LEAP Program Plan          Biomedical Engineering

Student: _____          BUID#: _____

Course pre-requisites are listed in parentheses. Other required courses may be designated as part of the advising process. All students must present evidence of previous equivalent coursework or complete the following:

| Taken | Needs | Course Number | Title | Credits |
|---|---|---|---|---|
| | | ENG EK 121 | Introduction to Programming and Data Science with Python for Engineers | 2 |
| | | ENG EK 122 | MATLAB for Engineers (EK 121) | 2 |
| | | CAS MA 124 | Calculus II (MA 121 or MA 123) | 4 |
| | | CAS MA 225 | Multivariate Calculus (MA 124 or MA 129) | 4 |
| | | CAS MA 226 | Differential Equations (MA 225 or MA 230) | 4 |
| | | CAS PY 211 | General Physics I (MA 123; co-req. MA 124 or MA 127) | 4 |
| | | CAS PY 212 | General Physics II (PY 211 and MA 124) | 4 |
| | | ENG EK 301 | Engineering Mechanics I (PY 211; co-req. MA 225 and EK 121/122) | 4 |
| | | ENG EK 307 | Electric Circuits (co-req. PY 212) | 4 |
| | | CAS CH 131 | General Chemistry for the Engineering Sciences (co-req. MA 123) | 4 |
| | | ENG EK 103 | Computational Linear Algebra (EK 121/122) | 3 |
| | | ENG EK 381 | Probability, Statistics, and Data Science for Engineers (EK 103 and MA 225) | 4 |
| | | ENG BE 209 (F,S) | Principles of Molecular Cell Biology and Biotechnology | 4 |
| | | ENG BE 403 (F,S) OR ENG EC 401 (F,S) | Biomedical Signals and Controls (MA 226 and EK 307) Signals and Systems (MA 226 and EK 307) | 4 |
| | | ENG BE 493 (F,S) | Biomedical Measurements Lab I  (co-req. BE 403) | 4 |
| Choose one of the following | | | | |
| | | ENG BE 404 (S) | Control Systems in Biomedical Engineering (BE 403) | 4 |
| | | ENG BE 419 | Principles of Continuum Mechanics and Transport (EK 103, MA 226 and EK 301) | 4 |
| | | ENG BE 420 (S) | Introduction to Solid Biomechanics (EK 103, MA 226 and EK 301) | 4 |
| | | ENG BE 435 (F,S) | Transport Phenomena in Living Systems (PY 211 and MA 226) | 4 |
| | | ENG BE 436 (S) | Fundamentals of Fluid Mechanics (MA 226 and EK 301) | 4 |
| | | ENG EK 424 (F,S) | Thermodynamics and Statistical Mechanics (CH 102, PY 212, MA 226 and EK 381). Recommended for students intending to apply to the PhD program or take BE 605. | 4 |

Minimum # of courses needed for LEAP foundation: _____
Comments:

Advisor Initials: _____     Date: _____

LEAP Program Plan          Biomedical Engineering

Student: _____     BUID#: _____

Enter the course numbers for each LEAP foundation semester and year:

| Course | Semester | Year | Course | Semester | Year | Course | Semester | Year |
|--------|----------|------|--------|----------|------|--------|----------|------|
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|        |          |      |        |          |      |        |          |      |

| Course | Semester | Year | Course | Semester | Year | Course | Semester | Year |
|--------|----------|------|--------|----------|------|--------|----------|------|
|        |          |      |        |          |      |        |          |      |
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