

BIOMEDICAL ENGINEERING MS

Degree Requirements

The following requirements are in addition to, or further elaborate upon, those requirements outlined in The Graduate School Policy Guide (<https://catalogs.northwestern.edu/tgs/academic-policies-procedures/>).

Coursework-Only MS Degree

Total Units Required: 12

| Course | Title |
|--|---|
| Research Seminar (3 quarters - 0 units): | |
| BMD_ENG 512-0 | Graduate Research Seminar in Biomedical Engineering |
| Two of the three listed below: ¹ | |
| BMD_ENG 304-0 | Quantitative Systems Physiology |
| BMD_ENG 305-0 | Quantitative Systems Physiology |
| BMD_ENG 306-0 | Quantitative Systems Physiology |
| Quantitative science and engineering courses from approved list or by permission (2 units) | |
| Advanced statistics course from approved list or by permission (1 unit) | |
| Other engineering, math, and science courses (4 units) ² | |
| Restricted Electives (2 units) ³ | |

¹ Students who have taken similar physiology courses may petition to take advanced life sciences courses as replacements.

² Courses in the following areas may not count: research for credit (BMD_ENG 499-0 Projects), global health (except BMD_ENG 380-0 Medical Devices, Disease & Global Health), business, design, NUvention (except for 1 quarter of NUvention Medical), seminar, or survey courses.

³ Students may take design, global health, and business classes to fulfill this category. Students taking a basic statistics course may count it towards this category. Students may opt to take additional math/science/engineering courses to fulfill this category as well.

Other Requirements

- Examinations: none specified
- Research/Projects: either (1) approved project (one quarter minimum of BMD_ENG 499-0 Projects) or (2) three courses with significant project components from approved list
- Other: 7 of the 12 courses must be engineering courses. Restricted elective courses do not count as engineering courses.

MS Degree with Thesis

Total Units Required: 9

| Course | Title |
|--|---|
| Research Seminar (3 quarters - 0 units): | |
| BMD_ENG 512-0 | Graduate Research Seminar in Biomedical Engineering |
| Two of the three listed below: ¹ | |
| BMD_ENG 304-0 | Quantitative Systems Physiology |
| BMD_ENG 305-0 | Quantitative Systems Physiology |
| BMD_ENG 306-0 | Quantitative Systems Physiology |
| Quantitative science and engineering courses from approved list or by permission (2 units) | |

Advanced statistics course from approved list or by permission (1 unit)

Other engineering, math, and sciences courses (2 units) ²

Restricted Elective (1 unit) ³

¹ Students who have taken similar physiology courses may petition to take advanced life sciences courses as replacements.

² Courses in the following areas may not count: research for credit (BMD_ENG 499-0 Projects), global health (except BMD_ENG 380-0 Medical Devices, Disease & Global Health), business, design, NUvention (except for 1 quarter of NUvention Medical), seminar, or survey courses.

³ Students may take design, global health, and business classes to fulfill this category. Students taking a basic statistics course may count it towards this category. Students may opt to take additional math/science/engineering courses to fulfill this category as well.

Other Requirements

- Signed copy of MS Mentor/Mentee Agreement (https://www.mccormick.northwestern.edu/biomedical/documents/graduate/mentor_mentee-agreement_v2.pdf)
- Examinations: defend master's thesis
- Research/Projects: see master's thesis
- Master's Thesis: required
- Other: 5 out of 9 courses must be engineering. Restricted elective courses do not count as engineering courses.