# **GAM 302: Project III for Designers**

# ***Pre-production***

# Fall 2015

**Prerequisites:** GAM250 or GAM255, CS280 or CS 176, PHY200 or PHY115, and GAT 250

**Schedule:**  Monday 3:00pm—3:50pm (first lecture)

Tuesday\* 3:00pm—3:50pm (second lecture)

Friday 11:30pm—3:20pm (lab)

**Classroom:** PLATO for first and second lecture, EDISON/TESLA for labs

*\*This lecture will sometimes be in a different room than GAM 300, which will be announced on Game Central.*

**Professors:** Benjamin Ellinger, Stephen Beeman, Rachel Rutherford, and Ellen Beeman

**Contact:** [bellinge@digipen.edu](mailto:bellinge@digipen.edu) (425) 629-5052

[stephen.beeman@digipen.edu](mailto:stephen.beeman@digipen.edu) TBD

[rachelr@digipen.edu](mailto:rachelr@digipen.edu) (425) 449-1308

[ellen.beeman@digipen.edu](mailto:ellen.beeman@digipen.edu) (425) 829-4246

**Class Web Page:** The **GAM302** course at [distance.digipen.edu](http://distance.digipen.edu) (join **GameCentral** as well).

**Office Hours:** Tues & Thurs 4:00pm-5:30pm (Benjamin Ellinger)

Tues & Thurs 1:30pm-3:30pm (Rachel Rutherford)

Mon 1:00pm-3:00pm, Wed 4:00pm-6:00pm (Stephen Beeman)

Mon & Tues 1:00pm-3:00pm (Ellen Beeman)

*or by appointment*

**Description**

This course is the first semester of a three-semester project, which will be continued in GAM 350 and GAM 375, and focuses on the creation of a polished, professional-quality, real-time game or simulation. It provides the opportunity to work together on cross-discipline teams of three or more members, implementing the design and user experience of the project. This first semester focuses on pre-production to ensure the technology, tools, design, art, audio, and team are ready for full production in the following semester.

**Course Objectives and Learning Outcomes**

In this course, students apply the skills and knowledge gained from their academic courses to a large, team-based project. In the process, students address common production issues, including communication, conflict resolution, planning, testing, etc. Specific design objectives include prototyping, controls, user interface, mechanical design, component design, spatial design, and narrative design.

**Textbooks**

There are no required books for this class.

**Optional Textbooks**

The Art of Game Design, *by Jesse Schell*, Morgan Kaufmann (ISBN: 0123694965)

**References**

You can find the current list of recommended resources on the **GameCentral** page.

**Outline and Tentative Dates**

This class will roughly follow the outline below, although the order and/or content of the lectures are subject to change. The milestones will only be changed in extreme and unexpected circumstances (and will never be moved earlier). Except on milestone weeks, all labs are reserved for meeting with your team, working on your project, or meeting with the instructors. All milestone reports and weekly logs are due by midnight Sunday of the listed week.

**Week 1 (8/31–9/4)**

**Lectures:** Syllabus and Team Structure; Overview of DigiPen Games

**Homework:** Read the syllabus and rubrics. Form teams and talk to instructors if you do not have a team. Submit weekly task log #1.

**Week 2 (9/7–9/11)** *No classes on Monday (Labor Day holiday)*

**Lectures:** Engagement Theory\*

**Homework:** Work out initial team roles and responsibilities. Design initial engine architecture and begin coding. Set up SVN repository and task/bug-tracking system. Submit weekly task log #2.

**Week 3 (9/14–9/18)**

**Lectures:** Flexible Content Design; Best Practices for User Feedback\*

**Homework:** Submit weekly task log #3.

**Week 4 (9/21–9/25)**

**Lectures:** Estimation; Best Practices for UI and UX\*

**Homework:** Integrate all systems into core engine. Finalize at least three game concepts. Finalize your team structure. Submit weekly task log #4.

