Course Paths

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Agenda

- Outline problem
- Introduce background and context
- Implementation plan
- Our solution
- Questions and feedback

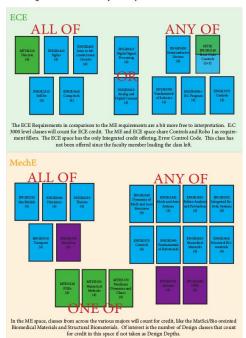
The Problem

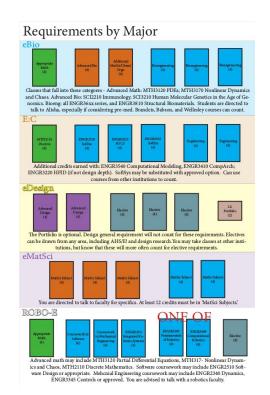
Creating a 4-year course plan is hard! Especially if you aren't yet sure of your major... We want to help!

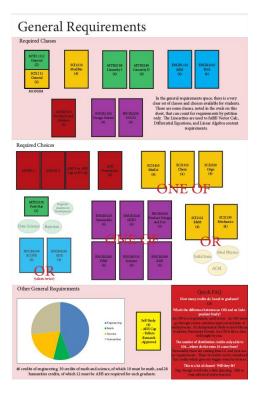


Current Solutions

Requirements by Major







How it will work!

Pandas to structure data

TKinter to display it

UML diagram:

Q: Should general requirements (ie Intro Bio, Phys foundation) live in the Major class or in a list outside of any class?

Course

Course ID number (int 1000-4999)

Difficulty (int 1-10)

depthArea (string 'Design', 'ECE', 'ME', 'ProbStat' or None)

suggestedSemester (int 0-7 or None)

foundationType (string 'Bio', 'Physics',

'Chem/MatSci' or None)

Prereas (list of Course objects)

is depth

is_foundation

is lab



ENG credits (int 0-4)

AHSE credits (int 0-4)

MATH/SCI credits (int 0-4)

requiredSemester (int 0-7 or None)





requiredCourses (list of tuples containing Course objects)

777



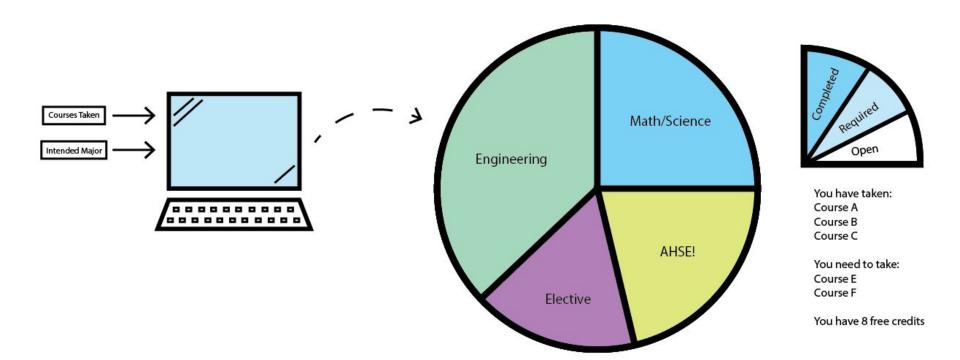


Student

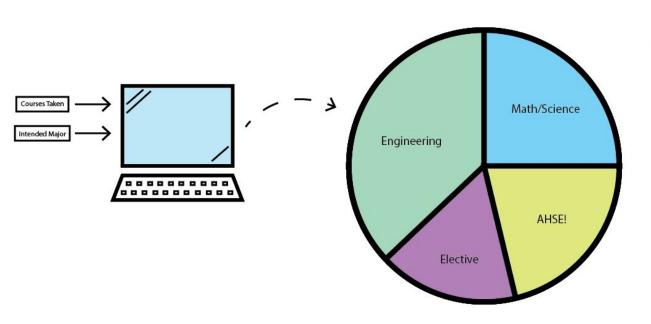
Major (Major object) coursesTaken [] coursesWanted [] coursesNeeded [] maxDifficulty (int 1-50) currentSemester (int 0-7)

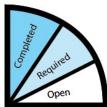
gen_course_plan is locked in left in major (modifies coursesNeeded) left in gened (modifies coursesNeeded) suggested_major

Our Solution



Secondary Solution





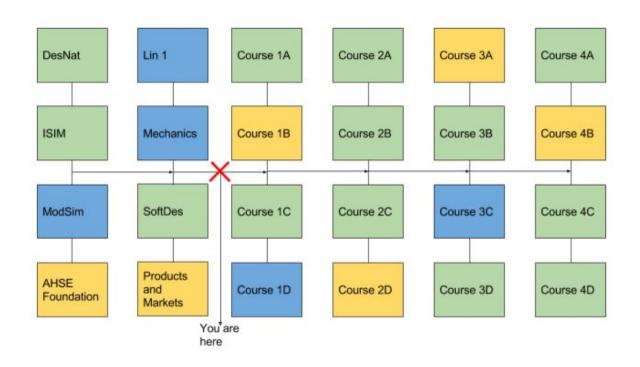
You have taken: Course A Course B Course C

You need to take: Course E Course F

You have 8 free credits

Suggested courses for your free credits: Course G Course H

Final Solution



Challenges

- How do we deal with courses that are not offered on a regular basis? (special topics courses and courses offered sporadically)
- What are the most important factors for us to consider in the recommendation algorithm?
 - Difficulty of course
 - Suggested semester
 - Coloring balance
 - Other things?
- What would be the most intuitive way for the user to input data?
 - o Check List?
 - Text Input?
 - Something Else?
- What is the best way to display the data for the user to read?
 - o Pie Chart?
 - Option Tree?
 - Chronological Flow Chart?