

INFT: INFORMATION TECHNOLOGY (UNDERGRADUATE)

INFT 1005 Introduction to Web Publishing (4 Credits)

Students will learn current HTML and CSS and acquire the knowledge needed to create and mount a web page. Students will explore topics in communication (audience, purpose, content development and copyright), design (style, layout, human factors in computing and accessibility) and technology (use of web development tools). Through readings, comparative review of web sites, and reflective writing and discussion, students will develop concepts of what makes an effective web site. As an integrating project, each student will plan and create a website as a final project. Notes: Students must have regular access to a personal computer with access to the web, a text editor, and a web browser. HTML and CSS are "markup" languages, not programming languages; this course does not satisfy the criterion for "programming" in any of the guidelines. This course was previously SMT-271354 Introduction to Web Publishing with HTML.

INFT 1998 Individualized Studies in Information Technology (INFT) (1-8 Credits)

Students have the opportunity to develop individualized studies with their mentor in Information Technology (INFT). Registration for this class must be approved by the student's mentor.

INFT 2005 Green Computing (4 Credits)

This study explores new initiatives in the federal/state governments and business organizations to make the IT industry environmentally friendly. Compliance requirements and rules for capping or exchanging "carbon credits" for controlling emissions and waste increase as laws and regulations change. Customers increasingly prefer to do business with "greener" companies related to electrical use, cooling systems, server virtualization, cloud computing, utility computing, and IT waste management. Assumptions about surrounding courses: Students should have taken basic IT courses to provide understanding of computer system components.

INFT 2010 Introduction to Web Publishing with Adobe Dreamweaver Creative Cloud (4 Credits)

In this study, students will gain hands-on experience with Adobe Dreamweaver Creative Cloud and learn how to use that web authoring and editing software application to design, develop, publish, and manage user-centered web sites in compliance with today's usability principles and accessibility standards. Students will learn how to style web pages with Cascading Style Sheets and add design elements to web pages using Adobe Dreamweaver Creative Cloud. Students will also create responsive web sites supporting different Internet-enabled devices from personal computers to tablets and smartphones with the help of Adobe Dreamweaver Creative Cloud. Prerequisite (must complete before registering): Introduction to Web Publishing or equivalent Notes/Comments: Students must also have regular access to a personal computer connected to the Internet and have Adobe Dreamweaver Creative Cloud and a web browser on it.

INFT 2015 Introduction to Business Analytics with Microsoft Excel (4 Credits)

In this study students will learn about data storage paradigms and analytical methods used to support decision making at various organizational levels. Theoretical discussion will compare types of data, information, visualizations for operational and strategic decision making. The impacts of data interpretation and visual perception are examined as impacts on objectivity in decision making. Through hands-on labs, students will convert spreadsheet and relational data into information and graphical abstractions to solve operational level problems. Assumptions about surrounding courses: Students should have a basic understanding of computer applications.

INFT 2020 Introduction to Digital Crime & Digital Terrorism (4 Credits)

This study focuses on the technical aspects of digital crime, and the behavioral and social aspects of computer hackers, virus writers, terrorists and other offenders. Using real life examples and case studies students will discuss the history, development, extent and types of digital crime and digital terrorism as well as current legislation and law enforcement practices designed to prevent, investigate and prosecute these crimes. Hands-on familiarity with the computer is required. Students will not receive credit for both INFT 2020 Intro to Dig Crime & Terrorism and INFT 3010 Adv Digital Crime & Terrorism. Cross-listed with INFT 3010.

Attributes: Liberal

INFT 2025 Introduction to Cybersecurity (4 Credits)

This course will provide a comprehensive exploration of security challenges and countermeasure strategies within the information systems environment. The course will integrate industry standards and practices, concentrating specifically on the aspects of availability, vulnerability, integrity, and confidentiality within information systems. Students will engage in real world applications of topics covered in the course. Assumptions about surrounding courses: Students should have an understanding of networks, either from a previous course or through experiential learning. Prerequisites: None. Corequisites: None.

INFT 2998 Individualized Studies in Information Technology (INFT) (1-8 Credits)

Students have the opportunity to develop individualized studies with their mentor in Information Technology (INFT). Registration for this class must be approved by the student's mentor.

INFT 3000 Academic Planning / Technology and Society (4 Credits)

The primary objective of this advanced course is the student to explore the area of study selecting a concentration in which s/he is interested and fits with personal and professional goals. S/he will reflect on learning that has taken place prior to coming to SUNY Empire State College. In consultation with the mentor, s/he will develop research paper on specific topic in Technology and Society using recommended textbooks, articles and databases to gain some broader perspectives on the current technology and social development. In consultation with the mentor, the student will develop a degree program following the ESC and SUNY requirements.