**Week 5 (9/28–10/2) ENGINE PROOF MILESTONE**

**Lectures:** Each team makes the engine proof presentation to the entire class (this is done in labs as well).

**Homework:** Write individual milestone reports and submit weekly task log #5.

**Week 6 (10/5–10/9)**

**Lectures:** Technical, Design, and Style Guides; Game Feel\*

**Homework:** Submit weekly task log #6.

**Week 7 (10/12–10/16)**

**Lectures:** Requirements; Designing for Specific Genres (Part 1)\*

**Homework:** Submit weekly task log #7.

**Week 8 (10/19–10/23)**

**Lectures:** How Not To Have A Career In Games; Designing for Specific Genres (Part 2)\*

**Homework:** Finalize and prioritize all tasks needed for your prototype. Submit weekly task log #8.

**Week 9 (10/26–10/30) SEGMENT PROTOTYPE MILESTONE**

**Lectures:** Each team makes the segment prototype presentation to the entire class (this is done in labs as well).

**Homework:** Write individual milestone reports and submit weekly task log #9.

**Week 10 (11/2–11/6)**

**Lectures:** Websites and Resumes; Project Rubric Review

**Homework:** Submit weekly task log #10.

**Week 11 (11/9–11/13)** *No classes on Wednesday (Veterans Day holiday)*

**Lectures:** Becoming a Professional; Designer Interviews\*

**Homework:** Submit weekly task log #11.

**Week 12 (11/16–11/20)**

**Lectures:** Design Patterns; Game Tropes and Trope Inversion\*

**Homework:** Submit weekly task log #12.

**Week 13 (11/23–11/27)** *No classes on Thursday or Friday (Thanksgiving holiday)*

**Lectures:** Artificial Personality; Mystery Lecture

**Homework:** Submit weekly task log #13.

**Week 14 (11/30–12/4) EPISODE PROTOTYPE MILESTONE** (Game submission due by midnight Friday)

**Lectures:** Selected teams make an episode prototype presentation to the entire class.

**Homework:** Write individual milestone reports and submit weekly task log #14.

*\*This lecture is in a separate room from GAM 300 students.*

**Retrieved from "**[**http://www.digipen.edu/main/GAM\_200**](http://www.digipen.edu/main/GAM_200)**"**

**This page has been accessed 2,940 times. This page was last modified 11:48, 25 April 2006.**

**Grading Policy**

The grades for this class are based on the score for the final submission made at the end of the semester. The same base score is given to all members of the same team within the same general discipline (coding, design, art). However, each student has their overall score adjusted by a modifier based on the contributions they personally have made to the project (code, design, art, music, testing, producing, etc.), as determined by their individual milestone reports, along with modifiers for participation, teamwork, attendance, etc. These categories of modifiers are explained below and are a major factor in the final grade. It is possible to get an adjustment of a full letter grade up (and several letter grades down), so it is not necessary for a student’s project score to be an A in order to get an A in the class (and a passing project score does not guarantee that an individual will pass). All grades in this class are given as percentage amounts on the normal DigiPen scale.

Mid-term grades are based on the first presentation and first milestone report of the semester. This will not directly affect your final grade (except for the milestone report part), but is a good indication of whether you are in trouble or not.

***Individual Score = Project Score + Milestone Reports + Weekly Logs + Attendance + Extras***

**Milestone Reports**

Each milestone, every student in the class must submit an individual milestone report through [distance.digipen.edu](http://distance.digipen.edu/). This report should include everything you have done related to this class since the last milestone. This means coding, debugging, optimizing, designing, testing, art, music, research, organizing meetings, helping other teams, etc. List everything, with an indication about how much time/effort you spent on each item (include the number of hours on each item, even if it is just an estimate). Also include any notes about how the milestone went in general, team problems, praise for others who did something exceptional, or anything else.

Each milestone report will be given a grade from -30% to +5%, but the final total for all three milestones is subject to adjustment (either up or down) based on a more detailed examination of each student’s work at the end of the semester.

* **+5%** (tons of work done this milestone at a very high quality level)
* **+2%** (tons of work done this milestone, or plenty of work done at a very high quality level)
* **+0%** (plenty of work done this milestone)
* **-2%** (moderate amount of work done this milestone, but should have done more)
* **-5%** (some work done this milestone, but much less than should have been done)
* **-10%** (very little work done this milestone)
* **-20%** (no report submitted or almost no work done this milestone)

#### Testing Done

As part of each milestone report, every student in GAM 302 must include details about the testing they have done. This report must include a detailed breakdown of the testing you have personally done for this milestone. This testing can be of paper or digital prototypes you have created, user interfaces, narrative, character designs, etc. Anything related to the design of the project is valid testing material. Your report must detail what you tested, who you tested with, when you tested, how long each session was, what data you collected/observations you personally made, and what conclusions you personally drew. The data in these reports should be many pages and you should be spending many hours testing each milestone.

The testing you do must have real purpose and meaning for the project you are doing. Just going through the motions, only testing with your teammates, not collecting real data, or not drawing useful conclusions is insufficient and will be penalized.

