Abstract:

- CourseBook is a registration planning utility that connects you to the courses around you.
- The introduction of a course search and planning tool greatly improves the course registration process.
- Feedback gathered from students helped us to design a tool that is more intuitive and student-friendly than the application the University released.

Improving Course Registration:

- At the beginning of this year, course registration was widely regarded as a painful process and the University had no intention of upgrading the system for at least four more years.
- Students had to search through numerous resources and hundreds of (hard to read) pages of information on the registrar timetable, the register, Penn Course Review, and Penn-In-Touch, just to find courses they wanted to take next semester. To make sense of this data, most students were forced to use a spreadsheet to check for conflicts in their schedule, and to organize their classes. Finding a class to fit a specific requirement or timeslot was nearly impossible without hours of searching.
- CourseBook aimed to solve these problems by combining a powerful search utility and intuitive schedule builder into one application; a one-stop-shop for your course planning needs.

Feedback from students shows that CourseBook is easier to use, more intuitive, and more visually pleasing than the University's tool.

CourseBook was continuously denied any access to University databases, and in March 2008 the University unexpectedly announced its own 'Course Search & Schedule Planning' tool.

“We can rebuild it. We have the technology”:

- With the release of the University’s system, CourseBook decided to shift focus from pure functionality to usability.
- The University’s tool had similar functionality to CourseBook, but we felt that by concentrating on acquiring user feedback on registration preferences, we could build a tool that not only had more functionality than the University’s, but that was designed according to the desires of the student body.
- CourseBook offers the ability to search the University registrar and Penn Course Review by criteria determined to be important by students, and provides a flexible and intuitive schedule planning interface.
- Feedback from students shows that CourseBook is easier to use, more intuitive, and more visually pleasing than the University’s tool.

Behind the Scenes:

- CourseBook was created with Google Web Toolkit (GWT). On the server-side, CourseBook draws from a MySQL database, which was populated by a registrar-scraping parser written in C#.
- Since the University denied us any access to the registrar databases, we had to obtain all data from the website. The parser retrieves the data by using regular expressions and pattern matching to scrape information from the poorly formatted registrar pages.
- Data is then processed, formatted, and inserted into the database where it can be read by the server-side component of CourseBook.

The Components of CourseBook:

- **Timetable Search**: CourseBook provides varied criteria to search for courses and when they meet. The query returns information grouped by department and course number into a user-friendly grid of results. Sections can be added to the user’s “MyCourseBook” (shopping cart).

- **Penn Course Review Search**: Historical course rating information can be viewed by searching the PCR. Data is returned in collapsible panels, each of which contains summary statistics and information for all semesters returned.

- **MyCourseBook and Scheduling Utility**: Once added to MyCourseBook, students can select courses to build into a schedule. The schedule updates and saves dynamically, displaying conflicts, warnings, and schedule summary information as the user modifies his or her schedule.

User studies and feedback on CourseBook:

- In order to help determine the features and design of CourseBook, a distributed to a subset of the student body. The survey attempted to gauge student preferences on desired search criteria, layout, and application features.
- With nearly 70 responses, it was a valuable source of information on student preferences and opinions.

The chart on the right shows results on search criteria preferences. It has been ranked in order by what students considered least important to most important.

Additionally, students were recruited for usability studies. Reactions and opinions from these students were used to help make many design decisions to make CourseBook more user-friendly and intuitive.

Conclusion:

- We believe CourseBook provides an easier, more student-friendly, and more enjoyable course registration experience than its competitor. This is largely due to the student feedback we gathered and incorporated into our design.
- Although CourseBook may never be adopted by the University, the information gathered and lessons learned can be valuable to the University for further developing their system to its full potential.