

## Chemical Engineering, MS Effective 2020-2021

College of Engineering

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The graduate Chemical Engineering program prepares students for further study at the doctoral level or for advanced chemical engineering practice in industry. Graduates of the program work in a broad range of fields and create innovative solutions to important industrial and societal problems. Active areas of research include Thermodynamics and Molecular Computation, Catalysis and Reaction Engineering, Transport Processes, Polymers, Energy and Fuels, Environmental Chemical Engineering and Biological Engineering.

### **Additional Admission Requirements**

- Undergraduate degree in STEM discipline
- Unconditional admission requires an engineering undergraduate degree from an ABET accredited Chemical Engineering program

### **Program Outcomes:**

- The graduates will perform effectively in an advanced chemical engineering related position in industry or in advanced graduate/professional schools.
- The graduates will demonstrate research leadership skills in using interdisciplinary and advanced approaches or techniques for solving their research or project problems.
- The graduates will be active in professional societies.
- The graduates will enhance their professional credentials through lifelong learning.

### **Degree Requirements**

Total credit hours: 30

- Core courses (9 credits): CHEN 720, 750, 760

#### Thesis option

- CHEN elective (3 credits): Select 3 credits from CHEN 705, 710, 715
- CHEN electives (6 credits): Select 6 credits from CHEN 600-799
- Engineering electives (6 credits): Select 6 credit hours from CHEN, BMEN, ELEN, ISEN, MEEN, PHYS, CHEM, BIOL, MATH, NANO, EES with approval of advisor
- Participate in CHEN seminar
- Thesis (CHEN 797: 6 credits)
- Pass thesis defense

#### Project option

- CHEN elective (3 credits): Select 3 credits from CHEN 705, 710, 715
- CHEN electives (6 credits): Select 6 credits from CHEN 600-799
- Engineering electives (9 credits): Select 9 credit hours from CHEN, BMEN, ELEN, ISEN, MEEN, PHYS, CHEM, BIOL, MATH, NANO, EES with approval of advisor.
- Project (CHEN 796: 3 credits)
- Participate in CHEN seminar

#### Course option

- CHEN elective (3 credits): Select 3 credits from CHEN 705, 710, 715
- CHEN electives (9 credits): Select 9 credits from CHEN 600-799
- Engineering electives (9 credits): Select 9 credit hours from CHEN, BMEN, ELEN, ISEN, MEEN, PHYS, CHEM, BIOL, MATH, NANO, EES with approval of advisor.
- Participate in CHEN seminar