DIG4930 - Special Topics in DAS: Level Design & Assembly in UE5

Instructor: Adam Bideau (Adam or Mr. Bideau is fine, just maintain professionalism.)
Course Format: Online
Credits: 3 credits
Duration: 12 Weeks
Software: Unreal Engine 5
Learning Platform: Canvas
Officer Hours: Monday - 8:00 p.m - 9:00 p.m Tuesday and Friday: 7:00 p.m - 8:00 p.m
Email: adam.bideau@ufl.edu

Course Description

This course introduces students to the process of developing a small functional design experience using Unreal Engine, with a focus on modern game production techniques, level design, and game composition. Rather than building assets from scratch, students will work with pre-developed assets (models, textures, animations, sounds) to assemble, script, and iterate on a fully playable game level or experience. Through hands-on projects and guided instruction, students will gain proficiency in using Unreal Engine's Blueprint visual scripting system, understand modular level design principles, learn about industry-standard production pipelines, and explore the process of testing and polishing a playable build. This course emphasizes design thinking, iteration, team communication, and the creative application of technical tools, bridging the gap between art and code in the game development process.

** **Note:** This course will use *Pre-developed assets only.* These assets will be provided by me and will be the **_only_** ones allowed in the course.

Course Objectives

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

- Understand and articulate the stages of a typical game production pipeline.

- Design and build modular, engaging, and functional design experience using pre-made assets.

- Script core gameplay mechanics and interactions using Unreal Engine's Blueprint system.

- Playtest, debug, and iterate on game levels to improve design and performance.

- Package and deploy a working build of a level for distribution.

Weekly Schedule

Assignments will be posted on Mondays.

Week	Topic	Assignment	Due Date
Week 1-2	**Course Intro & Level Design Basics**		
UE5 Overview	Project Setup + Overview of Termanology	Build a test level using premade assets	**May 25**
Week 3 - 4	**Blocking Out 3D Levels (BSP/Geometry)**		
Build First Level + Design Document	Learn how to Blockout a Level + Learn how to make a Design Document	Playable Blockout	**June 8**
Week 5 - 6	**Blueprint Scripting**		
Intro To Blueprint	Learn Blueprint and what you can do with it	Build a Blueprint Demo	**June 22**
Week 7 - 8	**Modular Kit Design**		
Modular Assets	Use modular pieces and Megascans to create a beautiful corner	Playable Beautiful corner + Final Submission of Design Doc	**July 13**
Week 9-12	**FINAL Submission**		
Playable level + walkthrough video	Final Build + Design Doc	Design Doc with Playable Level	**Aug 8**

Lecture Schedule

Monday's at 5 p.m. - 8 p.m. The instructor will announce changes to times/dates as needed. Please keep a lookout on canvas for announcements.

Required Materials

- Unreal Engine 5.5.4
- Microsoft Word
- Teams

Online Participation

- Discussion forums used for peer reviews
- Participation includes constructive feedback on peer projects

Grading Criteria

Assignment / Assessment	Total Points	% of Grade
Bi-Weekly Assignments - Screenshots, Video and Map file as dictated per assignment.	600	35
Interactive Assignments - Screenshot of Virtual or Real-World design experience you found engaging with description of why.	1200	20
Weekly Discussions - Respond to a weekly prompt related to that week's lesson	120	15
Design Document - Submitted and approved by the instructor	100	10
FINAL PROJECT (GOLD MASTER MILESTONE) Final executable build of the Level, Final Design Document and Video walkthrough	100	20

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

We value participation more than mere attendance. 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. Interaction with your peers and the instructor will empower you to greater achievement.

In our course, attendance is taken at the beginning of each class period and is calculated as the Participation element which makes up 15% of your overall grade. 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. All assignments are due by the stated date and time. No late assignments will be accepted. Please be professional with your delivery of items. It is expected students watch the pre-recorded lectures in a timely manner to allow for adequate effort on the weekly assignments. I suggest watching lectures 2-3 days after being posted on Monday (at the latest).

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.

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. Instructor may request documentation.

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.

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 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. This course uniquely requires the ability to run Unreal Engine 5+. This means underpowered GPU and CPU is not an excuse for late work.

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. This course requires each student's computer to meet certain minimum specs for heavy graphics use, the requirements documented in the course invitation survey must be met. Reach out to your instructor for more information or reference your email of the invitation survey.

Course Communications
Students can communicate directly with the instructor regarding the course material through the course management system (CANVAS) using "Canvas Mail".

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 Recordings

Our class sessions may be audio-visually recorded for students in the class to refer and for enrolled students who are unable to attend live. Students who participate in live zoom sessions 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 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 Zoom, 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 are expected to communicate with faculty and peers in a professional and respectful manner. Faculty reserve the right to refrain from engaging with students who demonstrate unprofessional behavior or communication. Please be professional and respectful at all times.

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.