Attributes: Liberal

INFT 3005 Data Analytics (4 Credits)

Theory of data driven decision making is put into practice by leveraging data to create strategic level business intelligence. Relational data is analyzed in an experiential environment for execution and interpretation of querying and decision making procedures, visualizations of information summaries, and decision validation for strategic level decision making. Students learn to combine industry experience, context, and intuition with analytical outcomes. Prerequisite: (must complete before registering): Introduction to Business Analytics with Microsoft Excel or equivalent

INFT 3010 Advanced Digital Crime & Digital Terrorism (4 Credits)

This study focuses on the technical aspects of digital crime, and the behavioral and social aspects of computer hackers, virus writers, terrorists and other offenders. Using real life examples, case studies and projects, students will analyze in depth the history, development, extent and types of digital crime and digital terrorism. They will evaluate current legislation and law enforcement practices designed to prevent, investigate and prosecute these crimes. Hands-on familiarity with the computer is required. Students will not receive credit for both INFT 2020 Intro to Dig Crime & Terrorism and INFT 3010 Adv Digital Crime & Terrorism.

Cross-listed with INFT 2020.

Attributes: Liberal

INFT 3015 Communications Technology Convergence (4 Credits)

The current technological mantra for businesses is convergence of communication systems. Legacy communication systems, such as voice, data and video networks of today, are being converged into a single network. This course will examine the history, business aspects and operation of current legacy systems with a strong focus on the drivers of network convergence and the emerging manifestations of convergence. This course will include a case study and many other activities that will provide the student with a realistic view of current trends and the ability to extrapolate this trend into the future. Prerequisite (must complete before registering): Introduction to Networks or equivalent Assumptions about surrounding courses: Familiarity with the core concepts of networking, including awareness of the existence of protocols; an understanding of hardware such as routers and hubs and switches, common operating systems, basic systems and network security. This knowledge can be gained through the listed prerequisite course or through professional experience. This course was previously SMT-273334 Communications Technology Convergence.

INFT 3020 Cyber Crime & Computer Forensics (3-4 Credits)

Computer forensics is one of the fastest growing areas in computer security and law enforcement. Virtually every criminal investigation requires that any computer related to the investigation is seized and searched. Studies have shown that about 93 percent of human recording of words, images, sounds, etc. is in digital format, making computer storage a gold mine for investigators. The expertise for conducting investigations requires knowledge ranging from disk structure, file formats, commercial software to investigation techniques and expert testimony. This course will provide an introduction to the field. Assumptions about surrounding courses: It is recommended, but not required, that students have familiarity with criminal investigations, trial procedure and the legal system, such as that gained in law enforcement or from a course such as Introduction to Law and the Legal System or Introduction to Criminal Justice. Notes/Comments: Some textbooks include forensics software. Students should consult with their instructor before they decide to install the software. This course was previously SMT-273614 Cyber Crime and Computer Forensics.

INFT 3025 Data Communications & Networks (4 Credits)

The purpose of this course is to provide the student with an in-depth exposure to the theoretical concepts, protocols, standards, topologies, design and problem solving techniques of data communications and computer networks. The course provides comprehensive coverage of network systems and infrastructure and helps students in planning, analyzing and implementing data communications LAN, MAN, WAN, and SDN technologies; switching, routing, and performance assessment; on-line applications and services in Internet / Extranets / Intranets; data security and computer networks management techniques. Assumptions about surrounding courses: Students should have an understanding of computers, database applications, along with a fundamental understanding of computer use in an organizational environment. This course was previously SMT-273304 Data Communications and Networking.

INFT 3030 Human-Computer Interaction (3-4 Credits)

Human-Computer Interaction (HCI) is concerned with interactions between human activities and the computational systems that support them. Because it deals with people as well as computational systems, HCI demands the consideration of cultural, social, organizational, cognitive and perceptual issues. A key component is the understanding and the advocacy of the user. Design in this domain must be interaction-focused and human-centered, and must draw upon knowledge areas of user and task analysis, human factors, accessibility standards, and cognitive psychology. Consequently, it draws on a variety of disciplinary traditions, including psychology, ergonomics, computer science, graphic and product design, anthropology and engineering. Prerequisites (must complete before registering): Computer Programming I or equivalent; Statistics Assumptions about surrounding courses: Familiarity with organizing data in spreadsheets and using spreadsheet functions. This course was previously SMT-273484 Human-Computer Interaction.

