

Michigan Technological University

Minor in Rail Transportation

Program Code ECRM, Academic Year 2021-22

Department of Civil, Environmental, and Geospatial Engineering

Total Credits Required: 18

Required Courses: 7 credits

Course	Credits
CEE 4404 Railroad Engineering	3
CEE 3490 Introduction to Rail Transportation	1
OSM 4700 Logistics and Transportation Management	3

Leadership/Professional Elective: Choose one course for 3 credits

Required Core Courses: [Choose one](#)

Course	Credits
AF 3010 Leadership Studies I	3
AF 3020 Leadership Studies II	3
HU 3120 Technical and Professional Communication	3
MGT 3000 Organizational Behavior	3
MGT 3100 Leadership Development	3
OSM 3200 Project Management	3

Choose One Area of Study: Civil, Mechanical or Electrical

Civil: [Choose at least 9 credits](#)

Course	Credits
CEE 3401 Transportation Engineering	3
CEE 4333 Estimating and Planning of Construction Projects	3
CEE 4407 Transportation Design	4
CEE 4905 Engineering Design Project*	3
CEE 4920 Independent Study in Civil Engineering*	3

Mechanical: [Choose 9 credits](#)

Course	Credits
MEEM 3911 Mechanical Engineering Practice IV	3
MEEM 4220 Internal Combustion Engines I	3
MEEM 4450 Vehicle Dynamics	3
MEEM 4665 Production Planning	3
MEEM 4901 Senior Capstone Design I* (2) and MEEM 4911 Senior Design II* (2)	4
MEEM 4990 Independent Study in Mechanical Engineering*	3

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Electrical: Choose 9 credits

Course	Credits
EE 3120 Electric Energy System	3
EE 4219 and 4220 Introduction to Electric Machinery and Drives with Lab	4
EE 4227 and 4228 Power Electronics with Lab	4
EE 3160 Signal Systems	3
EE 3171 Microcontroller Applications	4
EE 3261 Control Systems	3
EE 4253 Real Time Signal Processing	3
EE 4805 Electrical Engineering Project*	
EE 4901 EE Design Project I* (2) and EE 4910 EE Design Project II* (2)	4

*Prior written approval by the Director of the Rail Transportation Program is Required

Prerequisites to the above courses can be found in the Michigan Tech Undergraduate Catalog at mtu.edu/catalog

Prior written approval by the Director of the Rail Transportation Program is required to substitute a rail topics course from another university.