

DIG2632

Introduction to Game Design & Development

Instructor

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Email

Canvas Mail

Office Location

CSE 242

Office Hours

Zoom (TBA)

Course Number

DIG2632

Semester/Year

Offered in
Summer / Fall

Course Credits

3 credits

Course Location

ORC (Summer)
PICT (Fall)

Course Meeting Times

TBD

Course Description

Introduces designing video games with simple drag-and-drop programming and basic asset creation. Covers the essential principles of design and development needed to create effective arcade-style games. Provides a solid foundation in the technical skills needed to create multi-platform games.

Pre-Requisite Knowledge and Skills

None

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

- Understand the general workflow for an executable games using one of the industry-standard software.
- Define the scope for their game by creating a Game Design Document.
- Understand the various types of tools involved in designing 2D game assets.

Required Materials

- Unity HUB 3.8.x and Unity 2022.3.xx+ (*Free registration required*)
- Visual Studio (*or similar scripting software*)
- Adobe Photoshop CC
- Pixilart

Recommended Materials

- Lynda.com Online Unity Tutorials (*Free access for UF students*)
- Official Unity Development Community <https://unity3d.com/community>
- ArtStation <https://www.artstation.com/>
- SketchFab <https://sketchfab.com/>
- Night in the Woods game <http://www.nightinthewoods.com/>
- Digital Graphic Drawing Tablet with Pen (*Photoshop compatible*)

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	Assignments
Week 1	Introduction to Game Development <ul style="list-style-type: none"> Syllabus Overview Review students' examples Game Genre and Gameplay Brainstorming 	None
Week 2	Game Design Document (GDD) Creation <ul style="list-style-type: none"> Aesthetics, Gameplay, and Features Milestones, Scope, Deliverables 	GDD V1.0
Week 3	Initial Prototype Development <ul style="list-style-type: none"> Unity Editor Basics Unity Package & Scene setup Rough Gameplay Maps 	Rough Level Map
Week 4	Player Character and Animation <ul style="list-style-type: none"> Pixel Arts Gathering references Creating a customized character 2D Character animation 	Player Character Design (GIF)
Week 5	FIRST PROTOTYPE (Character & Platforms) <ul style="list-style-type: none"> Creating extra assets & tiles Tile & background setup in Unity Applying animation in Unity 	Prototype I (Character functionality)
Week 6	User Interface Development <ul style="list-style-type: none"> Canvas UI/UX Pipeline Collectibles Dialogue system in Unity 	UI/UX Screenshots Collectibles Dialogue
Week 7	Weapon system & Enemy Functionality <ul style="list-style-type: none"> Player weapon system Health Bar 	Video recording Weapon system
Week 8	MIDTERM MILESTONE <ul style="list-style-type: none"> Enemy Patrol & Chase Enemy weapon system Game Build Process Testing and Bug-Fixes 	MIDTERM MILESTONE (Character + Enemy +UI)
Week 9 10.14	Level Transitions and Post-processing <ul style="list-style-type: none"> Level Indexes and Navigation Teleporting 	Video recording Level Transition Teleport

Week	Subject	Assignments
Week 10	Auxiliary Systems <ul style="list-style-type: none"> • Parallax and Layers • Hybrid Lighting • Post-processing System Exercises 	Lighting Screenshot
Week 11	Particle Systems & Splash Screen <ul style="list-style-type: none"> • Unity Particle Editor • Practical Effects Creation 	Video Recording Particles & Splash Screen
Week 12	Support Game Levels <ul style="list-style-type: none"> • Splash Screen in Unity • Game Title scene, buttons, and ending/credit scene • Consistent Design 	Screenshots of Game level Support
Week 13	Game Audio <ul style="list-style-type: none"> • Creating your own sound effect & Voiceover • Audio Trigger • Adobe Audit • Audio Balancing 	Video recording with Audio
Week 14	Play Testing <ul style="list-style-type: none"> • Bug and Issue Priorities • Scope Triage • In-class review 	Bug List Document
Week 15	GOLD MASTER MILESTONE <ul style="list-style-type: none"> • Final Game Build • In-class review 	GOLD MASTER MILESTONE
Week 16	GOLD VERSION Showcase	Course Evaluation

