# Advanced 3-D Modeling
## AET 327
## 20930

*Bringing ones imagination to life has never been easier.*

Fall 2018
DFA 4.126
T TH 12:30-2:00

Instructor:            Dax Norman
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Office Hours:        Fridays 11am-1230pm in the Foundry,
or by appointment

## I. Rationale:

This course explores the production spectrum of 3-D digital modeling; building creative ideas into a variety of completed models and assets through a series of iterative projects.

## II. Course Aims and Objectives:

### Aims

This course teaches students to manifest ideas from thought to tangible form in a digital space. This course empowers students to create anything that they can possibly think of, through projects focused on the creation of solidly constructed 3-D characters, objects and vehicles produced in various methods. One will be able to try various aspects of production during the exploration of the commercial, artistic, and experimental nature of 3-D digital modeling.  Students will also explore the link between digital and physical modeling via 3D printing of digital models.

### Specific Learning Objectives:

By the end of this course, students will:

- Understand the similarities and differences between producing high poly and low poly character models in 3-D
- Conceptualize both organic and hard surface models
- Create character and vehicle /prop designs in the form of digital 3-D models
- Display a thorough understanding of topology
- Explore 3-D modeling through multiple approaches, such as box modeling, planar modeling as well as 3-D digital sculpting
- Apply clear Aesthetic choices to 3-D digital media
- Understand the state of the art of Digital Distribution through social media networks
- Explore digital modeling as sculpture through 3d printing of 3

## III. Format and Procedures:

This course will meet twice a week. During the first meeting, there will be a lecture that will include demonstration

along with discussion.  On the second class meeting of the week, there will be group learning project with discussion. This may take the form of an in class activity, critique or other collaboration which should include feedback. Even on days where a project is not due, students should be prepared with ready to show project progress. The in-class projects will review and practice the material covered from the week's first class meeting.  Active

participation in weekly in-class group projects and discussions will be a major component of the professionalism and participation component of student grades for the course that will comprise 20% of the final grade.

*IV.* **Tentative Course Schedule:** *\*\*This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

| Date | Main Topic(s) | Work to do at home to be completed before class | Evaluation |
|------|--------------|------------------------------------------------|------------|
| 8/30 | Course Introduction, In class collaborative design project. | Setup blog for class project process, Revise in class Design for next class meeting. (make a new sketch, refining the in class image) | |
| 9/04, 9/06 | Polygonal Modeling Review. Character Design and Planar Modeling. | Begin work on "Exquisite Corpse" model. | |
| 9/11, 9/13 | 3D Aesthetics and using Social Media. Discussion of form and content. | Continue work on "Exquisite Corpse" model (project01) | 9/05 is Labor Day Holiday. |
| 9/18, 9/20 | Project 01 in Class Presentations. | Begin Hard surface Model Project. | Project 01 Due (Tues) |
| 9/25, 9/27 | Modeling Vehicles, machines and Props. Hard Surface Modeling techniques. | Continue Hard surface Model Project. | |
| 10/02, 10/04 | UV Mapping Review Surfacing/ Texturing/ Digital Painting | Texture Hard surface Model Project. | |
| 10/09, 10/11 | Project 02 Presentations. 3-D character modeling, human faces. | Begin Human Facial Portrait | Project 02 Due. (Tues) |
| 10/16, 10/18 | Modeling Focus on facial construction and topology. | Continue Human Face project | |
| 10/23, 10/25 | Introduction to Mudbox and digital sculpting. | Finish Digitally Sculpted Human Face. | Project 03 Due (Thurs) |
| 10/30 11/01 | Creature Creation methods. | Work on Creature/ animal model | |
| 11/06, 11/08 | Creature and animal modeling, continued | Finish Creature/ animal model | |
| 11/13, 11/15 | Creature Project Presentations. Introduction of Final Course Project | Begin research for Final Project. | Project 04 Due (Tues) |
| 11/20 | Final Project strategies. | Continue work on Final Project. Thanksgiving Thurs | Bring 3 Final Project ideas (Tues) Thanksgiving Holiday Weds-Sat |
| 11/27, 11/29 | Finishing projects. Delivering 3D models for multi media. | Finish Final Project. | |

| 12/4, 12/6 | Final Project Presentations/ Course Wrap-up | Finish final projects, be prepared to present and discuss work with class | Final Projects Due |
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| 12/11 | | Final Project Presentations | During Finals Week |
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**Feedback Statement (to encourage students to respond to your requests for their feedback)**
During this course I will be asking you to give me feedback on your learning in informal as well as formal ways, including through anonymous surveys about how my teaching strategies are helping or hindering your learning. It's very important for me to know your reaction to what we're doing in class, so I encourage you to respond to these surveys, ensuring that together we can create an environment effective for teaching and learning.

## V.  My Assumptions
It is my belief that with hard work and a little bit of patience, anyone can be good at 3-D digital art. The learning curve is slower for some than others, but do not be discouraged and you will get to where you want to be. With the projects we do in this course, I advise students to make something that they can get really excited about.  Think about making short-term goals for your progress, and try to learn a new skill each day. The 3-D digital art process is very iterative, in that projects build upon one another, and many steps are repeated ad infinitum. With a firm plan in place, it will be easy to create a road map for success.

