

Usability Track

Description

This track emphasizes the design of software for usability by diverse users. If you are interested in designing user interfaces and understanding design and interaction issues involving the human user and the system itself, then you should consider this track. This track will offer you deeper exposure to the field than the single required SE course offers. This track is applicable to diverse systems that may be in use from desktop applications to mobile devices, where there is an interface between the user and the system. While the stereotypical user interface is a Graphical User Interface, other types of interaction are possible and likely as technology evolves. You will work closely with graphic designers and cognitive psychologists in order to deliver usable technology to users.

Software Engineering courses

The following Software Engineering course is relevant to this curriculum track. The course is required for the degree.

4010-444 Engineering Methods for Software Usability

Application Domains

If you are interested in this track you should consider choosing the Cognitive Psychology(or Human Factors?) application domain.

Courses in Other Programs

Courses relevant to this track exist in different departments around campus, a natural occurrence due to the nature of the field. Psychology has the 0514-433 Cognitive Psychology course, providing an in-depth study of user cognitive issues and foundational knowledge that is useful during usability analysis and design. The Industrial Engineering department has 0303-516 Human Factors. Human Factors is helpful in broadening understanding of the user and their physical environment, in addition to hardware interface design concepts.

The Information Technology department offers 2 courses that are relevant to this track, 4001-455 Needs Assessment and 4002-549 Usability Testing. Each of these courses offers a deeper exploration of usability analysis and testing topics that are covered in 4010-555 and 4010-444, respectively.

Related Minors

If you are interested in a Psychology minor, you can apply the 0514-443 Cognitive Psychology course towards the minor. Other courses that are part of the minor that would be relevant to the track are: 0514-444 Social Psychology, 0514-445 Psychology of Perception, and 0514-448 Industrial & Organizational Psychology. Note that 0514-210 Introduction to Psychology is a prerequisite to the minor and that 0514-402 Research Methods is a required course in the minor.

Refer to the Course Catalog and the Psychology department's website for the most current information on their minor.

Arranging your Track and Scheduling

The courses relevant to this track allow for some flexibility in scheduling. The scheduling suggestions are categorized by the courses' originating department.

- **Psychology.** You must complete 1016-314 Engineering Statistics and the Introduction to Psychology course (which counts as a Liberal Arts elective) before enrolling in 0514-443 Cognitive Psychology. 0514-443 Cognitive Psychology is offered in the Fall and Spring and sometimes in the Summer. You should complete the Introduction to Psychology course (which counts as a Liberal Arts elective) and 1016-314 Engineering Statistics by the end of Year 2 to ensure opportunity to schedule the desired track courses.
 - If you are interested in completing a Psychology minor, you should consider taking Biology as your Science Sequence. The Cognitive Psychology course will be counted as a Free Elective or towards your Liberal Arts concentration if Psychology is pursued as the concentration.
- **Industrial Engineering.** You should complete 1016-314 Engineering Statistics before enrolling in 0303-516 Human Factors. The Human Factors course is offered in spring. The course can count towards an Engineering Elective or a Free Elective.
- **Information Technology.** The prerequisite for 4001-455 Needs assessment is 3rd year standing and the completion of a co-op block. The course is offered in the fall and winter. You must complete 1016-314 Engineering Statistics and 4010-444 Engineering Methods for Software Usability before you enroll in 4002-549 Usability Testing. The Usability Testing course is offered in spring. Both of these courses count towards Free Electives.

Of the four courses noted in the track, there is no required order nor is it needed to take all of the courses. However the courses identified would provide a well-rounded background in the field.

Planning for a Minor

Before embarking on a minor you should meet with the department sponsoring the minor to register and review scheduling strategies. There may be a need to coordinate your co-op blocks based on the quarters in which courses are typically offered as well as considering course pre-requisite chains required within the minor.