Architecture + Urban Design
UCLA School of the Arts and Architecture

226A Intro to CAAD

226A Introduction to Computer-aided Architectural Design

Fall 1998	**Mon and Wed**	**12:00 - 1:30pm** CDA Lecture Room
Instructor	**Kostas Terzidis**	Rm 1125D tel. 825-8004
		e-mail: **kostas@ucla.edu**
Office hours:	Mon and Wed 2:00-3:00pm or e-mail (anytime)	
Class Notes:	**http://cad.aud.ucla.edu/**	username: **arch226** password: **cda123**
T.A.:	**Behn Samareh**	e-mail: **behn@aud.ucla.edu**
Lab hours:	**Thursday**	**12:00-2:00pm**

DESCRIPTION

Introduction to CAAD is a course that introduces the students to **basic concepts, skills and theoretical aspects** of Computer-Aided Architectural Design (CAAD). The course intends to meet the needs of students with little or no microcomputer skills. The goal is to provide students with generalized skills and structured knowledge. The applications that have been selected are all commonly found in professional offices. Students will therefore also pick up some specific skills related to particular Macintosh and Windows-based packages which they are likely to encounter as they pursue their careers.

The first part of this course (fall quarter) will cover issues related to two-and three-dimensional representation, i.e., **painting, drafting, multi-media, hyper-media, modeling, and basic VRML.** The second part of this course (winter quarter) will cover issues related to **rendering, animation, and advanced VRML**. The second course will focus on theoretical issues related to how objects are represented in three-dimensional space, research overview of solid modeling, a close view to cyberspace and virtual reality, different techniques for texture mapping, and ways for creating animated pictures of architectural spaces.

The software packages that will be used in this course include **Photoshop** (image processing), **Morph** (image morphing), **AutoCAD** (drafting), **PageMill** (Hypermedia), **FormZ** (solid and void modeling), **3D Studio MAX/Softimage** (rendering and animation) and **Cosmo Worlds/Player** (Real-time animation).

In addition, theoretical aspects of CAAD will be presented and discussed. This will provide the students with general information about the theory, history, and research related to CAAD. The intention is to make the students think and understand beyond the limits of a specific application and to give them the theoretical background to be able to acquire and critically evaluate new knowledge in the area of CAAD.

SCHEDULE FOR FALL 1998

Week 1: **October 5 and October 7**
Topics: Course overview, computer hardware, internal operations, storage devices, basic concepts of software, selecting a computer to use.
Lab: Tour of the lab, what is an operating system, MacOS, Windows basic commands

---

Week 2: **October 12 and 14**
Topics: Paint fundamentals, photoshop operations, and morphing
Lab: Scan a project and analyze
Project 1: Scan a picture, edit, and morph.

Week 3: **October 19 and 21**
Topics: Multi-media, hyper-media, and the Internet
Lab: Use of e-mail, Netscape, Internet explorer, and ftp
Project 2: Send e-mail, browse the W3, and create a home page

---

Week 4: **October 26 and 28**
Topics: Draft fundamentals, differences between pixel and object-oriented systems, databases, symbols and libraries
Lab: AutoCAD file, draw, and edit operations
Project 3: Digitize a drawing, edit, and present.

Week 5: **November 2 and 4**
Topics: Form related approaches in computational design, typology, transformation (morphing), shape grammars, artificial intelligence approaches to arch design, desktop publishing, slide presentations
Lab: Presentation techniques, electronic portfolios

Week 6: **November 9 and 11**
Topics: Midterm Exam - 3D Space - The concept of a model - FormZ: Basics
Lab: formZ tutorial

Week 7: **November 16 and 18**
Topics: FormZ: Building a model - Step-by-step tutorial - Advanced features
Project 4: Create a 3D model (historical building)

Week 8: **November 23 and 25**
Topics: Modeling techniques: 3D Studio MAX
Lab: Representation, editing, and visualizing models in 3DS max

---

Week 9: **November 30 and December 2**
Topics: Transferring files between different programs and/or computers - 3D internet - VRML basics
Lab: Storage devices and file transferring

Week 10: **December 7**
Topics: Take home final exam