## VI. Course Requirements:
**1.**  Class attendance and participation policy:
    (a)  Expected classroom behavior: take notes, ask many questions, and attend class for the entire duration. Make a solid effort on each project outside of class, so that you may have many questions to contribute to the discussion.
    (b)  Cell phone use, including texting, is unallowable. Keep cell phones stored during the duration of class

**Religious Holy Days**
By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

**2.**  Course Readings/Materials:
    (a)  Recommended Textbooks: *Introducing Autodesk Maya 2016:* Autodesk Official Press, by Dariush Derakhshani.  1st Edition.  ISBN: 9781119059639

    (b)  Supplies needed: Laptop computer capable of running Autodesk Maya and Unity.
    (c) Other supplies: Jump Drive for external storage and data backup. A mouse for your laptop, as the 3D software will be much slower to use without one.
    (d) To download free student version of Autodesk Maya and Mudbox:
    http://www.autodesk.com/education/free-software/maya
    http://www.autodesk.com/education/free-software/mudbox

    (e)  URL for course website: http://advanced3dmodeling.tumblr.com/

**3.** Assignments, Assessment, and Evaluation
    (a)  Finished Assignments should be posted to canvas in the requested format before 9:00 AM on the Due Date
    (b)  Late assignments will be lose 10 points for the first day late, 20 points if 2 days late, 40 points off if 3 days late, and so on, with point subtraction doubling for each day of lateness
    (c)  Preliminary information on papers or projects, with due dates, shall be posted to canvas on the date of assignment

(d) List of assignments that will impact the final grade

Project 01: Exquisite Corpse Character Model (10%)
Project 02:  Hard Surface Model            (15%)
Project 03:  Human Face Model            (15%)
Project 04: Creature or Animal Character Model (15%)
Project 05:  Final Project            (20%)
3D Printing: 3 models required to be 3D Printed (15%)
Attendance, Professionalism and Participation (10%)  MISSING MORE THAN 3 CLASSES will
result in an AUTOMATIC ZERO for this grade.

(e)  Any changes in the syllabus, such as project due dates, will be announced in class as well as
on canvas.

| Letter Grade | Percentage | |
|---|---|---|
| A+ | 97%+ | |
| A | 93%-96% | |
| A- | 90%-92% | |
| B+ | 87%-89% | |
| B | 83%-86% | |
| B- | 80%-82% | |
| C+ | 77%-79% | |
| C | 73%-76% | |
| C- | 70%-72% | |
| D+ | 67%-69% | |
| D | 60%-66% | |

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|---|---|---|
| F | 0%-59% | |

**4.** Use of *Canvas* in class

In this class I use *Canvas*—a Web-based course management system with password-protected access at http://canvas.utexas.edu —to distribute course materials, to communicate and collaborate online, to post grades, and to submit assignments. You can find support in using Canvas at the ITS Help Desk at 475-9400, Monday through Friday, 8 a.m. to 6 p.m., so plan accordingly.

## VII. Grading Procedures: Grades will be based on:

Project 01: Exquisite Corpse Character Model (10%)
Project 02:  Hard Surface Model             (15%)
Project 03:  Human Face Model            (15%)
Project 04: Creature or Animal Character Model (15%)
Project 05:  Final Project              (20%)
3D Printing:                (15%)
Professionalism and Participation (10%):    MISSING MORE THAN 3 CLASSES will
                      result in an AUTOMATIC ZERO for this grade.

## IX. Academic Integrity

**University of Texas Honor Code**
The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

## X.  Other University Notices and Policies

**Use of E-mail for Official Correspondence to Students**
- All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at **http://www.utexas.edu/its/help/utmail/1564** .

**Documented Disability Statement**
Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. *(Note to Faculty: Details of a student's disability are confidential. Faculty should not ask questions related to a student's condition or diagnosis when receiving an official accommodation letter.)*

- Please notify me as quickly as possible if the material being presented in class is not accessible (e.g., instructional videos need captioning, course packets are not readable for proper alternative text conversion, etc.).

- Please notify me as early in the semester as possible if disability-related accommodations for field trips are required. Advanced notice will permit the arrangement of accommodations on the given day (e.g., transportation, site accessibility, etc.).

- Contact Services for Students with Disabilities at 471-6259 (voice) or 1-866-329-3986 (video phone) or reference SSD's website for more disability-related information: http://www.utexas.edu/diversity/ddce/ssd/for_cstudents.php

**Behavior Concerns Advice Line (BCAL)**

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit http://www.utexas.edu/safety/bcal.

**Q drop Policy**

The State of Texas has enacted a law that limits the number of course drops for academic reasons to six (6). As stated in Senate Bill 1231:

"Beginning with the fall 2007 academic term, an institution of higher education may not permit an undergraduate student a total of more than six dropped courses, including any course a transfer student has dropped at another institution of higher education, unless the student shows good cause for dropping more than that number."

**Emergency Evacuation Policy**

Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

- Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
- If you require assistance to evacuate, inform me in writing during the first week of class.
- In the event of an evacuation, follow my instructions or those of class instructors.

Do not re-enter a building unless you're given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

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