

University of Detroit Mercy
Bachelor of Architectural Engineering-Structures Track
Course Requirements Flowchart (pg. 1 of 2)
Fall 2021

Freshman Fall

13-17 credits

ENGR 1234 Engr Math (placement)
ARCH 1190 Introduction Prof. Arch.
ARCH 1100 Architecture Design I
ARCH 1110 Visual Communication
ENGR 1050 Engr Graphic Design
Optional Elective as needed (e.g. ENL 1300, MTH, CHM, UAS)

Freshman Winter

17 credits

PHY 1600 Physics (*MTH 1234*)
PHY 1610 Phys Lab (*co-PHY 1600*)
ARCH 1200 Arch. Design II (*ARCH 1100*)
ENL 1310 Acad Writing (*placement*)
ARCH 1860: Environmental Principles
ARCH 1880: Construction Principles
ARCH 1840 Structural Principles
Elective (any Math or science course.)

Summer

Sophomore Fall

16 credits

PHL 1000 Intro to Philosophy
ARCH 2110 Viz Com 3 (*Arch 1110*)
MTH 1410 Calc I (*MTH 1234*)
ENGR 3120 Statics (*PHY 1600, MTH 1234*)
ENGR 3000 Coop Prep
ARCH 2660: Building Environment I
ARCH 2680 – Building Construction I

Sophomore Winter

16 credits

PHY 1620 Physics II (*PHY 1600*)
PHY 1630 Physics II Lab (*co-PHY 1620*)
MTH 1420 Calc II (*MTH 1410*)
CHM 1070 Chem I (*placement*)
CHM 1100 Chem Lab I (*co-CHM 1070*)
Core D2 RELS + **IT4** (if available)
ARCH 2880 – Building Construction II

Summer

2 credits

CTA 3010 Coop I (*ENGR 3000*)

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Junior Fall

14 credits

ENGR 3260 Mechanics of Materials
(*ENGR 3120*)
ENGR 3270 Mechanics of Mat. Lab (*co-ENGR 3260*)
MTH 2410 Calc III (*MTH 1420*)
CST 1010 Speech (*co-ENL 1310*)
ENGR 3150 Thermo I (*Phys 1, Chem, MTH 1234*)

Senior Fall

15 credits

CIVE 4680 Structural Design (*CIVE 3420*)
ENGR 3400 Heat Transfer (*Thermo, Fluids, MTH 3720*)
STAT 2250 Statistics (*MTH 1010*)
Core E2 Lit
ENGR 3110 Prof. Pract. Engr. (*CTA 3010*)

Professional Fall

15 credits

ENGR 3200 Principles of Electrical
Circuits (*Phy 2*)
ENGR 3170 Materials Science (*Chem, Statics*)
CIVE 3480 / 3490 Geotechnical
Engineering (*ENGR 3260*)
ENGR 1000 Engineering Ethics
Core E1 Hist

Junior Winter

17 credits

CIVE 3420 Structural Theory (*ENGR 3260*)
ENGR 3140 Fluid Mechanics (*co-Thermo*)
MTH 3720 Differential Equations
(*MTH 1420*)
CIVE 3450 Construction Materials
(*ENGR 3260*)
Core D3 + IT4 (if needed) (ie.RELS 3081 or 4140)

Senior Winter

16 credits

ARCH 2220 Arch Hist 2 (*ARCH 2120*) E3
ENGR 3240 Engineering Economics
(*MTH 4270*)
AENG 4112 Fund. of Engr. Pract.
(*Senior Standing*)
AENG 4100 Integrative Design
(Capstone)
Technical Elective (see approved dept list)
ENGR 3130 Dynamics (*Statics*)

Summer

2 credits

CTA 3020 Coop II

Summer

2 credits

CTA 3030 Coop III