

MICHIGAN TECH RAIL TRANSPORTATION PROGRAM (RTP)

The Rail Transportation Program strives to develop skills and knowledge for students interested in pursuing careers in the railroad industry.

The program is designed to match the multidisciplinary nature of the industry itself! The minor is open to students of **any major**, and can be tailored to each **your needs!** Most credits should double-count towards your existing major, making this an attractive way to add a minor for relatively little additional coursework!

WHY CONSIDER RAIL?

- Diverse and plentiful job opportunities
- Paid Internships and Co-ops
- Established industry with global reach
- Senior design projects—put your new skills to use right away!
- Lots of industry-sponsored **scholarships** available!
- Rail is a “green” transportation alternative: 450+ ton-miles per gallon

Railroad Engineering & Activities Club

- Field trips & conference visits
- Industry networking & involvement



Find us on Facebook At
Facebook.com/MTURAIL

RTP VISION Develop leaders and technologies for the 21st century rail transportation

MISSION To Participate in the development of rail transportation and related engineering skills for the 21st century through an interdisciplinary and collaborative program that aligns Michigan Tech faculty and students with the demands of the industry

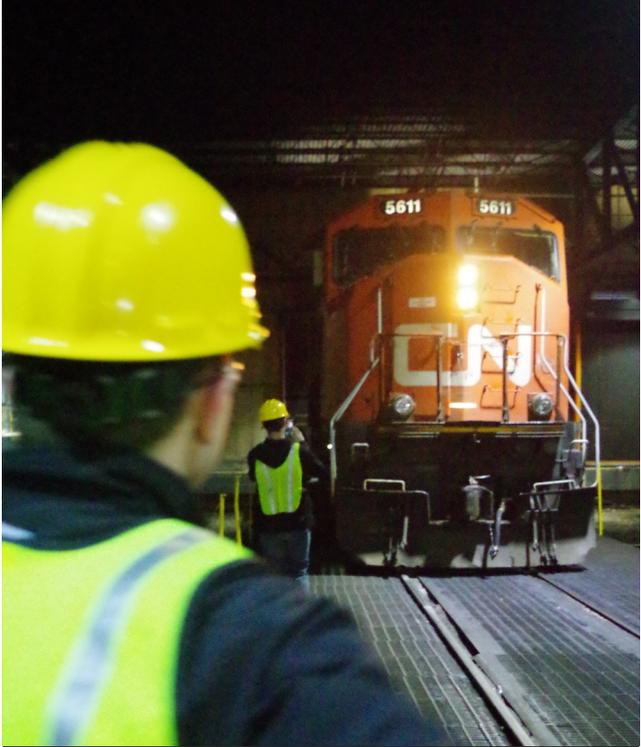
CONTACT INFORMATION
RAIL TRANSPORTATION PROGRAM
MICHIGAN TECHNOLOGICAL UNIVERSITY
DILLMAN HALL, 1400 TOWNSEND DRIVE
HOUGHTON, MI 49931
(906) 487-3547
Email: rail@mtu.edu
www.rail.mtu.edu



Rail Transportation Program
Michigan Tech Transportation Institute • Michigan Technological University



Michigan Technological University
Transportation Institute



RAIL TRANSPORTATION PROGRAM

GET ON TRACK:



Rail Transportation Program
Michigan Tech Transportation Institute • Michigan Technological University

LEARNING GOALS

Students will Develop:

A Rail Industry Knowledge Base

- Be familiar with rail system components
- Understand industry terminology
- Understand engineering and operational practices of the rail transportation industry

Professional Skills

- Gain discipline-specific knowledge of rail transportation industry topics
- Apply practical concepts and technologies to industry issues
- Work with design and data analysis of various system components

Leadership

- Learn management fundamentals
- Develop problem solving & effective communication skills
- Experience industry mentoring

Communication

- Demonstrate effective communication in multiple formats
- Experiences opportunities to meet industry leaders and hear from guest speakers

Industry Safety Culture

- Understand fundamental processes that are put in place by the rail industry to achieve optimum safety
- Research of new procedures and technologies to further increase industry safety

Rail Transportation Minor (Min. 19 Credits)

Required Courses (7 Credits)

CEE 3490—Intro To Rail Transportation
CEE 4404/5414—Railroad Engineering
OSM 4700—Logistics and Transportation Management

Leadership Electives (3 Credits)

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

Railroad Focus Technical Electives (9 Credits)

Civil Track

CEE 3401—Transportation Engineering
CEE 4333—Estimating and Planning of Construction Projects
CEE 4407—Transportation Design
CEE 4905—Senior Design (Railroad Theme)*
CEE 4990—Independent Study in Rail Topics*
CEE 5408—Public Transit
XX-XXXX A course in rail topics from another University*

Mechanical Track

MEEM 3900—Engineering Design Process
MEEM 4220—Internal Combustion Engines I
MEEM 4450—Vehicle Dynamics
MEEM 4901/4902—Senior Capstone Design (Railroad Theme)*
MEEM 4990—Independent Study in Rail Topics*
XX-XXXX A course in rail topics from another University*

Electrical Track

EE 3120—Electric Energy Systems
EE 4219/4220—Intro to Electric Machinery and Drives with lab
EE 4227/4228—Power Electronics with lab
EE 3160—Signal Systems
EE 3171—Microcontroller Applications
EE3261—Control Systems
EE4252—Digital Signal Processing and Applications
EE 4253—Real Time Signal Processing
EE 4800—Special Topics with Railroad Focus
EE 4901/4910—EE Design Project with Railroad focus
XX-XXXX A course in rail topics from another University*

* An independent study, project, or a senior or enterprise design course with a railroad focus in the student's major discipline, or a course in rail topics from another university may be substituted for one of the Railroad Focus courses with prior written approval by the Director, Rail Transportation Program.

**EMAIL US FOR MORE INFORMATION
REGARDING THE MINOR**

RAIL@MTU.EDU