

E-COMMERCE TECHNOLOGY (ECT)

ECT 250 | INTERNET, COMMERCE, AND SOCIETY | 4 quarter hours (Undergraduate)

An introduction of Internet technology, its application for commerce, and its social impact. This course surveys Internet technology, collaboration and commerce activities, digital media distribution, online communities, and social networking in the Internet environment.

ECT 310 | INTERNET APPLICATION DEVELOPMENT | 4 quarter hours (Undergraduate)

Development of Internet-based applications using client and server-side scripting. Students will design and build an Internet application that accesses a database.

CSC 211 (or IT 231 or CSC 241 or CSC 243) is a prerequisite for this class.

ECT 330 | ADVANCED INTERNET APPLICATION DEVELOPMENT | 4 quarter hours (Undergraduate)

This is a programming course focusing on advanced Internet technologies such as tiered design of Internet applications, transactions, creating components, and Web services.

(IT 211 or IT 231 or CSC 241 or CSC 243) is a prerequisite for this class.

ECT 355 | INTERNET SYSTEMS: COLLABORATION, COMMERCE, AND MEDIA | 4 quarter hours (Undergraduate)

This course examines the application of Internet technology to support collaboration, commerce, and digital media distribution activities. It will focus on the latest technologies, new development models and their social impact. Students will explore different models and develop applications to support collaborative commerce.

ECT 310 (or ECT 330 or IT 232) is a prerequisite for this class.

ECT 360 | INTRODUCTION TO XML | 4 quarter hours (Undergraduate)

An introduction to Extensible Markup Language (XML) and XML transformations. XML syntax, processing and validation. Namespaces. Transformations using XSLT and XPath. XML applications such as XHTML, RDF, SVG, XSL.

CSC 211 (or CSC 241 or CSC 243) is a prerequisite for this class.

ECT 410 | DEVELOPMENT OF WEB-BASED BUSINESS APPLICATIONS | 4 quarter hours (Graduate)

Development of web-based business solutions using client-side and server-side technologies. Major topics include analysis and design of web projects for a business, web application design patterns, server-side programming, and access to databases.

CSC 401 or IT 411 is a prerequisite for this class.

ECT 455 | E-COMMERCE WEB SITE ENGINEERING | 4 quarter hours (Graduate)

(Formerly ECT 555, cross-listed with HCI 513) An introduction to Web site engineering methods and processes to support e-commerce development. Web site engineering life cycle and user-centered design, including site goals, business models, value propositions, user analysis, information architecture, interface and navigation design, usability guidelines, database, testing, hosting strategies, usage metrics, and collaborative development. Technologies for e-commerce, shopping cart, digital payments, promotion strategies, and security issues. Students will build fully functional Web sites using database and client- and server-side technologies.

(CSC 401 or IT 411 or HCI 430) is a prerequisite for this class.

ECT 480 | INTRANETS AND PORTALS | 4 quarter hours (Graduate)

Intranet development methodology. Data warehousing concept and On-Line analytic processing (OLAP) for information management. Enterprise information portals (EIP). Transforming information into knowledge.

Major applications involve: decision support, customer applications and content personalization for intranet. Students will conduct case studies and projects.

ECT 424 is a prerequisite for this class.

ECT 481 | INTERNET SUPPLY CHAIN MANAGEMENT | 4 quarter hours (Graduate)

This course examines system architectures, technologies, approaches, and infrastructure requirements in the context of supply chain systems. The focus is on the design, development and implementation of systems that facilitate the collaboration of an enterprise with its buyers and suppliers. Topics include development of messaging-based collaboration framework with web services. Students will design and implement a collaborative extranet system component in team projects.

CSC 401 or IT 411 is a prerequisite for this class.

ECT 556 | ENTERPRISE ARCHITECTURE AND DESIGN | 4 quarter hours (Graduate)

This is an advanced course on the design and planning of enterprise architecture that enables intra-/multi-enterprise collaboration and interoperability. The emphasis is on the alignment between IT and organizational objectives through the integration of business architectures, data and information architecture, application architecture, technology architecture, interfaces and infrastructure. Topics include: frameworks, tools, and methodologies for enterprise architecture design; data and process modeling, application integration, implementation fundamentals, adaptability to changing organizational needs, and managing costs of implementation. Students will conduct case studies and develop architecture plans. Prerequisites: ECT 424 and SE 430.

