

# CHEMICAL ENGINEERING, DOCTOR OF PHILOSOPHY (PH.D.)

The Doctor of Philosophy degree is granted only upon sufficient evidence of high attainment in scholarship and the ability to engage in independent research. The Chemical Engineering Department requires minimum of 45 semester hours of course work beyond the B.S. degree. A minimum of 18 credit hours of Thesis Research is required; students in the PhD program can register only for CHBE899. All Ph.D. graduate students are required to serve as Teaching Assistants for two semesters. Other requirements, including CORE course GPA requirements are found on the Department website: [www.ench.umd.edu](http://www.ench.umd.edu) (<http://www.ench.umd.edu>).

**Advance to Candidacy:** In addition to completing the course requirements below, students must complete a research aptitude Ph.D. qualifying examination and a research proposal including an oral presentation covering the projected Ph.D. dissertation

**Post-Candidacy:** Students must complete at least 12 credits of CHBE899 Doctoral Dissertation Research as well as successfully defend and submit an original dissertation.

Course	Title	Credits
<b>Core Requirements</b>		
Minimum of 27 credits of courses numbered 600 or above, including the following:		27
CHBE609	Graduate Seminar	
CHBE610	Chemical Engineering Thermodynamics	
CHBE620	Methods of Engineering Analysis	
CHBE630	Transport Phenomena	
CHBE640	Advanced Chemical Reaction Kinetics	
<b>Dissertation Research Requirements</b>		
CHBE899	Doctoral Dissertation Research	12
CHBE898	Pre-Candidacy Research	6
or CHBE899	Doctoral Dissertation Research	
<b>Total Credits</b>		<b>45</b>