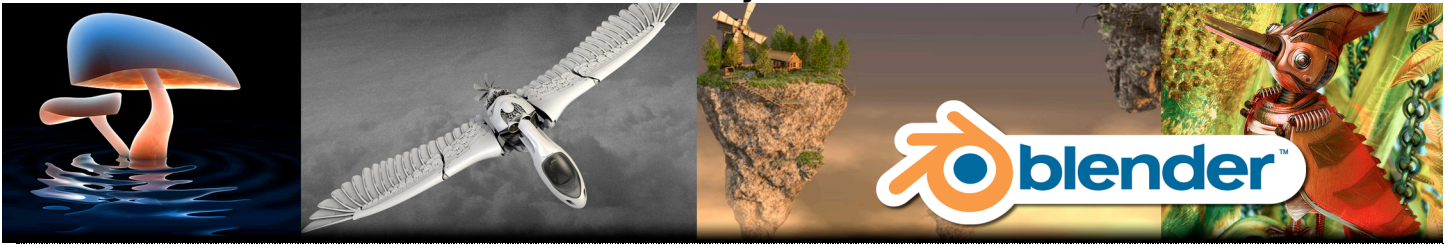


ARTD 471/571
3D Computer Imaging
Course Syllabus



Winter 2014 | CRN 28098 / 28099 (Grad)

Jan 6th – March 19th 2014

Instructor: John Park

Office: Hearth Cafe

Office Hours: Monday 1:30–3:00 pm + by APPT

Email: park@uoregon.edu

Class Hours: Monday/Wednesday 3:00 PM – 5:50 PM

Location: 283M Lawrence Hall

Course Fee: \$35

Optional Textbook: *Blender Foundations* by Roland Hess

Suggested Online Resources: blendercookie.com, blenderguru.com, blenderdiplom.com

Required supplies:

- External Hard Drive (≈\$90) OR USB Thumb Drive with at least 8 GB memory (cost<\$15)
- 3 Button Mouse (if you will work at home or on laptop in lab)
- Sketchbook and pens/pencils

Course Overview: An introduction to 3D software as a content creation tool. Curriculum includes modeling, composition, lighting, rendering, and prototyping.

Course Description: The course will be an exploration of 3D imaging in the artistic context and a hands-on lab in using Blender3D, an extremely powerful (and free) 3d modeling/rendering/animation software package. In a short 10 weeks students will go from manipulating primitive geometry, such as cube and spheres, to working their way up to complex organic sub-surface modeling and rendering.

WARNING! Because 3D imaging is a complex and detail oriented process, it is vital that students are aware that this course will be time-consuming and challenging. It should also be noted that '3D Computer Imaging' is not a production class, and is therefore not intended to teach students how to land jobs at major animation studios such as Pixar or Dreamworks.

Course Goals: Students will learn to use open-source 3D modeling and rendering software as an integral and rich tool-set in their digital creation process. By maintaining a constant awareness of their skills in 2D design and aesthetics, members of the class will gain another dimension to their work by re-imagining design in terms of space, depth and 3D compositing. Once comfortable with the interface and concepts of the 3D environment, students will learn to fully integrate the 3D output into their original two-dimensional works.

Course Readings / Text: One of the beautiful things about large-scale open source projects, such as Blender 3D, is that the user base and support community on the web is thriving and robust. This means that there are multiple databases of tutorials, dozens of forums for software Q&A's, as well as video lessons and hard copy book references available. The availability of these resources coupled with the fact that college textbook costs are inflated, leads the textual support for this course to be completely free, with digital PDF files or web URLs as your primary reading. An optional reference book is listed at the top of the syllabus.

Assignments and Projects: During the ten week course students will be assigned an in-class assignment every two weeks, one weekend take home assignment per week, and two large projects, one for midterms and the other as a final. There will also be a grade given for in class participation during discussions and critiques. The grading breakdown will be as follows:

Grade Breakdown

- 20% Take Home Assignments
- 10% In-Class Participation (discussion and project critiques)
- 25% Midterm Project
- 35% Final Project
- 10% Final Updating and cleanup of class blog

Attendance: The class meets 20 times in the 10 week course. Students are allowed **two absences** (excused or otherwise) and then each following absence will cost a 4% reduction from the student's final grade. If there are circumstances that may affect your attendance in the class, please discuss them with me at the beginning of the term, not at the end.

