Information Technology Studies (ITS)

Courses

**ITS 1670 Information Technology Today (4 Credits)**
The course is an overview of information technology and how it is used today in organizations and everyday life. Topics include its history and impact on organizations, business and people; the use of technology as a tool in various disciplines; issues of security and the ethical use of technology; the logical process of problem solving and the design of information systems; and general programming concepts. Course open to Colorado Women's College students only.

**ITS 1671 Principles of Information Technology (4 Credits)**
Students discuss and analyze information technology from a broad problem-solving perspective. This course presents an overview of the problem-solving process, the systems development life cycle, and project management, so that students can gain an appreciation of the "what," "why," and "how" technology applications are selected, developed, and implemented. Students analyze technologies of their choice to understand the objectives and benefits of these technologies and be able to recognize potential improvements. Students also develop a computer script to reflect capabilities of a technology. Prerequisites: ITS 1670, MATC 1100, MATH 2200. Course open to Colorado Women's College students only.

**ITS 1672 Introduction to Programming (4 Credits)**
This course is for students who want to improve their problem solving strategies and critical thinking skills. Students focus on problem definition and generating and evaluating solutions. Critical factors necessary for successful problem solving are discussed, as well as various techniques useful for analyzing problems and alternatives. Course open to Colorado Women's College students only.

**ITS 1992 Directed Study (1-5 Credits)**
Course open to Colorado Women's College students only.

**ITS 2210 Creativity in Problem Solving (4 Credits)**
Students learn how to design and implement computer programs using Java programming language, a widely used language for development of applications in an online (web-based) environment, as well as in object-oriented development. The course covers determining the requirements for the computer program and translating these requirements into a design. A computer program is then written, tested, and implemented. Prerequisites: ITS 1670, ITS 1671, MATC 1100, MATC 2200. Course open to Colorado Women's College students only.

**ITS 2410 Mobile Application Development (4 Credits)**
Students learn to program in the Visual Basic (VB) programming language for the .NET environment, one of the most important languages for the creation of computer applications that run in the Microsoft Windows environment. At the conclusion of this course, the student is able to design, implement and test VB programs using GUI interfaces. The object oriented nature of the language is employed in the creation of programs for the class. Prerequisites: ITS 1670, ITS 1671, ITS 1672. Course open to Colorado Women's College students only.

**ITS 2510 Operating Systems Using UNIX (4 Credits)**
Students learn the UNIX operating system using Linux. Topics covered include manipulating UNIX commands, shell programming, Linux on personal computers, UNIX system administration, UNIX utility programs using UNIX related programming languages such as PERL. Prerequisites: ITS 1670, ITS 1671, ITS 1672. Course open to Colorado Women's College students only.

**ITS 2700 Topics In Info Tech Studies (1-5 Credits)**
Course open to Colorado Women's College students only.

**ITS 2992 Directed Study (1-5 Credits)**
Course open to Colorado Women's College students only.

**ITS 3360 Operating Systems Using UNIX (4 Credits)**
Students learn the UNIX operating system using Linux. Topics covered include manipulating UNIX commands, shell programming, Linux on personal computers, UNIX system administration, UNIX utility programs using UNIX related programming languages such as PERL. Prerequisites: ITS 1670, ITS 1671, ITS 1672. Course open to Colorado Women's College students only.

**ITS 3410 Advanced Mobile Application Development (4 Credits)**
This course builds upon the student's knowledge of the hypertext markup language (HTML) and expands the ability to create advanced mobile applications that utilize cascading style sheets, forms, frames, Javascript and Java applets. Emphasis is placed on the development of internet application management skills gained through the utilization of the university's web server where students store their class web projects. Prerequisites: ITS 1670, ITS 1671, and ITS 2410. Course open to Colorado Women's College students only.

**ITS 3421 Database Organization and Management I (4 Credits)**
This course presents the important considerations in organizing and storing an organization’s data electronically using database technology. Topics covered include effective design of databases and using these techniques to design databases using commonly used database management systems. The societal and organizational implications of accumulating these electronic data are critically discussed. Prerequisite: ITS 1670 or BUS 1045. Course open to Colorado Women's College students only.
ITS 3422 Database Organization and Management II (4 Credits)
This course is designed to extend and implement the database design concepts learned in ITS 3421. Using, for example, the Oracle database management system, the course introduces SQL, PL/SQL, and programming language interfaces to databases. Students master software tools that enable the design and creation of database forms and reports. This class explains how to use a database management system to implement a database and access and manipulate its data. Course open to Colorado Women's College students only.

