[Randi Faris]
Contact: [352 294 2000] | [Canvas Email]
Office: [Virtual]
Hours: [Wednesday, 4-5 PM]
Or by Appointment

DIG3878 GAME SYSTEM DEV 2
Spring 2025

Course Meetings: [Asynchronous at student demand]
Course Mode: [Online only]
Course Location: [Online section through Canvas Shell and Zoom]

Course Description

This course will cover the fundamental principles of Game Engine's programming such as basic collision detection, input detection, instantiate, destroy game object and others. The student will also learn how to use game engine to develop various applications such as Personal Computer (PC) and mobile game, Augmented/Virtual Reality (AR/VR) project and others

Course Prerequisites

BA in Digital Arts and Sciences major, DIG 3873 with minimum grade of C.

Learning Outcomes

By the end of this course, students will be able to:
- Practice working with a game engine interface and features
- Apply the basics of game engine scripting to a game development project
- Develop mini game on PC and mobile platform
- Create an AR and VR project using game engine

Materials & Books

Required

- Unity HUB and Unity 2022.x (Free registration required)
- Visual Studio (or similar software editing tool)

Supplemental

- https://learn.unity.com
- GitHub Code Repository (Free registration required)
- Linked-In Learning Online Unity Tutorials (Free access for UF students)

[DIG3878 GSD2 Online]

- Official Unity Development Community https://unity3d.com/community

Technology Requirements
- Laptop or desktop computer able to run specified version of Unity software. A graphics card is extremely helpful.

Course Schedule
This schedule is only a guide and is subject to change. Unless otherwise indicated, assignments and readings are due the day they are listed on the syllabus, not the following day.

Week	Subject	Assignment Quizzes	Assignments Due
1	Class Introduction, Game Engine Installation Interface, RigidBodies, Collision Detection, Prefabs	**Assignment 1**	**TBA**
2	Input, Destroy-vs-SetActive, Instantiate	**Assignment 2**	**TBA**
3	Translate and Force Movement, Simple Timer, Materials	**Assignment 3**	**TBA**
4	Audio, Trigger Collision, Button.	**Assignment 4**	**TBA**
5	Adding Components, Following Object, Score, Name-vs-Tag	**Assignment 5** **Challenge 1**	**TBA**
6	WaitForSeconds, Finding Distance, Switching Scenes, User Interface (Button, Image, etc)	**Assignment 6**	**TBA**
7	Workshop: Mini Game Development	**Assignment 7** **Challenge 2**	**TBA**
8	Workshop: FPS Game Development **MidTerm**	**Assignment 8**	**TBA**
9	Final Project Explanation	Meeting Report + Game Design Document **MIDTERM**	**TBA**
10	Post-Processing	Meeting Report	**TBA**
11	Mobile Dev: iOS	Meeting Report **Check Point 1**-ALPHA Version	**TBA**
12	Mobile Dev: Android	Meeting Report	**TBA**

13	Unity & Augmented Reality	Meeting Report **Check Point 2**-BETA Version	TBA
14	Unity & Virtual Reality	Meeting Report	TBA
15	Unity for other purposes	Meeting Report+ GAMMA Version	TBA
16	FINAL PROJECT	Submit your team's FINAL VERSION game	TBA

Grading Criteria

Assignment / Assessment	Total Points	% of Grade
Weekly Graded Quiz/Assignment (1 pt x 15 weeks)	15	15%
Two **Challenges** – There will be 2 Challenges to examine student's proficiency of certain topics	10	10%
Midterm– Students are expected to individually develop a mini-game for the Midterm	25	25%
Three Check Points – students will form a group for the Final Project. Each checkpoint will be a deliverable of the game at different development stages.	15	15%
Final Project – Each group will develop a game to show their abilities to satisfy requirements given by instructor	35	35%

Grading Scale

Letter Grade	% Equivalency
A	94 – 100%
A-	90 – 93%
B+	87 – 89%
B	84 – 86%
B-	80 – 83%
C+	77 – 79%
C	74 – 76%
C-	70 – 73%
D+	67 – 69%
D	64 – 66%
D-	60 – 63%
E, I, NG, S-U, WF	0 – 59%

More information on grades and grading policies is here: https://catalog.ufl.edu/UGRD/academic-

Materials and Supply Fees

Material and supply and equipment use fee information are available from the academic departments or from the schedule of courses (Florida Statutes 1009.24). The total course fee for this class is $0.00. The total course fee for each course is listed on the UF Schedule of Courses. (https://registrar.ufl.edu/soc/)

Course Policies

Attendance Policy, Class Expectations, and Make-Up Policy

The instructor is responsible for communicating the specific details of what percentage of your grade (if any) will be assigned to participation, and how class participation will be measured and graded. The UF Digital Worlds Institute is committed to the idea that regular student engagement is essential to successful scholastic achievement. No matter if the class is held in a traditional classroom, an online classroom, or a combination of the two, interaction with your peers and the instructor will empower you to greater achievement.

This is an asynchronous online course, so students may watch the video lectures at their own pace. However, students are expected to complete weekly assignments and submit them via Canvas by the due date. There may be occasional real-time sessions (RTS) held live via Zoom. Attendance to these is recommended but not mandatory, however, it is expected that those students who do not attend live RTS will watch the video recordings of those sessions. Things may be said in those sessions that are important, and students are expected to know.

