



Instructor Name: Randi Faris

Contact: (352) 294-2000 | randi@digitalworlds.ufl.edu

Office: Online/Zoom

Hours: Online

DIG3873 Game Systems Development 1 - Online

Fall 2025

Course Meetings: Online

Course Modality: Online Asynchronous (OA)

Course Description

This course will introduce the fundamental principles of the C++ programming language. Students will become familiar with input output, variables, arithmetic operations, if-else conditional statements, and their use in game development. Students will also learn about the basic understanding of object-oriented programming (OOP) within the industry.

Course Prerequisites

Digital Arts and Sciences BA major.

Learning Outcomes

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

- Understand the C++ programming syntax
- Understand basic programming logic
- Read and understand the code written by other programmers
- Use existing code and modify/expand it.
- Understand the basic principles of object-oriented programming

Materials & Books

Required

- Software: CodeBlocks for C++ IDE or XCode

Supplemental

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Technology Requirements

- Personal laptop / computer

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.

Weekly Schedule

| Module | Topic | Assignments |
|--------|--|---|
| 0 | Class introduction | Course Overview Quiz; Introduce Yourself Discussion |
| 1 | IDE Installation Introduction to C++ Computer Architecture SW Development Lifecycle | CodeBlocks installation "Hello World" Quiz 1 |
| 2 | Variables & Constants Good Coding Practices | Basic Input/Output Quiz 2 |
| 3 | Arithmetic Operations | Simple Calculations Quiz 3 |
| 4 | Logic & Conditional | Basic Logic, Quiz 4 |
| 5 | Code workshop 1 Boolean & Switch | Character Selector, Quiz 5 |
| 6 | Repetition - Loops | Practicing Loops, Quiz 6 |
| 7 | Functions | Basic Functions, Quiz 7 |
| 8 | Code Workshop 2 Nested Loops & Arrays | Nested Loops and Arrays, Quiz 8 |
| 9 | Sentinel-controlled Program, Multi-Dimensional Arrays & Random Numbers | 2D Array, Random Number Quiz 9 |
| 10 | Fun with Strings | Strings, Quiz 10 |
| 11 | Using C++ Vectors | Vectors, Quiz 11 |
| 12 | Classes and Objects Public and Private | Classes, Quiz 12 |
| 13 | Classes & Functions in Separate Files | Classes & Functions in Separate Files, Quiz 13 |
| 14 | Static Methods & Properties | Static Methods & Properties, Quiz 14 |
| 15 | TBD #ifdef, ternary operator | Assignment 15, Quiz 15 |

Grading Criteria

| Assignment / Assessment | % of Grade |
|--|------------|
| Weekly graded assignments (10 points each) | 15% |
| Weekly graded quizzes (10 points each) | 10% |
| Project 1 (10 points) | 10% |
| Project 2 (10 points) | 10% |
| Project 3 (10 points) | 15% |
| Midterm Exam | 15% |
| Final Exam | 25% |

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-regulations/grades-grading-policies/>

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 achieve greater success.

In our course, participation in online forums and timely submission of assignments, quizzes, and projects is expected. Late assignments may be submitted up to 3 days after the scheduled due date, incurring a penalty for each day late – this does not apply to the Final Project which must be completed on time as scheduled




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 competitions, 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.

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". Student can also attend online office hours via Zoom for real time communication with the instructor.

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](#) available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@ufl.edu.

University Policies

[Information about university-wide policies and resources can be found here.](#)

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.