ITS 3510 Website Design and Usability (4 Credits)
This course is for students wishing to continue their study of web development, but with a focus on design and usability. Students learn what is meant by usability as a construct, the origins of usability research in psychology and human factors, and what user-centered design entails. Guidelines for usability, including accessibility, are studied extensively and identified as followed or violated in current websites. Lastly, students conduct a heuristic evaluation of a website and are introduced to formal usability assessment study methodologies. Prerequisites: ITS 2410 and 3410. Course open to Colorado Women's College students only.

ITS 3621 Computer Networking (4 Credits)
The technology of networks that connect computers and other devices together is discussed and understood. Students learn to consider alternative technologies in architcting networks of computers. The impact on society and organizations of being connected to networks locally and globally is explored. Prerequisites: ITS 1670, ITS 1671, ITS 1672, MATC 1100, MATH 2200. Course open to Colorado Women's College students only.

ITS 3651 Computer Security (4 Credits)
This course introduces the important world of computer security. As information technology becomes ubiquitous, the opportunities for loss of information resources and the invasion of privacy become greater. Topics include the technological aspects of computer security, i.e., how systems can be designed and managed to limit unwanted intrusions, and the human aspects of security, i.e., how social engineering can be used to manipulate individuals to divulge information that permits security breaches. Prerequisite: ITS 1672. ITS 3360, Operating Systems using Unix, is strongly recommended. Course open to Colorado Women's College students only.

ITS 3700 Topics in Info Tech Studies (1-5 Credits)
Course open to Colorado Women's College students only.

ITS 3810 Information Technology Business Analysis (4 Credits)
This course enables students to understand and demonstrate the skills necessary to be an effective Information Technology (IT) business analyst and support the requirements process. A business analyst is expected to understand not only the technology being supported, but also the business area being represented. Understanding the enterprise or business domain and working closely with stakeholders (both business and technical) is essential for successfully identifying opportunities, eliciting and analyzing stakeholder needs, and managing the scope of the solution as expressed by the requirements. This course emphasizes the competencies and knowledge areas defined by the International Institute of Business Analysis (IIBA). Prerequisite: ITS 1671. Course open to Colorado Women's College students only.

ITS 3880 Systems Analysis and Design (4 Credits)
Students master the orderly process of creating information systems in this course, which is the first of three courses making up the senior experience. In this course, students learn the Systems Development Life Cycle (SDLC), in several of its many implementations. Students learn the process of defining information system requirements, analyzing alternative approaches to meeting the requirements, and designing a system to address the chosen alternative. As part of their senior experience, the students, in teams, determine a project they will implement in the capstone experience, define its requirements, and design the solution they will implement. Prerequisites: ITS 1670, MATC 1100, MATH 2200, ITS 1671, ITS 1672, ENGG 1111, ENGG 1122, CREX 1217, ADM 2510. Course open to Colorado Women's College students only.

ITS 3890 Managing IT Projects (4 Credits)
Successful design, development and deployment of technology solutions for business problems requires project management to plan, monitor and manage critical resources. Project management is the process of identifying, managing and focusing people and other resources to achieve project objectives within budget and time constraints. This course explores the role and responsibilities of the project manager, the principles and techniques of effective project management (particularly as related to information technology projects), and tools to enable more efficient management. Prerequisite: ITS 3890. Course open to Colorado Women's College students only.

ITS 3950 Info Tech Integrated Seminar (4 Credits)
This course is the culmination of the senior experience. Following the design they have created and the project plan they have developed, teams of students implement and install a useful IT system for a client. At the conclusion of the course, the students formally present and demonstrate the results of their project to a panel of faculty and experts from the IT industry, who give them professional feedback on the quality of their project and the professional quality of their presentation. Prerequisites: Completion of all required major courses and senior status. Course open to Colorado Women's College students only.

ITS 3980 Internship (1-6 Credits)
Course open to Colorado Women's College students only.

ITS 3991 Independent Study (1-10 Credits)
Course open to Colorado Women's College students only.

ITS 3992 Directed Study (1-5 Credits)
Course open to Colorado Women's College students only.