**The University of Puerto Rico at Mayagüez**

**Department of Engineering**

**Software Reliability Testing-INSO 4117**



**Project Proposal: Curriculum Advisor**

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1. **Domain Description**

Curriculum

* + Courses that students must enroll and pass each semester. Some courses require other courses to already be passed in order to enroll. In other cases, some courses can be enrolled if taking a specific course during the same semester. There are courses are not available in each semester.

1. **Current Situation**

Currently Software Engineering and Computer Science Majors are having trouble sorting out which courses to take and how to properly progress throughout the degree. Students currently either go to the advisor to check which classes are needed for their next semester or manually check which classes are required for them to take. Since many students pick classes that they know they have to take, they sometimes choose classes that are not very urgent, because of this they may have to wait a year to be able to take that specific course and it holds them back. When meeting with the department advisor one may have to wait for a long period of time while the advisor is meeting with other students. The advisor has certain hours where they could meet with students but that can be very limiting because students may not be able to attend at those hours.

1. **Needs**

We need a proper guide to help us select the best courses at the best time. By providing a detailed suggestion on how one should progress through one’s major and giving in-depth details on courses, this system can help students continue through their degrees with maximum efficiency.

1. **Ideas**

The idea is to create a web app that allows students to create their own personal profile where they add certain information (student id, name, academic year, curriculum, etc.). With said profiles students can monitor their progress and see future classes that they should take.

1. **Scope**

The problem in general is that there are many students who do not know how to optimize their enrollments such as to graduate as quickly and effectively as possible. Although there is a curriculum to follow, many people deviate from this and will need a tool to get them back on track.

1. **Span**

The problem more specifically is that there are students that are taking longer than they should to graduate. These students could deviate from their curriculum due to taking courses from a minor or they simply don’t pass the necessary classes for a specific course and later have no idea how to get back on track. There are department resources that enable the student to read up on how everything works, but this might not be enough and could still lead to major delays. There are also cases where a course is only given once every two years or so which means that not a lot of attention is brought to this specific course, but the tool could change this.

1. **Concepts and Facilities**
   1. Concept
      1. Student’s curriculum and grades
      2. Courses
      3. Professor’s passing rate of each course
      4. Amount of credits desired per semester
   2. Facility
      1. Devices downloaded with this application
2. **Stakeholders Definition**
   1. Students: The main objective of this Software is to help and guide students in choosing their classes. It will take into consideration different aspects of the student academic information; this will result in a organize and personalize curriculum for the student. Because of this, Students are one of main Stakeholders in this project. They will share an interest for this software like no other community in the Campus, it will give to Students the clarity and organization they are searching for.
   2. University/Department: The students will be able to have a well-organized schedule for the upcoming semester just by a few clicks on their laptops. This is something hard to believe here in Mayaguez, because of this the Department will have a great amount of relief with this Software. While helping the students with their personal schedules this will help the Department in different ways. For example, it will result in better performances of their students and a higher graduation percentage. It will reduce the amount of work done by counsellors, they tend to receive a lot of students and this does not allow them to spend quality time with them and give the best advices.
3. **Assumptions and Dependencies**
   1. Assumptions
      1. Students are currently enrolled in their university.
      2. Students has their academic profile in the database.
      3. Students wishes to continue their studies until graduation.
   2. Dependencies
      1. Database with a list of all enrolled students and their profiles.
      2. Database containing all university’s classes.
      3. Database contains a grade percentage of each professor in their class.
4. **Goals**
   1. This application will provide students with the most optimal preliminary class registrations for their incoming semesters.