Every student in GAM 302 must also spend a significant amount of time (at least two hours) each milestone performing a design “best practice” of some kind for the project. This can include design documentation, design research, A-B testing, persona creation, data tracking, UI wire-framing, etc. (ask your instructor to see if something not in this list can count). This best practice must be clearly labelled as part of your milestone report.

The results of this testing breakdown are applied to the milestone report grade. This testing requirement only applies to the first semester of the project, not to later ones.

* **+0%** (plenty of testing done, detailed report, and has done significant work on a design “best practice”)
* **-2%** (moderate testing done, superficial report, or has not done significant work on a design “best practice”)
* **-5%** (some testing done this milestone, or testing/report was of low quality)
* **-10%** (no report submitted, almost no testing done this milestone, or testing/report was very low quality)

**Weekly Logs**

Each week, every student in the class must submit an individual weekly task log through [distance.digipen.edu](http://distance.digipen.edu/). This report should list tasks and approximate hours spent on each task. You are strongly recommended to update a work log file every day you work on GAM tasks, rather than writing this report once a week. The weekly work log will not be graded in detail, but failure to submit these assignments is a -1% for each one.

#### Extras

All other elements of the class are considered “extras”. You can get bonuses of +1% to +5% for performing well in leadership roles, helping out other teams extensively, participating consistently and constructively in class, or just doing something exceptional. Skipping a presentation is a -5% penalty.

**Attendance**

Attendance at all labs and lectures is required, although if you email the instructor about any absences, they might be excused (especially if you send the email beforehand, but send one regardless). Each missed lecture or lab is a -2% penalty. Note that absences are counted by the number of attendance sheets that you have not signed. Even if you have photographic proof that you were in class, it does not count if you do not sign the attendance sheet, as this is an accreditation requirement (email the instructor if you forget to do so). Attendance emails go only to [ellen.beeman@digipen.edu](mailto:ellen.beeman@digipen.edu) with the subject line of “ABSENCE – GAM 302 – LASTNAME, FIRSTNAME – DATE OF ABSENCE - LAB” (or “LECTURE” or “LAB/LECTURE”). Emails requesting an excused absence that do not follow this format will be denied. Please do not email instructors other than Ellen Beeman regarding absences.

**Late Policy**

If an assignment is turned in late, its grade is reduced by 1% for each day (including weekends) it is late, but never below the grade you would get for not doing it at all. After one week, assignments can no longer be turned in.

Late penalties for the final project of a semester are -5% per day. If a final project requires a resubmission due to major penalties from missing technical requirements (which is the only reason a resubmission is allowed), then the grade is reduced by 5% if it is resubmitted within a day of the team being informed of the problem. Each additional day after that results in an additional 5% deduction. If additional resubmissions are required, any additional penalties are cumulative. If your total score for technical requirements is -5% or better, you will not even be notified or allowed to resubmit.

**Milestone Rubrics**

Each milestone has a rubric used to score that particular milestone. These are found on Game Central as separate documents. You should read all these rubrics during the first week of class—do not wait until the milestone is actually due. Note that the first two milestones of each semester do not actually affect your final grade in the class. Only the last milestone is used for your final grade. These rubrics and the submission spreadsheet are found on **GameCentral**.

**Technical and Design Guides**

There are two required documents: the Technical Guide (which is only required if you have GAM 300 students on your team) and the Design Guide (which is only required if you have GAM 302 students on your team). The Technical Guide includes information about how your architecture works, coding methods, naming conventions, and tools (particularly art pipeline and level editing). The Design Guide includes information about how your game works, characters, enemies, the setting, etc. The grades for these guides are part of the project submission rubrics and therefore apply to the whole team, not just the student that wrote them.

**Producer Responsibilities**

Producers are responsible for driving all scheduling and planning for your project. They create and maintain the sprint/milestone backlog for all coding, content creation, and bug fixing tasks (using scrum boards, TRAC, FogBugz, etc.). The producer holds sprint/milestone planning and prioritization meetings, along with at least one scrum each week. Producers must also attend the weekly producer meetings and convey information to the rest of your team.

Producer must submit weekly status reports (these are separate from and in addition to the individual milestone reports). All other team members are required to give the producer the data for these updates. If a team member does not update their status, just list that as part of the report. Also provide a link to the task/bug list in your status reports (or a screenshot/file attachment if that makes more sense). If you submit all status reports on time for the entire semester, you can get up to a +2% bonus.

