

DOCTOR OF PHILOSOPHY WITH A MAJOR IN CHEMICAL ENGINEERING

The School of Chemical & Biomolecular Engineering offers the PhD degree in Chemical Engineering. Research opportunities exist in a broad range of areas of importance to chemical engineers and society, including catalysis, reaction kinetics, complex fluids, microelectronics, microfluidics, optimization, bioinformatics, polymers, sustainable development, pulp and paper, separations, CO₂ capture, biomedicine, solar energy, thermodynamics, MEMS, environmental science, reaction engineering, cancer diagnostics and therapeutics, biofuels, air quality, modeling, and process synthesis and control. Furthermore, the School of Chemical & Biomolecular Engineering participates with other schools in offering the PhD degree in Bioengineering. Additional information about the School is available <https://www.chbe.gatech.edu/> or upon request by calling 404.894.1838.

PhD students in Chemical Engineering must successfully complete the following courses (or their equivalents) with an average cumulative GPA of 3.0 or higher. Additionally PhD students must earn a GPA of 3.2 or higher in the five 3-credit-hour core courses.

Code	Title	Credit Hours
CHBE 6001	Introduction to Research and Responsible Conduct of Research for ChBE Graduate Students	1
CHBE 6003	Chemical Process Safety	1
CHBE 6100	Advanced Chemical Engineering Thermodynamics	3
CHBE 6200	Advanced Transport Phenomena, Fluid Mechanics, and Heat	3
CHBE 6260	Transport Phenomena-Mass Transfer	3
CHBE 6300	Kinetics and Reactor Design	3
CHBE 6500	Mathematical Modeling and Analysis of Chemical Processes	3
CHBE Elective		3
Minor Field of Study		9

Additional enriching requirements of the PhD program include earning 10 units in the Professional Preparation Program, participating in teaching for three semesters (5 hours per week), and presenting their research in the Fourth-Year Colloquium.

PhD students must take and pass the qualifying exam in their second semester. Students also have a second opportunity to take and pass the exam, the next time it is given. PhD students must defend their research proposal to their committee in the spring of their second year. Prior to their thesis defense, PhD students must hold a predoctoral review with their committee, at least six months before the thesis defense.

The thesis defense examination will be conducted by the Doctoral Examination Committee chosen by the student and the thesis advisor and approved by the Graduate Studies Committee and the Dean of Graduate Studies. The examination will be announced throughout the School and will be open to the academic community. The student will

be required to make an oral presentation of the final thesis. If both the dissertation and examination are satisfactory, and there is compliance with all the requirements of the PhD program, then the candidate will be certified as qualified to receive the degree of Doctor of Philosophy.