**Project Proposal**

**Emma, Ellie & Becca**

**The Big Idea:** What is the main idea of your project? What topics will you explore and what will you generate? What is your **minimum viable product**? What is a **stretch goal**?

The goal of our project is to create a tool for Olin students to help them create a course plan based on the courses they have taken already as well as their areas of interest.

An MVP would be an interactive piece of software that, given your major and courses you’ve already taken, tells you what other courses are required to graduate.

A stretch goal would be an interactive piece of software that takes in a large number of interests and generates multiple paths that could be taken during you time at Olin. This stretch goal would manifest itself in a website.

**Learning Goals:** What are your individual learning goals for this project?

Emma: I want to learn more about the user and interactive portion of software as well as how to make a well-designed interaction.

Becca: I am interested in learning about UI/UX and creating GUIs. Also just feeling a little more confident with the whole coding thing...

Ellie: I’m interested in helping to write an algorithm that can accumulate information about a person and assign weights to different possibilities (trying to combine holism and optimization if possible)

**Implementation Plan:** This will probably be pretty vague initially. Perhaps at this early juncture you will have identified a library or a framework that you think will be useful for your project**.** If you don't have any idea how you will implement your project, provide a rough plan for how you will determine this information.

We will probably end up using Pygame for animation/visual display and interaction things, although there may be (probably are) better libraries out there for doing UI/UX and GUI stuff.

We will have a variety of functions for counting course credits and calculating credits still needed as well as functions for recommending potential courses to fulfill those requirements.

Probably will use pickle to store dictionaries of info.

Other libraries we will most likely discover a need for as we go.

**Project schedule:** You have 6 weeks (roughly) to finish the project. Sketch out a rough schedule for completing the project. Depending on your project, you may be able to do this in great specificity or you may only be able to give a broad outline. Additionally, longer projects come with increased uncertainty, and this schedule will likely need to be refined along the way.

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| Week | Tasks | Deliverables? |
| March 20 - 26 | Make a team! Pick a project! | Project Proposal |
| March 26 - April 2 | Transfer info about major requirements into dictionaries, sketch outline of function architecture |  |
| April 3 - 9 | Implement credit counter and course recommender functions | MVP |
| April 10 - 16 | Front end: start to create basic GUI  Back end: start to move away from “what’s your major?” |  |
| April 17 - 23 | Front end: continue to create basic GUI  Back end: move further away from “what’s your major?” | Simple GUI + Algorithm Check-In |
| April 24 - 30 | Make things prettier and smarter |  |
| Finals Week! | Even prettier and even smarter! | FINAL PRESENTATION! |

**Collaboration plan:** How do you plan to collaborate with your teammates on this project? Will you split tasks up, complete them independently, and then integrate? Will you pair program the entire thing? Make sure to articulate your plan for successfully working together as a team. This might also include information about any software development methodologies you plan to use (e.g. [agile development](http://en.wikipedia.org/wiki/Agile_software_development)). Make sure to make clear why you are choosing this particular organizational structure.

Pair programming for MVP then work independently on aspects of the recommendation algorithm and GUI and integrate.

**Risks:** What do you view as the biggest risks to the success of this project?

Integration is difficult

Project is too ambitious

Not enough time commitment

Bogged down by vague or hard to implement ideas

Little coding experience, easily daunted

**Additional Course Content:** What are some topics that we might cover in class that you think would be especially helpful for your project?

UI/UX

GUI

Webapp stuff

Animation that is classy and not tacky