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| Screen Shot 2015-04-16 at 9 | Course Number: | AGGP 101C |
| Course Name: | Introduction to Game Design and Creation with Programming |
| Course Sections: | W \ WL \ RL |
| Course Format: | 2 hour lecture & 3 hour lab |
| Semester/Year: | FALL 2020 |

Course Description:

Introduces the student to game design with a focus on core programming concepts and common game mechanics. No prior knowledge of game development is assumed. Several hands-on game programming assignments demonstrate real world implementations of abstract concepts. A research paper on the game industry and development topics is assigned. Each student is required to create a small game project during the last several weeks of the course.

Prerequisites:

Courses:   
Co/Prerequisite: CPET 107C, or with permission of Program Coordinator for AGGP.

Major Course Objectives/ Learning Outcomes:

* Introduction to Programming using C#
* Introduction to Unity Development
* Introduction to Unity Scripting using C#
* Introduction to the Game Industry and Game Design

Instructor(s):

Instructor: Gregory Walek

E-mail: [gwalek@ccsnh.edu](mailto:gwalek@ccsnh.edu)

**Instructor Availability:**

Professor Walekis available to meet by appointment outside of other class times.

**Help with this course:**

* Did you read and review the reading materials?
* Have you talked to your instructor?
* Did you review the materials given to you?

**Required Text(s) and Material(s)**:

**Personal Unity ID**

*Create your Unity ID at https://unity3d.com/*

*Recommended that you use an email address that is NOT your student account.*

**Unity Hub**

This is Unity’s central application to manage projects and install different versions

<https://unity3d.com/get-unity/download>

**This Class will use Unity Version 2020.1**

**This Class will use Visual Studio for code writing.**If you do not have Visual Studio Installed, Unity will install it for you.

**Students can find the latest version of all course materials located in the AGGP 101 Git Hub Repository**

[*https://github.com/AGGP-NHTI/AGGP101c*](https://github.com/AGGP-NHTI/AGGP101c)

Supplemental Text(s) and Material(s):

* Unity 2018 Game Development in 24 Hours, Sams Teach Yourself
  + Author: Mike Geig
  + Published: May 2018
  + ISBN: ISBN0134998898
  + GTIN: GTIN09780134998893
  + Note: There are other versions of this book, these versions do not cover all of features of Unity 2018.

Other Course Requirements:

AGGP 101 will be held on-line in the AGGP Discord. Students are expected to be on-line in “Virtual Little 231” for the class. Students will be marked absent if they are not online. Students will use their real name as their “Nickname” on the AGGP Discord.   
  
All Students are required to be present at the Lecture on Wednesday night at 6pm

Students are required to be present at one of the two lab sections in the course.   
The first section is 8pm Wednesday night, After lecture.

The second lab section is Thursday Night at 6pm. Students are welcome to attend both lab sessions if they wish to.

Canvass Orientation:

If this is your first time using Canvas at CCSNH, please complete the [Canvas student orientation](https://ccsnh.instructure.com/courses/101). This orientation offers the opportunity to familiarize you with navigating and using Canvas.

Available Technical Support - If you need help navigating this course, explore the Canvas [Student Guide](https://community.canvaslms.com/docs/DOC-10701). The Student Guide, Chat, and Phone offer helpful information and are always found by clicking on the  help button on the bottom-right side of every page in Canvas.

Couse Schedule:

*Course Schedule and due dates are subject to change.*

*Updates will be posted to Canvas*

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| --- | --- | --- | --- | --- |
| **WEEK** | **LECTURE &**  **LAB 1 DATE** | **LAB 2 DATE** | **TOPIC** | **NOTES** |
| 1 | 9/2 | 9/3 | Course Introduction Unity Interface Introduction  Scenes & Prefabs |  |
| 2 | 9/9 | 9/10 | C# Scripts,  Variables,  Translate Component | DUE Sept 9th:  Lab #1  Quiz #1 |
| 3 | 9/16 | 9/17 | Input and Logic | DUE 9/16:  Lab #2  Quiz #2 |
| 4 | 9/23 | 9/24 | Functions  Vector Math | DUE 9/23:  Lab #3  Quiz #3 |
| 5 | 9/30 | 10/1 | Unity Collisions | DUE 9/30:  Lab #4  Quiz #4 |
| 6 | 10/7 | 10/8 | Spawn And Destroy | DUE 10/7:  Lab #5  Quiz #5 |
| 7 | 10/14 | 10/15 | Ray Casting | DUE 10/14:  Lab #6  Quiz #6 |
| 8 | 10/21 | 10/22 | Object 2 Object Communication | DUE 10/21:  Lab #7  Quiz #7 |
| 9 | 10/28 | 10/29 | Scene Loading and UI | DUE 10/28:  Lab #8  Quiz #8 |
| 10 | 11/4 | 11/5 | Building | DUE 11/4:  Lab #9  Quiz #9 |
| 11 | 11/11 | 11/12 | Final Project - Concepts and Proposals | DUE 11/11:  Lab #10  Quiz #10 |
| 12 | 11/18 | 11/19 | Final Project – Work In Progress | Due 11/18:  Final Project – Concept Document |
| 13 | 11/25 | 11/26 | **NO CLASS: Thanksgiving Week** |  |
| 14 | 12/2 | 12/3 | Final Project – Work In Progress | DUE 12/3: Quiz #11  Final Project – Review #1 *(In Lab)* |
| 15 | 12/9 | 12/10 | Final Project – Work In Progress | DUE 12/9: Quiz #12 |
| FINALS | 12/14 –  12/17 |  | Date and time for Final will be posted later in the term. | Final Project Presented at Final |

