

## Ph.D. in Biomedical Engineering

Degree Codes: ES PhD BIEN

Contact: Professor Steven Jones

### Ph.D. Curriculum

Course Category	Number	Course Name	SCH	SCH
<b>Core Courses</b>	BIEN 500	Systems Physiology (fall)	4	15
	BIEN 510	Biomedical Instrumentation (winter)	4	
	BIEN 501	Physiological Modeling (spring)	4	
	STAT 620	Theory of Probability	3	
<b>Qualifying Examinations</b>	BIEN 685	Doctoral Qualifying Exam	0	
	BIEN 686	Oral Comprehensive Exam <sup>1</sup>	0	
<b>Doctoral Seminar</b>	BIEN 611	Doctoral Seminar (taken three times in a student's first three quarters)	1	3
<b>Electives<sup>2</sup></b>	Take 30 SCH of electives following the protocol described below <sup>2</sup>			30
<b>Research and Dissertation<sup>3</sup></b>	BIEN 651	Pre-Candidacy Doctoral Research	1-6	6
	BIEN 751	Post-Candidacy Dissertation Research	1-9	9
				Total 63

<sup>1</sup> BIEN 686 is a presentation of preliminary research achievements and a defense of proposed PhD research. A written proposal, uploaded in a student's plan of study and approved by their committee, is required before a student may enroll in BIEN 686.

<sup>2</sup> Taken under the supervision of the faculty member with the following guidelines.

- *At least* 15 credit hours must be in Engineering
- *At least* 3 credit hours must be in Mathematics or Statistics.
- Up to 12 credits total can be taken in Physics, Chemistry, Mathematics, Biology, or Computer Science, and up to 6 credits can be taken in other disciplines that are appropriate to the student's dissertation topic.
- Up to 6 credits total can be taken in Special Topics (BIEN 557) and Directed Study (BIEN 650).

<sup>3</sup> Complete 6 SCH of BIEN 651 prior to BIEN 686. After successful passing BIEN 686, complete 9 SCH of BIEN 751. Registration in any quarter is for 1 to 3 semester hours or multiples thereof, up to a maximum of 6 SCH for BIEN 651 and 9 SCH per quarter for BEIN 751.

Students are expected to have published one or more peer reviewed journal publications or conference proceedings by the time they graduate.

**Plan of Study Important Information:** When entering information in the plan of study, it is important to note that only core courses and all core courses need to be put in Section 1.1, while all others are put in Section 1.2 (i.e. special topics, seminar, and research courses). See <http://coes.latech.edu/grad-programs/plan-of-study-instructions.pdf> for plan of study instructions.

Updated 4/2018