Chemical Engineering

Research activities in the department include: computational nanoscience and biology; biomolecular engineering and biotechnology; catalysis, combustion, kinetics and electrochemical engineering; biofuels and renewable energy technology; green chemistry and engineering; innovative textiles, polymers and colloids; nanoscience and nanoengineering; and thermodynamics and molecular simulation.

Master of Science Degree Requirements
The M.S. degree requires a minimum of 30 credit hours. A set of four core courses is required. Two options are provided. In the thesis option, the thesis must be defended in a final public oral examination. In the non-thesis option, the student must satisfactorily complete a total of 10 graduate courses. A unique feature of the non-thesis option is the availability of a Distance Education Masters in which the students can complete all 30 credit hours remotely through online courses offered via streaming videos without being on campus.

Master of Chemical Engineering Degree Requirements
The M.Ch.E. degree requires a minimum of 30 credit hours. A set of four core courses is required. A three-credit project is also required.

Doctor of Philosophy Degree Requirements
Students normally take a set of five core courses, two advanced courses and at least 6 credits of dissertation research. A thesis is required; this must be defended in a final public oral examination. In addition, the candidate must: (1) submit and defend an original written proposition in any area of chemical engineering, and (2) submit and defend a proposal to perform his/her thesis research.

More Information
Chemical Engineering Program Website (https://www.cbe.ncsu.edu/)
Distance Website (https://online-distance.ncsu.edu/program/master-of-science-in-chemical-engineering/)

Admissions Requirements
Students admitted to the graduate program normally have a Bachelor's degree in chemical engineering or its equivalent. Students with undergraduate degrees in chemistry, physics or other engineering disciplines may be admitted but will be required to make up undergraduate course work deficiencies in chemical engineering without graduate credit. The most promising candidates will be accepted up to the number of spaces available.

Applicant Information
Chemical Engineering (MR and PhD)
- Delivery Method: On-Campus
- Entrance Exam: None
- Interview Required: None

Chemical Engineering (MS)
- Delivery Method: On-Campus, Online, Hybrid
- Entrance Exam: None
- Interview Required: None

Application Deadlines
- Fall: March 15
- Spring: November 15 (admitting distance education students only)

Degrees
- Chemical Engineering (MR) (http://catalog.ncsu.edu/graduate/engineering/chemical-engineering/chemical-engineering-mr/)
- Chemical Engineering (MS) (http://catalog.ncsu.edu/graduate/engineering/chemical-engineering/chemical-engineering-ms/)
- Chemical Engineering (PhD) (http://catalog.ncsu.edu/graduate/engineering/chemical-engineering/chemical-engineering-phd/)
- Chemical Engineering (Minor) (http://catalog.ncsu.edu/graduate/engineering/chemical-engineering/chemical-engineering-minor/)

Faculty
Full Professors
Ruben G. Carbonell
Michael David Dickey
Peter S. Fedkiw
Jan Genzer
Harvinder Gill
Christine S. Grant
Carol K. Hall
Jason M. Haugh
Hasan Jameel
Robert M. Kelly
Saad A. Khan
Fanxing Li
Gregory N Parsons
Walter James Pfaendtner
Behnam Pourdeyhimi
Balaji M. Rao
Sindee Lou Simon
Richard J. Spontak
Orlin Dimitrov Velev
Phillip R. Westmoreland
Associate Professors
Milad Abolhasani
Adriana San Miguel Delgadillo
Chien Ching Lilian Hsiao
Albert Jun Qi Keung
Stefano Menegatti
Erik Emilio Santiso
Qingshan Wei

Assistant Professors
Nathan Crook
Artem Rumyantsev
Wentao Tang

Practice/Research/Teaching Professors
Cristina Boi
Lisa G. Bullard
Matthew Ellis Cooper
Kirill Efimenko
Gary Louis Gilleskie
Hassan Golpour
Gregory McKenna
Luke Neal
John H. van Zanten

Adjunct Faculty
Anthony L. Andрадy
Orlando J. Rojas

Emeritus Faculty
Joseph M. DeSimone
Richard M. Felder
Michael Carl Flickinger
Keith Gubbins
Harold B. Hopfenberg