Plan of Study for Civil/Environmental Engineering Concentration

Core Courses: [All are 3 credits]

	Offered	Prerequisites
• MEE 150 – Applied Mechanics: Statics	F+S	MAT 126
• CIE 225 – Transportation Engineering	S	CIE or EPS Major
• CIE 331 – Fundamentals of Environ. Eng.	F	CHY 121 or 131, MAT 127
• CIE 350 – Hydraulics	F	MEE 150; MAT 258*

Total Engineering credits for core courses: **12**

**MAT 258 can also be a corequisite for CIE 350*

The three required CIE courses cover the technical areas of transportation, environmental engineering, and hydraulics/fluids. Following the initial four core courses, students must choose at least 12 credits of more advanced classes, focused in a technical area that they find interesting (and augment or substitute up to 6 credits from another engineering discipline area). Examples of these technical areas and courses that can be taken to satisfy the advanced course requirements in each area include:

- Transportation – CIE 424 Urban Transportation Planning
  CIE 425 Transportation Safety
  CIE 426 Advanced Roadway Design

- Structures – CIE 340 Intro. to Structural Analysis (requires MEE 251)
  CIE 440 Structural Analysis I
  CIE 442 Reinforced Concrete Design
  CIE 443 Structural Steel Design

- Environmental Engineering – CIE 430 Water Treatment
  CIE 431 Pollutant Fate and Transport
  CIE 434 Wastewater Process Design
  CIE 439 Solid Waste and Air Pollution

- Water resources – CIE 450 Open Channel Hydraulics
  CIE 455 Hydrology
  CIE 456 Groundwater Hydrology and Hydraulics

Optional Courses: [credits in brackets]

	Offered	Prerequisites
• CIE 340 – Intro. to Structural Analysis [4]	F	MEE 251
• CIE 365 – Soil Mechanics [3]	S	MEE 251 or concurrently
• CIE 424 – Urban Transportation Planning [3]	S	CIE 225
• CIE 425 – Transportation Safety [3]	F	CIE 225
• CIE 426 – Advanced Roadway Design [3]	F	CIE 225
• CIE 430 – Water Treatment [4]	F	CIE 231 and CIE 350
• CIE 431 – Pollutant Fate and Transport [4]	S	CIE 231 and MAT 258
• CIE 434 – Wastewater Process Design [4]	S	CIE 231 and CIE 350
• CIE 439 – Solid Waste and Air Pollution [3]	S	CIE 231
• CIE 440 – Structural Analysis I [4]	S	CIE 340
• CIE 442 – Reinforced Concrete Design [4]	F	CIE 340
• CIE 443 – Structural Steel Design [4]	S	CIE 340
• CIE 450 – Open Channel Hydraulics [3]	F	CIE 350
• CIE 455 – Hydrology [3]	F	CIE 350
• CIE 456 – Groundwater Hydrology/Hydraulics [4]	S	CIE 350, MAT 258 or 451
• CIE 460 – Geotechnical Engineering [3]	F	CIE 365
• CIE 480 – Wind Energy Engineering [3]	S	MAT 258, MEE 251; Coreq: CIE 350 or MEE 360