Drexel University I Department of Architecture + Interiors I ARCH150 . Spring 2010

Course Number and Title: ARCH 150 / Intro to CADD I / 4.0 Credits

Instructor: Lauren Karwoski Magee
Contact:LKM@DREXEL.EDU
Website: www.thedraftedline.com/teaching

Course pre-requisite: ARCH 151, ARCH 152.

Schedule: Spring Term, Tuesday (Section 1) or Thursday (Section 2) 2:00 – 5:50pm, including Lab*

Catalog Description: Introduces the creation and manipulation of three-dimensional architectural models and the resultant two-dimensional drawings using computer techniques.

Course Objectives: To broaden students' knowledge of representation techniques through the introduction of computer software as a continuation of subjects discussed in Basic Architectural Drawing and Graphic Communications. Students are expected to be familiar with drafting conventions and hand drawing terminology and techniques prior to taking Arch 150.

NAAB (National Accreditation Board) Conditions for Accreditation & Student Performance Criteria: Arch 150 content addresses student performance criteria required for professional accreditation of our architecture program. These criteria consist of specified acilities and understandings that graduating students must demonstrate. The following criteria are covered in this course:
Realm A: Critical Thinking and Representation: A.1 Communication Skills, A.2 Design Thinking Skills, A.3 Visual Communication Skills, A.4 Technical Documentation Skills, A.5 Investigative Skills, A.7 Use of Precedents, A.8 Ordering Systems Skills, A.11 Applied Research
Realm C: Leadership and Practice: C.1 Collaboration, C.2 Human Behavior

Course Requirements:
Assignments: Students are expected to complete all work for the week as outlined in each assignment handout and be prepared to discuss it in class.

Submitting Work: Work will be submitted via AW Storage every week and via hardcopy prints or plots as per the requirements and deadlines indicated on each assignment.

Class: Class will meet in the basement classroom in 3201 Arch unless noted otherwise.

Course website: Students are expected to check the course website frequently for updates, tutorials and supplements to in-class presentations. www.thedraftedline.com/teaching.

Textbook: Although not required, some students will find the following helpful to learning the software:
Introducing AutoCAD 2009 and AutoCAD LT 2010 by George Omura, ISBN: 978-0470438671;
Wiley Pathways Introduction to Google SketchUp, 2nd Edition by Aidan Chopra, ISBN: 978-0-470-17565-1

Supplies: Architectural triangular scale, Sketchbook (minimum 5"x8"), roll of trace paper, sharpie markers in 3 weights. You will also need access to a camera, preferable digital, later in the term; personal laptop and three-button mouse with scroll wheel. All software must be installed and activated prior to class.

Software: We will be using AutoCAD 2010, SketchUp and Photoshop CS4 in class. You may obtain free copies of AutoCAD and SketchUp online. AutoCAD may be downloaded from students.autodesk.com and SketchUp may be downloaded from sketchup.google.com. An free alternative to Photoshop is Gimp, available at www.gimp.com. This software provides many of the photo-editing tools available in Photoshop.

Plotting and Computer use: Lab computers are available in 3201 Arch and the 4th Floor of Main. Plotting is available at 3201 Arch for free and on the 4th floor of Main for a nominal fee which allows access to a wider selection of paper types.

Lab *: This course is worth 4 credits and therefore includes two one-hour labs in addition to the regular weekly 3-hour class meeting time. ***Labs will be held in the 1st year studio in 3201 Arch on Tuesdays and Thursdays from 5:00 – 6:00pm*** and are open to students from either section of Arch 150. While attendance is not mandatory, it is an opportunity to ask questions and discuss techniques discussed in class. On certain days, special presentations will be given and attendance is highly recommended.

Attendance: Regular class attendance is mandatory except in the event of an emergency or sickness. Inability to attend class requires advance notification to the instructor via email. More than 1 *unexcused absence* will result in a reduction of the final grade. More than 1 *excused absence* will result in an evaluation by the instructor of student's competence in the subject matter and demonstrated understanding of topics covered in class. Failure to pass this evaluation will result in a reduction of the final grade or failure in extreme cases. When missing class, it is the student's responsibility to obtain the assignment from the course website and complete the necessary work for the following week.

Submitting work: All digital submissions must be made by the normal deadline, even if class will be missed class due to an emergency (exceptions apply, discuss with instructor). Work submitted late will be down-graded 1 full letter grade per week following the due date.

Grading: Students will be evaluated on attendance, class participation, thoroughness of work, adherence to project requirements and quality of submitted assignments. Individual progress will also be factored into the grade, allowing students with prior digital design experience to develop new software skills. Assignments must be completed and submitted on time via email and/or hardcopy as per project requirements. Late work will result in a reduction in the assignment grade. Term grades are as follows:

Course Schedule and Grade Breakdown:

Project 1 – Representation (30%)

Week 1: Intro to 2D AutoCAD

Introduction to essential tools and techniques in developing a basic layout; drafting a plan from survey

Week 2: Advanced AutoCAD, Digital Output

Orthographic Projection in AutoCAD: creating elevations; page setup and printing

Week 3: AutoCAD and Photoshop

Section Drawing; annotating a drawing; large format plotted layout

Project 2 – Composite Drawing and Analysis (20%)

Weeks 4 & 5: Composite Drawing, Presentation

Bring AutoCAD work into Photoshop as a PDF and create a final presentation with composite imagery

Intro to SketchUp; Exploded Axonometric Drawing; Presentation

Working between AutoCAD 2D and SketchUp 3D to create an analytical 3D drawing

Project 3 – Design and Development (40%)

Week 6: Site Analysis and Design

Creating site analysis diagrams for use in design work

Week 7: Developing a 3D Site Model in SketchUp; Terrain Texturing

Working between SketchUp and AutoCAD; developing a design in 2D and 3D

Week 8: Site Section and Composite Images in Perspective

Photomatching in 2D and 3D; creating final imagery for presentation

Week 9: Finalizing the Presentation; Work Session

Composing a final presentation with text and imagery

Extra Credit: Scenes of the final SketchUp model (submit to AW Storage)

Extra Credit: Exploring realistic lighting in Kerkythea or other software (submit to AW Storage; include in final presentation

Week 10: Final Presentation

Participation, Progress, AW Storage Use: 10%