**DigiPen Academy Studio Overview**

DigiPen Academy Studio courses are project-based learning experiences for students to specifically develop skills and processes for “learning to learn.” Unlike a workshop that is more group-based with “step-by-step” instruction, a studio course necessitates a high level of self-directed learning that is facilitated by the instructor. Students will be challenged to use their research, critical thinking, and problem-solving skills through every phase of a project that they define.

Studio students are required to have some prior knowledge and experience that will be assessed by the instructor at the start of the course. Through consultations with the instructor, studio students then develop a highly individualized plan that outlines how that student will complete their project by the end of the course.

To be approved, all project proposals developed by the student in conjunction with the instructor must include the following:

1. **Overview** – What is the project and what is the motivation for the project?
2. **Objectives** – What will successful completion of the project prove in terms of required knowledge and skill outcomes?
3. **Deliverables** – What will be the final specific deliverable (eg. game executable, .mp4 file, series of drawings, etc.)
4. **Resources** – What will be used for the project including:
   1. Materials – Sketchbooks, art supplies, Lego Mindstorms kit, etc.
   2. Equipment – MIDI keyboards, microphone, tablet, etc.
   3. Software - Visual Studio, Maya, Pro Tools, etc.
   4. Instructional resources – Faculty, videos, books, websites, etc.
5. **Schedule** – What is the timeline that will be used to complete the project including milestones?
6. **Risks & Mitigation** – What situations pose a risk for the completion of the project and what is the plan to mitigate the risks?
7. **Evaluation** – What are the rubrics that will be used to measure progress, quality, and competency?

As a studio course uses a competency-based form of evaluation, the quality of the work needs to be the focus for the student, not quantity. It is not unusual for students to initially overestimate the scope of their project and in such circumstances, the student will need to work with the instructor to modify the scope so that the outcomes will provide the student with a strong basis to work towards the larger scale after the studio course.

The following pages contain the template for students to use for their project proposal.

Good luck!

**DigiPen Academy Studio Project Proposal**

**NAME OF PROJECT**

Snake Game: Attachment Time

9/24/2021

**STUDENT**

Gavin Cooper

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**INSTRUCTOR**

Jeremy Kings

**PROJECT DESCRIPTION**

Describe in 1-2 sentences what the actual proposed project is and the motivation behind the project idea.

This project is a unity game where you play as a snake that has weapons and armor attached to it. The snake will be attacked by enemies and must kill all the enemies to move to the next level. I want to do this project because it sounds like an interesting concept and will make me code things I haven’t tried before like enemies AI and some form of UI for attaching things to the snake.

**PROJECT LEARNING OBJECTIVES**

Describe the main learning objectives that will be achieved to complete the project. What specific knowledge and skills will you gain?

I want to improve my coding skills in general with this project. Specifically, I want to learn about how to make a drag and drop UI for the snake. I also want to learn how to make a simple AI that will attack the snake.

**PROJECT DELIVERABLES**

Describe what the specific deliverable will be. Is this project going to result in a game executable? A composed piece of music that will exported to an .mp3 format? Will it be a series of 8x11 paintings?

The final product will be a unity game.

**PROJECT RESOURCES**

List the specific resources that you need for your project. You should plan to define:

1. Materials – Sketchbooks, art supplies, Lego Mindstorms kit, etc.
2. Equipment – MIDI keyboards, microphone, tablet, etc.
3. Software - Visual Studio, Maya, Pro Tools, etc.
4. Instructional resources – Faculty, videos, books, websites, etc.

The only thing I am going to need is Unity and Visual Studios. I will use the internet if I run into problems, I will try to find solutions or look up clarification for functions.

**SCHEDULE**

The schedule is a daily breakdown of specific topics, tasks, and deliverables that you will use to measure progress with the project.

|  |  |
| --- | --- |
| **Day** | **Tasks and Topics** |
| 1 | Define project, identify learning objectives, identify resources |
| 2 | Completion and approval of individualized project proposal |
| 3 | TBD – Defined by specific project requirements |
| 4 | TBD – Defined by specific project requirements |
| 5 | “Alpha” (Adjustable date based on project) - Effectively the proof of concept and pipeline. Whatever base knowledge and skills that a student will need to execute the project must be evident. |
| 6 | TBD – Defined by specific project requirements |
| 7 | TBD – Defined by specific project requirements |
| 8 | “Beta” (Adjustable date based on project) - “Content” is complete and implemented |
| 9 | TBD – Defined by specific project requirements |
| 10 | Final project submission and presentation with post-mortem |

|  |  |
| --- | --- |
| **Days** | **Task** |
| 1 | Work on ideas and documents |
| 2-3 | Prototype snake movement |
| 4-5 | Create snake attachments and make snake attachments attach to snake |
| 6-7 | Create enemies and enemies AI |
| 8 | Create basic life system |
| 9 | Create world |
| 10-12 | Create world generation |
| >13 | IDK, not sure what is the next set, lots of polishing |

**PROJECT RISKS AND MITIGATION**

Identify the three (3) greatest concerns that you feel may negatively impact the completion or quality of the project. You will need also identify what your “backup plan” will be should any of the issues come up.

I think the biggest problem with this project is that I will not be working on it consistently, I will only be working on this project when I have nothing else to do. The other two things I am concerned with making the drag and drop UI for the Snake and then the AI for the different enemies. The final problem is going to be figuring out how I want to do levels. I might want to do sudo random world generation where I am randomly generating sections.

I can’t really help the fact that I won’t be working on this project much, that is the nature of this project. If the snake UI ends up not working well I can just change the style of UI to try and make it easier to code. If I have problems with the AI I can always simplify it or ask for help from Jeremy. If I can’t figure out world generation I will ask for help from Jeremy or just name one world by hand.

**EVALUATION:**

This is where you should provide information about how your progress and the level of quality that you will be striving for. This should include, where possible, visual examples or reference to other projects to better quantify that you will demonstrate.

At each step of production, instructors will evaluate as follows:

1. Work does not yet meet expectation
2. Work meets expectation

Advancing to the next step of production is always contingent on instructor approval of each phase and/or milestone.

This project is really just something for me to do when I have extra time so as long as I am learning things I don’t care how the final project turns out. I really like making polished things so I will try to make a finished product but it isn’t a big deal if it doesn’t end up good.

Inspiration:

