

GAME 260 : Level Design

Online, Section 501, CRN 70495

Fall 2021

Instructor: Ian Burch

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Office and Hours: Online on Zoom. M/W @ 3:00 - 5:00 pm or by appointment

Division Chair: Dr Laura Musselwhite; lmusselwhite@unm.edu

Course Goals:

This course focuses on the theory of level design and the practical development of levels. Theory will focus on pathing, flow state, and the expansion/evolution model. Development itself will focus on efficiency and iteration, explored through various game genres.

Learning Objectives:

By the end of the course, students will:

- (1) Be able to analyze and critique existing levels in games
- (2) Have a strong understanding of level structure and path layout
- (3) Design levels with escalating challenges using an expansion / evolution model
- (4) Use whiteboxing, iteration, and testing to efficiently build and refine levels
- (5) Build game levels and environments that provide players a variety of gameplay options

Materials:

- Internet Access
- Way of sharing files such as OneDrive / Dropbox / Google Drive
- Access to GameMaker Studio 2.3 or higher
- Access to Unreal Engine 4.24 or higher
- Notebook

Grade Breakdown:

Design Projects	66%
Level Analysis	24%
Participation & Attendance	10%

Grading will be primarily based on effort and completion, as collaboration and feedback is important. Letter grades will be given as follows, with + or - given for the highest and lowest 3% in each range, respectively. Incomplete (I) grades will not be assigned without extenuating circumstances.

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
0% - 59%	F

Course Details:

The course will be broken into three units, each looking at the level design of a different game genre. Each unit will follow the same progression - we'll begin by discussing the theory behind the layout, progression, and design of these levels. Next, students will analyze levels within an appropriate game. Finally, students will build a level using these design principles.

The first level project will be solo design work as students build a few Mario-style levels, but will playtest each other's levels and provide feedback. The latter two projects - FPS Arena and Puzzle Dungeon - will be cooperative, with students working together to design, build, and script the level. Work will be publicly shared and discussed using the UNM Learn discussion forums.

Tentative Schedule:

Weeks 1-4 : Platformer Design

- Analyzing the design of Super Mario World, Super Meat Boy, and Celeste
- Using the CCST expansion & evolution model to provide difficulty progression and teach mechanics
- How to design levels with sketching, whiteboxing, playtesting, and iteration
- *Project: Platformer Levels*

Weeks 5-9 : Multiplayer Arena

- Analyzing the design of Halo, Call of Duty, Overwatch
- How to encourage different playstyles through asymmetry and cover
- Thinking about elevation and sightlines
- *Project: FPS Arena*

Weeks 10-16 : Dungeons

- Analyzing the design of Legend of Zelda, Skyrim, and Dark Souls
- Looking at non-linear layouts with critical paths, loops, and backtracking
- Incorporating light scripting into our level design work
- *Project: Puzzle Dungeon*

Late Work:

As we are still dealing with Covid-19 and its effects, I'll be lenient on due dates. Email me if you're going to be late on an assignment and I'll generally give an extension. However, as we will be doing peer work, note that late assignments make more work for your classmates as well, so please respect their time. Any assignments not submitted by the end of the semester will be automatically graded 0

Expectations:

Students are expected to conduct themselves in a professional and collegial manner. During Zoom meetings, be professional, appropriate, and mute when not speaking. When posting on discussion boards, be polite, concise, and avoid using internet slang. If you need an extension on an assignment, please email or message me before it is due. Students missing more than 4 consecutive assignments may be dropped from the course.

UNM Administrative Mandate on Required Vaccinations

All students, staff, and instructors are required by UNM Administrative Mandate on Required Vaccinations to be fully vaccinated for COVID-19 as soon as possible, but no later than September 30, 2021, and must provide proof of vaccination or of a UNM validated limited exemption or exemption no later than September 30, 2021 to the UNM vaccination verification site. Students seeking medical exemption from the vaccination policy must submit a request to the UNM verification site for review by the UNM Accessibility Resource Center. Students seeking religious exemption from the vaccination policy must submit a request for reasonable accommodation to the UNM verification site for review by the Compliance, Ethics, and Equal Opportunity Office. For further information on the requirement and on limited exemptions and exemptions, see the UNM Administrative Mandate on Required Vaccinations.

UNM Requirement on Masking in Indoor Spaces

All students, staff, and instructors are required to wear face masks in indoor classes, labs, studios and meetings on UNM campuses, see masking requirement. Vaccinated and unvaccinated instructors teaching in classrooms must wear a mask. Students who do not wear a mask indoors on UNM campuses can expect to be asked to leave the classroom and to be dropped from a class if failure to wear a mask occurs more than once in that class. With the exception of the limited cases described above, students and employees who do not wear a mask in classrooms and other indoor public spaces on UNM campuses are subject to disciplinary actions.

Disability Statement:

In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the

instructor's attention, as I am not legally permitted to inquire. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow. Contact Accessibility Resource Center at 277-3506 or arc.unm.edu for additional information.

If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Cheryl Dilger, the coordinator for Equal Access Services at 925-8910 or cdilger@unm.edu.

Academic Integrity:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Credit-hour Statement:

This is a three credit-hour course. Class meets for two 75-minute sessions or equivalent of direct instruction for fifteen weeks during the Fall 2021 semester. Students are expected to complete a *minimum* of six hours of out-of-class work (or homework, study, assignment completion, and class preparation) each week.

Title IX :

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see pg 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the

campus policy regarding sexual misconduct, see:

<https://policy.unm.edu/university-policies/2000/2740.html>

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration's welcome is found on our website: <http://undocumented.unm.edu/>.