



# MS in Bioengineering with a Graduate Certificate in Engineering Leadership

**Total Semester Hours Required: 33**

Students pursuing the MS in Bioengineering with a Graduate Certificate in Engineering Leadership must complete 16 semester hours of Gordon Program coursework and 17 semester hours of Bioengineering coursework including a concentration in Biomedical Devices and Bioimaging, Cell and Tissue Engineering, or Biomechanics. Please refer to the Bioengineering home page for the most up-to-date course requirements and other program information.

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## Plan of Study

**All students will complete the following Gordon Engineering Leadership coursework and one of the Bioengineering concentrations.**

Gordon Engineering Leadership Program (16 Semester Hours Total)

|           |  |   |
|-----------|--|---|
| ENLR 5121 | Engineering Leadership 1                   | 2 |
| ENLR 5122 | Engineering Leadership 2                   | 2 |
| ENLR 5131 | Scientific Principles of Engineering 1     | 2 |
| ENLR 5132 | Scientific Principles of Engineering 2     | 2 |
| ENLR 7440 | Engineering Leadership Challenge Project 1 | 4 |
| ENLR 7442 | Engineering Leadership Challenge Project 2 | 4 |

See next page for Bioengineering concentration coursework options

Biomedical Devices and Bioimaging Concentration (17 Semester Hours Total)

|           |   |   |
|-----------|---|---|
| BIOE 7390 | Seminar   | 0 |
| BIOE 6100 | Medical Physiology  | 4 |
| BIOE 6000 | Principles of Bioengineering                              | 1 |
| BIOE 5235 | Biomedical Imaging  | 4 |
| BIOE 5250 | Design, Manufacture, and Evaluation<br>of Medical Devices | 4 |
| BIOE 5810 | Design of Biomedical Instrumentation                      | 4 |

Cell and Tissue Engineering Concentration (17 Semester Hours Total)

|           |                              |   |
|-----------|------------------------------|---|
| BIOE 7390 | Seminar                      | 0 |
| BIOE 6100 | Medical Physiology           | 4 |
| BIOE 6000 | Principles of Bioengineering | 1 |
| BIOE 5410 | Molecular Bioengineering     | 4 |
| BIOE 5420 | Cellular Engineering         | 4 |
|           | Elective                     | 4 |

Biomechanics Concentration (17 Semester Hours Total)

|           |                              |   |
|-----------|------------------------------|---|
| BIOE 7390 | Seminar                      | 0 |
| BIOE 6100 | Medical Physiology           | 4 |
| BIOE 6000 | Principles of Bioengineering | 1 |
| ME 5665   | Musculoskeletal Biomechanics | 4 |
| BIOE 5650 | Multiscale Biomechanics      | 4 |
|           | Elective                     | 4 |

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**Contact**

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