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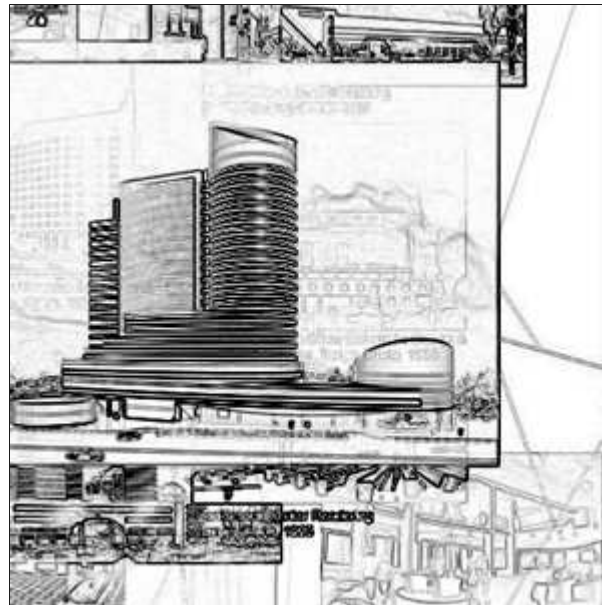
ENDS 116 Design Communication Foundations II (Section 500)- Spring 2010

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Office Hours: Tuesday & Thursday 9:30AM - 11:00AM, Langford A318



Description

Introduction to computing and visualization as methods of design communication. Fundamentals on computer applications for design, planning, and construction. Review of applications for Digital Imaging, Web publishing, 2D CAD Drawing, 3D Modeling, Rendering, and Animation.

Click **Syllabus** link on the left navigation area to check the detailed syllabus of this course.

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ENDS 116 Design Communication Foundations II

Introduction

As in most professions that make use of computers for the purpose of supporting an upgraded performance, the environmental design profession has within reach a growing variety of computational resources that, if used properly, may substantially aid our professional practice.

In the domain of environmental design, computers are "means" and not the "ends" of our professional concern, and within such a conceptual framework, this syllabus has been designed on the understanding that environmental designers must concentrate on the creative use of available computational means.

Creative usage requires a solid understanding of how computational resources work, and therefore the content of the course will address such understanding through the development of a theoretical framework based on "models" that express the logic and nature of computer operations.

In similar way and beyond the fundamentals of computing, environmental designers will need to grow familiar with a diversity of computer capabilities to be applied in the profession. Consequently the syllabus of this course will address all major software typologies within the application domain of environmental design, and at the same time will draw links through which software integration may be established for specific professional purposes.

In order to offer a context for in-focus usage the course will propose a practical framework of interrelated assignments that in conjunction will put on evidence the potential for integration of our computational resources. A number of software packages will be used for the purpose of illustrating the general functionality of major software brackets but no software package will be explicitly appointed for in-depth training.

The course content will be explicit on demonstrating that similar design intentions, similar design methodologies, and even similar design products can be successfully achieved by using quite different computational resources; and that in contrast, almost identical computational resources can aid the implementation of very different intentions, methodologies, and products.

Objectives

At a fundamental level, the course has the objective of enabling students to define the computer based processes, and related hardware-software configurations that may satisfy their present and future instrumental requirements in the domain of environmental design.

At the end of the semester students will be expected to have the ability to use, with a basic level of proficiency, all major software brackets within the application domain of environmental design. Students will be able to navigate through networks and within the most common operating systems; students will be able to foresee the behavior of standard user-system interfaces and know what to expect in terms of hardware-software performance.

The objectives of this course will be pursued by means of theoretical lectures and practical exercises that address a given set of instructional targets.

Instructional Targets

- To stimulate the acquisition of fundamental knowledge in the domain of computing.
- To stimulate knowledge acquisition referred to major software brackets within the application domain of environmental design.
- To stimulate knowledge acquisition referred to software integration within the

- application domain of environmental design.
- To offer opportunities for training on the use of diversified computing resources

Course Content

The course combines theoretical lectures, research, and practical working sessions into a comprehensive review of computational resources in the domain of environmental design. As thematic umbrella for practical exercises we will elaborate on your experience as a design student. The course will include the following components:

- Digital Imaging
- CAD and Building Information Modeling
- 2D CAD Drawing and 3D Modeling
- Rendering and Animation
- Web Publishing

A timetable can be found in **Lectures/Labs** link on the left navigation area. Some items of the timetable may change in response to unforeseen pedagogic or logistic factors.

You are encouraged, but not required, to do readings listed in the **Readings** link on the left navigation area.

Performance Evaluation and Attendance to Classes

The final grade will be based on all assignments. All assignments will be graded by points. The final grade will be given by a letter based on weighted average points. Points and letters will be given by the following evaluation:

Letter grade	Point grade (max 100)	Quality of work
A	points \geq 90	Exceptional work, above standards
B	90 > points \geq 80	Satisfactory work, meet standards
C	80 > points \geq 70	Unsatisfactory work, below standards
D	70 > points \geq 60	Deficient work
F	points < 60	Failure, course needs to be repeated

Assessment will be based on the quality of the final product (defined as the relationship between assignment objectives and results) and the quality of the procedural narrative (description of the procedure used during the assignment).