Computers/Software/Printers:

It is the student’s responsibility to have access to a PC and the ability to:

* connect to the web including SIS and Canvas,
* use their NHTI email account to send and receive email; including attachments,
* use a word processor (e.g. Word) to produce documents,
* store and retrieve files to removable media (e.g. thumb drive),
* print pdf and Microsoft Office documents, and
* install and use software utilized in this course.

Technical Standards:

The exercises in this course are designed to reflect the environment typically found in the game development and software engineering industry. The knowledge and skills developed in this course are required by employers of software developers. As such:

• The lab exercises for this course require the student to possess skills to

(i) Operate a computer running a modern desktop operating system;

(ii) Write, edit, debug, and compile code using the selected programming languages and integrated development environments;

(iii) Maintain a safe lab environment for the student and other students;

(iv) Work in a team environment with other students;

(v) Demonstration work for review in a public setting, including peers (other students & faculty).

• Some lab exercises limit the time a student has to complete the lab exercise.

Class Cancelations:

Campus wide Cancellation:

<http://www.nhti.edu/student-life/student-handbook/cancellations-and-delays>

Students should also sign up for alerts to be sent to their email and/or mobile phone. <https://www.nhti.edu/student-life/campus-safety/nhti-alerts>

Cancelling this Class:

When the instructor cancels or delays the start of lecture/lab, the instructor will post the cancellation to the course’s Canvas and send an email to students’ email accounts as far in advance as possible. The same notice will be posted in the corresponding classroom/lab.

Student Communication Responsibility:

* Students are responsible for reading their NHTI student email at least once each day.
* Students are responsible for regularly accessing this course’s Canvas for the latest course announcements, assignments, and course materials.
* Canvas will be used for instructor announcements; an email noting the announcement will be sent to each student
* GITHUB will serve as the repository for instructor provided course materials, schedules, etc.
* All lecture assignments will be posted to this course’s GITHUB repository.
* Grades for assignments, labs, quizzes, etc. will be posted to Canvas regularly.

Instructional Methods:

The primary delivery of course concepts will be through lectures utilizing the chalk\white board, classroom discussion, Power Point slides, and software demonstrations. Course assignments are designed for comprehension of the course material. Students are expected to research topics, learn them, and be able to demonstrate to peers for their understanding.

Assessment of Student Level of Achievement Measured Against Specific Course Objectives:

Students level of achievement against specific course objectives is measured by:

* Research, Presentations, Written Work,
* Software Assignments
* Participation and conduct during lab and lecture

Grade Calculation

* Journals, Quizzes, Assigned Research,

Presentations, and other Written Work 30% of course grade

* Software Lab Assignments 60% of course grade
* Professionalism (*see below*) 10% of course grade

Professionalism:

*“If you do not act and behave like a professional now, you will never be one.”*

*- Jennell Jaquays*

Students are expected to contribute to a cooperative and productive learning environment. To meet this objective, students are expected to show up for class (and lab) on time, be attentive, not disrupt the instructor or other students, work quietly and use time in the lab time to complete assigned work, stay in lab until assigned work is complete, demonstrate respect for other people, demonstrate initiative and self-motivation, and take responsibility for academic success.

All students are expected to put forth an honest effort in to their work at all times during the term.

Students are expected to act professionally about attendance, punctuality and doing work that is assigned (whether it’s graded or not) in way that is meant to be similar to that which would be expected of them in a professional environment.

Please note: Each unexcused absence from or late arrival to lecture or lab will result in a loss of 1 to 5 points from the professionalism points.

While Professionalism is ranked as 10% of the course grade, it is calculated as an addition to all other grades. In the case that a student receives a negative professionalism grade, it would be calculated into the course grade as its value dictates. This negative grade would reduce the student’s overall grade in the course.

Students are responsible to contact the instructor in a timely manner if they are unable to attend class or will be late.

Any student who commits an egregious unprofessional act or consistently behaves in an unprofessional manner will find themselves removed from the course with an AF Grade.

