Assumption University
School of Architecture and Design
Semester 2 – 2008

Course Number: AR 1105 –Computer_Aided Design I  3 (2 – 2)

Section 401 Wednesday 12:30 – 16:30 (4 hours)
Section 402 Friday 12:30 – 16:30 (4 hours)

Class Room: SC 0601

Instructors:
A. Sanphawat Jatupatwarangkul Course Coordinator
A. Nattapol Suphawong
A. Theeprakorn Lunthomrattana
A. Suwimol K. Luphaiboon

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Course Description:
Students will learn how to use AutoCAD program. The beginning stage, 2D drafting is the main focus. Student should be able to produce drafting drawing set through out AutoCAD program. Moreover, advise other graphic programs through applied with AutoCAD program and useful for presentation feature. Moreover, student will learn how to apply their presentation to online portfolio in the final stage.

Prerequisite: None

Course Objective:
Student gains their knowing from both theoretical and practical from the class. Lecture will introduce AutoCAD commands at the beginning of lesson. Student will learn, how each commands are used. Then the lesson will follow with class exercise. Each of the exercises is designed to suite the lesson. They will focus on the commands that they earned through lesson can be applied to real works. Then the assignments of each week will be given to student. They can practice at and learn how to use AutoCAD on their free times. And even more students are able to apply AutoCAD output to other graphic programs to enhance ability of presentation. Online Portfolio is required and further development.

Course Outlines: November 2007 – March 2008

Week #  1:  Introduction to AutoCAD and Draw and Modify Commands I
Week #  2:  Draw and Modify Commands II
Week #  3:  Draw and Modify Commands III, Layer , Block, Hatching and Dimension
Week #  4:  Design 2D Drawing I
Week #  5:  Design 2D Drawing II
Week #  6:  Printing and Design 2D Drawing III
Week #  7:  Design 2D Drawing IV
Week #  8:  Site measurement and Design 2D Drawing V

Mid-tem Examination Tuesday 13 /01 /09, 15.00-17.00

Week #  9:  Practical Drawing and Construction Drawing
Week #10: Details in Practical Drawing and Construction Drawing
Week #11:  Introduction to Adobe Photoshop CS
Week #12: Practice on Adobe Photoshop CS
Week #13: Introduction to Adobe Illustrator CS
Week #14: Practice on Adobe Illustrator CS
Week #15: Introduction to Portfolio presentation

Final Examination Monday 09 /03 /09, 9.00-12.00

Score Requirement:

According to the University grading system, the significance of grades is
A = superior ;  A- = excellent ;  B+ = very good ;  B = good ;  B- = fair ;  C = acceptable ;
D = Minimum ; and F = inadequate. For grading purposes, the value of each part will be
as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio Work / Assignment</td>
<td>40%</td>
</tr>
<tr>
<td>Mid-Term Examination</td>
<td>25%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>30%</td>
</tr>
<tr>
<td>Attendance</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
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NOTE: In order to pass the course, a grade of "D" or better is required.

Reference texts, Resources, and Materials:

Required:
1. AutoCAD 2005/2006: Completed reference and Online Handout
2. Adobe Photoshop CS , Adobe Illustration CS, and Macromedia Dreamweaver MX Quick reference

Recommended:
3. Architectural drawing: a visual compendium of types and methods.
   (Call Number: 720.284 Y42a 2003, Accession No. 3353 c.1)
4. Tadao Ando: details 2
   (Call Number: 720.92 A552t 1997, Accession No. 1475 c.1)
5. Traditional details for building restoration, renovation, and rehabilitation: from the 1932-
   1951 editions of architectural graphic standards.
   (Call Number: 692.2 T763 1998, Accession No. 1569 c.1)
6. The new complete illustration guide: the ultimate trace file for architects, designers, artists, and
   students.
   (Call Number: 720.284 E92n 1997, Accession No. 549 c.2)
7. GA document: international 97.
   (Call Number: 720.92 Go111 1997, Accession No. 2689 c.1)
   (Call Number: R 720.946 M671 1999, Accession No. 2818 c.1)
   (Call Number: R 720.920904 L695d 1996, Accession No. 1116 c.1)
10. El croquis., Eisenman, Peter
    (Call Number: R 720.920904 E36p 1997, Accession No. 1115 c.1)
11. El Croquis.
    (Call Number: R 720.920904 E37 2001, Accession No. 3450 c.1)
    (Call Number: R 720.920904 M288 2003, Accession No. 3736 c.1)
13. The Phaidon atlas of contemporary world architecture.
    (Call Number: R 724.7 P532 2004, Accession No. 3834 c.1)
Course Format:

This course is a combination of reading assignments, class lectures, projects, and examinations.

