# 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 which 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, 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**
- **3 or more core courses**
  - Chosen from the following:
    - **Course**
    - **Title**
      - 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
      - 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:
    - **Course**
    - **Title**
      - CIV_ENV 205-0
        - 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
      - or ECON 370-0
        - Environmental & Natural Resource Economics
      - ECON 373-0
        - Natural Resource Economics
      - or ECON 370-0
        - Environmental & 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
      - POLL_SCI 321-0
        - Urban Politics
      - POLL_SCI 322-0
        - Ideas and Institutions in Urban Politics
      - POLL_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

- **Course**
- **Title**
  - 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 473-0
    - Survey methods, data and analysis
  - 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.
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- 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.

**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.