Attributes: Liberal

INFT 3035 Project Management (4 Credits)

Project management requires a combination of understanding the project life cycle, organizational, behavioral, and management concerns, and project management tools. This course provides students with at least an introduction to all of these in a comprehensive, non-fragmented way, and gives them the foundation to further develop their abilities. Students will acquire project management knowledge that can be helpful in thinking about, understanding, discussing, and managing projects. This course can be individualized to explore particular contexts. For study groups and independent studies, the student should check with the mentor/instructor to ensure that the student's preferred specialty offering is available in the course section. For the online course, existing context options include predesigned tracks with reading lists include construction, government, health care, IS/IT, manufacturing, non-profit, and multinational, and the student can work with the instructor to arrange for other contexts. Prerequisites: Management Principles; Organizational Behavior Notes/Comments: Students can only take one of the project management courses: INFT 3035 Project Management, MGIS 4015 Project Management in IT/IS, or MGMT 4030 Project Management for Business. Assumptions about surrounding courses: Management Principles (or equivalent experience in management), Organizational Behavior (or significant experience in management) This course was previously SMT-273454 Project Management.

INFT 3040 Social Media Management (4 Credits)

In this study, students will learn about different social media technologies and explore the role of such technologies in helping organizations support not only their day-to-day business operations, but also management-level strategic decisions. They will learn about how to govern organizations to help them become truly social and effectively connect with today's social customers. Students will also gain an in-depth understanding of a series of transformations that need to take place in organizations including establishing new positions, empowering existing employees, and forming cross-functional teams to help those organizations successfully build, maintain, and improve their presence on social platforms. Assumptions about surrounding courses: Students should have an understanding of basic management principles.

INFT 3045 Social, Professional & Ethical Issues in Computing (3,4 Credits)

The global use of computers, communications, information systems, and information technology continues to rise with new applications and technologies developing rapidly. As the pace of change accelerates, new opportunities, challenges, tensions, and complexities arise between what can be done and what should be done. Understanding the social, legal, and ethical issues and the frameworks available for assessing them is important for everyone but especially for those who work with these systems. This course will examine the interaction of these technologies and society and the roles and responsibilities of professionals in the field. This course will include topics such as intellectual property, privacy, security, accessibility, and reliability. Assumptions about surrounding courses: Advanced-level critical reading, thinking, and writing skills. This course was previously SMT 273404 Social/Professional Issues in IT/IS.

Attributes: Liberal

INFT 3050 Systems Analysis & Design (3-4 Credits)

The focus of this course is to enable the IT professional to use the appropriate logical and design processes to develop useful and useable business information systems. The course will incorporate general systems theory and development methodologies, and may use business case studies to explore the implementation of these concepts. This course is appropriate for IT professionals seeking to supplement or upgrade their skill sets and students with an information systems background but with no systems analysis and design expertise. Assumptions about surrounding courses: Some programming experience. Work in some aspect of information systems or an introductory information systems course. Students will be expected to install and use Microsoft Visio on their computers. While this course includes user interface design, it does not cover sufficient material to address Human-Computer Interaction. This course was previously SMT-273224 Systems Analysis and Design.

Attributes: Liberal

INFT 3055 Technology for Digital Marketing (4 Credits)

This study is designed to educate students about the technical side of digital marketing and to think about it strategically, bringing together marketing, sales and operations functions. The study will show how to implement a more iterative, measurable, and repeatable approach to digital marketing, how to integrate the full strategic toolkit: social media, pay-per-click, Google AdWords, SEO, site usability, Google Analytics, audience analysis, CRM, lead generation, site navigation optimization, and more. This provides different knowledge than courses in internet marketing. Assumptions about surrounding courses: Advanced-level computer skills are required. Plus, advanced-level reading, writing, and critical thinking skills are required. Recommended courses: Principles of Marketing and Internet Marketing or equivalent knowledge.

INFT 3060 Topics in Web Design (4 Credits)

The purpose of this course is to further develop one or more areas of web design based on industry standards. Topics are usability and accessibility plus one additional topic such as information architecture or responsive design. Students who take Topics in Web Design should already have a foundation in web publishing. Prerequisite (must complete before registering): Introduction to Web Publishing or equivalent Assumptions about surrounding courses: This course does not overlap with Web Systems Development.

