

# Engineering - Doctor of Philosophy

The Doctor of Philosophy in Engineering prepares graduates to be innovative thinkers capable of performing cutting-edge research, synthesizing and creating new knowledge, and finding novel solutions to complex problems in their specialties. Doctoral students are also challenged to demonstrate the broader impact of their work for meeting needs in society.

## Program Requirements

The Ph.D. degree requires a minimum of 60 semester hours beyond the master's degree (or its equivalent) or 90 semester hours beyond the bachelor's degree (or its equivalent).

Code	Title	Credit Hours
<b>Coursework</b> <sup>1</sup>		
The minimum coursework is six (6) letter-grade graduate courses comprising at least fourteen (14) credit hours, with at least two (2) of the letter-grade credit hours in courses numbered 600 or above.		
Up to four (4) additional courses in the student's designated area of research may be required as determined by the student's faculty committee.		
<b>Seminars</b>		
Students are required to enroll in at least one graduate seminar each semester.		
Select from the following:		
CPB 600	Graduate Seminar	
ECE 610	Graduate Seminars	
MME 610	Graduate Seminar	
PHY 500	Physics Seminar	
<b>Conferences</b>		
Students must select an advising committee during year 1 to approve their plan of study, and must hold a conference with that committee at the end of year 1 to discuss their proposed research.		
<b>Annual Reports</b>		
Students must submit and pass annual progress reports commencing at the end of second year in the graduate program.		
<b>Written and Oral Exams</b>		
Students must write and pass a written proposal document, which serves as the Written Examination. <sup>2</sup>		
Students must orally defend the proposal, typically at the end of the second year, which serves as the Oral Examination. <sup>2</sup>		
<b>Original Research</b>		
Students must complete at least 30 credit hours of Research for Doctoral Dissertation (see below). Students must write and defend a dissertation regarding the findings of their research.		
Select from the following, by concentration:		
Biomedical Engineering		
CPB 850		

Chemical Engineering
CPB 850
Electrical and Computer Engineering
ECE 850
Robotics and Automation Engineering
ECE 850
or MME 850
Mechanical and Manufacturing Engineering
MME 850
Engineering Physics
PHY 850

<sup>1</sup> For students earning a master's degree in engineering, physics, or computer science at Miami University, all graded coursework taken toward the master's also counts toward the Ph.D. graded coursework requirement, but is not factored into the 60 hours required beyond the master's degree.

<sup>2</sup> The proposal may be in the student's research area and should form the narrative for a grant proposal to a federal or state agency or to industry.