

APPLIED 3D MODELING (AM)

COURSE NUMBER: DIG6358C	CREDIT HOURS: 2.0
SEMESTER/YEAR: SUMMER B 2021	CLASS LOCATION: ONLINE (REAL-TIME)
	CLASS MEETING TIME(S): <i>TUESDAY/THURSDAY 9:30AM – 12:15PM</i>
INSTRUCTOR: Seunghyuk Jang (Hyuk)	OFFICE LOCATION/HOURS: CSE 424
	CONTACT EMAIL: Contact via Canvas Inbox
CONTACT PHONE: (352) 294-2000	COURSE WEBSITE: DIGITALWORLDS.UFL.EDU/PROGRAMS/MA-IN-DIGITAL-ARTS-SCIENCES/

COURSE DESCRIPTION

3D asset production skills are essential for modelers and animators working in Communications, Film, Interaction Design, Game, Industrial Design, and Virtual Reality (VR). This course instructs students in the best industry standard practices and pipelines for creating 3D assets, with a special concentration in producing content for Virtual Reality.

PREREQUISITE KNOWLEDGE AND SKILLS

Enrollment in the MA in DAS program or consent of instructor.

PURPOSE OF COURSE

To familiarize students with the core skills used in professional 3D modeling in Virtual Reality (VR) using an industry standard tool. Students will learn to create digital 3D assets that accurately represent real world objects, produce digital VR environments from concept to completion.

COURSE GOALS AND/OR OBJECTIVES: At the conclusion of this course, students will be able to –

1. Produce Navigable VR environments from concept to completion (Model, Texture, Shade, and Lighting).
2. Create Low-poly assets can be implemented into a Game Engine
3. Understand the 3D graphics pipeline (both pre and real-time rendered) and how it affects best practices for efficient and well-crafted 3D assets.
4. Manage and modify Physical Based Shader node.

COURSE SCHEDULE:

The course incorporates lecture, in-class exercises and assignments to apply and reinforce skills learned. Additionally, students will be asked to participate in online critiques to strengthen their skills in analysis and critical thinking. Individual assignments will be explained in detail as the course progresses.

The FINAL EXAM TIME SCHEDULED FOR THIS COURSE will be announced in advance of each semester by the University of Florida Registrar's Office at <http://www.registrar.ufl.edu/soc/>

Contents/Topic	Assignments/Quizzes
Course Objectives Overview of course and objectives 3D modeling for Extended Reality (XR) Basics of 3D Modeling in Maya <ul style="list-style-type: none"> Image Plane 	Assignment 1: Modeling a hard-surface object in Maya
Texturing in Maya <ul style="list-style-type: none"> Unwrap the UV Pre-render textures vs Real time render textures 	
<ul style="list-style-type: none"> Advanced Texturing in Maya and Substance Painter Use/Customize material library 	Assignment 2: Modeling an organic object in Maya
Advanced details with low poly assets	
Rendering in Maya vs Game engine <ul style="list-style-type: none"> Arnold Render in Maya Hardware render for VR 	Assignment 3: Digital Painting (Handmade Painting)
Dynamics in Maya and Game engine	Assignment 4: Lighting and Rendering
FINAL PROJECTS DUE Final movie file and project folder must be submitted by Due Date	Final Project Due!

REQUIRED TEXTBOOKS AND SOFTWARE:

- Autodesk Maya 2020 (Educational version is free for students) [DOWNLOAD](#)
- Adobe Photoshop CC
- Adobe After Effects CC
- SketchFab Account
- Substance Painter

RECOMMENDED MATERIALS:

- Mastering Autodesk Maya 2016 : Autodesk Official Press by Todd Palamar
 ISBN-13: 978-1119059820/ ISBN-10: 1119059828 Edition: 1st
 Also View in Google Play
https://play.google.com/store/books/details/Todd_Palamar_Mastering_Autodesk_Maya_2016?id=A5YvCgAAQBAJ
 And iTunes
<https://itunes.apple.com/us/book/mastering-autodesk-maya-2016/id1027638809?mt=11>
- Williams, Richard. *The Animator's Survival Kit--Revised Edition: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet*. Faber & Faber, 2012.

