



Information for Viterbi Ph.D. Students interested in applying to add a Graduate Certificate in Health, Technology & Engineering (HTE@USC)

The Health, Technology, and Engineering Graduate Certificate Program offers an opportunity to learn about and gain experience in medical device and process innovation. Applicants to this program are either first-year USC Ph.D. engineering students or incoming M.D. students. Through project-based and interdisciplinary collaboration, students will augment their current programs with a set of courses and lab experiences linking medical and engineering research groups. By applying design-informed approaches toward problem identification and solution prototyping, students will be involved in all the steps of medical device innovation from conception to commercialization. The program aims to create interdisciplinary, boundary-spanning, inventive entrepreneurs seeking early practical experience with device and method innovation in healthcare. Program participants will form bonds with a group of like-minded medical students and engineers who will be their mentors, colleagues and contacts as they advance in their careers. HTE@USC eliminates barriers to collaborative projects and ensures that graduates know whom to contact, how to discuss their projects, how to work together and how to plan from the beginning for successful outcomes or, for some, instructive failure.

HTE Program’s First Year Engineering courses (held at UPC on Mondays):		
BME 566a & b	Topics in Health, Technology & Engineering: First two of four modules: Group formation and core knowledge for commercialization	2 + 2
HTE Program’s Second Year Engineering courses (both held at HSC on Thursday evenings):		
BME 566c & d	Topics in Health, Technology & Engineering: Last two of four modules: Implementation and Strategic considerations	2 + 2
BME 567a & b	Case Studies in HTE Two modules: Aiming for success while learning from failure and learning from experts	1 + 1
790	Directed Research (In the student’s major department with project activity-dependent variable credits)	2 - 8
Other required courses which are part of the M.D. curriculum (Ph.D. students enroll in INTD course versions of the same courses open only to HTE students on NC/CR basis):		
INTD-621a & b (1 st year of program)	Introduction to Clinical Medicine – ICM (Ph.D. students take first year with M.D. students in HTE@USC program)	3 + 3
INTD-622 (1 st or 2 nd year)	Pre-clinical system block A 3-9 week, intensive, system-focused combination of lectures and labs	3 - 5

Following a year of Introduction to Clinical Medicine (ICM), one additional pre-clinical system block focused on an organ system or area related to their project (INTD-622) will be required. Finally, during their third or fourth year, engineering students will spend a month as an observer in a clinical rotation on a service relevant to their collaborative health technology project.

The program is offered to Ph.D. students in *any* department at Viterbi. Applicants must be in good standing in their first year and have their Ph.D. advisor's approval. All applicants will be required to submit two essays outlining: 1) How their goals after completion of graduate school involve a combination of engineering and medicine; and 2) A description of a device or method they would like to develop, why they see it as important, its potential for impact, an implementation plan and anticipated challenges in design and development. Qualifying candidates will be interviewed prior to being offered admission to the program.

Candidates interested in applying should contact HTE@USC.edu via email. Intention to apply should be communicated to HTE@USC.edu by first year Ph.D. students no later than April 30th. Application essays must be received before interviews can be scheduled and admission decisions will be communicated on a rolling-basis until all slots are filled. The program begins with the start of the Keck School of Medicine program in mid-August and all admitted Ph.D. students must plan to be available for group activities and coursework starting at that time.

A limited number of spaces for other interested students will be available in both the Topics in HTE and Case Studies in HTE course sequences. Participation in these courses will require prior approval of the Administrative Director of the HTE@USC program who can be reached via HTE@USC.edu. Information about the program and related events can be found at <http://hte.usc.edu>



USC Viterbi
School of Engineering

HTE@USC
Engineering and Medicine at USC