

NE Engineering Focuses (for students accepted prior to FA20)

Engineering Focus (twenty-units; for students accepted prior to FA20): Students must select all five focus courses from one single major to constitute an engineering focus. However, students may take four of the five courses in one area and the fifth course from a different focus area, should scheduling conflicts occur (i.e. A student completing the Bioengineering Focus can take BENG 100, 103B, 110; CENG 101A; and NANO 108).

We also accept graduate level courses germane to each area. Undergraduate students must have an overall GPA of 3.0 to enroll in a graduate course. A [petition](#) must be submitted for undergraduate and graduate courses that are not on the pre-approved list prior to taking the course.

The courses listed here other than NANO are under the control of other departments. All departments strictly enforce the course prerequisites for all students. Each student is responsible for determining the prerequisites, when courses are offered, and making a curriculum schedule that fits into his or her own graduation plan.

Bioengineering

BENG 100, 103B*, 110, 112A, 112B, 122A*, 130, 186A

*BENG 103B requires CENG 101A. BENG 122A requires MAE 140. Both prerequisites are accepted as part of the twenty unit Bioengineering focus.

Chemical Engineering

CENG 100, 101A, 101B, 101C, 102, 113, 114, 120, 157

CENG students have first priority for enrollment in their core courses. All prerequisites must have been fulfilled before enrolling in any CENG course.

Electrical Engineering

ECE 100, 103, 109, 134, 135A, 135B, 136L, 138L, 139, 183, 187

Mechanical Engineering

CENG 101A

NANO 108, 141A, 161, 174

MAE 101B, 101C, 105, 110, 131A, 143A, 143B, 160

*Effective Winter 2018, MAE 110A has been renumbered to MAE 11 and may not be used as a focus elective.

* MAE 130A and MAE 130B have been renumbered to lower division courses, MAE 30A and MAE 30B. These lower division courses are no longer pre-approved courses.

Materials Science

NANO 100L, 108, 114, 134, 148, 150, 156*, 158, 161, 164, 168, 174, 174L

*NANO 156 and MAE 166 are cross-listed courses. NANO majors must enroll in NANO 156, not MAE 166

[Global TIES and Engineering Leadership](#) (Effective Spring 2015)

Students can choose one of the options as one approved Focus Elective:

1. ENG 100D (4 units): Design for Development
2. ENG 100L (2 units) and ENG 100L (2 units): Design for Development Lab (*total of 4 units*)
3. ENG 100B (2 units) and 100L (2 units): Engineering Leadership and Design for Development Lab (*total of 4 units*)