IT 403 - Introduction to Internet Technologies
Credits: 4
Introductory course exploring the fundamentals of Internet communications with an emphasis on the World Wide Web. Students develop an understanding of the Internet's underlying technologies and learn how to utilize them as contributing members of the Web community. Students become proficient with creating and publishing Web pages using HTML and CSS. No prior knowledge or experience is assumed. No credit if credit earned for CIS 405. (Note CIS 405 is offered at UNH Manchester, and is not related to CS #405 at UNH Durham.)
Grade Mode: Letter Grading

IT 502 - Intermediate Web Design
Credits: 4
An intermediate level exploration of the theory and practice of Web design. Students learn the fundamentals of design theory applicable to the World Wide Web and examine tools and techniques for applying that knowledge to their projects. Additional topics include information architecture, usability, accessibility, optimization, typography, and market visibility. Working knowledge of XHTML and CSS required.
Prerequisite(s): IT 403 with a minimum grade of D-.
Grade Mode: Letter Grading

IT 505 - Integrative Programming
Credits: 4
Expands prior programming knowledge through the introduction of another programming language, with a particular emphasis on integrative programming techniques common within IT. Topics include data access and exchange; database concepts; effective interfaces; and leveraging third-party APIs, libraries, and frameworks. Computer Science majors not allowed.
Prerequisite(s): CS 416 with a minimum grade of D- or CS 417 with a minimum grade of D-.
Grade Mode: Letter Grading

IT 520 - Foundations of Information Technology
Credits: 4
Fundamentals of computer hardware, software, and data. Topics include processors, memory, storage, resource management, and discrete mathematics.
Prerequisite(s): CS 415 with a minimum grade of C- or CS 410C with a minimum grade of C- or CS 410P with a minimum grade of C-.
Grade Mode: Letter Grading

IT 604 - Server-side Web Development
Credits: 4
An intermediate-level examination of the theory and practice of developing server-side applications for the World Wide Web. Students will learn practical techniques for designing and implementing data-driven Web sites through the use of server-side processing. Working knowledge of HTML, CSS, and some programming language is required.
Prerequisite(s): IT 403 with a minimum grade of D- and (CS 410 with a minimum grade of D- or CS #414 with a minimum grade of D- or CS 415 with a minimum grade of D-).
Grade Mode: Letter Grading

IT 666 - Cybersecurity Practices
Credits: 4
Through readings, exercises, research papers, and exams students will acquire the skills needed to implement solutions for security-related issues. Students will discuss security policies, legislation, system procedures, tools, and techniques. Students will analyze the patterns that attackers use to gain access to systems and understand what is required to defeat those attack patterns. At the conclusion of the course, students will have a heightened sense of security in the actions they take when using and maintaining computer systems.
Prerequisite(s): CS 527 with a minimum grade of D-.
Grade Mode: Letter Grading
IT 699 - Internship
Credits: 1
Provides the opportunity to apply academic experience in settings associated with future professional employment. Proposals for the internship must be approved by the instructor prior to registration. Students may receive compensation for their internship work.
Repeat Rule: May be repeated for a maximum of 4 credits. May be repeated up to 3 times.
Grade Mode: Credit/Fail Grading

IT 705 - Project Management for Information Technology
Credits: 4
This course focuses on a core set of project management essentials that can affect the bottom line of project technical and business performance. These are termed "best practices," and those addressed are: formal risk management, agreement on interfaces, metrics based scheduling/tracking, frequent binary completion milestones, incremental development, people aware management style, and change management. The emphasis is on information technology projects; however, the basic principles are pertinent to a wider class of project domains.
Attributes: Writing Intensive Course
Grade Mode: Letter Grading

IT 718 - Cloud Computing Principles
Credits: 4
Students will learn fundamental cloud architectural principles of: operational excellence, security, reliability, performance efficiency, and cost optimization through readings, labs, and a hands-on project. Course material will cover cloud offerings from Amazon’s AWS, Microsoft’s Azure, and Google’s Cloud Platform. Students complete a semester-long project in which they are required to implement a complete Cloud solution.
Prerequisite(s): CS 527 with a minimum grade of D-.
Grade Mode: Letter Grading

IT 725 - Network Technology
Credits: 4
Introduction to fundamental concepts of computer networks and exploration of widely-used networking technologies. Topics include principles of congestion and error control; network routing; local, wireless and access networks; application protocol design; and network programming. In-depth discussion of the Internet suite of protocols.
Prerequisite(s): IT 520 with a minimum grade of D-.
Equivalent(s): CS 725
Grade Mode: Letter Grading

IT 775 - Database Technology
Credits: 4
Topics include database architecture, schema design and definition, entity-relationship diagrams, data retrieval and update, and indexing performance. Architectures for single-user, multi-user, client-server, and web access are introduced. The relational data model is emphasized but alternative database models, such as semi-structured and object models, are introduced. Database administration topics include examination of metadata information, data integrity, and management of users and privileges, performance tuning, transactions, isolation levels, and security. Ethics of data protection are introduced. Students develop skill in SQL.
Not open to CS majors.
Prerequisite(s): IT 505 with a minimum grade of D-.
Mutual Exclusion: No credit for students who have taken CS 775.
Grade Mode: Letter Grading

IT #780 - Topics in Information Technology
Credits: 4
Material not normally covered in course offerings.
Repeat Rule: May be repeated for a maximum of 8 credits.
Grade Mode: Letter Grading

IT 791 - Senior Project I
Credits: 2
First semester of the capstone design experience. Industry best practices and tools are surveyed and applied in team projects. Students begin development on software projects proposed by faculty or external sponsors, including initial stages of design, implementation, and documentation, with an interim presentation of progress expected toward the end of the semester. Principles of security, testability, and maintainability are stressed.
Prerequisite(s): IT 705 (may be taken concurrently) with a minimum grade of D-.
Grade Mode: Letter Grading

IT 792 - Senior Project II
Credits: 2
Continuation of IT 791: Senior Project I. Students complete the project, a final presentation of results is expected toward the end of the semester. Successful completion of this course fulfills the Capstone Experience requirement for Information Technology majors.
Attributes: Writing Intensive Course
Prerequisite(s): IT 791 with a minimum grade of D-.
Equivalent(s): IT 710
Grade Mode: Letter Grading