Punctuality Policy: In order to ensure that coursework will be turned in on time, late assignments will be penalized with a 1/2 a letter grade reduction per day late and projects will be reduced a full letter grade per day late. It brings no amount of pleasure to penalize students for late work, so please be organized and punctual by turning in your assignments on time.

Assessment: Criteria considered:

Quality and amount of work	Engagement with course expectations and concepts	Participation	Progress and self-challenge	Typical Grade Distributions
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- A+** = Truly exceptional work, unusually sophisticated level of engagement with course concepts, insightful participation in class discussions, extraordinary growth. Highest distinction, typically very few if any students receive this grade.
 - A** = Distinctive work, complete success in synthesis of thinking and making, thoughtful and perceptive contributions to discussions, significant personal progress. Typically no more than a quarter of the students in a class receive this grade, more in upper-division classes.
 - B** = Successful and well-executed work, competency with all course materials, concepts, and objectives, frequent and thoughtful participation, evidence of progress. Typically this is the most common grade.
 - C** = Competent work with most assignments and class work completed, satisfactory grasp of material, participates in discussions most times, made some growth. Typically this grade indicates weak performance in at least one area of expectation.
 - D** = Subpar work with significant lack of completion and/or low attendance, course concepts poorly understood, minimal participation, minimal to no growth. Typically this grade indicates significant problems in more than one area of performance.
 - F** = Problematic on all fronts, indicating either no real grasp of the material, significant lack of effort and/or growth, or unacceptably negative forms of engagement with the course materials and the classroom community. Typically very few students receive this grade.
- NOTE: In upper-division courses, expectations include attention to the critical discourse surrounding the work or issue at hand, with the expectation that the work be clearly placed in a critical dialogue with outside sources.

Final: Unlike many other art classes, ARTD 471/571 will utilize the scheduled Final Examination Block as assigned by the University. For Winter '14, this means **the final critique will be held on Wednesday March 19th at 3:15 PM (We may choose as a class to change this time).**

Lab Fee: The lab fee is used to pay for instructional materials as well as consumable supplies for the 3D Printers (Replicator 2 and Form1), the Motion Capture system in Millrace 2 and the Occular Rift VR headsets.

Graduate Students (ARTD 571): Grad students will be asked to develop a research proposal for the two projects and will have a separate grading rubric for the projects.

Disability access statement: If you have a disability that will affect your coursework, please notify the instructor within the first two weeks of class to ensure suitable arrangements and a comfortable working

environment. The University provides resources for students with disabilities: For assistance with access or disability-related questions or concerns, contact the Accessible Education Center at (541) 346-1155.

Students are responsible for meeting all the standards set by the UO Policy on Academic Dishonesty. *See the UO Policy on Academic Dishonesty.*

Course Breakdown:

Week 1:

Intro to Blender, understand the 3-axis interface.

Subsurf modeling. Modeling a Thumb Tack. Modeling a fork. Modeling a screwdriver. Blog setup.

Week 2:

Colors and materials. Extrusion, separation and arrays.

Organic modeling intro. 2D/3D Compositing. Abstraction assignment.

Week 3:

Sculpt Tool intro. Retopology. Lighting and Rendering details.

Unwrap and texture painting. Appending. Creatures!

Week 4:

Creature design and development. Unwrap emphasis.

Lighting Part II. Workshop on rigging character (outside of class)

Week 5:

Technical/Precision Modeling

Product Assignment. Project 1 Intro.

Week 6:

Project 1 group share. Modifiers explained.

Particles and physics.

Week 7:

Animation Introduction, work day for P1.

Critique Project 1.

Week 8:

Design in 3D as production tool (planning for real world output)

Advanced unwrapping, live unwrap.

Week 9:

Advanced Modeling, lighting rigs, compositor.

Work Day for Final.

Week 10:

Individual Consults for Final Project.

Wrap Up. Work Sessions.

FINAL CRITIQUE : March 19th, time 3:15 pm (or chosen alternate by class)
