

**Wright State University Lake Campus
AR/VR IT3450**

Instructor:

Graphic Design & Multimedia Instructor: Jonathan Welch

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Wright State University-Lake Campus

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Office hours: Tuesday 12:30 pm-2:30 pm, Wednesday 2:30 pm-5 pm, Thursday 12:30 pm-2 pm, Email for appointment: Monday & Friday

General Course Information

Pre-requisites: None

Textbook: None

Software: Autodesk Maya 2017, Autodesk Mudbox 2018, Autodesk Motionbuilder 2018, Unity

Course Description (Credit Hours: 3)

In this course, you will learn the fundamental topics and tools of 3D modeling an object from a drawing, technical diagram, or photograph. The students will then learn how to texture their models in Mudbox, animate them, and edit animation in Maya and MotionBuilder. Animated models will be exported for use in Sketchfab online 3D hosting and loaded into a Unity virtual reality environment and augmented reality app.

Course Outcomes

After completion of this course you will be well versed in the basics of 3D modeling, rigging, and animation in Maya, efficient use of graphics engine resources (polygon count, texturing, and lighting), and how to export their work for viewing on the web, virtual reality, and augmented reality. The students will also have an understanding of the fundamental concepts of 3D modeling and animation, augmented reality, and virtual reality to extend and update their skillsets in the changing world of 3D media interaction.

Course Text

There is no textbook required. I will supply step by step instructions on the features that you will need to know.



Course Software

Maya 2017 (Do not try to use 2018)

In order to complete the coursework you will need to download and install Autodesk Maya 2017 on to your computer. Go to the Autodesk <https://www.autodesk.com/> and the Unity 3D websites <https://unity3d.com/>, or to the direct links:
<https://www.autodesk.com/education/free-software/maya>,
<https://www.autodesk.com/education/free-software/mudbox>,
<https://www.autodesk.com/education/free-software/motionbuilder>,
<https://store.unity.com/download?ref=personal> these link directly to the Autodesk and Unity Software Download pages. You will need to create an account and register for the free student licenses.

Please note that this software is necessary to have if you are planning on working at home or on your own computer.

For technical support for installing Autodesk software on your computer check here:

<https://knowledge.autodesk.com/customer-service/download-install>

For technical support for installing Unity software on your computer check here:

https://support.unity3d.com/hc/en-us?_ga=2.21216701.729182155.1533851768-2083206459.1533227302

Also: If you wish to use the software on campus, please check the availability of lab times at the Lake Campus- Andrews 183 or 185.

Dayton Campus please contact-CATS for the lab availability of this software in the Library stacks.

On-Line Class Info—How to Take the Class On-Line

This class is fully on-line and will use Pilot and email for corresponding. In general, students will listen to the lecture on PANOPTO (found on your Pilot home page) to do the assignments for each chapter. All assignments will need to be uploaded to the Weekly Drop Box in Pilot. Each Saturday I will direct you with instructions for weekly assignments to follow. A general guideline is included in this syllabus.

The time for all deadline dates is **1:00 p.m. every Saturday!** Except for the last week of the term, which the due date is: **Thursday by Midnight**

In summary: Read the weekly assignment/lecture email, Do the assignments listed on the assignment sheet. The deadlines are every Saturday by 1:00pm except for the very last final assignment due on Thursday instead. If any questions or concerns arise, don't hesitate to e-mail me. Please be sure to include the chapter and the page and step you are having difficulties with on the assignment. Comments for your assignments will be left in the comment section of the grade portion of Pilot.

Late Work

Late work is only accepted 24 hours after due date with a 1 letter grade penalty. The only exception is under the extreme circumstance of provable emergencies (i.e. Sickness, with note from doctor, funeral, etc). You must take all necessary steps to complete your work in time, each week. Use your time wisely; all late work will be marked as a zero.

Grading Scale

90% - 100% = A
80% - 90% = B
70% - 80% = C
60% - 70% = D
below 59% = F

Grade Breakdown

Class Work Assignments	50 pts.
Skill Projects	100 pts.
Final Project	100 pts.
Final Project Presentation	50 pts.
Discussion posts	100 pts.
Total	400 pts.

