Finding Your Way

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Problem

Northeastern's Degree Audit system is used to display a student's progress on the completion of their degree requirements. The current system is unintuitive for students because all the information is presented at once instead of what a user needs for certain tasks. It can be frustrating to navigate through because it displays information in a way that is difficult to understand. There are no instructions built into the system; instead the "Audit Help" option takes users to a seperate FAQ site.

The homepage is mostly taken up by user information, with small buttons for audit creation. When a user chooses "Submit a New Audit" they are redirected to a second page where they have to wait several seconds for the option to view an audit. The system does not include any feedback that it is processing. From there, users are redirected to a third page with the degree audit.

The page that presents the degree audit is very text-heavy and difficult to skim. It uses blue and red text colors, but does not explain what the colors represent. Additionally It only uses the left side of the screen. Users have two buttons options to increase and decrease font size. However they are far less visible than the boldly colored text and changes the font size by a very large magnitude. The audit begins by listing sections for different kinds of requirements, though users must manually scroll to view these sections. This section also begins with the use of symbols (IP, +, R, etc), yet a legend is not provided until the end of the document.

Target Users

The two groups that mostly use the audit systems are students and academic advisors. Students often use the system to plan their classes. Some students, particularly first-years or undecided majors, use the audit system to see the effects of changing their major or catalog year. Academic advisors work with students and the audit system to create a plan of study. Both students and advisors use the system to see the effects of changing a student's pattern of attendance, as some classes are only offered in certain semesters. Academic advisors and older students also use the system to make sure that a student is on track to graduate.

Lit Review

There has been some research on student advising that may provide helpful background on why this is an important problem. According to the engagement model from Davi Dyarbrough, before there can be effective academic advising, the student must be introduced to the basic formal and informal practices of their campus, including the university catalog (Dyarbrough

2002). From our experience, Northeastern's formal (namely the degree audit) and informal practices (students searching for course descriptions) are not interconnected. It is also assumed that when a student identifies a particular academic area of interest, they have a general understanding of what that field entails. Combining the degree audit with the course catalog, particularly for the what-if mode, would allow students to better understand potential fields they are exploring.

Another research paper we found describes the design of a prototype computerized advising system that aims to save time for students and advisors by automating parts of the advising process (Al Ahmar 2011). The object-oriented database tried to allow for "quick and easy course selection and evaluation of various alternatives." Some of the user interface options described in the paper could be useful points of inspiration as we get further in the design process. For example, the system displays buttons such as "Offered Courses", "Study Plan Structure", "Help", "Exit", "Academic Advising", "Print" and "Explain!".

Lastly, we found a paper that goes into detail about a proposed audit system for New Mexico State University (Gupta 1998). The author mentions requirements and challenges of an audit system in addition to reviewing other college audit systems. The author takes into account learnability and school resources. The article focuses more on backend coding, however it does touch on user interaction and audit structure, emphasizing the importance of requirement layout.

Solution

Our goal is to not only redesign the presentation and navigation of information in the degree audit, but also to combine useful aspects of program requirements in the university catalog. Connecting these sources of information, particularly by showing descriptions when the course numbers are mentioned, will facilitate tasks related to planning out course schedules for student users. Instead of showing all possible information at once, which can be overwhelming, our solution will offer different views that cater to different tasks. Other key elements we plan to offer test users include: a summary graphic showing how many credits a student needs to graduate, different language for class statuses and a more prominent key for labels. The end product will be a web interface with a mobile-responsive design to accommodate for different screen sizes.

Works Cited

Al Ahmar, M. A. (2011). A prototype student advising expert system supported with an object-oriented database. *International Journal of Advanced Computer Science and Applications (IJACSA), Special Issue on Artificial Intelligence*, *1*(3), 100-105.

Dyarbrough, D. (2002). The engagement model for effective academic advising with undergraduate college students and student organizations. *The Journal of Humanistic Counseling, Education and Development*, *41*(1), 61-68.

Gupta, G. (1998). Nada: Nmsu advising degree audit system.