Hours	
Lecture	0
Laboratory	0
Studio	0
Total	0

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Advisory

ARCH250 - Introduction To Autodesk Revit Architecture (in-development)

Objectives

- Complete a series of architectural drafting problems using the Revit software.
- Explain the relationship between floor plans, elevations, and section views within a parametric environment.
- Create three-dimensional models and construction documents for a residential design project.
- Create photo-realistic renderings of architectural projects.

OR

Advisory

ENGR109 - Computer Aided Design AutoCAD I (in-development)

Objectives

- Create a complete set of CAD drawings that communicates technical information for a complex geometric part or assembly.

Entry Standards

Entry Standards

Prepare high quality unambiguous CAD drawings.

Course Limitations

Cross Listed or Equivalent Course

Specifications

Methods of Instruction

Methods of Instruction	Laboratory

Methods of Instruction	Multimedia
Methods of Instruction	Guest Speakers

Out of Class Assignments

- Individual projects (e.g. projects of the student's own choosing to gain additional practice with various software drawing programs)

Methods of Evaluation	Rationale
Writing Assignment	Project proposal (i.e. the student will complete a written description of the projects to be completed during the course)
Project/Portfolio	Individual project critique (i.e. the projects that have been completed with be critiqued by the instructor)
Project/Portfolio	Final portfolio (i.e. the student will assemble the completed drawing projects and provide a short written description of each)
Project/Portfolio	Final portfolio critique (i.e. the student's portfolio will be critiqued by the instructor)

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Wakita, O	The Professional Practice of Architectural Working Drawings,	New York: John Wiley and Sons	2024	9781119875338
Martin, David D.	Instant Revit!: A Quick and Easy Guide to Learning Autodesk® Revit® 2021	Seattle: CreateSpace Independent Publishing Platform	2020	979-8650217909

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives

Course Objectives

Use current Windows based computer-aided design software (AutoCAD, Autodesk Revit Architecture, or other comparable software) to complete a project of the student's own choosing.

Apply the concepts of computer-aided design software.

Complete a printed or digital portfolio of various drawings/projects.

SLOs

Draft and design assignments in an architectural format. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Create a three-dimensional physical or virtual model of the student's project. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Describe the concepts and purpose of a portfolio. Expected Outcome Performance: 70.0

ILOs Core ILOs	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Additional SLO Information

Does this proposal include revisions that might improve student attainment of course learning outcomes?

No

Is this proposal submitted in response to learning outcomes assessment data?

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

SLO Evidence

No Value

Course Content

Lecture Content

No value

Laboratory/Studio Content

Introduction to Course (3 Hours)

- Selection of projects
- Review of computer aided design software fundamentals

Laboratory Practice Using Computer Aided Design Software (105 Hours)

Total Hours: 108

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

No Value

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

No

If yes, who is your departmental library liason?

No Value

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No Value

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

No Value

If additional resources are needed, add a brief description and cost in the box provided.

No Value