Announcements or Issues with Pilot

Please check your e-mail regularly in the unlikely event an announcement is sent to the class. Reminders will be sent out weekly for the assignment of the week.

Data Files: The files used for the assignments can be downloaded from your Pilot Content > Lesson Data Files.

Feel free to correspond by e-mail if you have any questions. If you have dial-up Internet services some parts of this class will be difficult to operate so it's advised to have access to high speed Internet.

Finally, each student has to be the judge of how well he/she comprehends the material. The book does contain some terms that you will become familiar with as you read the material. The key to success will be constant communication between the student and the instructor. Do not hesitate to e-mail me if you encounter problems.

Tutoring

The (SSC) Student Success Center offers FREE services to help students meet their full potential. Hours will be M-F 9-5. Tutoring in any subject, study groups, one-on-one technology workshops, feedback on writing assignments, and general academic skills coaching available. Tutoring hours will be M-Th from 10-5. Tutors will be available on Fridays by appointment only. Location: Andrews 182 Phone: 419-586-0333 Setup your tutoring session on the Web: <http://wright.mywconline.com>

Disability Services

If a student has a disability that will require special accommodations, it is essential that he or she discuss it with the instructor and/or The Center for Independent Achievement (CIA) before or during the first week of the semester. The CIA will work with these students on an individual basis to determine what services, equipment, and accommodations would be appropriate regarding their documented needs. Students who may qualify for these types of service should initiate contact with the instructor and/or the CIA as soon as possible to enable the university to meet their needs. Please call Deanna Springer at 419-586-0366 or 1-800-237-1477, deanna.springer@wright.edu or visit the CIA for more information.

Academic Integrity

Cheating of any kind will not be tolerated. From the Wright State University, Office of Judicial Affairs, Student Guide to Academic Integrity:

"It is the policy of Wright State University to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and truth. Furthermore, it is the policy of the university to enforce these standards through fair and objective procedures governing instances of alleged dishonesty, cheating, and other academic misconduct."

Writing

Because writing is such an important part of a college education, the Student Success Center provides free writing support to all Wright State students, at any stage of your writing process and for any class. I encourage you to visit the SSC for help with any aspect of your writing, from research to revision. Sessions are available M-Th by appointment or walk-in from 10-5 pm and Fridays by appointment only from 10-5. To make an appointment, stop by the SSC (182 Andrews Hall) or call 419-586-0333. For more information about the SSC, their hours, and scheduling, please visit: <https://lake.wright.edu/campus-life/student-success-center>.

Math

The Student Success Center offers free assistance to students enrolled in developmental mathematics courses within the Wright State Catalog. I encourage you to visit the SSC for help with any aspect of math above DEV. Sessions are available M-Th by appointment or walk-in from 10-5 pm and Fridays by appointment only from 10-5 pm. To make an appointment, stop by the SSC (182 Andrew Hall) or call 419-586-0333. For more information about the SSC, their hours, and scheduling, please visit: <https://lake.wright.edu/campus-life/student-success-center>.

Class Schedule:

WEEK 1

MAYA INTERFACE AND SIMPLE OBJECT CREATION

WEEK 2

NURBS, POLYGONS, AND BOOLEANS

WEEK 3

MODELING FROM A PHOTOGRAPH

WEEK 4

TEXTURING IN MUDBOX

WEEK 5

RETOPOLOGY

WEEK 6

LIGHTING, TRANSFERRING TEXTURE MAPS, AND OPTIMIZING RENDER ENGINES

WEEK 7

UPLOADING STATIC MODELS TO SKETCHFAB

WEEK 8

RIGGING AND CONSTRAINTS

WEEK 9

ANIMATION IN MAYA AND MOTION EDITING IN MOTIONBUILDER

WEEK 10
EXPORTING MODELS FOR UNITY

WEEK 11
UNITY BASICS

WEEK 12
VR

WEEK 13
FALL HOLIDAY

WEEK 14
AR

WEEK 15
ASSESSMENT EXAM (50)

WEEK 16
FINAL PROJECT (200)