

DESIGN IMPLEMENTATION

INSTRUCTOR: Seunghyuk Jang (Hyuk)	Class location: CSE E413
Semester/Year: FALL 2018	Class meeting time(s): T & TH, P 3 - 4
OFFICE LOCATION/HOURS: CSE428 M&W 11:30AM-12:30	CONTACT PHONE: (352) 294-2000
Credit Hours: 2.0	Course Number: DIG69312C
CONTACT EMAIL: ANGELOS@DIGITALWORLDS.UFL.EDU	COURSE COMMUNICATION: UF E-LEARNING

COURSE DESCRIPTION

With the sudden rise of high quality virtual reality hardware, virtual reality became a common tool that is changing the way people interact with the world. Knowing how this works will help to develop more useful VR experiences.

PREREQUISITE KNOWLEDGE AND SKILLS

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

PURPOSE OF COURSE

The purpose of this course is to familiarize students with the core skills used in creating virtual reality environment using an industry standard game engine. Students will learn to create virtual reality that could accurately represent real world or non-existing world with their creative mind. They will also produce virtual reality environments from concept to completion and apply various interactions that help students to make their own unique VR experiences.

COURSE GOALS AND/OR OBJECTIVES

By the end of this course, students will be able to:

1. Understand the workflow of character development in Virtual Reality (VR).
2. Create Virtual Reality Environment from ground up using a powerful cross-platform 3D game engine.
3. Develop most important VR interaction concept.
4. Run VR applications on a smart phone, and most up to date VR hardware.

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 weekly 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/>

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Contents/Topic	Assignments/Quizzes
Overview of course and objectives <ul style="list-style-type: none">• Character Modeling for VR/AR• Retopology practice	Review the class lecture
Rigging Workshop <ul style="list-style-type: none">• Character rigging with HumanIK• Comparison with 3rd party plugins	Assignment 1: Planning
Rendering Workshop <ul style="list-style-type: none">• Photo realistic render• Eyeball workshop	Assignment 2: Level Creation
Animation Workshop I <ul style="list-style-type: none">• Looping Animation• Animation for trigger	Assignment 3: Make it run
Animation Workshop II <ul style="list-style-type: none">• Game Engine implementation	
Dynamics and collisions	
FINAL PROJECTS DUE Final movie file and project folder must be submitted by Due Date	Final Project Due!

REQUIRED TEXTBOOKS AND SOFTWARE:

1. UNITY 3D / UNREAL ENGINE 4
2. Autodesk Maya 2018 (Educational version is free for students) [DOWNLOAD](#)
3. Adobe Photoshop CC
4. Substance Painter

RECOMMENDED MATERIALS:

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 \$17.00

The total course fee for each course is listed on the UF Schedule of Courses.
(<https://registrar.ufl.edu/soc/>).

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 – 59%	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-

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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**.

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>

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 COMMUNICATIONS

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

COURSE TECHNOLOGY

The University of Florida and Digital Worlds requires that students have access to and on-going use of a laptop/mobile computer for DIG courses in order to be able to function in the current learning environment. Students are required to access electronic forms of information, submit assignments and communicate with other students and faculty electronically.

COURSE TECHNOLOGY SUPPORT:

The [Technology Support Center](#) provides computer support for Digital Worlds students who access Visimeet, lecture recordings, student equipment, facilities and other technology-based resources. <http://digitalworlds.ufl.edu/support>

For computer assistance related to Visimeet, lecture recordings, student equipment, and facilities request please [Submit a Help Ticket](#) or email support@digitalworlds.ufl.edu.

For support related to account services, technical consulting, mobile device services, software services, administrative support, application support center, and learning support services, please contact the [UF Computer Help Desk](#) available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@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](#) 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) 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](#). 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 [evaluation 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.