### Undergraduate Major Planning

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<tr>
<th>SUMMER</th>
<th>FALL</th>
<th>WINTER</th>
<th>SPRING</th>
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<tbody>
<tr>
<td>First year</td>
<td>AP credits:</td>
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<td>Sophomore</td>
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<td>Junior</td>
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<td>Senior</td>
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Engrs major ____________ Engrs modified with ____________ Biomedical ENG ____________ Eng physics ____________

### PREREQUISITES
- Math 3, 8, 11 or 13 (F,W,S, see ORC for times)
- Physics 13 (F, W:) & 14 (W, S: times vary)
- Chemistry 5 (F: 10; W: 9L, 10)
- Engs 20 (F,W: 10, S: 11, 12) or CoSc 1 (F: 12, W:12, S: 2)
  and CoSc 10 (F: 2; W:11, S:2)

### COMMON CORE COURSES (3 courses)
- ENGS 21 Intro to Engineering (F, W,S: 10A)**Math 3
- ENGS 22 Systems (F:10A; W:9L; S: 9L; X: 10) **Math 13, Phys 14, Engs 20
- ENGS 23 Distributed Systems & Fields (F:2; W:9L; S:9L)**Engrs 22

### DISTRIBUTIVE CORE COURSES (choose 2)
- ENGS 24 Science of Materials (W,S: 10) **Phys 14, Chem 5
- ENGS 25 Thermodynamics (S: 2; X: 10A) **Math 13, Phys 13, ENGS 20 or CoSc 1& 10
- ENGS 26 Control Theory (F, S: 9L:) **Engs 22
- ENGS 27 Discrete & Probabilistic Systems (F: 10A) **Math 8, Engs 20 or CoSc 1&10, Phys 13 or Chem 5

### GATEWAY COURSES (choose 2)
- ENGS 30 Biological Physics (S:11) **Chem 5, Phys 13, Phys 14
- ENGS 31 Digital Electronics (S: 12; X: 9L) **Engrs 20 or CoSc 1&10
- ENGS 32 Electronics (W; arrange) **Engrs 22
- ENGS 33 Solid Mechanics (X: 12; F: 11; W: 12) **Math 13, Phys 13
- ENGS 34 Fluid Dynamics (W: 9L) **Engrs 2
- ENGS 35 Biotechnology & Biochemical Eng (F: 9L)
  *Math 3, Chem 3 or 5, Biol 12 or 13
- ENGS 36 Chemical Engineering (F: 10A) **Engrs 22, Engs 25 and Chem 5
- ENGS 37 Environmental engineering (F: 11) **Math 3, Chem 5

### ELECTIVES (choose 2)
- Math, natural science, or engineering science
- Engineering science (may be culminating exp)

### CULMINATING EXPERIENCE (choose 1)
- Consult ORC or Thayer Course Guide

**Indicates pre-requisite, check ORC for exceptions. For modified, Biomedical, and engineering physics majors, consult the Thayer School course guide or ORC. Only pre-requisites may be taken under the NRO option unless prohibited.