**Team Size**

Teams must have at least three members officially getting credit for the project (the team members do not have to all be getting credit for the same class, though). The size of your team will affect your final project grade (i.e., each official team member has a “cost”).

* You start with a +15% bonus to your project grade for team size.
* -2% for each team member getting credit for a regular game project class (GAM/PRJ/CSP)
* -1% for each team member getting credit for a non-game project class (CG/GAT)
* -0% for each team member who is not getting credit, or who is a sound designer in a MUS class
* If a student is only on a team for part of a semester, their cost is split among the teams they were/are on.
* The team size bonus can go negative, but then it becomes a penalty to your project grade.

**Team Structure**

Team structure must be determined by mutual agreement among all team members. The only hard requirement is that one student must assume the role of producer, who will be the team’s primary contact person with the instructors. While there are many other possible roles (see below), only the producer role is required. Note that being your team’s producer does not get you out of the other requirements for the class (coding, designing, etc.).

There are many different structures you can choose among to organize your team, each with its advantages and disadvantages. There are two parts to this: leadership roles and developer roles.

Leadership roles include titles such as Producer, Director, Technical Lead, Design Lead, Art Lead, Audio Lead, Test Lead, etc. Traditionally organized teams have all of these roles, with the Producer being responsible for planning and organization, the Director being responsible for the overall direction and creative vision of the game, and the various leads managing developers of their specific type (but ultimately reporting to the Director). This works best for large teams where having leads for each discipline is important. For smaller teams, having leads might not make sense, or might only make sense for certain disciplines. In many cases, the Director may also be a lead (usually a Technical, Design, or Art Lead) or a Producer, especially if the team is small. Some teams do not even have a Director—instead the leads act jointly as a director (this can easily weaken a game’s vision if you are not careful, though). At the most extreme are teams that have no formal leadership roles at all (Valve does this). This can work with just the right team, but can also make it difficult to ship a game on time (Valve’s main weakness).

Developer roles are divided up by the actual work that needs to get done. This can just be generic, by discipline, so that the roles are Programmer, Designer, Artist, Musician, Tester, etc. It can also be more specific, such as Graphics Programmer, Physics Programmer, Networking Programmer, Systems Designer, Level Designer, Animator, Concept Artist, Modeler, Composer, etc. While a single developer usually has only one specific role on a large project, smaller projects tend to have developers fulfilling multiple roles at the same time. Having very specific roles can be good because it makes it very clear what each developer is responsible for, but it can be very inefficient and cause problems when, for example, only one developer knows how the graphics engine works. At the most extreme, we find Valve again, which doesn’t even have formal developer roles (they have developers who do both art and code, for example). This works because they are very careful about the type of people they hire, but many developers would get lost without a clear idea of what their role on the team is.

DigiPen teams have succeeded with just about every type of team structure there is. Your team must determine what structure it is going to use and make that a part of the first milestone presentation.

**Mechanisms and Procedures**

There are a variety of procedures and mechanisms used in this class to make it run as smoothly as possible. Make sure you read each of these sections thoroughly so that you understand what the instructors expect.

**Instructor Questions and Meetings**

You will undoubtedly have many questions for the instructors and will often wish to have individual or team meetings as well. To make this work efficiently, you must email any questions (about any topics you wish) or meeting requests to one of the instructors. Make sure you start the subject of the email with “GAM200”, “GAM300”, etc. so that it won’t be filtered out (failure to do so will result in unanswered emails—note that it must be capitalized and have no spaces or dashes).

In addition to asking questions through email, if you talk with an instructor in person (whether in class or otherwise) and there is some follow-up action the instructor has agreed to perform, you must email that instructor with a reminder. If you don’t send a follow-up email, whatever you talked about will be forgotten and not followed up on (regardless of what the instructor said at the time). Making follow-up emails a habit is excellent practice for the real-world of working with busy bosses, producers, executives, etc.

**Team Names**

Students can generally select any team name they wish, so long as it would be appropriate for an E-10 rated game. However, the official name of the team for competitions and/or press interactions must be DigiPen ***teamname*** (or similar wording). For example, the official name of “Team Nitronic” would be “DigiPen Team Nitronic”. Note that team logos (even ones that include the team name), do not have to include “DigiPen” as part of them.