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**ECT 565 | MOBILE ENTERPRISE | 4 quarter hours
(Graduate)**

Mobile enterprise information systems are becoming increasingly complex and consist of existing systems with enabling middleware to achieve end-to-end enterprise mobile solutions. Mobile infrastructure performs content adaptation, data synchronization, bridging corporate and mobile messaging systems and support mobile information portals. The course will discuss web services oriented component architecture and system integration with Adaptive Application Architecture (AAA) with Wireless application gateway (WAG) and Multi-channel Access Gateways (MAG) supporting mobile and wireless access for heterogeneous devices. Such concepts as content distribution, connectivity and security, scalability and load balancing, device management will be discussed. Additional topics include Location-aware applications supporting mobile knowledge workers, business process for value contribution, and investment decisions on mobile technologies. Students will become familiar with mobile enterprise tool suites, mobile messaging delivery platforms, wireless Web portals. Students will be implementing mobile enterprise solution components.

ECT 455 is a prerequisite for this class.

**ECT 582 | SECURE ELECTRONIC COMMERCE | 4 quarter hours
(Graduate)**

This course studies security requirements, threat modeling, and appropriate safeguards for e-commerce systems. Major topics include web application security, web service security, and web server security.

ECT 424 OR CSC 435 OR NET 463 is a prerequisite for this class.

**ECT 583 | ADVANCED SCRIPTING TECHNOLOGIES | 4 quarter hours
(Graduate)**

This course focuses on applying advanced scripting technologies in the design and development of large Web applications. Major topics include tiered application design, transacted Web applications, components, and Web services.

CSC 401 or IS 411 or IT 411 is a prerequisite for this class.

**ECT 587 | MOBILE COMMERCE TECHNOLOGY | 4 quarter hours
(Graduate)**

This course examines leading wireless and mobile technologies for consumer and enterprise mobile commerce. This course discusses how mobile technologies have changed the business community with an emphasis on major mobile platforms. Major topics include analysis and design of business applications in a mobile environment, and wireless user interface design. Students will develop mobile applications using a prominent mobile technology.

CSC 401 or IS 411 or IT 411 is a prerequisite for this class.

**ECT 589 | E-BUSINESS STRATEGIES | 4 quarter hours
(Graduate)**

Designed for ECT majors and IS majors in ECT concentration, this course focuses on the deployment of Internet and enterprise technologies to support organization's e-business initiatives and collaborative commerce. Conducted in the format of seminar, case analysis, and dialogue with industry practitioners, this course requires students to actively participate in the study of models and approaches for e-business technology implementation and transformation. Topics include: the impact of Internet on industry structure and organizational transformation, enterprise application architecture, planning and implementation of technology and process to support an increasingly collaborative and integrated environment for e-commerce. Students have to complete an organization case study of e-business technology implementation to fulfill the requirement of this capstone course. This course should be taken at the conclusion of the ECT program. **PREREQUISITE(S):** Completion of ten or more School of Computing MS level courses is required.

**ECT 596 | TOPICS IN E-COMMERCE TECHNOLOGY | 4 quarter hours
(Graduate)**

Independent study form required. **PREREQUISITE(S):** Consent of instructor.

**ECT 690 | RESEARCH SEMINAR | 1-4 quarter hours
(Graduate)**

Readings and discussion on current research topics. Students may register for this course no more than twice. **PREREQUISITE(S):** Consent of the instructor. (variable credit)

**ECT 696 | MASTER'S PROJECT | 4 quarter hours
(Graduate)**

Four credit hours. Students may register for this course only after their advisor has approved a written proposal for their project. Independent study form required. **(PREREQUISITE(S):** Consent of advisor).

**ECT 698 | MASTER'S THESIS | 2 quarter hours
(Graduate)**

(2 credit hours) Students may register for this course only after their advisor has approved a written proposal for their thesis. Students must continue to register for this course every quarter after their first registration in it until they complete their project or thesis to the satisfaction of their advisor. They earn two hours of credit for each such registration but only four hours of credit will apply for degree credit. Independent study form required. **PREREQUISITE(S):** Consent of advisor. (2 quarter hours)