Syllabus for: 3D CAD Applications

Semester & Year:	Fall 2012
Course ID and Section Number:	DT50 (E2147)
Number of Credits/Units:	4 (3 hours lecture, 3 hours lab per week)
Recommended Preparation	None
Prerequisite	DT23 or ENGR23
Day/Time:	TTH 2:50 – 5:45
Location:	AT107
Instructor's Name:	Steve Brown
Contact Information:	Office location and hours: AT139 MW 12-1, TTH 1-2 Phone: 707-476-4347 Email: steve-brown@redwoods.edu
Required Text	AutoCAD 2012 3D Modeling
Required Materials	1) Notebook & plastic sleeves to organize portfolio 2) USB File Storage

Course Description (as described in course outline)**:**
An intermediate level study of 3D modeling and presentation methods used in the design and drafting industry. Students will study the creation and application of wireframe, surface, solid, and parametric CAD models as well as design visualization techniques and rapid prototyping processes.

Student Learning Outcomes (as described in course outline)**:**
1. Use CAD software to create 3D CAD models using wireframe, surface, solid, and feature-based parametric techniques.
2. Manipulate the 3D coordinate system & 3D viewing systems.
3. Use the CAD software user interface, including customization and file management.
4. Analyze a 3D model in terms of form, function, and mass properties, including interference detection.
5. Develop a 3D model by converting 2D data.
6. Use software processes to create photorealistic renderings of a 3D model.
7. Create dimensioned orthographic drawings from 3D model data.
8. Define various 3D CAD file formats.
9. Create physical prototypes of a design using rapid prototyping.
10. Define terminology associated with the CAD industry and describe the role of design visualization and prototyping in the design process.
11. Choose the proper software tools to meet a client's needs.
12. Prepare a professional portfolio.

Methods of Evaluation: The final grade you receive will be based on the following criteria:

55% Projects & Quizzes	Grade Scale:	100% - 90%	A
5% Participation		89% - 80%	B
10% Portfolio		79% - 70%	C
10% Midterm		69% - 60%	D
10% Final			
10% Presentation of Research			

*Students with 4 absences prior to the end of the 10th week will be dropped from the course.

Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course.

The student code of conduct is available on the College of the Redwoods website at: http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf

Other Important Information:

- The information in this document is subject to change, with notice, in the event of extenuating circumstances.
- The following items may be found on the MyCR site for this class:
  - ✓ Course calendar (includes assignment information)
  - ✓ Announcements
  - ✓ Online quizzes
  - ✓ Gradebook
  - ✓ Resources such as reading assignments, handouts, and PowerPoints
- It is your responsibility to check MyCR frequently.
- The expectation is that you attend every class, on time, and stay for the duration of the class. If you are absent it is your responsibility to get the missed information from the instructor or another student. Make use of the instructor's office hours to get missed information; there will not likely be time during class for the instructor to go over the missed instruction or assignment.
- In the event of an earthquake, take cover under your computer station and hold on to the desk. Once it is safe to leave the building, go to the nearest safety zone (ours is right behind the AT building). Do not go to towards the cafeteria (high pressure gas line) or to the lower parking lot (tsunami danger).
- **NO FOOD OR DRINK AT COMPUTER WORKSTATIONS. SPILLPROOF WATER BOTTLES ARE OK.**

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.