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Williams, Richard. *The Animator's Survival Kit App*:

<https://itunes.apple.com/us/app/the-animators-survival-kit/id627438690?mt=8>

- Lynda.com, Online tutorial (*FREE access for UF students*)

COURSE FEES:

Course fees are assessed for certain courses to offset the cost of materials or supply items consumed in the course of instruction. A list of [approved courses and fees](#) is published in the Schedule of Courses each semester. (UF-3.0374 Regulations of the University of Florida).

Material and supply and equipment use fee information is available from the academic departments or from the schedule of courses (Florida Statutes 1009.24). The total course fee for this class is \$35.50

The total course fee for each course is listed on the UF Schedule of Courses.

(<https://registrar.ufl.edu/soc/>).

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EVALUATION OF GRADES

Assignment	Total Points	Percentage of Grade
Participation – Students are expected to actively participate in class discussions, both in class as well as in class online forums outside class meetings.	100	10%
Weekly Assignments – Weekly assignments are due the first session of each week unless otherwise noted. The work will be uploaded to CANVAS prior to the beginning of class otherwise the work will be considered late.	450	45%
Final Project – Final Project is the final result of the semester long effort in learning. It is expected that in this final project, students employ the principles and techniques they have learned during the semester.	450	45%

GRADING SCALE:

Letter Grade	% Equivalency	GPA Equivalency
A	94 – 100%	4.0
A-	90 – 93%	3.67
B+	87 – 89%	3.33
B	84 – 86%	3.00

B-	80 – 83%	2.67
C+	77 – 79%	2.33
C	74 – 76%	2.00
C-	70 – 73%	1.67
D+	67 – 69%	1.33
D	64 – 66%	1.00
D-	60 – 63%	.67
E, I, NG, S- U, WF		0.00

More information on grades and grading policies is here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

COURSE POLICIES:

PARTICIPATION / ATTENDANCE POLICY

Students are allowed three unexcused absences. If you miss more than three classes during the semester, each additional absence will lower your overall grade by 50 points. If you miss more than six classes, you will fail the course. Exempt from this policy are only those absences involving university-sponsored events, such as athletics and band, and religious holidays, family emergencies, and health issues for which you must provide appropriate documentation in advance of the absence.

In our course, attendance for On-Campus and RT On-Line students is mandatory. Students are allowed **three unexcused absences**. If you miss more than **three classes** during the semester, each additional absence will lower your overall grade by **1 Letter Grade (ex. A becomes A-)**. If you miss more than **six classes**, you will fail the course. Exempt from this policy are only those absences involving university-sponsored events, such as athletics and band, and religious holidays, family emergencies, and health issues for which **you must provide appropriate documentation in advance of the absence**.

MAKE-UP POLICY

Unless discussed at least 72 hours in advance of the deadline, late assignments after available date on Canvas will not be accepted. Late submissions after Due will lower your completion points by 10 per each day. Excluded from this policy are any assignments missed due to medical emergencies.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

COURSE TECHNOLOGY

The students will be required to have access to, and use a personal computer with the access to the Internet. Word editing software will be required for written assignments.

COURSE COMMUNICATIONS

Students can communicate directly with the Instructor regarding the course material through UF e-Learning. <http://elearning.ufl.edu/>

UF POLICIES:

UNIVERSITY HONESTY POLICY

UF students are bound by The Honor Pledge that states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conducthonor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

CLASS DEMEANOR

Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Please avoid the use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

STUDENTS REQUIRING ACCOMMODATIONS

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

NETIQUETTE COMMUNICATION COURTESY

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats, more information can be found at: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

ONLINE COURSE EVALUATIONS

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or

three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

CAMPUS RESOURCES

HEALTH AND WELLNESS

U Matter, We Care

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center

<http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

ACADEMIC RESOURCES

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.

<http://www.crc.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.

<http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.

<http://writing.ufl.edu/writing-studio/>

Student Complaints Campus:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

On-Line Students Complaints:

<http://www.distance.ufl.edu/student-complaint-process>

Disclaimer: This syllabus represents the instructor's 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.

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