In addition to completing the University of Utah's and Eccles School's core requirements, students seeking a Bachelor's Degree in Information Systems must complete the following courses. (Students seeking an Honors Bachelor's Degree in Information Systems must complete the major's honors requirements, as well). Students can find full course descriptions and requisite details on the University of Utah's General Catalog and class schedule.

### Core Courses

**IS 4415 - Data Structures & Java**  
Prerequisite: IS 4410 or 4411  
Topics include: object-oriented computer programming, using the Java programming language; variables; control-flow statements; single-value data structures; lists, sets, hash tables, trees, and graph data structures; and algorithms for searching, sorting, and clustering data.

**IS 4420 - Database Fundamentals**  
Prerequisite: IS 4410 or 4411  
Topics include: database theory and design, entity-relationship diagrams (ERD); logical modeling (including normalizing data tables, defining keys, and querying the data); and structured query language (SQL) topics (including aggregates, embedded queries, and joins).

**IS 4430 - Process Analysis & IS Project Management**  
Prerequisite: IS 4410 or 4411  
Topics include: information system analysis; analysis tools; the procedures for managing information system analysis projects; the role of the systems analyst in an organization; and concepts, philosophies, trends, tools, and techniques in systems analysis and design.

**IS 4440 - Networking & Servers**  
Prerequisite: IS 4410 or 4411  
Topics include: telecommunication systems; management support for networking; data communications; computer network definitions, concepts, and principles (including topologies, protocols, standards, routers, gateways, and cabling); and the benefits, drawbacks, effects, tradeoffs, and compromises related to data communication technologies.

**IS 4460 - Web Based Applications**  
Prerequisite: IS 4415  
Topics include: technologies and tools that assist businesses in using the World Wide Web successfully (including Java programming, JSP, HTML, XML, HTTP, and Web servers and databases).
The University of Utah’s General Catalog includes a sample four-year degree plan for the Information Systems major. Students can customize this plan, using the Degree Plan feature in My Degree Dashboard. In addition to utilizing these tools, the Eccles School encourages students to work closely with their academic advisor. Advising will ensure proper course sequencing, while also creating a personalized academic road-map.

Core Courses (continued)

- Students must complete one (1) of the following courses:
  - IS 4470 - Telecommunication & Security
  - IS 4480 - Data Warehouse Design & Implementation
  - IS 4482 - Business Data Mining

- OIS 3440 - Applications of Business Statistics
  Prerequisite: OIS 2340

  Topics include: designing experiments, goodness of fit, contingency tables, correlation analysis, nonparametric statistics, statistical process control, developing and interpreting regression models, and creating graphical and numerical outputs in Microsoft Excel.

Global Perspectives Courses

- OIS 5620 - Global Supply Chain Management
  Prerequisite: OIS 3660 or 3661

  Topics include: how to improve the performance of an individual firm and the supply chain network (including material flows, information flows, and contractual arrangements) and aligning the inventories, information, and incentives of a supply chain operating in a global context.

- Students must complete a university-approved International (IR) course.

Program of Study

The University of Utah’s General Catalog includes a sample four-year degree plan for the Information Systems major. Students can customize this plan, using the Degree Plan feature in My Degree Dashboard. In addition to utilizing these tools, the Eccles School encourages students to work closely with their academic advisor. Advising will ensure proper course sequencing, while also creating a personalized academic road-map.
Scheduling Guide

To help students plan their schedules, the Department of Operations & Information Systems has put together a scheduling guide. While it cannot guarantee offerings in the event of unforeseen circumstances (e.g. instructor illness), the department intends to offer the following courses at the time and semester indicated, even if enrollment is low.

Please note that the department does not offer major IS courses in the summer.

<table>
<thead>
<tr>
<th>Information Systems Core</th>
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<tbody>
<tr>
<td>IS 4415 - Data Structures &amp; Java</td>
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<td>Day</td>
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