

COLLEGE OF DUPAGE
ARCHITECTURE 2220 – Architectural Computer Modeling

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ARCHITECTURE 2220
SPRING SEMESTER 2019
Tuesday / Thursday 11:00am – 12:50pm
Location: TEC 3003

<u>Course Name:</u>	Architecture 2220-Architectural Computer Modeling
<u>Credit and Contact Hours:</u>	2 credit hours (1 lecture hour, 3 lab hours)
<u>Prerequisites:</u>	Architecture 1211 or Computer-Assisted Design/Drafting 1111 or equivalent, or permission of instructor.
<u>Textbook:</u>	<i>Required exercises provided by instructor (can be purchased through the bookstore as a course packet)</i> Further suggested reading: <i><u>Kelly L. Murdock's Autodesk 3ds Max 2017 Complete Reference Guide</u></i> by Kelly L. Murdock ISBN-13: 978-1630570330 <i><u>Autodesk 3ds Max 2016 Essentials</u></i> by Dariusz Derakhshani (Author), Randi L. Derakhshani (Author) ISBN-13: 978-1119059769 <i><u>Autodesk 3ds Max 2017: A Comprehensive Guide</u></i> by Prof Sham Tickoo Purdue Univ. ISBN-13: 978-1942689362
<u>Materials:</u>	Flash Drive / Cloud Storage

Course Description:

Computer graphics course using Computer-Aided Drafting (CAD) and other software to create computer architectural models and presentations.

Course Objectives:

1. Create architectural models using Computer-Aided Drafting and Design (CADD) software
2. Apply realistic materials to the models
3. Create realistic lighting of the models
4. Create camera views and animation of the models
5. Develop the models in other software environments
6. Convert the model files to various media

Topical Outline:

This course will include but not be restricted to the following topics:

1. Model creation and editing
2. Material application and manipulation
3. Light sources
4. Cameras
5. Animation
6. Model enhancement using other software
7. Presentations in various media

Attendance:

Students are expected to attend all classes. There is a great deal of work that students are expected to complete in this class. Absences will severely limit your ability to complete the required assignments. Excused absences must be reviewed with the instructor. If you know you will be missing a class you must review it with the instructor *before* the missed class and all work due must be turned in ahead of time. If you miss class for illness or an emergency any assignments due must be turned in at the beginning of your first class back. **Points may be subtracted if you do not contact the instructor and fail to attend on a regular basis.**

Late Work:

Late assignments may be turned in up to one week after the original due date, after that date late assignments will not be accepted. All assignments are due by the end of the assigned class, otherwise they will be considered late. Late assignments will be reduced by one letter grade.

Withdrawal:

The last day to withdraw from this class is **Friday, April 12th 2019**. After that date, students may file a Petition for Late Withdrawal through the Registration Office. Petitions for Late Withdrawal will be granted for extenuating circumstances only, including student illness, death in the immediate family, family emergencies, call to active duty, or other appropriate extenuating circumstances. The student will be required to provide appropriate documentation for all requests for Late Withdrawal. **Prior to withdrawing from this class, students are encouraged to speak with the instructor.**

Incomplete:

Incompletes will only be granted for serious illness and emergencies or unforeseeable situations outside of the student's control. Students must be current on all assignments prior to the emergency to be granted and incomplete. The student must request an incomplete by the next to last week of the semester. It is the student's responsibility to request an incomplete grade. See the appropriate pages in college catalog for definitions and regulations: http://www.cod.edu/gateways/pdfs/cod_student_handbook.pdf

Electronics:

Cell phones and listening devices will be turned off during class lectures and discussions. If you have extenuating circumstances please discuss them with me outside of class.

Academic Honesty:

Any violations of College of DuPage policies regarding academic honesty and/or integrity will be referred automatically to the appropriate College authorities for disposition. See appropriate pages in the student code of conduct for definitions and regulations.

http://www.cod.edu/gateways/pdfs/cod_student_handbook.pdf

Any violations of academic honesty policy will result in FAILURE of the course.

