University of Detroit Mercy  
Bachelor of Civil Engineering  
Course Requirements Flowchart (2016)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
<th>Courses</th>
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</table>
| **Freshman Fall** | 16      | ENGR 1050 Eng Graphic Design  
MTH 1234 Engineering Math  
BIO 1080 Biology  
ENL 1310 Academic Writing *(placement)*  
ENGR 3000 Coop Prep  
CIVE 3410 Lab  
PHL 1000 Intro to Philosophy |
| **Freshman Winter** | 18      | PHY 1600 Physics *(MTH 1234)*  
PHY 1610 Phys Lab *(co)*  
MTH 1410 Calc I *(MTH 1234)*  
CHM 1070 Chemistry I *(placement)*  
CHM 1100 Chemistry Lab I *(co)*  
CIVE 3400 Eng Survey *(ENGR 1050)*  |
| **Summer**      | 2       | CTA 3010 Coop I |

| **Sophomore Fall** | 16      | ENGR 3120 Statics *(Physics, MTH 1234)*  
PHY 1620 Physics II *(Phys I)*  
PHY 1630 Phys II Lab *(co)*  
MTH 1420 Calc II *(Calc I)*  
ENGR 1000 Eng Ethics  
Core Objective 5 |
| **Sophomore Winter** | 17      | ENGR 3260 Mech. of Materials *(Statics)*  
ENGR 3270 Mech. of Materials Lab *(co)*  
MTH 2410 Calc III *(Calc 2)*  
ENL 3030 Tech Writing  
CST 1010 Speech *(co-ENL 1310)*  |
| **Summer**      | 2       | CTA 3020 Coop II |

| **Junior Fall**   | 16      | ENGR 3170 Mat Science *(Chem., Statics)*  
ENGR 3150 Thermo I *(Phys I, Chem, MTH 1234)*  
CIVE 3480 Geotech *(Mech. of MTL)*  
CIVE 3490 Geotech lab *(co)*  
MTH 3720 Differential Equations *(Calc 2)*  
ENGR 3110 Prof. Pract. Engr. |
| **Junior Winter** | 16      | CIVE 3420 Structural Theory *(Mech. of MTL)*  
ENGR 3140 Fluid Mechanics *(co)*  
CIVE 3450 Construction Materials *(Mech. of MTLs)*  
MTH 4270 Probability & Statistics *(MTH 1420)*  |
| **Summer**      | 2       | CTA 3030 Coop III |

| **Senior Fall**   | 16      | CIVE 4100 Transportation Eng  
CIVE 4530 Hydraulics *(Fluids)*  
CIVE 4680 Design of Steel & Concrete *(Struct. Theory)*  
Core Objective 5  
Technical Elective |
| **Senior Winter** | 17      | CIVE 4820 Senior Design Project  
CIVE 4500 Water / Waste Water Engin. *(Fluids)*  
CIVE 4510 Water Eng Lab *(co)*  
ENGR 3240 Engineering Econ. *(Calc 3)*  
Technical Elective  
ENGR 3130 Dynamics *(Statics)*  
ENGR 3112 Fund. of Engr. Pract. |