ENGINEERING: RAILWAY ENGINEERING, MENG

for the Master of Engineering in Engineering, Railway Engineering Concentration

The MEng in Engineering, Railway Engineering Concentration is a professionally oriented degree program for students whose primary intent is a career in industry or government. This degree differs from the Master of Science degree in that it is a terminal degree and not a pathway to a doctoral program. Concentrations under the MEng in Engineering major include Aerospace Systems Engineering (http://catalog.illinois.edu/graduate/engineering/engineering-meng/aerospace-systems/), Autonomy and Robotics (http://catalog.illinois.edu/graduate/engineering/engineering-meng/autonomy-robotics/), Digital Agriculture (http://catalog.illinois.edu/graduate/engineering/engineering-meng/digital-agriculture/), Energy Systems (http://catalog.illinois.edu/graduate/engineering/engineering-meng/energy-systems/), Instrumentation and Applied Physics (http://catalog.illinois.edu/graduate/engineering/engineering-meng/instrumentation-applied-physics/), Plasma Engineering (http://catalog.illinois.edu/graduate/engineering/engineering-meng/plasma-engineering/), and Railway Engineering (p. 1).

This program is a collaborative effort between the Rail Transportation Engineering Center (RailTEC) and the Railway Group at KTH Royal Institute of Technology in Stockholm, Sweden.

Admission Requirements

The Department of Civil & Environmental Engineering accepts applications for admission to the graduate program for both fall and spring semesters. Applicants must hold a bachelor's or master's degree in engineering or related fields equivalent to those granted by the University of Illinois at Urbana-Champaign with cumulative grade point average of at least 3.00 (A = 4.00). The Graduate Record Examination (GRE) (http://www.ets.org/portal/site/ets/menumitem.fab2360b1645a1de9b3a0779f1751509/?vgnextoid=b195e3b5f64f4010VgnVCM10000022f95190RCRD) is required.

Full details of admission requirements are on the Railway Engineering Concentration website (http://railwaymeng.engineering.illinois.edu/).

All applicants whose native language is not English are required to submit TOEFL (http://www.toefl.org/) or International English Language Testing System (IELTS) (http://www.ielts.org/) scores as evidence of English proficiency. Minimum admission requirements (https://grad.illinois.edu/admissions/instructions/04c/) are set by the Graduate College.

Financial Aid

Students in concentrations under the MEng in Engineering major are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

Other Graduate Programs in the Department of Civil & Environmental Engineering

- Civil Engineering, MS (http://catalog.illinois.edu/graduate/engineering/civil-engineering-ms/)
  - optional concentrations for the MS:
    - Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
    - Data Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/data-science-engineering/)
- Civil Engineering, PhD (http://catalog.illinois.edu/graduate/engineering/civil-engineering-phd/)
  - optional concentrations:
    - Computational Science and Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
- Environmental Engineering in Civil Engineering, MS (http://catalog.illinois.edu/graduate/engineering/environmental-engineering-civil-engineering-ms/)
  - optional concentrations:
    - Computational Science and Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
- Environmental Engineering in Civil Engineering, PhD (http://catalog.illinois.edu/graduate/engineering/environmental-engineering-civil-engineering-phd/)
  - optional concentrations:
    - Computational Science and Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
  - concentrations:
    - Railway Engineering (p. 1)
    - available for:
Engineering: Railway Engineering, MEng

- Engineering, MENG (http://catalog.illinois.edu/graduate/engineering/engineering-meng/)

- joint programs:
  - Civil Engineering, MS & Architecture, MARCH (http://catalog.illinois.edu/graduate/engineering_faa/joint-degree/architecture-march-civil-engineering-ms/), (Construction Management or Structures)
  - Civil Engineering, MS & Urban Planning, MS (http://catalog.illinois.edu/graduate/faa/joint-degree/urban-planning-mup/)

For the Master of Engineering in Engineering Railway Engineering Concentration

For additional details and requirements, please refer to the concentration's website (http://railwaymeng.engineering.illinois.edu/) and the Graduate College Handbook (http://grad.illinois.edu/gradhandbook/).

### Concentration Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 409</td>
<td>Railroad Track Engineering</td>
<td>6</td>
</tr>
<tr>
<td>CEE 412</td>
<td>High-Speed Rail Engineering</td>
<td>6</td>
</tr>
<tr>
<td>Alternate Illinois course from approved list for students who have completed one or both of the required courses in previous degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEE 498</td>
<td>Special Topics (RTV, KTH SD2307, Rail Vehicle Technology)</td>
<td>12</td>
</tr>
<tr>
<td>CEE 498</td>
<td>Special Topics (TMS, KTH AK2036, Theory and Methodology of Science with Applications)</td>
<td>12</td>
</tr>
<tr>
<td>CEE 598</td>
<td>Special Topics (ET, KTH EJ2400, Electric Traction)</td>
<td>12</td>
</tr>
<tr>
<td>CEE 598</td>
<td>Special Topics (RVD, KTH SD2313, Rail Vehicle Dynamics)</td>
<td>12</td>
</tr>
</tbody>
</table>

**Elective Courses from Illinois**

- Railway Elective Courses from Approved List A, minimum 6 hours
- Engineering Elective Courses from Approved List B, minimum 6 hours
- Professional Development courses from approved list

**Total Hours**

- 36

### Other Requirements and Conditions (may overlap)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Minimum of 20 credit hours must be taken at the University of Illinois at Urbana-Champaign campus</td>
<td></td>
</tr>
<tr>
<td>Minimum of 12 500-level credit hours in the concentration with at least 8 credit hours in the core concentration</td>
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<tr>
<td>No courses used to fulfill any degree requirement may be taken using the Credit/No Credit option.</td>
<td></td>
</tr>
<tr>
<td>Minimum program GPA</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*Information listed in this catalog is current as of 08/2022*
phone: (217) 333-3921
email: meng-railway@illinois.edu

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