

# **BSE Chemical Engineering / MEng Pharmaceutical Engineering**

## **Sequential Undergraduate/Graduate Studies (SUGS) Program**

### **(not currently accepting applications)**

This five-year sequential undergraduate/graduate study (SUGS) program allows qualified undergraduate Chemical Engineering students to receive both the BS and MEng degrees and obtain practical training simultaneously within 5 years. The Master of Engineering (MEng) degree is intended to reflect professional practice and application, as compared to the traditional Master of Science in Engineering (MSE) degree.

#### **Admission**

1. Students are encouraged to apply early in the second term of their junior year for provisional admission into the program in order to be advised appropriately regarding planning for undergraduate and graduate course selections.
2. Students apply for admission through the MEng in Pharmaceutical Engineering online application site: <https://www.applyweb.com/apply/umengin/>
3. An overall GPA of at least 3.2 or above at time of admission is required.
4. GRE scores are not required, but will be considered if provided.

#### **Enrollment**

A maximum of 15 credits taken outside the Rackham registration may be allowed. This includes credits that are double-counted, transferred from the U-M undergraduate program, or transferred from outside of U-M. All courses that are double-counted or transferred must be approved. A student must complete one full-time term in the program before courses can be transferred or double-counted.

1. SUGS students do not dual register. Students earning a dual bachelors degree are NOT eligible for SUGS.
2. Students will enroll in the MEng (under the College of Engineering) within 12 months of undergraduate graduation, with the approval of the program.
3. SUGS students must enroll for at least two full (8 credit) terms as Graduate Engineering, paying full tuition in Graduate Engineering with no other U-M registration.

#### **SGUS Requirements**

1. All 128 credits of the Chemical Engineering BSE requirements must be met.
2. All 30 credits of the Pharmaceutical Engineering (MEng) requirements must be met.
3. Up to nine hours of prior-approved coursework may be double-counted toward each of the two degrees, leading to a minimum total of:

$$\mathbf{128 \text{ (BSE)} + 30 \text{ (M.Eng.)} - 9 \text{ (double-counted)} = 149 \text{ credit hours}}$$

Double-counted hours may not include any core courses required for either the BSE or MEng degree but may include courses elected to meet technical or general electives for the BSE degree.

At least two of the double-counted courses must be acceptable for Rackham cognate credit (non-ChE courses at the 4xx level or above). All double-counted hours must be acceptable for Rackham credit (ChE 5xx or 6xx courses, or courses in other departments at the 4xx level or above). Check the Rackham approved courses online at <http://www.rackham.umich.edu/academics/programs-of-study>.

### **Pharmaceutical Engineering Program Requirements**

The Master of Engineering in Pharmaceutical Engineering program requires a total of 30 credit hours of coursework, of which at least 24 credit hours must be graded A-E. At least 18 graded credit hours must be in courses at the 500 level and above. A minimum grade point average of 3.0/4.0 (i.e., a "B" average) is also required.

Students must take the following courses:

- Two required core courses PharmSci 597 and PharmSci 519 (5 credits, graded)
- Additional Core courses (10 credits, graded)
- One PharmSci course (3 credits, graded)
- One Engineering course (3 credits, graded)
- Electives courses (6 credits, graded)
- A Practical Training or Research course (3 credits, satisfactory completion)

### **Grading - S/U or Pass/Fail**

A total of 6 credits graded Satisfactory or Unsatisfactory (S/U) may be applied toward the PharmEng program (S/pass) = B or above, (U/fail) = B- or below.

Practical Training or Research course (3 credits) counts towards the 6-credit total. Students can take up to 3 additional credits, with a grade that is designated S/U.

### **CONTACTS**

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<http://www.engin.umich.edu/che/undergraduate/program/options/sgus>

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Rackham SUGS website

[www.rackham.umich.edu/current-students/policies/academic-records/sugs-information](http://www.rackham.umich.edu/current-students/policies/academic-records/sugs-information)

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