## Math. & Science (30-34 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus I [3-4]</td>
<td></td>
<td>MATH1012/1013/1013/1023</td>
</tr>
<tr>
<td>Linear Algebra &amp; ODE</td>
<td></td>
<td>MATH2350</td>
</tr>
<tr>
<td>Multivariable Calculus</td>
<td></td>
<td>MATH2011</td>
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<tr>
<td>General Physics I [3]</td>
<td></td>
<td>PHYS1112/PHYS1312</td>
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<tr>
<td>Calculus II [3]</td>
<td></td>
<td>MATH1014/1024</td>
</tr>
<tr>
<td>General Chemistry I +</td>
<td></td>
<td>CHEM1010/1020 + CHEM1050</td>
</tr>
<tr>
<td>Analytical Chem. [3]</td>
<td></td>
<td>CHEM2155/2355</td>
</tr>
<tr>
<td>Bio. Lab. [1]</td>
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</tbody>
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## CEEV Depth & Electives (9 credits)

- CEEV Electives x 1 [3] chosen from:
  - CENG4140 Energy Resources, Conversions and Technologies
  - CIVL4470 Air Quality Control and Management
  - ENVR3110 Sustainable Development
  - ENVR3120 Energy Resources and Usage

(For CEEV: Intro to Envr. Engg. or Materials Sci. or Intro to BME)

[For CENG] Materials Sci. or Intro to CBE

Also satisfies engineering intro course requirement

## Final Year Project (6 credits)

### Lab (4 credits)

- Chemical & Environmental Engineering Lab [4]
  - MATH2350: Multivariable Calculus
  - MATH2011: General Physics I
  - CHEM2111: Organic Chemistry

### Research Option (6 credits)

- [6] CENG4980 x 2

## Credit Requirement

- **CENG Major:** 79-83 (6 credits of double-counting allowed)
- **CEEV Major:** 88-92 (9 credits of double-counting allowed)
- **Common Core:** 36

## Introduction (6 credits)

- For CEEV: Intro to BME or Intro to CBE

## CEEV Design (12 credits)

- Plant Design & Econ.
  - [3] CENG4130
- Process Dyn. & Control
  - [3] CENG3110/4120
- Process Int. and Design
  - [3] CENG3120
- Process & Product Design Principles
  - [3] CENG2110

## ChE Science (15 credits)

- Separation Process
  - [3] CENG3210
- Heat and Mass Transfer
  - [3] CENG3220
- Reaction and Reactor Engg.
  - [3] CENG3230
- Fluid Mech.
  - [3] CENG2220
- CBE Thermo.
  - [3] CENG2210

## Others (6 credits)

- Engineering Seminars [0] ENGG1010 & ENGG2010

## Cohorts admitted in 2017 and 2018 (incl. Direct Entry students admitted to Year 2 in 2019)

- Updated on: 24-Jun-2021