**TRANSPORTATION AND LOGISTICS MINOR**

Students are required to complete 7 courses, of which 1 is a required course. The other 6 courses must include at least 3 core courses. At least 2 of the 6 must be outside the school in which the student is majoring.

Students in the McCormick School may double-count a maximum of 2 courses from their major program toward the minor. Students from other schools are not allowed to double-count courses that are part of their major but may count courses that fulfill related course, distribution, foundation, or social science and humanities requirements.

**Prerequisites**

In preparation for pursuing the minor, students should take courses in calculus and in probability and statistics.

**Minor Requirements (7 units)**

- **TRANS 310-0 Seminar in Transportation and Logistics** (For WCAS students entering after Spring 2023, this class fulfills the WCAS Advanced Expression requirement.)
- 3 or more core courses
  - Chosen from the following:
    - CIV_ENV 304-0: Civil and Environmental Engineering Systems Analysis
    - CIV_ENV 371-0: Introduction to Transportation Planning and Analysis
    - CIV_ENV 376-0: Transportation System Operations
    - CIV_ENV 377-0: Choice Modelling in Engineering
    - ECON 310-1: Microeconomics
    - ECON 355-0: Transportation Economics and Public Policy
    - IEMS 310-0: Operations Research
    - or IEMS 313-0: Foundations of Optimization
    - IEMS 381-0: Supply Chain Modeling and Analysis
    - IEMS 383-0: Service Engineering and Management
  - 2 must be outside the student's major program.
  - No substitutions are allowed.
  - 3 additional courses selected from core courses or approved electives:
    - Approved electives include the following:
      - CIV_ENV 305-0: Economics and Finance for Engineers
      - or BUS_INST 304-0: Corporate Finance
      - or ECON 360-1: Foundations of Corporate Finance Theory
      - or KELLG_FE 310-0: Principles of Finance
      - CIV_ENV 330-0: Engineering Project Management
      - CIV_ENV 368-0: Sustainability: The City
      - CIV_ENV 387-0: Design of Sustainable Urban Developments
      - ECON 309-0: Public Finance
      - ECON 337-0: Economics of State and Local Governments
      - ECON 349-0: Industrial Economics
      - ECON 350-0: Monopoly Competition & Public Policy
      - ECON 354-0: Issues in Urban and Regional Economics
      - ECON 361-0: International Trade
      - ECON 371-0: Economics of Energy
      - ECON 372-0: Environmental Economics
      - ECON 373-0: Natural Resource Economics
      - ECON 381-1: Econometrics
      - ECON 381-2: Econometrics
      - GEOG 312-0: Geography of Chicago & Its Region
      - GEOG 341-0: Principles of Cartography
      - GEOG 343-0: Geographic Information Systems (or other approved GIS course)
      - HISTORY 322-2: Development of the Modern American City: 1880-Present
      - IEMS 315-0: Stochastic Models
      - IEMS 317-0: Discrete Event Systems Simulation
      - IEMS 365-0: Analytics for Social Good
      - IEMS 382-0: Operations Engineering and Management
      - POLI_SCI 321-0: Urban Politics
      - POLI_SCI 329-0: U.S. Environmental Politics
      - SOCIOL 301-0: The City: Urbanization and Urbanism
      - SOCIOL 312-0: Social Change and the Environment
      - or SOCIOL 336-0: The Climate Crisis, Policies, and Society

  - 1 unit of approved independent study

**Graduate Level Courses**

- CIV_ENV 471-1: Transportation Systems Analysis 1
- CIV_ENV 471-2: Transportation Systems Analysis 2
- CIV_ENV 472-1: Transportation System Operations and Control 1: Urban Networks
- CIV_ENV 472-2: Transportation System Operations and Control 2: Scheduled Modes and Real-Time
- CIV_ENV 480-1: Travel Demand Analysis & Forecasting 1
- CIV_ENV 480-2: Advances in Travel Demand Analysis and Forecasting
- CIV_ENV 482-0: Evaluation and Decision Making for Infrastructure Systems
- CIV_ENV 483-0: Infrastructure Systems Analysis
- CIV_ENV 484-0: Advanced Theories of Traffic Flow
- IEMS 481-0: Logistics
- IEMS 482-0: Operations

- At least 2 of the core or elective courses must be outside the school in which the student is registered.
- Students in the McCormick School may double-count a maximum of 2 courses from their major program toward the minor.
- Students from other schools are not allowed to double-count courses that are part of their major but may count courses that fulfill related course, distribution, or social science and humanities requirements.
- 4XX level courses require consent of the instructor and the Director of the Transportation and Logistics Program.

**TRANS 310-0 Seminar in Transportation and Logistics (1 Unit)** Yearlong senior seminar on the structure of the transportation and supply-chain industries and evaluation of relevant public policy. Students receive 1 credit in the spring quarter of their senior year. **Advanced Expression**

**TRANS 399-0 Independent Study (1 Unit)** Advanced work chosen by mutual agreement with a faculty member. Only 1 unit may count toward the minor. Consent of faculty required.