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:
    \begin{itemize}
      \item Course \hspace{1cm} Title
      \item CIV_ENV 304-0 \hspace{1cm} Civil and Environmental Engineering Systems Analysis
      \item CIV_ENV 371-0 \hspace{1cm} Introduction to Transportation Planning and Analysis
      \item CIV_ENV 376-0 \hspace{1cm} Transportation System Operations
      \item ECON 310-1 \hspace{1cm} Microeconomics
      \item ECON 355-0 \hspace{1cm} Transportation Economics and Public Policy
      \item IEMS 310-0 \hspace{1cm} Operations Research
      \item or IEMS 313-0 \hspace{1cm} Foundations of Optimization
      \item IEMS 381-0 \hspace{1cm} Supply Chain Modeling and Analysis
      \item IEMS 383-0 \hspace{1cm} Service Operations Management
    \end{itemize}

• 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:
    \begin{itemize}
      \item Course \hspace{1cm} Title
      \item CIV_ENV 205-0 \hspace{1cm} Economics and Finance for Engineers
      \item or BUS_INST 304-0 \hspace{1cm} Corporate Finance
      \item or ECON 360-1 \hspace{1cm} Foundations of Corporate Finance Theory
      \item or KELLG_FE 310-0 \hspace{1cm} Principles of Finance
      \item CIV_ENV 330-0 \hspace{1cm} Engineering Project Management
      \item CIV_ENV 368-0 \hspace{1cm} Sustainability: The City
      \item CIV_ENV 387-0 \hspace{1cm} Design of Sustainable Urban Developments
      \item ECON 309-0 \hspace{1cm} Public Finance
      \item ECON 337-0 \hspace{1cm} Economics of State and Local Governments
      \item ECON 349-0 \hspace{1cm} Industrial Economics
      \item ECON 350-0 \hspace{1cm} Monopoly Competition & Public Policy
      \item ECON 354-0 \hspace{1cm} Issues in Urban and Regional Economics
      \item ECON 361-0 \hspace{1cm} International Trade
      \item ECON 371-0 \hspace{1cm} Economics of Energy
      \item ECON 372-0 \hspace{1cm} Environmental Economics
      \item or ECON 370-0 \hspace{1cm} Environmental & Natural Resource Economics
      \item ECON 373-0 \hspace{1cm} Natural Resource Economics
      \item or ECON 370-0 \hspace{1cm} Environmental & Natural Resource Economics
      \item ECON 381-1 \hspace{1cm} Econometrics
      \item ECON 381-2 \hspace{1cm} Econometrics
      \item GEOG 312-0 \hspace{1cm} Geography of Chicago & Its Region
      \item GEOG 341-0 \hspace{1cm} Principles of Cartography
      \item GEOG 343-0 \hspace{1cm} Geographic Information Systems (or other approved GIS course)
      \item HISTORY 322-2 \hspace{1cm} Development of the Modern American City: 1880-Present
      \item IEMS 315-0 \hspace{1cm} Stochastic Models
      \item IEMS 317-0 \hspace{1cm} Discrete Event Systems Simulation
      \item IEMS 365-0 \hspace{1cm} Analytics for Social Good
      \item IEMS 382-0 \hspace{1cm} Production Planning and Scheduling
      \item POLI_SCI 321-0 \hspace{1cm} Urban Politics
      \item POLI_SCI 322-0 \hspace{1cm} Ideas and Institutions in Urban Politics
      \item POLI_SCI 329-0 \hspace{1cm} U.S. Environmental Politics
      \item SOCIOL 301-0 \hspace{1cm} The City: Urbanization and Urbanism
      \item SOCIOL 312-0 \hspace{1cm} Social Change and the Environment
      \item or SOCIOL 336-0 \hspace{1cm} The Climate Crisis, Policies, and Society
    \end{itemize}

1 unit of approved independent study

Graduate Level Courses

\begin{itemize}
  \item CIV_ENV 471-1 \hspace{1cm} Transportation Systems Analysis 1
  \item CIV_ENV 471-2 \hspace{1cm} Transportation Systems Analysis 2
  \item CIV_ENV 472-1 \hspace{1cm} Transportation System Operations and Control 1: Urban Networks
  \item CIV_ENV 472-2 \hspace{1cm} Transportation System Operations and Control 2: Scheduled Modes and Real-Time
  \item CIV_ENV 473-0 \hspace{1cm} Survey methods, data and analysis
  \item CIV_ENV 480-1 \hspace{1cm} Travel Demand Analysis & Forecasting 1
  \item CIV_ENV 480-2 \hspace{1cm} Advances in Travel Demand Analysis and Forecasting
  \item CIV_ENV 482-0 \hspace{1cm} Evaluation and Decision Making for Infrastructure Systems
  \item CIV_ENV 483-0 \hspace{1cm} Infrastructure Systems Analysis
  \item CIV_ENV 484-0 \hspace{1cm} Advanced Theories of Traffic Flow
  \item IEMS 481-0 \hspace{1cm} Logistics
  \item or ECON 370-0 \hspace{1cm} Environmental & Natural Resource Economics
  \item ECON 381-1 \hspace{1cm} Econometrics
  \item ECON 381-2 \hspace{1cm} Econometrics
  \item GEOG 312-0 \hspace{1cm} Geography of Chicago & Its Region
  \item GEOG 341-0 \hspace{1cm} Principles of Cartography
  \item GEOG 343-0 \hspace{1cm} Geographic Information Systems (or other approved GIS course)
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  \item SOCIOL 301-0 \hspace{1cm} The City: Urbanization and Urbanism
  \item SOCIOL 312-0 \hspace{1cm} Social Change and the Environment
  \item or SOCIOL 336-0 \hspace{1cm} The Climate Crisis, Policies, and Society
  \item 1 unit of approved independent study
  \item\end{itemize}

• 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.

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.