Engineering Science Minor

This minor has been designed for Boston University students who are not enrolled in the College of Engineering, but who want a general introduction to the concepts and applications of Engineering. Track A has a Mechanical Engineering emphasis, Track B has an Electrical and Computer Engineering emphasis and Track C has a Biomedical Engineering emphasis. A minimum grade of C is required in all courses fulfilling the minor and a 20-credit residency in the College of Engineering is required. All course substitutions must be approved by the College of Engineering Undergraduate Committee. For additional information and specifics regarding prerequisites, consult the College of Engineering Undergraduate Records Office via engrec@bu.edu.

**Minor Prerequisites:**

- CAS MA 123 – Calculus 1 (4 cr.)
- CAS MA 124 – Calculus 2 (4 cr.)
- CAS PY 211 – Physics 1 (4 cr.)
- CAS PY 212 – Physics 2 (4 cr.) If pursuing Track B or Track C-Option 1.

**Requirements:**

- CAS MA 226 – Differential Equations (4 cr.)
- ENG EK 127 – Engineering Computation (4 cr.)
  or ENG EK 128 – Engineering Computation ++
- Introduction Courses – See Below (4 cr.)
- Track A OR Track B OR Track C – See Below (12 cr.)

**Introduction Courses:**

Select two (2) of the courses below, totaling 4 credits.

<table>
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<th>Course</th>
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<tr>
<td>ENG EK 131 or 132 Introduction to Engineering 2 cr.</td>
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<tr>
<td>ENG EK 156 Design &amp; Manufacture 2 cr.</td>
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<td>ENG EK 210 Introduction to Engineering Design 2 cr.</td>
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<td>ENG ME 359 Introduction to CAD &amp; Machine Components 2 cr.</td>
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**Track Emphasis:**

Select one (1) track below, totaling 12 credits.

**Track A (Mechanical Emphasis)**

- ENG EK 301 Engineering Mechanics 4 cr.
  - Pre-Req: CAS PY 211 & ENG EK 127
- ENG ME --- Select two (2) courses from the list below. 8 cr.
  - ENG ME 302 Engineering Mechanics II (Pre-Req: ENG EK 301) 4 cr.
  - ENG ME 303 Fluid Mechanics (Pre-Req: ENG EK 301) 4 cr.
  - ENG ME 304 Thermodynamics (Pre-Req: CAS PY 211) 4 cr.
  - ENG ME 305 Mechanics of Materials (Pre-Req: ENG EK 301) 4 cr.
  - ENG ME 306 Material Science (Pre-Req: CAS PY 212) 4 cr.
  - ENG ME 360 Product Design (Pre-Req: ENG ME 359) 4 cr.

**Track B (Electrical/Computer Emphasis)**

- ENG EK 307 Electric Circuits 4 cr.
  - Co-Req: CAS MA 226 & CAS PY 212
- ENG EC 300+ 300-level + Course 4 cr.
  - Any pre-requisites for this course must be completed prior to enrollment.
- ENG EC 300+ 300-level + Course 4 cr.
  - Any pre-requisites for this course must be completed prior to enrollment.

**Track C – Option 1 (Biomedical Emphasis)**

- ENG EK 307 Electric Circuits 4 cr.
  - Co-Req: CAS MA 226 & CAS PY 212
- ENG BE 209 Princ. Molecular Cell Biology & Biotechnology 4 cr.
  - Pre-Req: CAS PY 212, CAS CH 102 or 131, ENG EK 127, & ENG BE 200
- ENG BE 401 Signals & Systems in BME (Pre-Req: CAS MA 226 & CAS PY212) 4 cr.
- ENG BE 424 Thermo & Stat Mech (Pre-Req: CAS PY 212, CAS MA 225 & CAS CH 102)

**Track C – Option 2 (Biomedical Emphasis)**

- ENG EK 307 Electric Circuits 4 cr.
  - Co-Req: CAS MA 226 & CAS PY 212
- ENG BE 209 Princ. Molecular Cell Biology & Biotechnology 4 cr.
  - Pre-Req: CAS PY 212, CAS CH 102 or 131, ENG EK 127, & ENG BE 200
- ENG BE 401 Signals & Systems in BME (Pre-Req: CAS MA 226 & CAS PY212) 4 cr.
- ENG BE 424 Thermo & Stat Mech (Pre-Req: CAS PY 212, CAS MA 225 & CAS CH 102)

03/31/16