

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

### Freshman Fall

16 credits

**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 credits

**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*)  
**Core Objective 5**

### Summer

2 credits

**CTA 3010** Coop I

### Sophomore Fall

16 credits

**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 credits

**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*)  
**Core Objective 4**

### Summer

2 credits

**CTA 3020** Coop II

### Junior Fall

16 credits

**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 credits

**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*)  
**Core Objective 4**

### Summer

2 credits

**CTA 3030** Coop III

### Senior Fall

16 credits

**CIVE 4100** Transportation Eng  
**CIVE 4530** Hydraulics (*Fluids*)  
**CIVE 4680** Design of Steel & Concrete (*Struct. Theory*)  
**Core Objective 5**  
**Technical Elective**

### Senior Winter

17 credits

**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.