## EVEN B.S. Degree: Block Diagram 2019-20

<table>
<thead>
<tr>
<th>SEM</th>
<th>CR</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spr 16</td>
<td>3-</td>
<td>Enviro Eng Opt list B</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Spr 15</td>
<td>3-</td>
<td>Enviro Eng Opt list A</td>
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<tr>
<td>Fall 17</td>
<td>-3-</td>
<td>Enviro Eng Opt list B</td>
<td>Air or Earth Science Lab or Field course</td>
<td>-3-</td>
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<tr>
<td>Fall 16</td>
<td>-3-</td>
<td>Engineering Economics</td>
<td>EVEN 4404</td>
<td>-3- Fluid Chemistry &amp; Water Chemistry</td>
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<tr>
<td>Fall 15</td>
<td>-3-</td>
<td>Engineering Economics</td>
<td>APMM 2350</td>
<td>-4- Calculus III for Engineers</td>
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<tr>
<td>Spr 17</td>
<td>-3-</td>
<td>Engineering Economics</td>
<td>APMM 1350</td>
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<td>-3-</td>
<td>Engineering Economics</td>
<td>APMM 1350</td>
<td>-4- Calculus I for Engineers</td>
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### Sem 16: Fall
- **MCEN 4131**: Air Pollution Control<br>  P: Fluid Mechanics & Thermodynamics #
- **CVEN 4333**: Engineering Hydrology<br>  P: Fluids; C: Prob & Stat
- **CVEN 4344**: Environmental Engineering Design<br>  P: CVEN 3414 #
- **Technical Elective**: -3- or Senior thesis *
- **H&S**: Elective V -3- upper division

### Sem 15: Fall
- **MCEN 4131**: Air Pollution Control<br>  P: Fluid Mechanics & Thermodynamics #
- **CVEN 4333**: Engineering Hydrology<br>  P: Fluids; C: Prob & Stat
- **CVEN 4344**: Environmental Engineering Design<br>  P: CVEN 3414 #
- **Technical Elective**: -3- or Senior thesis *
- **H&S**: Elective V -3- upper division

### Sem 16: Spring
- **APPM 2360**: -4- Introduction to Differential Equations & Linear Algebra<br>  P: APPM 1360 or MATH 2300
- **Fluid Mechanics**: -3-<br>  P: APPM 2360
- **CVEN 3414**: -3- Fundamentals of Env Eng<br>  P: CHEN 1211, CHEM 1221 & calc 2
- **Free Elective**: -3- |
- **H&S**: Elective IV -3- upper division

### Sem 15: Spring
- **APPM 2350**: -4- Calculus III for Engineers<br>  P: APPM 1360 or MATH 2300
- **Statics / Mechanics**: -3-<br>  P: APPM 2360
- **Mathematics**: -3-<br>  P: APPM 2360
- **Technical Elective**: -3- |
- **H&S**: Elective III -3- lower division

### Sem 17: Fall
- **APPM 1350**: -4- Calculus II for Engineers<br>  P: APPM 1350 or MATH 1300
- **Fluid Mechanics**: -3-<br>  P: APPM 2360
- **Fluid Mechanics**: -3-<br>  P: APPM 2360
- **Technical Elective**: -3- |
- **H&S**: Elective II -3- lower division

### Sem 16: Fall
- **APPM 1350**: -4- Calculus I for Engineers<br>  P: APPM 1350 or MATH 1300
- **Chem Eng for Engineers**: -4-<br>  P: CHEN 1221 & CHEM 3510
- **Chemical Engineering**: -3-<br>  P: APPM 1350 or MATH 1300
- **Technical Elective**: -3- |
- **H&S**: Elective I -3- lower division

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# Courses marked thus are offered only in SEMESTER shown.  
$ - CHEN 1221 & CHEM 1221 must be taken concurrently.  
P/C - Prerequisite or Co-requisite required before taking course listed.  
Statics/ Mechanics: CVEN 2121 Analytic Mechanics (F,S; Phys1110, co-req APPM 2350); GEEN 2851 Statics for Engrs (Phys 1110, APPM 1360), MCEN 2023 Statics & Structures (F, APPM 1360 & Phys 1110)  
Fluid Mechanics: CVEN 3113 Theoretical Fluid Mechanics (S; Solid Mechanics); MCEN 3021 Fluid Mechanics (F,S; Pre APPM 2350, Solid Mech coreq APPM 2360), CHEN 3200 Chem Eng Fluid Mechanics (S; APPM 2350, CHEN 1220/MCEN 2023)

GEEN 2851 Fluid Mech for Engrs (sum, APPM 2350/2360, GEEN 1300)  
Thermodynamics: AREN 2110 Thermodynamics (F,S; APPM 1360, Phys 3110), GEEN 3852 Thermodynamics (F,S; Preapp air quality option; APPM 2350) CHEN 3320 Chem Eng Thermodynamics (F, reqd chem proc option; CHEN 1310, CHEM 4S21); EVEN 3012 Environmental Engineering Thermodynamics (Phys 1110, APPM 1360, CHEN 1221)  
Heat Transfer: MCEN 3022 Heat Transfer (F,S; Thermodynamics, APPM 2360) CHEM 1220 Chem Eng Heat Transfer (F, Fluids-CHEM or MCEN), EVEN 4830-001 Sustainable Energy

*Tech electives: 3 cr can be lower division, others must be 3000 or 4000 level; one tech elective (3cr) must relate to earth science noted on list by * next to it.  
Air/Earth Lab field course: ATOC 1070/1090 Weather & Atmos Lab/LEC, GEOL 1010/1030 Intro to Geol LEC/LAB, EVEN 3708 Geotech Eng, EVEN 4100 Env Sampling, GEOL 3010 Intro to Mineralogy. If course is less than 3 credits, remaining credits must be upper division tech electives.  
Engineering Economics: CVEN 4147 Civil Engineering Systems (F), EMEN 4140 Business Methods and Economics for Engineers, CVEN 3246 introduction to Construction (F,S,Sum)  
Probability and Statistics: CVEN 3227 Probability, Statistics, & Decision (S) APPM 4570 Statistical Methods (F,S; APPM 1360), CHEN 3010 Appal Data Analysis (F, CHEN 1310, APPM 2360)  
Writing Course: HUEN 3100 Humanities for Engrs, WRTG 3030 Writing Sci & Society, WRTG 3035 Tech Comm & Design, PHYS 3050 Wing for Phys HUEN 3100 Freshman year only.  
Key: P: Prereq | C: Co-req All MCEN courses require grade of C for any pre/co req Fall 2015