# CIVIL & ENVIRONMENTAL ENGINEERING DEPARTMENT

## BS DEGREE IN CIVIL ENGINEERING: ERE Concentration

### CURRICULUM EVALUATION (Catalog Years 2018-19 & 2019-20)

<table>
<thead>
<tr>
<th>Course No. &amp; Name</th>
<th>Cred.</th>
<th>Gra.</th>
<th>Q.P.</th>
<th>Course No. &amp; Name</th>
<th>Cred.</th>
<th>Gra.</th>
<th>Q.P.</th>
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</thead>
<tbody>
<tr>
<td>ENL 101 Critical Read &amp; Writing I</td>
<td>3</td>
<td>_____</td>
<td>_____</td>
<td>EGR 111 Intro to Engr &amp; Comput.</td>
<td>3</td>
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<tr>
<td>CHM 153 Princ Chem for Engr</td>
<td>3</td>
<td>_____</td>
<td>_____</td>
<td>EGR 241 Engineering Mechanics I</td>
<td>3</td>
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<tr>
<td>MTH 153 Calculus Appl Sci &amp; Engr I</td>
<td>4</td>
<td>_____</td>
<td>_____</td>
<td>CEN 161 Civil Engr Design Graphics</td>
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<tr>
<td>ENL 102 Critical Read &amp; Writing II</td>
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<td>_____</td>
<td>_____</td>
<td>EGR 242 Engineering Mechanics II</td>
<td>3</td>
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<td>ENL 266 Technical Communications</td>
<td>3</td>
<td>_____</td>
<td>_____</td>
<td>CEN 202 Mechanics of Materials</td>
<td>3</td>
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<tr>
<td>CHM 152 Princ of Modern Chem. II</td>
<td>3</td>
<td>_____</td>
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<td>CEN 212 Mechanics of Materials Lab</td>
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<tr>
<td>CHM 162 Intro Applied Chem. II</td>
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<tr>
<td>MTH 154 Calculus Appl Sci &amp; Engr II</td>
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<td>_____</td>
<td>_____</td>
<td>CEN 303 Fluid Mechanics</td>
<td>3</td>
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<td>MTH 212 Differential Equations</td>
<td>3</td>
<td>_____</td>
<td>_____</td>
<td>CEN 306 Structural Analysis</td>
<td>3</td>
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<tr>
<td>MTH 213 Analytic Geom &amp; Calc III</td>
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<td>_____</td>
<td>_____</td>
<td>CEN 305 Soil Mechanics</td>
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<tr>
<td>PHY 111 Physics for Sci &amp; Engr I</td>
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<td>_____</td>
<td>_____</td>
<td>CEN 315 Soil Mechanics Lab</td>
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<tr>
<td>PHY 112 Physics for Sci &amp; Engr II</td>
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<td>CEN 209 Intro to Transport.</td>
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<td>BIO/BNG Req. (BIO 143 or BNG 255)</td>
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### University Studies

- **Cluster 3A** (3 credits)
  - [Blank]
  - [Blank]
  - [Blank]

- **Cluster 3B** (3 credits)
  - [Blank]
  - [Blank]
  - [Blank]

- **Cluster 4A** (3 credits)
  - [Blank]
  - [Blank]
  - [Blank]

- **Cluster 4B** (3 credits)
  - [Blank]
  - [Blank]
  - [Blank]

The Civil Engineering Department requires for Graduation a minimum overall 2.0 quality point Average for (a) all courses completed at UMass Dartmouth and (b) all courses in the right hand column of this sheet (which comprises all required and elective CEN and EGR courses).

Cum. Average in Major: _____ = _____ (2.0 min.)

Overall Cum. Average: _____ = _____ (2.0 min.)

**TOTAL CREDITS FOR GRADUATION = 122**

- rev. 4/6/20 jm
- *must have ERE emphasis
- **course not being used for List B can meet List C requirement**

**ERE Concentration Electives**

- **List A**: 2 of the following 3 course options (CEN 307 or CEN 408 is one option)
  - CEN 323 Geotechnical Engineering
  - CEN 334 Traffic Engineering
  - CEN 307/ Analysis Design Steel Structures/
  - CEN 408 Analysis Design Concrete Struct

- **List B**: 2 courses required (C or better in each)
  - EGR 333 Intro to GIS *(required)*
  - CEN 464 Water Chemistry**
  - EGR 415 Environmental Fluid Mechanics**

- **List C**: 3 courses required (C or better in each)
  - CEN 412 Pollution Control of Wastes
  - CEN 414 Hazardous Waste Management
  - CEN 428 Prob. & Stats. for Civil Engineerers
  - CEN 430 Special Topics (ERE approved)
  - CEN 433 Special Topics Geotechnical Eng
  - CEN 456 Waves and Tides
  - CEN 459 Dynamics of Stratified Flows
  - CEN 464 Water Chemistry**
  - CEN 465 Pollutant Trans. In the Environ.
  - CEN 475 Intro. To Environmental Turbulence
  - CHM 356 Atmos./Terrest. Environ. Chem.
  - EGR 415 Environmental Fluid Mechanics**
  - SUS 348 Ocean Policy and Law