**GAT251 3D Game Design I**

**Fall-2015 DigiPen Institute of Technology**

**Prerequisites:** GAT 250

**Schedule:** Lecture Tuesday, 10:30am – 11:50am in VAN GOGH

Lab Section A Wednesday, 10:30am – 12:20pm in TURING

Lab Section B Thursday, 3:30pm – 5:20pm in TURING

**Classroom:** DA VINCI for Lecture and Labs

**Professor:** Bill Morrison

**Contact:** [wmorrison@digipen.edu](mailto:wmorrison@didpen.edu)

**Class Web Page:** The **GAT251** course at [distance.digipen.edu](http://distance.digipen.edu/).

**Office Hours:** Monday 2pm – 4pm

Wednesday 2pm – 4pm

Thursday 9am – 12pm

*Or by appointment*

**Description**

This course focuses on designing and implementing games using a 3D engine. Students will work to create one or more levels from start to finish, including any needed modifications to game mechanics, controls, and cameras. Topics may include aesthetics, environment building, lighting, texturing, resource placement, player guidance, player controls, camera controls, scripting, and game mechanics in 3D.

**Course Objectives and Learning Outcomes**

In this course, students will:

* Learn how to use space to guide a player through a 3D environment.
* Learn how to use visuals to guide a player through a 3D environment.
* Learn how to use audio to guide a player through a 3D environment.
* Learn how to design and tune 3D player controls.
* Learn how to design and tune 3D dynamic camera.
* Learn how to create interesting moment-to-moment gameplay in a 3D game.
* Learn how to create well-structured segments of gameplay throughout a 3D level.
* Learn how to deliver the aesthetic of competition.

**Required Textbooks**

# None.

**Recommended Textbooks**

# *“Beginning Game Level Design”* by Feil & Scattergood, Premier Press Game Development (ISBN: 9781592004348)

**Academic Integrity Policy**

Cheating, or academic dishonesty in any form, will not be tolerated in this course. Penalties for cheating may include receiving a zero on an assignment, or a failing grade in the course, or even expulsion from DigiPen. For further details, please consult the *DigiPen Academic Integrity Policy*.

**Disabled Student Services**

If students have disabilities and will need formal accommodations in order to fully participate or effectively demonstration learning in this class, they should contact the Disability Support Services Office at (425)629-5015 or [dss@digipen.edu](mailto:dss@digipen.edu).  The DSS Office welcomes the opportunity to meet with students to discuss how the accommodations will be implemented. Also, if you may need assistance in the event of an evacuation, please let the instructor know.

**Mechanisms and Procedures**

**Attendance**

You are expected to attend class and attendance will be tracked. Every unexcused absence past the first will result in a -5% penalty to your final grade in the class. To gain an excused absence, you MUST contact your instructor. You must sign the attendance sheet in order be counted as present. You will also be considered absent if you are more than 15 minutes late to class.

**Class Behavior**

In class, the following rules apply:

1. No food in class – drinks must be in closable containers.
2. Be here on time and be ready to learn.
3. Bring questions and observations.
4. No electronics usage in class unless specifically asked to do so. No phones, no computers, no tablets, no exceptions.
5. Be responsible. Turn in assignments on time and make every effort to attend. If for some reason, you can’t attend, must arrive late, or leave early, you MUST email or text me or you WILL affect your grade.

**Professionalism**

All students in this class are expected to behave in a professional manner in their interactions with all students, faculty, staff, and teaching assistants. This includes personal conduct in class, verbal discussions, and emails. Rude or otherwise unprofessional conduct will result in a penalty of up to 10% on the student's final grade in the class, or more in extreme cases or in cases involving more than a single incident, at the sole discretion of the instructor. Exceptionally professional conduct, above and beyond what is normally expected, can result in a bonus of up to 5%, also at the sole discretion of the instructor. More than any other role in the game industry, a designer's reputation for professional conduct is critical to their career.

**Late Policy**

All assignments are expected to be turned in on time. All late projects have their final grade cut in half. Projects can be improved and resubmitted after they are initially turned in, in which case the new grade is averaged with the old one.

**Grading Policy**

Grades for this class are primarily based on the three projects. The student’s final grade is modified by attendance penalties and penalties for poor lab preparation and/or participation. A student can also get a bonus for exceptional lab preparation, analysis and testing.

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| --- | --- |
| Player Guidance Assignment | 25% |
| Dynamic Camera Assignment | 35% |
| Competitive Multiplayer Assignment | 40% |
| Every unexcused absence from a lecture or lab | -5% |
| Every lab student is not prepared for analysis or testing | -2% |

**Class Schedule** (subject to change)

**Week 1**

**Lecture:** Course Introduction & Overview, Spatial Archetypes I

**Homework:** Work out a rough plan for the player guidance project.

**Week 2**

**Lectures:** Spatial Archetypes II, Level Planning

**Homework:** Create a playable first prototype for the player guidance project.

**Week 3**

**Lectures:** Level Compositions & Guidance

**Homework:** Test and improve your player guidance project.

**Week 4**

**Lectures:** Cinematography

**Homework:** Test and improve your player guidance project so that it is roughly complete.

**Week 5**

**Lecture:** Guidance in Professional Games

**Homework:** Test and improve your player guidance project so that it is ready to turn in.

**Week 6 PLAYER GUIDANCE PROJECT DUE (Midnight Sunday)**

**Lecture:** Presentations & Peer Review

**Homework:** Test and add final touches to your player guidance project. Work out a rough plan for the dynamic camera project.

**Week 7**

**Lecture:** Cameras

**Homework:** Create a playable first prototype for the dynamic camera project.

**Week 8**

**Lecture:** 3D Controls

**Homework:** Continue working on and improving your dynamic camera project.

**Week 9**

**Lecture:** Cameras – Professional Game Analysis

**Homework:** Test and improve your dynamic camera project so that it is ready to turn in.

**Week 10 DYNAMIC CAMERA PROJECT DUE (Midnight Sunday)**

**Lecture:** Presentations & Peer Review

**Homework:** Test and add final touches to your player guidance project. Work out a rough plan for the competitive multiplayer project.

**Week 11**

**Lecture:** Competition Engagement

**Homework:** Create a playable first prototype for the competitive multiplayer project.

**Week 12**

**Lecture:** Multiplayer Design

**Homework:** Test and improve your competitive multiplayer project so that it is roughly complete.

**Week 13**

**Lectures:** Competition – Professional Game Analysis

**Homework:** Test and improve your competitive multiplayer project so that it is ready to turn in.

**Week 14 COMPETITIVE MULTIPLAYER PROJECT DUE (Midnight Sunday)**

**Lecture:** Presentation and Final Advice for all Projects

**Homework:** Test and add final touches to your competitive multiplayer project.