West Los Angeles College
Los Angeles Institute of Architecture and Design

Course Syllabus – Spring 2015

WLAC Course: Arc 180 CAD Laboratory (CSU) 1.00 Unit

PRE-REQUISITE / CO-REQUISITE

Co-requisite: Arc 161

SCHEDULE / LOCATION

6:00 pm – 7:45 pm M, Th at LAIAD, 3807 Wilshire Bl. Suite 330

FACULTY

William Taylor 310 280 8393 wtaylor@laiad.com

OFFICE HOURS

By appointment. The instructor is available during business hours for consultation outside of class. Students are encouraged to seek help and bring concerns to the instructor during this time. Please don't hesitate to ask for help or assistance if you need it, or to discuss any concerns you have regarding the class.

COURSE DESCRIPTION

Arc 180 CAD Laboratory*:* Arch 180 is a computer laboratory class that allows students to receive hands-on computer instruction while working on assignments for Arch 161. Arch 180 is a co-requisite for Arch 161. Students are to provide their own laptop computer and the appropriate software for the course.

REQUIRED HARDWARE

A 64-bit l**aptop running Windows.**(If you are a Mac user, you must install Boot Camp and Windows right away.)

REQUIRED HARDWARE

Rhino 5 SR7*(Rhino for Mac is still in Beta and is not sufficient for this class. The underlying framework is being re-written from dot net to Mono and will not be suitable for professionals until this is complete.) Be sure to buy the student version at the highly discounted rate of $195.*

Grasshopper*Available free at* grasshopper3d.com *(we will be installing many wonderful Grasshopper plugins throughout the semester as needed. They are all free.*

Adobe Illustrator I recommend the entire CC suite at $19.95 per month for students, but all you really need for this class is Illustrator.

Optional

Flamingo NXT *An excellent, affordable rendering engine for Rhino.$95 with student discount.*

COURSE STUDENT LEARNING OUTCOME (SLO)

At end of the course, the successful student will be able to demonstrate digital drafting competency by creating different 3D drawings /views of an object in CAD software, and then creating layout views for printing and presentation purposes.

LEARNING OBJECTIVES

1. Practice the software taught in the concurrent course and access department printers, plotters, and scanners to assist in completion of co-requisite course assignments.
2. Assess, compare, and select appropriate commands to achieve particular tasks.
3. Utilize the computers to produce a variety of architectural documents.
4. Delineate projects assigned in the concurrent course.
5. Compare and discuss solutions to project design challenges with other students.
6. Produce animations such as walk-throughs and fly-arounds for class presentation.
7. Produce large format prints at correct size/scale to create presentation boards.
8. Assemble class projects portfolio.
9. Develop skills related to digital data management.

COURSE CONTENT

- Basic Knowledge of Digital Architectural Software

1. Learning and understanding of the Rhino interface / tools
2. Emphasis on Rhino as a tool for design
3. Integration of Multi software applications into single work flow
4. Understanding vector and pixel based programs
5. Learning and understanding of the Rhino interface / tools
6. Emphasis on Rhino as a tool for 2D description
7. Integration of Multi software applications into single work flow

- Basic Techniques of Digital Architectural Drawing

1. Modeling / drafting of a design
2. Rendering
3. Composition
4. Presentation

- Basic Techniques in Spatial Description

1. Orthographic projection: Plan, Section, Elevation.
2. Axonometric and isometric views
3. Relationships of plan, section, and elevation in a composition.

- Basic Techniques of Analytical Drawing

1. Use of diagrams as design tools
2. Use of Diagrams as presentation tools
3. Compositional diagramming through abstract analysis

- Basic techniques in architectural presentation software

1. Understanding interface and tools
2. Digital modeling / drafting, export, and rendering
3. Continuing discussion on the use of diagrams: as a design tool versus an explanation tool.
4. Use of varying graphics in presentation: 2d architectural drawings, 3d architectural drawings, 2d and 3d diagrams, photography, 3d renderings, text.
5. Compositional relationships in presentation
6. Verbal presentation skills

EVALUATION GUIDELINES AND PROCEDURES:

1. Students are evaluated for individual progress using the following criteria:
   - A. Development of skills and abilities listed under learning objectives.
   - B. Attendance and contribution to studio, lectures, and field trips.
   - B. Evidence of motivation / perseverance.
   - D. Willingness to explore alternatives and take risks.
   - E. Willingness to accept criticism.

2. In terms of the criteria listed above the design studio activities are weighted approximately as follows:

Projects & Case Studies	75% (number of projects may vary)
Attendance and Participation	15%
Instructor Discretion	10%
TOTAL	100%

3. Grades given on LAIAD transcripts will be traditional A,B,C, F grading. No grades of D will be given.
4. Equal Grades will be given on West Los Angeles College Transcripts if student is enrolled at WLAC for credit.
5. Attendance is mandatory. Students missing 25% of classes will be subject to dismissal.
6. No project assignments will be accepted for full credit if late or unfinished.

SCHEDULE: Fall 2014

Homework will be assigned on a daily basis. Attendance is mandatory to all class meetings.

Week	Day	Date	Subject Matter
0	Thur	Feb 5	First Day of Class - Computer Setup
1	Mon	Feb 9	Labor Day – No Class
	Thur	Feb 12	Tutorials: Rhino
2	Mon	Feb 16	Tutorials: Rhino
	Thur	Feb 19	Tutorials: Rhino
3	Mon	Feb 23	**Project 1 Assigned: Modeling Case Study**
	Thur	Feb 26	Tutorials: Architectural Drawings in Rhino & Illustrator
4	Mon	Mar 2	Desk Crits
	Thur	Mar 5	Desk Crits
5	Mon	Mar 9	Project 1 Due
	Thur	Mar 12	Tutorials: Grasshopper
6	Mon	Mar 16	Tutorials: Grasshopper
	Thur	Mar 19	Tutorials: Grasshopper
7	Mon	Mar 23	Tutorials: Grasshopper
	Thur	Mar 26	**Project 2 Assigned: Grasshopper Algorithmic Curiosties**
8	Mon	Mar 30	Desk Crits
	Thur	Apr 2	Desk Crits
9	Mon	Apr 6	Desk Crits
	Thur	Apr 9	Tutorials: Visualization in Grasshopper
10	Mon	Apr 13	Desk Crits
	Thur	Apr 16	Desk Crits
11	Mon	Apr 20	**Project 2 Due**
	Thur	Apr 23	Tutorials: Rendering
12	Mon	Apr 27	**Project 3 Assigned: Studio Drawings**

	Thur	Apr 30	Desk Crits
13	Mon	May 4	Desk Crits
	Thur	May 7	Thanksgiving – No class
14	Mon	May 11	Desk Crits
	Thur	May 14	Desk Crits
15	Mon	May 18	Desk Crits
	Thur	May 21	Last Day of Class
16	**Mon**	May 25	**Memorial Day No Class**
	Thur	May 28	Presentation
	Sat	May 30	FINAL JURY – All Work Due (Saturday, 10am)