Consider this your only warning.

Grading System:

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| A | 93 - 100 | B | 83 – 86.9 | C | 73 – 76.9 | D | 63 – 66.9 |
| A- | 90 – 92.9 | B- | 80 – 82.9 | C- | 70 – 72.9 | D- | 60 – 62.9 |
| B+ | 87 – 89.9 | C+ | 77 – 79.9 | D+ | 67 – 69.9 | F | 0 – 59.9 |

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| Other Grades | W | WP | WF | AF |

For the definition of the grades W, WP, WF, and AF, please refer to the NHTI Grading Policy at: <http://www.nhti.edu/academics/requirements-policies/grading-system>

**Attendance:**

**ATTENDANCE WILL BE TAKEN.**

Being on time and attendance at all lectures and labs is a requirement for successful completion of this course. While there may be circumstances over which the student has no control that may necessitate absence from lecture or lab, such absences do not excuse the student from being responsible for the course material missed due to that absence.

Any student that is absent for 10% or more of the semester total number of labs and lectures may receive an immediate grade of AF for the course. This course has 1 lecture/week and 1 lab/week for 15 weeks. Missing 4 or more of any combination of labs/lectures may result in an AF.

Late Assignments:

All homework assignments, pre-lab assignments, and lab reports have due dates posted to Canvas. This out-of-class/lab course work is a critical part of mastering the course material by:

1) reinforcing and supplementing what was taught in lecture,

2) developing the student’s problem solving skills,

3) developing the student’s ability to learn new material/concepts on their own and

4) developing the student’s ability to meet schedule deadlines.

All of these are essential to preparing students to meet the demands of the “hi-tech” industry.

Because new course material is covered each week and builds on the previous week’s material, completing assigned out-of-class/lab work on time is essential.

* Unless otherwise noted, lecture assignments are due at beginning of the lecture or it is late.
* Unless otherwise noted, lab reports and pre-lab assignments are due at beginning of the lab or it is late.

Student absence from lecture or lab does not excuse the student from the due date for assigned out-of-class/lab course work. Therefore, the student should give the instructor the out-of-class/lab work prior to the due date or scan each page to pdf and email the out-of-class/lab work to the instructor by the due date (or take a clearly readable picture of each page and email that).

Homework assignments: 15% deducted for each day late

Pre-Lab assignments: Grade of 0 for being late but must be completed prior to starting the lab exercise.

Lab Reports: 15% deducted for each day late

Lecture and Lab Etiquette:

Unless explicitly allowed by the professor, students should not use PC’s, cell phones, or be texting during the lecture or lab. Please set cell phones to silent during lab or lecture, and keep “chit-chat” to a minimum during lab time.

For safety reasons and for the protection of equipment, no food or drink is allowed in the lab. Student may bring a beverage to lecture but may not eat during the lecture.

Student Delivery of Completed Assignments:

* All programming assignments will be returned to the instructor electronically using Canvas.
* The instructions to return assignments electronically are posted to this course’s Canvas.

Collaboration Versus Cheating Policy:

* Students are encouraged to provide appropriate support to their peers. For example, sharing concepts and ideas with peers is appropriate support.
* However, providing appropriate support to a peer should NOT result in a reduction of the academic requirements or rigor all students are expected to meet for course work. For example, it is NOT appropriate to share your work to another student or to provide answers to assigned course work (e.g. homework, lab results, lab exercises, quizzes & tests, etc.)
* Unless otherwise specified by the instructor, students repeating a course cannot submit, or use in any way, their work from a previous semester. Doing so will be considered cheating.
* Unless otherwise specified by the instructor, all assignments, pre-labs, lab reports, take home exams, etc. should represent the work of the student only. Students doing otherwise may be considered to have plagiarized or cheated.
* Students using answer keys, another student’s work from a previous semester, etc. may be considered to have plagiarized or cheated.
* Any portion of work turned in, that is not the sole product of the student, should be clearly identified and annotated with a reference indicating the source. In such cases, the student will not be considered to have plagiarized or cheated. However, the instructor has the discretion to deduct points from the grade for the portion of the work that was not the sole product of the student.
* The department head may impose additional and more serious disciplinary action when cheating is discovered.
* See also NHTI policy: <http://www.nhti.edu/academics/requirements-policies/plagiarismcheating-policy-and-procedures>

**Minimum Grade:**

The minimum grade in AGGP major courses C. Any grade below this indicates that the student is not ready to continue with subsequent courses or to successfully enter the workforce. As such, major courses with a grade of less than C will not count toward meeting the program’s completion requirements.

**Academic Affairs Notices:**

Each student is responsible for reading the Academic Affairs Notices[[1]](#footnote-1) that are posted in this folder on Canvass.

1. This semester’s Academic Affairs Notices are the same for all courses taught at NHTI [↑](#footnote-ref-1)