

University of Detroit Mercy  
Bachelor of Civil Engineering  
Course Requirements Flowchart

### Freshman 1

15 credits

**ENGR 1050** Eng Graphic Design  
**ENGR 1000** Eng Ethics  
**MTH 1410** Calc I (*placement*)  
**CHM 1070** Chemistry I (*placement*)  
**CHM 1100** Chemistry Lab I (*co*)  
**ENL 1310** Academic Writing (*placement*)

### Sophomore 1

18+1 credits

**ENGR 3120** Statics (*Physics, co-Calc 3*)  
**ENGR 2040** Intro Computer Programming (*Calc I*)  
**PHY 1620** Physics II (*Phys I*)  
**PHY 1630** Phys II Lab (*co*)  
**MTH 2410** Calc III (*Calc 2*)  
**CIVE 3400** Eng Survey (*ENGR 1050*)  
**CIVE 3410** Lab (*co*)  
**CEC 3000** Coop Prep

### Junior 1

17+1 credits

**ENGR 3170** Mat Science (*Chemistry*)  
**ENGR 3200** Elect Eng (*Physics 2*)  
**CIVE 3480** Soil Mechanics (*Mech. of MTL*)  
**CIVE 3490** Soils lab (*co*)  
**CIVE 3420** Structural Theory (*Mech. of MTL*)  
**ENGR 3010** PWOW I  
**Core Objective 5**

### Senior 1

2 credits

**CTA 3030** Coop III

### Freshman 2

17 credits

**PHY 1600** Physics (*Calc I, co II*)  
**PHY 1610** Phys Lab (*co*)  
**MTH 1420** Calc II (*Calc I*)  
**BIO 1080** Biology  
**CST 1010** Speech  
**Core Objective 4**

### Sophomore 2

17 credits

**ENGR 3260** Mechanics of Materials (*Statics*)  
**ENGR 3270** Mechanics of Materials Lab (*co*)  
**MTH 3720** Differential Equations & Linear Algebra (*Calc 2*)  
**ENL 3030** Tech Writing  
**Core Objective 5D**  
**PHL 1000** Intro to Philosophy

### Junior 2

2 credits

**CTA 3020** Coop II

### Senior 2

16+1 credits

**ENGR 3130** Dynamics (*Statics*)  
**CIVE 4100** Transportation Eng  
**CIVE 4500** Water / Waste Water Engin. (*Fluids*)  
**CIVE 4510** Water Eng Lab (*co*)  
**CIVE 4530** Hydraulics (*Fluids*)  
**ENGR 3240** Engineering Economics  
**ENGR 3030** PWOW III

### Freshman 3

Vacation

### Sophomore 3

2 credits

**CTA 3010** Coop I

### Junior 3

16+1 credits

**ENGR 3150** Thermo I (*Phys I, Chem, Calc 2*)  
**CIVE 4680** Design of Steel & Concrete (*Struct. Theory*)  
**MTH 4270** Probability & Statistics (*Calc 3*)  
**ENGR 3020** PWOW II  
**ENGR 3140** Fluid Mechanics (*co*)  
**CIVE 3450** Construction Materials (*Mech. of MTLs*)

### Senior 3

15 credits

**CIVE 4820** Senior Design Project  
**Technical Elective**  
**Technical Elective**  
**Core Objective 5**  
**Core Objective 4**