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 (Passing)
C-	70 – 73%	1.67
D+	67 – 69%	1.33
D	64 – 66%	1.00
D-	60 – 63%	.67

Letter Grade	% Equivalency	GPA Equivalency
E, I, NG, S-U, WF		0.00

More information on grades and grading policies is here:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Materials and Supply Fees

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 \$11.85.

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

You are expected to participate in all course assignments and submit all your work on time.

On Campus Students (F2F)

Attendance is mandatory. You are required to attend the class on time to receive full credit for attendance as well as participate in the class by asking questions, answering questions, or engaging in the media in other forms during the live class. Attendance and participation will be jointly graded on Canvas using the Attendance tool. By arriving on time to class you will receive 50% of your grade. By participating/engaging throughout that class, you will receive the other 50% of your grade for that day. If you arrive late to class you will not receive your initial 50% of your grade for that day.

Unexcused Absences: On third Unexcused absence will drop a letter grade down at the end. On 4th unexcused absence will drop 2 letter grades down at the end of the semester.

Online Students (OA/OS)

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.

Students will take a weekly attendance quiz via CANVAS. There will be a guideline explaining on the first day of the class.

LATE WORK

Work submitted late will always be given partial credit, so turning in LATE work is always better than NOT turning in any assignments – which will always result in a zero for that task.

Late Penalty

- Up to 12 hours – 20% penalty of the maximum possible points (ex. 100 --> 80)
- After 12 hours till 48 hours – 30% penalty of the maximum possible points (ex. 100 --> 70)
- After 48 hours – 50% penalty of the maximum possible points (ex. 100 --> 50)

Exceptions

- Medical issues with an official letter from the health care service. (must have date/sign)
- Other issues must be discussed ahead of time and granted a permit from the instructor.

MAKE-UP POLICY

In general, acceptable reasons for absence from or failure to participate in class include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays, and participation in official university activities such as music performances, athletic competition, or debate. Students must provide appropriate documentation in advance of the absence when possible. No documentation is needed for an absence due to religious observation.




Students are responsible to contact the instructor if anything happens, and all the missing assignments must be discussed with the instructor.

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/UGRD/academic-regulations/attendance-policies/>

Course Modality

Course modality is the way in which a class is offered/delivered to students by the instructor. All students, regardless of the modality, will achieve the same learning objectives. Students can check their class schedules or reference the top of this syllabus to see the format(s) available for each of their individual classes. The modality of a course does not vary during a semester, and students are expected to adhere to the instructor-defined attendance guidelines for that format. Use the guide below to familiarize yourself with the various ways classes are offered at the Digital Worlds Institute.

Know Your Course Modality

		
Face-to-Face (F2F)	Online Asynchronous (OA)	Online Synchronous (OS)
Students attend class F2F in a classroom. Class sessions may be recorded for students to view later.	Students watch the posted recording of the class session or studio recording online at their convenience.	Students participate in a class in real-time through Zoom.
Hybrid refers to a course that is partially Face-to-Face (F2F) and Online Asynchronous (OA)		
In a HyFlex Model , students have the flexibility of moving across all three modalities as needed or desired.		

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.

The University of Florida and Digital Worlds requires that students have access to and ongoing use of a laptop/mobile computer for DIG courses in order to be able to function in the current learning environment. Digital Worlds requires each DAS major'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".

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.

Course Technology Support

Technology Support Center

The [Technology Support Center](http://digitalworlds.ufl.edu/support) 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](https://helpdesk@ufl.edu) 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](mailto:helpdesk@ufl.edu) 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.