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Human-Computer Interaction

Certificate Program

With hardware processing power increasing and software development techniques improving, the user interface is fast becoming the key bottleneck in developing computer products that meet market needs.

When interface design does not reflect the needs of the intended users, products fail in the marketplace and enormous sums of money are spent on documentation, help lines, and training courses to overcome the difficulties of running programs. Much of this difficulty can be avoided with proper attention to both the physical and psychological constraints of the user.

Extending the expertise of its internationally recognized Human Factors program, Tufts has designed this certificate program to train the next generation of computer programmers for tomorrow's complex programming challenges. Students must complete four courses, including those in engineering

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psychology, interface design, and computer programming. Students interested in earning a graduate degree can often apply these certificate courses toward a master's degree in computer science or human factors.

Who Should Apply?

The program is open to individuals with a bachelor's degree and is especially useful for computer programmers, web designers, software engineers, human factors professionals, user interface designers, and others who wish to develop or enhance their user interface design and implementation skills.

Program of Study

The certificate requires four courses.

1. *Two foundation courses:*

- COMP 171 Human-Computer Interaction
- PSY 53/ENP 61 Engineering Psychology

2. *One or more of the following:*

- COMP 106 Object Oriented Programming for GUIs
- ENP 161 Human Factors in Product Design
- ENP 162 Man-Machine System Design
- ENP 166 Applied Design of Software User Interfaces
- PSY 130 Advanced Engineering Psychology

3. *Electives*

- COMP 20 Web Programming
- COMP 175 Computer Graphics
- EE 120 Computer Animation for Technical Communications
- OTS 105 Assistive Technology

(Students may substitute other Tufts graduate courses, subject to the approval of the certificate advisor.)

This certificate is offered in collaboration with the Tufts [Department of Psychology](#), the [School of Engineering](#), and the [Boston School of Occupational Therapy](#) at Tufts.

Tuition:

Certificate students pay a course rate for each required certificate course of \$3,715 per course (2014-2015).

For course information, contact:

Certificate Faculty Advisor:

[Daniel J. Hannon](#), Ph.D. 617-627-2021

[For Application Forms for the certificate program.](#)

Course numbers/titles are subject to change. Course descriptions are available at <http://ase.tufts.edu/bulletin/>

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