**CORE REQUIREMENTS**

<table>
<thead>
<tr>
<th>Basic Math and Science</th>
<th>Engineering</th>
<th>Additional Degree Requirements</th>
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</thead>
</table>
| Sem Course             | Sem Course | 1. Demonstration of computer programming proficiency by course or exam.
|                        |            | 2. Completion of at least eight course credits in the arts, humanities, or social sciences. To ensure depth of study, at least two courses must be taken in the same subject area.
|                        |            | 3. No more than one engineering course with a grade lower than C-. |
| MATH 131 Calculus I (1.5 credits) | ENGR 212L Linear Circuit Theory OR ENGR 221L Digital Circuits & Systems | |
| MATH 132 Calculus II (1.5 credits) | ENGR 225 Mechanics I | |
| PHYS 141L Mechanics (approved in advance by dept. chair) | ENGR 232L Engineering Materials | |
| PHYS 231L Elec., Mag., Waves | | |

**Senior Capstone Design Project** (1 course, 1 credit - that integrates engineering with subjects from chosen cognate area)

Sem Course

ENGR 483 Capstone Design I

**B.A. ELECTIVES**

<table>
<thead>
<tr>
<th>Engineering Electives</th>
<th>COGNATE DEPT./PROGRAM ELECTIVES</th>
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</thead>
<tbody>
<tr>
<td>Three electives from the following, at least two of which must be above 100 level and at least one of which must be at the 300 level or above:</td>
<td>Cognate Department/Program: (4 courses, 4-5 credits)</td>
</tr>
</tbody>
</table>

Sem Course

- ENGR 120 Introduction to Engineering Design
- ENGR 212L Linear Circuit Theory
- ENGR 221L Digital Circuits & Systems
- ENGR 226 Mechanics II
- ENGR 301L Signal Processing & Applications
- ENGR 302 Image Processing/Biomed Appl
- ENGR 303 Analog & Digital Communication
- ENGR 307L Semiconductors & Electronics I
- ENGR 308L Semiconductors & Electronics II
- ENGR 311 Electrophysiology
- ENGR 312 Automatic Control Systems
- ENGR 314L VLSI Design Projects
- ENGR 316 Neural Engineering
- ENGR 323L* Microprocessor Systems

Sem Course

- ENGR 337 Thermodynamics
- ENGR 353 Biomechanics
- ENGR 357* Physiological Modeling
- ENGR 362L Fluid Mechanics
- ENGR 372 Heat Transfer
- ENGR 431 Experimental Design & Methods
- ENGR 483 *Capstone Design I
- ENGR 484 *Capstone Design II
- BEACON

Rensselaer at Hartford engineering courses (approved in advance by dept. chair)

* These courses must achieve depth of study in the cognate area.

**Program totals:** 7.5-8.25 Engineering credits

17 courses, 19-21.25 credits

**NOTE:** Courses with laboratories (denoted by suffix 'L') count as 1.25 course credits; courses without labs count as 1.0 course credit, except where noted.

Program totals do not include course/credit counts from "Additional Degree Requirements".

- Satisfies computer programming proficiency requirement as well as CPSC 115 or CPSC 215.