Student Network Directories:

The network directories given to you by the college are only to be used for work related specifically to this course. Student directories are monitored and may only contain course related files. Please refer to board policy #10-126 for your rights and responsibilities as well as the College of DuPage Electronic Communications Guidelines: <http://www.cod.edu/it/security/>

General Note:

In order to achieve the course objectives, it is essential that you enjoy the class in addition to complying with the above requirements and the rules and policies of College of DuPage contained in the catalog and other College materials. If you are having course/College related problems, please feel free to talk to me so that we can resolve them to your satisfaction and benefit.

Method of Evaluating Students:

Grading:

Point Distribution:

1. Class Exercises (6 @ 50 points each)	300
2. Assignments (10 @ 100 points each)	1000
2. Final Project	
Exterior Rendering	200
Interior Rendering	200
Animation (50 pts extra credit)	

Total	1700
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Final Grades will be assigned as follows:

<u>Accumulated Points</u>	<u>Grade</u>
1530-1700 (90%)	A
1360-1529 (80%)	B
1190-1359 (70%)	C
1020-1189 (60%)	D
1019 or lower	F

Schedule: (Tentative / Subject to CHANGES)

Week	Day	Date	Lecture	Lab Activity	
				Exercise Due (50 pts)	Assignment Due (100 pts)
1	T	Jan 22	Syllabus, Introductions, Touring the interface, Standard Primitives / Network Directories		
	R	Jan 24	Touring the interface Standard Primitives / Move Copy Rotate Transforms / Modifiers	EX A: Getting Started	
2	T	Jan 29	Splines / Boolean / Sub-Object Editing	EX B: Splines / San Vitale	
	R	Jan 31	Splines / Materials	EX C: Wine Glass	
3	T	Feb 5	Standard Primitives Extended Primitives / Groups		
	R	Feb 7	Splines / Materials		Assignment 1: Minoan Column (Part A and B)
4	T	Feb 12	Modeling with Primitives, Splines, and Modifiers		
	R	Feb 14	Modeling with Primitives, Splines, and Modifiers		Assignment 2: Tugendhat Chair
5	T	Feb 19	AEC Objects		
	R	Feb 21	AEC Objects		Assignment 3: AEC Objects

6	T	Feb 26	Modifiers	EX D: Modifier Presentation	
	R	Feb 28	Autocad, Sketchup and 3DS – Modeling the Farnsworth House		
7	T	Mar 5	Autocad, Sketchup and 3DS – Modeling the Farnsworth House		
	R	Mar 7	Autocad, Sketchup and 3DS – Modeling the Farnsworth House		Assignment 4: Farnsworth House
8	T	Mar 12	Terrain Objects		Assignment 5: Terrain
	R	Mar 14	Lighting / Materials / Entourage / Exterior Farnsworth Rendering		
9	T	Mar 19	Lighting / Materials / Entourage / Exterior Farnsworth Rendering		Final Project Proposal Due
	R	Mar 21	Lighting / Materials / Entourage / Exterior Farnsworth Rendering		Assignment 6: Exterior Rendering
	T	Mar 26	NO CLASS – SPRING BREAK		
	R	Mar 28	NO CLASS – SPRING BREAK		
10	T	Apr 2	Entourage	EX E: Create Your Own Entourage	
	R	Apr 4	Lighting / Materials / Entourage / Interior Farnsworth Rendering		
11	T	Apr 9			Assignment 7: Interior Rendering
	R	Apr 11	Advanced Forms (3ds) / Nurbs Modeling	EX F: Advanced Form Making	
12	T	Apr 16	Animation (3DS)		
	R	Apr 18	Animation (3DS)		Assignment 8: Animation
13	T	Apr 23	Sketchup / Vray		
	R	Apr 25	Sketchup / Vray		Assignment 9: Vray and Sketchup
14	T	Apr 30	Rhino		
	R	May 2	Rhino		Assignment 10: Rhino
15	T	May 7	Final Project Lecture / Final Project Work Day		Final Project Wireframe Due
	R	May 9	Final Project Resources / Final Project Work Day		
16	T	May 14	FINAL WEEK – No Class		
	R	May 16	Final - 11am -12:50pm / Final Project Presentations		Final Project Due