Requirements of assignments, assignment weights, and due days can be found in **Assignments** link on the left navigation area.

Please note:

- All assignments should be individually developed, except those noted as "team" assignments.
- Assignments normally due before the next course phase.
- A project is given 90/100 as a basis for "Satisfactory work, meet standards". Based on project requirements, errors will cause reduction of points and extra/exceptional work is awarded with extra points.
- Late project submissions will be penalized 5 points for each 24 hour period lateness.
- Attendance is mandatory in all classes including both lectures and work sessions. Please see the "Attendance" section on the "Texas A&M Student Rules" regarding accepted reasons that may justify an absence. An absence of class will result in many times more effort and time to catch up with the class.

How to Learn in This Class

Focus on the application tutorials, homework, and projects. Learn the theories behind

the applications. Don't miss any tutorials or any part of a tutorial. All tutorials are important for completing the projects. The tutorials are designed not only to let you master the fundamental knowledge of computer applications, but also to introduce you systematic methods of design computing and BIM.

Students with Disabilities

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation, please contact the Office of Support Services for Students with disabilities in Room 126 of the Student Services Building. The phone is 845 - 1637.

Academic Policy

The TAMU student rules (<http://student-rules.tamu.edu/>), Part I Rule 20 (about Academic Misconduct) will be strictly enforced.

For individual work, students should not provide to other students any kind of personal digital file related to the development of the assignments. Drawing, modeling, animation files (.rvt, .rfa, dxf, .mdb, .accdb, dwg, .dwf, .psd, .jpg, .gif, .avi, etc) among others, that are created in the context of the class are personal property and should not be shared with other students of the same section or among sections. Plagiarism applies to all kinds of digital files and to all related content (i.e. models, images, drawings, the narrative of the procedure for an assignment, etc). You are committing plagiarism if you use or copy the work of another person and turn it as your own, even if you should have permission of that person.

AGGIE HONOR CODE

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

For additional information please visit: <http://aggiehonor.tamu.edu/>



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ENDS 116 Design Communication Foundations II

Section 500: W 11:30AM - 1:45PM and F: 10:20AM - 1:45 PM, ARC

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Today

January 2010 ▼

Mon	Tue	Wed	Thu	Fri	Jan
28	29	30	31		
4	5	6	7		
11	12	13	14		
18	19	20	21		
25	26	27	28		

Events shown in time zone: Central Time

Phase 1 - Introduction and 3D Modeling/Building Modeling

Lecture #	Topics
Lecture 1	Course Introduction
Lecture 2	Building Modeling
Lecture 3	CAD vs BIM
Lecture 4	BIM - Work Session
Lecture 5	BIM - Project1
Lecture 6	3D Modeling with Autodesk VIZ and BIM Work Session
Lecture 7	BIM/VIZ Modeling
Lecture 8	CAD/BIM Conversion
Lecture 9	BIM Details

Phase 2 - Web Publishing and Digital Imaging

Lecture #	Topics
Lecture 10	Web Publishing and HTML

Lecture 11	Web Publishing and HTML (2) Work Session
Lecture 12	Work Session for Project 1
Lecture 13	Project 1
Lecture 14	Project 1
Lecture 15	Project 1 and Submission
Lecture 16	Digital Imaging and Project2
Lecture 17	Project 2
Lecture 18	Project 2

Phase 3 - Rendering and Animation

Lecture #	Topics
Lecture 19	Rendering and Animation with Autodesk VIZ
Lecture 20	Rendering and Animation (2) Project3
Lecture 21	Materials and Lighting Work Session
Lecture 22	Rendering and Animation (3) Work Session
Lecture 23	Rendering and Animation (4) Work Session
Lecture 24	Project3 Work Session - Materials and Lighting
Lecture 25	Project3 Work Session - Cameras and Rendering
Lecture 26	Rendering Tips and Review
Lecture 27	Posting Movies and Conclusions

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Readings (optional)

- COMMUNICATION AND DESIGN WITH THE INTERNET, Jonathan Cohen, W.W. Norton & Company Inc, ISBN: 0-393-73043-3.
- DIGITAL ARCHITECTURE, M. Saleh Uddin. MacGraw-Hill Inc, ISBN: 0-07-065814-5.
- ARCHITECTURE'S NEW MEDIA: PRINCIPLES, THEORIES, AND METHODS OF COMPUTER-AIDED DESIGN, Yehuda, E. Kalay. The MIT Press. ISBN: 0-262-11284-1.



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Projects

Assignment #	TOPIC	DUE	WEIGHT
1	3D/Building Modeling		
2	Digital Imaging		
3	Rendering and Animation		

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Today

January 2010 ▼

Mon	Tue	Wed	Thu	Fri	Jar
28	29	30	31		
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Projects

Students	Name	Project1	Project2
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels

80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels
80 x 120 Pixels		160 x 120 Pixels	160 x 120 Pixels