Michigan Technological University
Minor in Rail Transportation
Program Code ECRM, Academic Year 2026-2027
Department of Civil, Environmental, and Geospatial Engineering
Minimum Credits Required: 19

Required Courses: 7 credits

- CEE 3490 Introduction to Rail Transportation (1) *Prereqs: none*
- CEE 4404 Railroad Engineering (3) *Prereqs: none*
- OSM 4700 Logistics and Transportation Management (3) *Prereqs: (MA2710 or MA2720 or MA3710 or CE3710 or CEE3710) and (MA1121 or MA1135 or MA1160 or MA1161)*

Leadership/Professional Elective: choose one course for 3 credits

- AF 3001 Leading People and Effective Communication I (3) *Prereqs: UN1015*
- AF 3002 Leading People and Effective Communication II (3) *Prereqs: none*
- HU 3120 Technical and Professional Communication (3) *Prereqs: UN1015*
- MGT 3000 Organizational Behavior (3) *Prereqs: none*
- MGT 3100 Leadership Development (3) *Prereqs: none*
- OSM 4300 Project Management (3) *Prereqs: BUS2100 or BE2110 or CEE3710 or EE3180 or MA2710 or MA2720*

Choose one area of study

Civil: choose 9 credits

- CEE 3401 Transportation Engineering (3) *Prereqs: none*
- CEE 4333 Estimating and Planning of Construction Projects (3) *Prereqs: CEE3332 or CMG3265*
- CEE 4407 Transportation Design (3) *Prereqs: CEE3401 and SU2000*
- CEE 4905 Engineering Design Project* (3) *Prereqs: none*
- CEE 4920 Independent Study in Civil Engineering* (3) *Prereqs: none*

Mechanical: choose 9 credits

- ME 3911 Mechanical Engineering Practice IV (3) *Prereqs: ME2911 and ME3901*
- ME 4220 Internal Combustion Engines I (3) *Prereqs: ME4201*
- ME 4450 Vehicle Dynamics (3) *Prereqs: ME3400 or EE3261*
- ME 4655 Production Planning (3) *Prereqs: ME3600*
- ME 4901 Senior Capstone Design I* (2) *Prereqs: ME3400 and EE3010 and ME3600 and ME3901 and ME3201 and ME3750 and ME3911 and MA3710*
  - **and** ME 4911 Senior Design II* (2) *Prereqs: EE3010 and ME3201 and ME3600 and ME3750 and ME4901*
- ME 4990 Special Topics in Mechanical Engineering* (3) *Prereqs: none*

Electrical: choose 9 credits

- EE 3120 Electric Energy System (3) *Prereqs: EE2110 or EE3010 or (EE2111 and EE2112)*
- EE 4219 Introduction to Electric Machinery and Drives (3) *Prereqs: (EE2112 or EE3010) and EE3120*
  - **and** EE 4220 Intro to Elec Mach & Drive Lab (1) *Prereqs: EE4219 (C)*
- EE 4227 Power Electronics (3) *Prereqs: EE3120 and (EE3130 or EE3131*
  - **and** EE 4228 Power Electronics Lab (1) *Prereqs: EE4227 (C)*
- EE 3160 Signal Systems (3) *Prereqs: (EE3010 or EE2112) and (MA2320 or MA2321 or MA2330) and (MA3520 or MA3521 or MA3530 or MA3560)*
- EE 3261 Control Systems (3) *Prereqs: EE3160*
- EE 4253 Real Time Signal Processing (3) *Prereqs: E4252*
- EE 4805 Electrical Engineering Project* *Prereqs: none*
- EE 4901 EE Design Project I* (2) *Prereqs: EE3131 or (EE3130 and EE3305) and (EE3901 or EE4900) and (EE3170 or EE3171 or EE3173)*
  - **and** EE 4910 EE Design Project II* (2) *Prereqs: EE4901*

*Prior written approval by the Director of the Rail Transportation Program is Required
Students wishing to substitute a rail topics course from another university requires prior written approval by the Director of the Rail Transportation Program