MEMP Curriculum Map

Science / Engineering Concentration

Choose one of the established concentration areas and select four courses from the approved list for the chosen area. Current MEMP concentration areas are:

- Aeronautics & Astronautics
- Biological Engineering
- Brain & Cognitive Sciences
- Chemical Engineering
- Computer Science
- Chemistry
- Electrical Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Nuclear Engineering
- Physics

Biomedical Sciences and Clinical Requirements

Biomedical Sciences Core

- HST030 or HST034: Human Pathology
- HST160: Genetics in Modern Medicine
- HST090: Cardiovascular Pathophysiology

Restricted Electives - Choose two

- HST010: Human Anatomy
- HST100: Respiratory Pathophysiology*
- HST110: Renal Pathophysiology*
- HST130: Introduction to Neuroscience
- HST175: Cellular & Molecular Immunology

**Must choose at least one of HST100, HST110

Clinical Core

- HST201: Intro. to Clinical Medicine I
- HST202: Intro. to Clinical Medicine II

Professional Skills

- HST500: Frontiers in (Bio)Medical Engineering and Physics
  Required spring of first year

- HST590: Biomedical Engineering Seminar
  Required fall semester of first year. Minimum of four semesters required; one on responsible conduct of research and three electives. Topics rotate.

Research

Letter of Intent #1:
Thesis supervisor and topic.
Due by April 30 of 2nd year.

Letter of Intent #2:
Tentative thesis committee.
Due by April 30 of 3rd year.

Thesis proposal:
Defended before thesis committee.
Due by April 30 of 4th year.

Final Thesis:
Public defense and submission of final thesis document.

Qualifying Exam

TQE: Technical qualification based on performance in four concentration area courses and Pathology

OQE: Oral examination to evaluate ability to integrate information from diverse sources into a coherent research proposal and to defend that proposal

1. Harvard MEMP students fulfill Basic Science/Engineering Concentration and Qualifying Exam requirements through their collaborating department (SEAS or Biophysics).
2. Required for all MEMP students. (Biophysics students may substitute MedSci 300 for HST590 term on responsible conduct of research.)
3. Harvard MEMP students must submit an electronic copy of the final thesis including the signed cover sheet. Harvard MEMP students should not register for HST ThG.