eCommerce Engineering Minor

This interdisciplinary minor, created in collaboration with IBM, is intended for students interested in careers in eCommerce-related applications development and information technologies, including enterprise development, systems analysis and architecture, data warehousing, and data analytics.

eCommerce, in the form of business-to-consumer (B2C) or business-to-business (B2B) commerce, now makes up the majority of commerce in the United States. Much of this activity is "hidden" from end consumers. eCommerce includes not just web-based sales to consumers, but the technology and business processes integrating complex multinational supply chains and the collection and analysis of market-related data from both traditional point-of-sale and web stores, as well as from Internet of Things (IoT) devices, such as mobile phones.

Technologies and business practices have evolved rapidly in eCommerce, and there is a high demand for employees with expertise in these systems. The purpose of this minor is to familiarize technically oriented students with the business processes and strategic issues underlying eCommerce systems, as well as develop a mastery of the design, development, and implementation of eCommerce software systems.
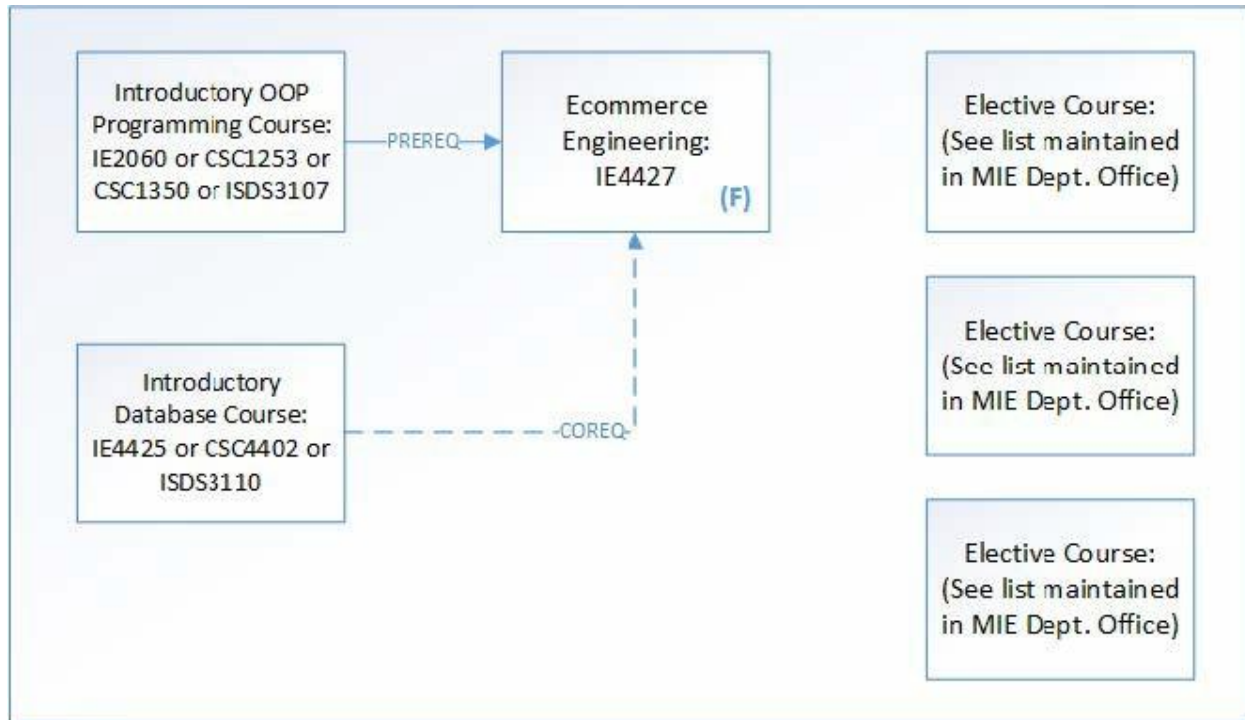
Program Requirements

To earn an eCommerce engineering minor, a student must complete 18 credit hours of coursework:

- An introductory object-oriented programming course (IE 2060 or CSC 1253 or CSC 1350 or ISDS 3107)
- An introductory database/SQL course (IE 4425 or CSC 4402 or ISDS 3110)
- IE 4427 eCommerce Engineering (normally offered in the fall)
- Three elective courses from the approved electives list for the minor. This currently includes:

  - CSC 2610 Cloud Fundamentals & Web Programming
  - CSC 3730 Machine Learning and Data Analytics
  - CSC 4343 Interfaces Design & Technology
  - CSC 4740 Big Data Technologies
  - IE 3520 Supply Chain Logistics I
  - IE 4426 Dist. Info Systems (Web Applications Development)
  - IE 4466 Human Computer Interaction
  - ISDS 4070 Big Data
  - ISDS 4096 Cyber Risk Mgt
  - ISDS 4141 Intro to Data Mining
  - ISDS 4112 Data Warehousing
  - ISDS 4118 Web Analytics
  - ISDS 4160 Sourcing in China
  - 4000-level independent study course with eCommerce engineering topic (e.g., IE 4785)
    - Only one independent study course may be counted towards the elective

Many of these courses are either required or elective courses in computer science, electrical and computer engineering, industrial engineering, and information systems and decision sciences, and can be counted towards both major and minor requirements.

View the minor flowchart below:

For more information on the minor, please contact:

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