Course Number: AR 2108  Computer Aided Design II
Section 401: Friday: 12.30 – 17.30
Section 402: Thursday: 12.30 – 17.30
Instructors: A. Sanphawat Jatupatwarangkul  Course Coordinator
A. Theeprakorn Lunthomrattana

Course Outline (June 2009 – October 2009):

Week # 1: Introduction to Computer Aided Design II Primary stage and Revising to Computer Aided Design I
Week # 2: Basic Form: 2D and 3D
Week # 3: Architectural Form: Architectural Elements and Accessories
Week # 4: Architectural Space
Week # 5: Material and Mapping
Week # 6: Basic Light
Week # 7: Polygon Form

< Midterm Examination >

Week # 8: Modify Architecture Form and Material I
Week # 9: Modify Architecture Form and Material II
Week #10: Exterior Lighting I
Week #11: Exterior Lighting II
Week #12: Interior Lighting I
Week #13: Interior Lighting II
Week #14: Walk Through Animation
Week #15: Project

Texts:
1. 3D Studio Max6 Completed reference
2. Lighting: Class Website
3. Material and Mapping: Class Website
   http://www.webhosting.au.edu/sunphawatpng/cad2
   (Call Number: 737.46 D391g 1999, Accession No. 2489 c.1)
   (Call Number: 720.483092 R515t 2001, Accession No. 2796 c.1)
   (Call Number: 720 S618 2000, Accession No. 3325 c.1)
7. Animate form.
   (Call Number: 720.222 L989a 1999, Accession No. 2229 c.1)
   (Call Number: 720.2222 L334l 2000, Accession No. 3148 c.1)

Reference:
   (Call Number: R 720.946 M671 1999, Accession No. 2818 c.1)
    (Call Number: R 720.920904 L695d 1996, Accession No. 1116 c.1)
11. El croquis, Eisenman, Peter
    (Call Number: R 720.920904 E36p 1997, Accession No. 1115 c.1)
12. 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)
14. The Phaidon atlas of contemporary world architecture.
    (Call Number: R 724.7 P532 2004, Accession No. 3834 c.1)
Score Requirement:

1. Assignment 40 %
   - Quiz I-II 10 %
   - Assignment in Class 30 %

2. Examination (Take home) 55 %
   - Mid Term Project 20 %
   - Final Project and Portfolio 35 %

3. Attendance 5 %
   Total 100 %

About the class:

1. Class meeting:
   Thursday and Friday at school of architecture and design building. Room AR401
2. Special Class meeting: To be informed by lecturer.
3. Class Cancellation and Make-up class: To be informed by lecturer.
4. Description: Introduction to 3D created by 3D Studio Max8 program.
5. Description: Introduction to Graphic Presentation Programs
6. Instructors: A. Sanphawat Jatupatwarangkul
    A. Theeprakorn Lunthomrattana
7. Offices: AR0201
8. Phones:
   E-mail: sanphawat@yahoo.com, op_as2001@yahoo.com

Description of Course Outline:

Introduction
This subject is the continuing program study of AR1105 Computer Aided Design I. Once students gained knowledge that how to use AutoCAD program to conduct 2D. Now they are reaching the second stage. Student will have a chance to explore more on using computer as tools to achieve their goal in design process and development. They will learn how to use computer to ease their work on each stage of designing such as: be able to gain information through Internet, they can make advance model study via some of the 3D programs. Finally they should be able to present their work in the professional ways.

Aims and Objective
Student will learn how to conduct 3D modeling through 3D programs. To express student's idea through 3D model is very importance for design development stage. It's help from the beginning such as rough model stage till they reach the final stage where they have to produce a very actual looking model to present as close as the reality. Student will discover full potential of how 3D program can enhance their creativity.

Time table
Week 1:
Introduction to Computer Aided Design II Primary stage and Revising to Computer Aided Design I: Lesson begins with an introduction to class’s rules, times table, term assignments. Showcase advanced architectural visualization sample and review over all basic concept of Computer Aided Design II

Week 2:
Basic Form: 2D and 3D: This lesson is also guide student on how to design standard form and shape in term of 2D and 3D. And also applied to use simple modify function.

Week 3:
Architectural Form: Architectural Elements and Accessories: This lesson will explore other potential from architectural form and shape such as wall, partition, window, furniture, and accessories function. And also use modify objects tool.
Week 4:
**Architectural Space:** This lesson is also guide student on how to full potential of architectural form and applied to be architectural space. And also enhance the capability of form through full fill space.

Week 5
**Material and Mapping:** This lesson will explore other potential of materials and technique of mapping through objects and architectural elements. And also student able to design reality objects by rendering material. Moreover, this lesson help enhance in rendering quality, style and atmosphere.

Week 6:
**Basic Light:** This lesson will explore the basic of light which is consider to only standard light, and applied techniques of light through objects and architectural space. This technique will give student's abilities to develop perspective their architecture and interior space.

Week 7:
**Polygon Form + Output and Rendering:** The lesson will focus on how to create efficient polygon to the models. By concerning about load of rendering for a big animation scene, Techniques and shot cut to easy model creation. And also this lesson will explore output of rendering and locate the camera orientation to set the perspective output. And students also design perspective view through architectural space.

Week 8:
**Modify Architecture Form and Material I:**
Students are to apply former knowledge on how to full potential of architectural form and applied to be an exterior architectural space. And also enhance the capability of form through full fill space.

Week 9:
**Modify Architecture Form and Material II:**
Students are to apply former knowledge on how to full potential of architectural form and applied to be an interior architectural space. And also enhance the capability of form through full fill space.

Week 10 -11
**Exterior Lighting:** The lesson will focus on how to create efficient lighting through the day time and night time, and also applied the standard light to relate the exterior space.

Week 12 - 13:
**Interior Lighting:** The lesson will focus on how to create efficient lighting through the day time and night time, and also applied the standard light to relate the interior space.

Week 14:
**Walk Through Animation:** This lesson will explore motion camera in animation project to create fly through and walk through animation. Lighting can be animated to help visualize light and shadow effect which influence architectural design. And including to VRML function through enhance to effective of perspective and presentation.

*Last day to withdraw with "W" : Friday August 29, 2009*