

# CREATING MOBILE GAMES (CMG)

<b>COURSE NUMBER:</b> DIG2632 <b>SEMESTER/YEAR:</b> SUMMER B/2019	<b>CREDIT HOURS:</b> 3.0 <b>CLASS LOCATION:</b> ORC 0120 <b>CLASS MEETING TIME(S):</b> MON – FRI 9:30 AM-10:45 PM FINAL EXAM FRIDAY AUGUST 9 9:30 AM-10:45 PM
<b>INSTRUCTOR:</b> Nick Heitzman <b>CONTACT PHONE:</b> (352) 294-2000	<b>OFFICE LOCATION/HOURS:</b> THU 2:00-4:00 PM <b>CONTACT EMAIL:</b> Contact via Canvas Inbox <b>COURSE WEBSITE:</b> ELEARNING.UFL.EDU

## COURSE DESCRIPTION

This is an introductory course on designing your own game with simple drag and drop programming and basic asset creation. Unity 5 is user-friendly, and you will create dynamic arcade-style platformer video games while learning essential principles of game design and the development process.

**PREREQUISITE KNOWLEDGE AND SKILLS:** None

## PURPOSE OF COURSE

This course focuses on providing students with a solid foundation in the technical skills needed to be successful in the emerging field of mobile game application design and development. Students will gain a strong knowledge of multiplatform mobile game and tools.

**COURSE GOALS AND/OR OBJECTIVES:** By the end of this course, students will be able to:

1. Understand the general work-flow for creating mobile games using industry standard software.
2. Define scope for their game by creating a Game Design Document.
3. Understand the various types of tools involved in designing a mobile game.

## COURSE SCHEDULE:

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/>

**Final Presentation Date: AUGUST 9 2019**

Week	Topics	Assignments/Quizzes
1	Course Objectives and Overview Creating a Simple 2D Platformer <ul style="list-style-type: none"> <li>• Class Introduction</li> <li>• Syllabus review</li> <li>• Unity install check</li> <li>• Pipeline Process and Flow</li> <li>• 2D Platform Games</li> </ul>	<b>Assignment 1:</b> Simple Game Design Document

	<ul style="list-style-type: none"> <li>• Game Design Document Overview</li> <li>• Assignment GDD discussion and exercise</li> </ul>	
2	<p>Introduction to Unity 5</p> <ul style="list-style-type: none"> <li>• Basic GUI Overview</li> <li>• Sorting and Layers</li> <li>• Image Formats</li> <li>• Creating/Importing Assets</li> <li>• Naming Conventions</li> <li>• Scenes / Levels / Concept Maps</li> <li>• Sprites</li> <li>• Background, Midground, Foreground</li> <li>• Platforms</li> <li>• Design Rules and Color Use</li> <li>• Assignment: Rough level map design</li> </ul>	<p><b>Assignment 2:</b> Design your own rough platform level map concept – then use in Unity to develop gameplay level</p>
3	<p>Basic Gameplay Features</p> <ul style="list-style-type: none"> <li>• Movement</li> <li>• Physics and Collision</li> <li>• Player Camera</li> <li>• Start and End Level</li> <li>• Platforms</li> <li>• Damage and Death</li> <li>• Enemies</li> <li>• Hazards</li> <li>• Assignment: Screenshot of your base game level</li> </ul>	<p><b>Assignment 3:</b> Screenshot of gameplay camera view – first gameplay testing session with prioritized feedback</p>
4	<p><b>Game Build, Animated Sprites, Lighting</b></p> <ul style="list-style-type: none"> <li>• Custom 2D Assets in Photoshop</li> <li>• 2D Lighting through Sprite Materials</li> <li>• Animated Sprites</li> <li>• Secondary Animations</li> <li>• Assignment: Animated sprite sheet</li> <li>• Game build process overview</li> </ul>	<p><b>Assignment 4:</b> <b>Game Build</b></p> <p>Animated sprite sheet for an element in your game</p>
5	<p>User Interface and Splash Screen</p> <ul style="list-style-type: none"> <li>• Canvas UI</li> <li>• NPC Dialogue Functionality</li> <li>• Custom Fonts</li> <li>• Score and High Score</li> <li>• Collectable Counter</li> <li>• Data management</li> <li>• Parallax scrolling</li> <li>• Assignment: Screenshot showing your UI</li> </ul>	<p><b>Assignment 5:</b> Screenshot showing your user interface in game</p>

<b>6</b>	<p><b>Gameplay Review and Post-mortem</b></p> <ul style="list-style-type: none"> <li>• Gameplay Review</li> <li>• Identifying bugs and assigning severity</li> <li>• Bug Fixing and Evaluating</li> <li>• Assignment: Final game executable</li> <li>• Post-mortem discussion</li> </ul>	<p><b>Final:</b> <b>Game executable and materials</b></p>
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**REQUIRED TEXTBOOKS AND SOFTWARE:**

- Unity Hub [DOWNLOAD](#)
- Adobe Photoshop CC

**RECOMMENDED MATERIALS:**

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

**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 \$0.00

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
<p><b>Participation</b> – Synchronous students are expected to participate in class discussions. Asynchronous students are welcome to actively participate in class discussions. Both synchronous and asynchronous students are expected to participate in online forums outside class meetings.</p>	100	10%
<p><b>Assignments</b> – 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.</p>	500	50%

<b>Final Project</b> – 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.	400	40%
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**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**

We value participation more than mere attendance. Each 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.

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>

In our course, attendance for synchronous 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 **100 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**.

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Additionally, tardiness will not be tolerated. If you are tardy for three class periods, you will receive an unexcused absence.

### **MAKE-UP POLICY**

Presentations may not be presented late. Documented emergencies or medical situations may be the only accepted reasons for an excused absence on the day of a presentation.

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 the course management system (CANVAS).

*Electronic communication outside class meetings is welcome, however unless absolutely urgent, will be responded to M-F from 9 AM to 5 PM.*

When you send an email to your instructor, you should:

- Use the Canvas “Inbox” tool for your course unless you have specific directions otherwise
- Send to the minimum number of necessary recipients
- Use a descriptive subject line
- Be concise and clear
- Use standard file formats for attachments (e.g. PDF, DOCX, XLSX), or confirm that the recipient can open the format you intend to send
- Sign your message with your name and return email address

### **NOTE ON INSTRUCTION**

The course incorporates lecture, in-class exercises, and assignments to apply and reinforce skills learned. Additionally, students will be asked to participate in homework expanding on in-class lessons to strengthen their skills. Individual assignments will be explained in detail as the course progresses.

## **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

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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 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](mailto: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](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.*