



MASTER OF SCIENCE IN CHEMICAL ENGINEERING

Program Overview

The Department of Chemical, Biological and Bioengineering offers high-quality educational and academic enrichment opportunities at the graduate level through the Master of Science in Chemical Engineering. The Department seeks to foster excellence in teaching, research and engagement, an inclusive environment to meet the needs of a diverse student population, and academic and operational excellence.

The Master of Science in Chemical Engineering prepares students for advanced chemical engineering practice in industry and for advanced education in PhD programs through high-level research and coursework. Education and research areas include Separation Technologies, Reaction Systems, Energy and Fuels, Process Scale-up, Particle Technology, Advanced Thermodynamics and Materials Analysis. The program promotes leadership, professionalism, and mentoring skills through a multidisciplinary approach, and through networking with industrial, academic, and government affiliates.

For More Information

Please Contact:
Graduate Program Coordinator,
Dr. Vinayak Kabadi
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336-285-3657

Program Structure

- The curriculum requirements are designed to be consistent with prominent national M.S. Chemical Engineering programs, and with other M.S. engineering programs at NC A&T.
- The M.S. program requires a total of 30 course credits. Course requirements include nine (9) credit hours of common core courses, nine (9) to twelve (12) credit hours of chemical engineering electives depending on the option selected, six (6) to nine (9) credit hours of engineering electives, and one non-credit seminar each semester. Students in the thesis option take six (6) thesis credit hours. Students in the project option take three (3) project credit hours.

Sample Graduate Courses:

- Separations Processes
- Energy and Fuels
- Process Scale-up and Design
- Fundamentals of Polymer Engineering
- Solids Process and Particle Technology
- Transport Phenomena
- Advanced Chemical Reaction Eng.
- Advanced Chem. Eng. Thermodynamics
- Advanced Chem. Eng. Analysis

Research Laboratories and Centers

- Reaction Engineering Laboratory
- Diffusional Transport Laboratory
- High Pressure Thermodynamics Laboratory
- Center for Energy Research and Training
- NASA Center for Aviation Safety



Research Areas

- Reaction Engineering
- Catalysis & Surface Science
- Membrane Separations
- Polymer Processing
- Fuels Cells & Fuel Reforming
- Applied and Molecular Thermodynamics
- Nanostructured Materials & Sensors

Graduate Placement

Graduates of the program are well prepared to pursue careers in industry, academia and government labs. Many of our graduates go on to pursue doctoral work at prestigious research institutions. Graduates have obtained jobs at companies including International Paper, Accenture Federal Services, Dow Chemical, Altria, The Chemours Company, Michelin, Nestle-Purina, Microsoft, Land O Lakes, BASF, Georgia Pacific, Bunge, Michelin and various consulting firms and government agencies.

Funding

Faculty in the Chemical, Biological and Bioengineering Department have a number of research projects funded by NSF, USDA, DOE, DOD and NASA. In addition to tuition remission, students may receive teaching and research assistantships. A limited number of fellowships are also available. Financial aid is based on merit and availability of funds.



North Carolina Agricultural and Technical State University
THE GRADUATE COLLEGE
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<https://graduateadmissions.ncat.edu>

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY THE GRADUATE COLLEGE

OUR RESEARCH STRENGTHS

- Aerospace and Transportation Systems
- Biomedical Research
- Biotechnology & Biosciences
- Computer and Computational Sciences
- Defense and National Security
- Energy and the Environment
- Food Science
- Human Health, Nutrition and Wellness
- Leadership and Community Development
- Nanotechnology and Multi-Scale
- Social and Behavioral Sciences
- Transportation and Logistics

AGGIE POINTS OF PRIDE

- Ranked by the Carnegie Classification of Institutions of Higher Education as “doctoral/research university”
- Ranked third within the UNC System in research funding, with over \$56 million in sponsored programs and nearly \$7 million in appropriations for agricultural research and cooperative extension
- Received the National Science Foundation’s prestigious Engineering Research Center (ERC) grant for biomedical engineering and nano-bio applications research totaling more than \$18 million over five years
- Received a National Science Foundation’s Math S-STEM Program in Mathematics grant
- The National Council on Teacher Quality (NCTQ) preparation programs among the top in the state
- North Carolina A&T graduates students in STEM disciplines at nearly twice the rate of the UNC system average
- The Triangle Business Journal has reported that North Carolina A&T State University ranks No. 1 among historically black colleges and universities in North Carolina and No. 4 in the UNC System for the highest return on investment of colleges and universities

ADMISSIONS REQUIREMENTS and DEADLINES

ADMISSION REQUIREMENTS

- Online application
- Application fee
- Transcripts
- Personal statement
- Recommendation letters

* Some programs require standardized test scores and/or on campus interviews

IMPORTANT APPLICATION DEADLINES

	Priority	US Citizen	International
Fall	February 1	July 1	June 1
Spring	September 1	November 1	October 1
Summer	NA	April 1	NA

Earlier deadlines for certain programs apply. Check www.ncat.edu/tgc and click Graduate Admissions–Admission Application Requirements and Instructions.

FINANCING GRADUATE STUDIES

For detailed information on tuition, fees, and related costs of education, assistantships, fellowships, and other financial assistance visit www.ncat.edu/tgc and click Financial Information.

CONTACT INFO

THE GRADUATE COLLEGE
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