MICHIGAN TECH RAIL TRANSPORTATION PROGRAM

The Rail Transportation Program (RTP) attracts students from a wide range of degree programs. The RTP will prepare you for future employment through supportive programming and by giving you innovative course work and unique opportunities necessary to learn about the rail transportation industry. RTP will also help you develop critical professional skills.

WHY CONSIDER RAIL?
- “Green” Transportation
- Job Opportunities
- Scholarships
- Field Trips & Conference Visits
- Industry Networking & Involvement
- Internships & Co-ops
- Railroad Engineering and Activities Club
- Industry Sponsored Enterprise and Senior Design Projects

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

Find us on Facebook At Facebook.com/MTURAIL
**LEARNING GOALS**  
Students will:

**Rail Industry Knowledge Base**  
- Be familiar with rail system components  
- Understand industry terminology  
- Understand engineering and operational practices of the rail transportation industry  

**Professional Development**  
- Gain disciplinary 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  
- Experience 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)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 3490</td>
<td>Intro To Rail Transportation</td>
</tr>
<tr>
<td>CEE 4404/5404</td>
<td>Railroad Engineering</td>
</tr>
<tr>
<td>OSM 4700</td>
<td>Logistics and Transportation Management</td>
</tr>
</tbody>
</table>

**Leadership Electives (3 Credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 3000</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>MGT 3100</td>
<td>Leadership Development</td>
</tr>
<tr>
<td>HU 3120</td>
<td>Technical and Professional Communication</td>
</tr>
</tbody>
</table>

**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