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.

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.

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.

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

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

Chien Ching Lilian Hsiao

Albert Jun Qi Keung

Stefano Menegatti

Adriana San Miguel Delgadillo

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. Andrady

Orlando J. Rojas

Emeritus Faculty

Joseph M. DeSimone

Richard M. Felder

Michael Carl Flickinger

Keith E. Gubbins

Harold B. Hopfenberg

Harold Henry Lamb

Phooi K. Lim

Steven W. Peretti

Hubert Winston