

Department of Biomedical Engineering
Curriculum Summary for the PhD Degree

Required Courses: (8 credits) No Exemptions

Course Number	Course Title	Credits
BMME 400 [100]	Introduction to BME	1
BMME 900 [311], BME 693, BME 893, BMME 910L [300], BMME 920L [301], or BME 790R	Research Experience (must be in first three semesters)	1
BMME 994 [394] or BME 895	Doctoral Dissertation	6

Required Core Topic Courses: (17 credits or more)

- Refer to engineering core topics list for approved courses
- There are no exemptions for engineering core topics courses or for life science courses in the PhD program.
- Grade requirements apply in order to advance in the PhD program.

Course Numbers	Requirement	Credits
BMME 589 [181], BMME 790 [281], BMME 570 [151], BMME 770 [251], PHY 503, PHY 504, and/or other courses from list of graduate-level life science courses approved by the department or by the academic advisor	Life Sciences Core	8 minimum
	Engineering Core	3
	Engineering Core	3
	Engineering Core	3

Required Mathematics and Statistics: (9 credits or more)

- Three hours of probability and statistics are required for all students. Students with at least three hours of prior coursework in advanced undergraduate or graduate probability and statistics may be exempted from this requirement at the recommendation of the advisor.
- Six hours of advanced engineering mathematics are required for all students. Students with equivalent prior coursework (as defined by the content of MATH 528 [128] and 529 [129] or MAT 501 and 502) may be exempted from this requirement at the recommendation of the advisor.
- For exemptions, prior coursework must be documented on the student's transcript.
- Exempted courses are not applied to the total credit hours requirement.

Course Numbers	Requirement	Credits
BIOS 550 [150] * or ST 515* or BIOS 600 [110] or ST 511 * preferred courses	Probability and Statistical Inference	3
MATH 528 [128], 529 [129] or MAT 501,502	Advanced Engineering mathematics	6

_____ **Approved Electives:** (18 credits or more)

- BMME or BME courses, courses in other departments listed in “BME Course Descriptions,” or courses listed in recommended curricula for specific programs of study do not require prior approval of the academic advisor.
- All courses not meeting the above conditions are subject to approval of the academic advisor.
- At least four courses must be at the Ph.D. level (700-800 [200] or 700 level). A 700-level course applied to the life science core topics requirement does not apply to the total of four courses.

Elective	Course Number and Title	Credits
Ph.D.-level elective		
Ph.D.-level elective		
Ph.D.-level elective		
Ph.D.-level elective		

_____ **Total credit hours requirement:** (52 credits or more)

_____ **Teaching/Seminar Requirement:**

- At least two class periods or seminars

Course Number or Seminar Location	Date	Course Director or Seminar Sponsor

_____ **Required Course in Responsible Conduct of Research:** Date _____

- Students entering Fall, 2006 or after must take either the UNC course, “Responsible Conduct of Research”, or the NC State course, PHI 816 “Introduction to Research Ethics.”

_____ **Core Topic Requirement Complete:** Date _____

_____ **PhD Written Preliminary Examination:** Date _____

_____ **PhD Oral Preliminary Examination and Proposal:** Date _____

_____ **Final Doctoral Oral Examination (Defense):** Date _____

_____ **Approved Dissertation:** Date _____