Communications with the students will be done via Canvas Announcements, Canvas Inbox Messaging, assignment submission comments and comments within the assignment rubrics. Students are expected to check Canvas announcements and their email on a regular (daily) basis, so they do not miss any important communications about this class. Students are expected to read the submission and rubric comments in a timely manner. Sometimes these require a timely action or response from the student. Questions or concerns about a graded assignment must be sent to the Professor via Canvas Inbox not the assignment's submission comment.

Students may submit most assignments up to 3 days late, with a penalty of 10% per day. Extensions on due dates will only be given to people with special accommodations from the DRC or with appropriate documentation by going through this web site: https://care.dso.ufl.edu/instructor-notifications/.)

The final project will not be accepted late under any circumstances with no exceptions.

Students may only participate in classes if they are registered officially or approved to audit with evidence of having paid audit fees. The Office of the University Registrar provides official class rolls to instructors. Students are responsible for satisfying all academic objectives as defined by the instructor. Absences count from the first-class meeting.

Acceptable reasons for absence from or failure to engage in class include illness; Title IX-related situations; serious accidents or emergencies affecting the student, their roommates, or their family; special curricular requirements (e.g., judging trips, field trips, professional conferences); military obligation; severe weather conditions that prevent class participation; religious holidays; participation in official university activities (e.g., music performances, athletic competition, debate); and court-imposed legal obligations (e.g., jury duty or subpoena). Other reasons (e.g., a job interview or club activity) may be deemed acceptable if approved by the instructor.

For all planned absences, a student in a situation that allows an excused absence from a class, or any required class activity must inform the instructor as early as possible prior to the class. For all unplanned absences because of accidents or emergency situations, students should contact their instructor as soon as conditions permit.

Students shall be permitted a reasonable amount of time to make up the material or activities covered during absence from class or inability to engage in class activities because of the reasons outlined above.

Course Technology
The students will be required to have access to and use a personal computer with access to the Internet. Word editing software will be required for written assignments. A video camera is required for Zoom meetings.

The University of Florida and Digital Worlds requires that students have access to and ongoing use of a laptop/mobile computer for DIG courses to be able to function in the current learning environment. Digital Worlds requires each student's laptop computer to meet certain minimum specs for heavy graphics use, the requirements documented below must be met. https://digitalworlds.ufl.edu/programs/ba-in-digital-arts-sciences/technology-requirements/

Course Communications
Students can communicate directly with the instructor regarding the course material through the course management system (CANVAS) using "Canvas Mail". Students attending Zoom office hours are expected to have their video cameras on.

Course Recordings
Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Creation of Original Content Ethics
For original projects and all assignment deliverables, students should remember that representations of acts of violence, coarse and offensive language, sexual behavior, bodily function and ability, neurodiversity, and personal identity are likely to cause extreme audience response, regardless of the creator's intentions. In addition, the recreation of such actions and subjects for fictional purposes may unintentionally traumatize or negatively impact those who collaborate in the creation of the images. While the university encourages students to explore themes and tell stories that may include this difficult subject matter, they should be cautioned against modes or styles of representation that might be considered unnecessarily offensive or potentially triggering. Instructors, faculty, and university administrators reserve the right to not show or share any student work they feel is inappropriate for their classroom or for public exhibition, as there may be concerns about the impact of such work on the community. We encourage students to consult with their faculty when producing work that might be considered controversial, and to err on the side of being cautious when it comes to making decisions about a project's content - in other words, make the PG-13 version of your story, not the R version, and certainly not the "unrated" version. This is also to help students understand that most professional creative situations have strict guidelines and limitations on such content and how it is

produced: your ability to tell stories effectively with "less" is a strong professional skill that will aid in the dissemination of your work to a broader audience.

Coding Policies

Individual Assignments
- For all individual assignments sharing/copying, "borrowing" of code structure, looking at code from another student or providing such code, and plagiarism, in addition to other dishonest behaviors, are all considered to be academic dishonesty.
- **Looking at any piece of external code*, sharing files, searching for solutions found online, using AI-generated or suggested code, using AI-generation tools for writing or translating reports, or using someone else to code your solution is strictly prohibited.**

Group Assignments
- For all group assignments sharing/copying, "borrowing" of code structure, looking at code from another student OUTSIDE of your group or providing such code, and plagiarism, in addition to other dishonest behaviors, are all considered to be academic dishonesty.

All Assignments
- Any student found to have violated the above rules, whether a provider or receiver or unauthorized help, will be given a **zero** on that assignment **and** a **two-letter final grade decrement** for a first offense. For a second offense, you will get an E grade. Also, for both offenses, you will be reported to the Honor Court. **If you aren't clear on what constitutes plagiarism, ask the course staff.**
- **You may use code provided with the course materials to do your assignments.**

*For the Midterm and Final projects, using code provided from other Digital Worlds classes may be allowed, but this will be detailed by the professor when going over these assignments.

Course Technology Support

Technology Support Center
The Technology Support Center provides computer support for Digital Worlds students who access Zoom, lecture recordings, student equipment, facilities, and other technology-based resources.
http://digitalworlds.ufl.edu/support

For computer assistance related to Zoon, lecture recordings, student equipment, and facilities requests please email support@digitalworlds.ufl.edu.

UF Computing Help Desk
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 Computing Help Desk available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@ufl.edu.

University Policies

University Honesty Policy

UF students are bound by The Honor Pledge which 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-conduct-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 who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, 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

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://catalog.ufl.edu/UGRD/academic-regulations/ferpa-confidentiality-student-records/

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/

Campus and Academic Resources

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

Online Students Complaints: View the Distance Learning 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.