

Biomedical Engineering, PhD (BME)

The Biomedical Engineering doctoral degree requires a minimum of 72 credits beyond the bachelor's level, with a minimum of 36 being course credits (including the core curriculum) and a minimum of 24 credits of doctoral dissertation research.

The core curriculum that must be satisfied by all PhD students consists of the following:

- One graduate-level course (≥ 3 credits) in life science from an approved list
- One graduate-level course (≥ 3 credits) in mathematics from an approved list
- One graduate-level course in (≥ 3 credits) computer science from an approved list or exemption by proficiency
- Four BME courses (≥ 12 credits) from an approved list

A comprehensive list of the approved courses is in the BME PhD Policy Manual located on the Biomedical Engineering (BME) PhD website.

Up to 6 credits of BME 8992 Research Rotation for BME Doctoral Students and/or 3 credits BME 8887 BME Doctoral Seminar Series may be counted toward the 36 credits of graduate courses required for the PhD. A total of 27 additional credits, including the core curriculum, are required for the PhD. Up to two 4000-level courses may be counted toward the PhD coursework requirements. Graduate courses may be transferred in (up to 24 credits) but must be evaluated and approved by the Director of Doctoral Studies. The evaluation and approval may occur at any time, but course transfer does not become official until after one year in residence at Washington University.

Students seeking the PhD in Biomedical Engineering enroll in two to three courses each semester and participate in one or two laboratory rotations during the first year. Before the end of their first 10 months of enrollment in the program, students take their oral qualifying exam, which consists of a presentation of their research done to date in the mentor's laboratory followed by an oral exam addressing any issues directly related to their rotation report or their oral presentation. Upon successfully passing the qualifying examination, they advance to candidacy and complete the balance of their requirements. During the second and third years, students complete their remaining courses, participate in a mentored teaching experience, and begin their thesis research. By the end of the third year, students must complete their thesis proposal. Students must also complete one accepted and one submitted first-author publication and complete a dissertation.