• Lectures by instructors.
• Students’ paper and project presentations

Also, there are class assignments during this semester. Students are to observe the handout and reading materials on the website (http://www.webhosting.au.edu/sunphawattpng/cad1)

Participation and Attendance Policies:

Students are responsible for regular and punctual class attendance and should be presented at the class room before the class start.

The university requirement of 80% Attendance must be satisfied. This means 3 absences (for typical lecture class) and 6 absences (for design studio) are the maximum.

Student who presents at the class room later than 15 minutes of the starting time will be considered as "late" and the 3 lates = 1 absence.

Student who presents at the class room later than 1 hour of the starting time will not be allowed to attain the class session of that day. However, it is student’s responsibility to follow the processing project/assignment, work submission, and other matters announced while missing the session.

NOTE: Two consecutive absences are not allowed. The 3 absences during a particular studio project discussion is the maximum.

On the paper/project review day, students have to present and sign-up at the class on time. There will be a sign-up sheet otherwise a student name list on the board. Clean and well-prepared space which includes seats for the audience is highly expected before the review time.

Work Submission and Deadline:

Projects and assignments must due at the beginning of the class on the day stipulated and will not be accepted after 2 days of the due date. The only exception is when written documentation of personal illness or death in the immediate family is provided. In these two instances the project/assignment must be received by instructor or authorized person during the next 10 days.

Works submitted after 15 minutes of the class start will be counted as “Late”. Late projects and assignments will not be allowed to present and be penalized by grade deduction as follows:

FOR LECTURE CLASS ONLY
Later than 15 minutes but within the review hours                        10% deduction
On the next day                                               20% deduction
On the next second day                                   50% deduction
Later than 2 days                                          receive a grade of "F"

Note:
Procrastination is not an acceptable excuse for missing a deadline, and instructor will not answer any question about a project within 48 hours of its original due date.
Description of course outlines:

Lecture # 1: - Introduction to AutoCAD and Draw and Modify Commands I

**Interface:** Menu Bar, Tool Bar, Cursor Men, Command Window, Text Window, Status Line, Screen Menu, Open File, Save file, Quit  
**Preference setting:** Unit, Grid, Snap, Ortho  
**Zoom:** Window, All, Previous, Scale (x/xp), Pan  
**Line:** Absolute Coordinate, Relative Coordinate, Polar Coordinate, offset  
**Undo/Redo**  
**Object selecting**  
**Erase**  
**Redraw**  
**Modify:** Move, Copy, Offset, Text

Lecture # 2: - Draw and Modify Commands II

**Draw:** Circle, Arc, Rectangular, Ellipse  
**Object snaps:** Endpoint, Midpoint, Intersection, Center, Quadrant, Node, Tangent, Perpendicular, Intersection, Nearest  
**Modify:** Trim, Extend, Mirror, Rotate

Lecture # 3: - Draw and Modify Commands III, Layer, Block, Hatching and Dimension

**Layer:** Linetype Properties, On/off Freeze/Thaw, Lock/unlock, Change properties  
**Block:** Block, Wblock, Explode  
**Dimension:** Linear, Angular, Diameter, Radius Leader, Dimension Style  
**Modify:** Array, Scale, Fillet, Chamfer, Divide  
**Create:** Polyline

Lecture # 4-5: - Design 2D Drawing I-II

Students are to practice on Design Drawing on AutoCAD program.

Lecture # 6: - Printing and Design 2D Drawing III

Students are to practice on Design Drawing on AutoCAD program.  
**Print:** Print Configuration, Device and Default Information, Pen Parameter, Addition, Parameter, Paper size and Orientation

Lecture # 7: - Design 2D Drawing IV

Students are to practice on Design Drawing on AutoCAD program.

Lecture # 8: - Site measurement and Design 2D Drawing V

Students will learn how to measure existing sites with precisely scale, and then students are drawn sites by using AutoCAD.

Lecture # 9-10: - Practical Drawing and Construction Drawing

Students are to draw and construction drawing, which consider details in architectural elements, such as; section, floor details, bath room, and other details
Lecture # 11: - Introduction to Adobe Photoshop CS

Introduction to graphic program and explain some of the function. Able to applied to AutoCAD function through the graphic presentation program.

Lecture # 12: - Practice on Adobe Photoshop CS

The integration of AutoCAD and Adobe Photoshop program.

Lecture # 13: - Introduction to Adobe Illustration CS

Introduction to graphic program and explain some of the function. Able to applied to AutoCAD function through the graphic presentation program

Lecture # 14: - Practice on Adobe Illustrator CS

The integration of AutoCAD and Adobe Illustrator program.

Lecture # 15: - Introduction to Design Portfolio

Multiple presentations will be proposed. Especially individual portfolio is able to develop in other techniques. Students are to design portfolio and insert individual project on portfolio format.

Last day to withdraw with “W”: Monday February 2, 2009