**Game Competitions**

DigiPen games can only be submitted to competitions by the DigiPen faculty—you cannot enter them yourself. If you think you have a game good enough to be entered into competitions (or that is the goal you are aiming for), make sure you inform your instructors as soon as possible, as they can give you advice directly targeted at making your game better for competitions. As general rule, any game that doesn’t get a final score of 90% or higher will not be submitted to a competition (unless it is later improved). To have a real chance of winning a competition, you’ll usually need a 95% or more.

**Changing Teams**

Students can leave or change teams with no penalty. You can kick someone off your team with a unanimous vote by the rest of the team. You must talk to an instructor about this, but they will not overturn your decision. If you leave your team and cannot find a new one, then you will be placed on the “studio team”, which is run by one of the instructors. Solo projects are not allowed. If you do not stay on the same team for the entire semester, your grade will be based on the team you end up with at the end of the semester. If you only left the first team after half of the semester was completed, then your grade will be the average of the two teams.

**Good-Faith Petition**

In some cases, a student may find that they are on a team that may end up with a failing project grade due to circumstances that are outside of that student’s reasonable control. Examples would be a non-technical designer whose programmer teammates do not get an engine working, or a programmer who provides a good engine, but the designers on the team deliver a very poor experience for the player. If you believe you are, or might be, in this situation, you can petition the instructor for relief at any time during the final milestone (or before the end of finals week after you receive your project grade). For your petition to be accepted, the instructor must be certain that you have done everything reasonable to get the project to passing, and may impose some additional requirements on you.

If your petition is accepted, your project grade will be set to a 70% (unless the project grade is actually higher, of course). Note that this means you must not have a net total penalty from milestone reports, attendance, etc. in order to pass. If your net modifiers are negative, you grade will still be below passing even if your petition is accepted. Putting in a lot of work and attending all classes is the way to protect yourself in this situation. Note that it will be very difficult, if not impossible, for more than a fraction of a team’s members to have a petition granted.

**Game Content**

DigiPen games must be able to get an EC, E, or E10+ ESRB rating. Anything that would require a T (13+) rating requires permission from an Assistant Dean. M (17+) and AO (18+) ratings are not allowed under any circumstances.

*Violence:* only cartoon/fantasy violence is allowed—no gore, body parts, realistic blood, etc.

*Social Issues:* any references to real-world politics or alcohol/tobacco/drugs require approval.

*Sexual Content:* nudity, sex, strongly suggestive sexual themes or references are not allowed.

*Language:* profanity and disparaging/stereotyping of race/gender/culture/disability are not allowed.

Remember that all art and audio must either be created by a current DigiPen student/instructor or be from the DigiPen approved art and audio libraries. You cannot use your friends, family members, public domain material, or other students not in your class (unless you talk to your instructor first). You can never use outside artists/musicians at all.

**Source Control**

Each team is responsible for setting up and managing source control for their project. See <https://svn.digipen.edu/> for details (Mercurial repositories are also available). Contact the IT department to get a repository. You must use DigiPen’s source control, not an external server. Each milestone report will be a -30% if you are not using DigiPen source control.

**Technical Restrictions**

If you have more than one GAM300 student on your team, then your team must abide by all of the technical restrictions found in the GAM300 syllabus (i.e., must build a custom engine in C++). However, a team that only has GAM302 students (and at most a single GAM300 student) can use middleware or a pre-made engine (Unreal, Unity, Zero Engine, etc.). The normal penalties to the project score still apply in this case, though. You do not have to make your graphics 3D, but doing a 2D game will reduce your final project score. The milestones are the same, but Engine Proof is about you showing you know how to use the engine, as opposed to building it.

Even if you are a GAM302 only team, you cannot just make a mod or just make levels. You must use original art, audio, music, characters, gameplay, etc. Please be aware that there is a rubric penalty for using a pre-made engine, even for a GAM302-only team.

**Last Day to Withdraw**

In order to withdraw from a course it is not sufficient simply to stop attending class or to inform the instructor. In accordance with the policy, contact your advisor or the registrar to begin the withdrawal process. The last day for withdrawal from this course is cited in the official catalog.

**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*. Note that in this team project class, working directly with your teammates, or even with other teams, is not cheating (and is highly encouraged). However, each student is required to accurately inform the instructors of the exact work they personally did on the project—any deception is cheating and will be punished harshly.

**Disabled Student Services**

If students have disabilities and will need formal accommodations in order to fully participate or effectively demonstrate learning in this class, they should contact the Disability Support Services Office at [(425) 629-5015](mailto:(425)%20629-5015) 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.