INFT 3065 Web Systems Development (3-4 Credits)

This course explores content management and the implementation of an enterprise web system. Students will learn about the fundamental technologies enabling database-driven dynamic web sites. The course addresses content design, management, and presentation as well as various design issues involving accessibility and usability. This course is particularly suited for current information systems professionals, managers with an information systems background, and advanced students in a computer related program who wish to increase their understanding of web systems technologies. Prerequisite (must complete before registering): Introduction to Web Publishing or equivalent Assumptions about surrounding courses: Students should have a solid foundation in programming skills and practices. They should also have a familiarity with the HTML markup language and the CSS stylesheet language. A familiarity with database systems and the special-purpose programming language SQL would also be helpful. This course was previously SMT-273254 Web Systems Development.

INFT 3070 Intermediate Python (3 Credits)

This course aims to establish solid knowledge of the Object-Oriented Programming (OOP) paradigm and its use in Python. Key topics include object-oriented concepts such as classes, objects, data abstraction, methods, inheritance, and polymorphism. These concepts are applied to practical applications on complex topics such as algorithmic problems, GUI applications, simple games, etc. In addition, design principles and patterns are examined to design large scale, maintainable Object-Oriented Systems.

INFT 3996 Special Topics in Information Technology (3-4 Credits)

This course is a special topics course in information technology.

Attributes: Liberal

INFT 3997 Special Topics in INFT (1-8 Credits)

The content of this course will vary by term and section. Students may repeat this course for credit as long as the topic differs. Please refer to the Term Guide for course topic offerings.

Cross-listed with CSCI 3900.

INFT 3998 Individualized Studies in Information Technology (INFT) (1-8 Credits)

Students have the opportunity to develop individualized studies with their mentor in Information Technology (INFT). Registration for this class must be approved by the student's mentor.

INFT 4005 Business Continuity Planning & Disaster Recovery (4 Credits)

Organizations must plan for contingencies. Business continuity planning and disaster recovery must start long before a catastrophe strikes. Electronic/digital processes are ubiquitous and at the core of many business functions, so no longer is restoration of a centralized data center sufficient. While the work is often rooted in IT, the entire organization must be considered. Thus, it is important to learn to analyze organizations; identify risk and impact; understand complexity; identify mission-critical systems; communicate the need for planning; create, test and implement business continuity plans; and conduct disaster avoidance. Prerequisites: Management Principles or equivalent Assumptions about surrounding courses: Familiarity with the functions of management including planning, organizing, staffing, leading, and controlling (such as one should gain through the listed prerequisite course or through professional experience). Students must also have the ability to do academic research using the college library, evaluate material, and effectively communicate ideas in an academic format (such as one should develop through lower-level college studies). This course was previously SMT-274604 Business Continuity Planning and Disaster Recovery.

INFT 4010 Data Analytics & Data Mining (4 Credits)

In this study students contrast relational and multidimensional data storage paradigms used for data warehouses and enterprise level predictive analytics. Extraction, transfer and loading of data, and meta-data lineage are also examined. Data mining and dashboard tools are infused into experiential learning through practical business problem solving. Students will learn the value of predictive analytics and data-driven decision making at the strategic enterprise level. Prerequisite (must complete before registering): Statistics (MATH 1065)

INFT 4015 Information Assurance (4 Credits)

This course focuses on the managerial aspects of information security and assurance. Topics covered include access control models, information security governance, and information security program assessment and metrics. Coverage on the foundational and technical components of information security is included to reinforce key concepts. The course includes up-to-date information on changes in the field, such as national and international laws and international standards like the ISO 27000 series. The course covers topics such as Introduction to the Management of Information Security, Planning for Security and Contingencies, Information Security, Security Management, Risk Management, and Law and Ethics. Prerequisites: Data Communications and Networks or equivalent; Database Systems or equivalent; Web Systems Development or equivalent Highly Recommended (not required): An understanding of data communications and computer network models (such as one would gain in an upper-level networking study), database systems and database administration concepts (such as one would gain in a database study), and web technologies and related applications (such as one would gain in a web systems study). This course was previously SMT-273494 Information Assurance.

INFT 4020 Technology in Mathematics Education (4 Credits)

This study is designed to gain competence in selection, analysis, evaluation, testing, adoption and utilization of various instructional technologies in mathematics education. Application of new technologies to teaching and learning will be emphasized along with performance-based activities in instructional design. This study will provide the student with an understanding of learning models and the impact technology can have toward enhancing and enriching the learning process. The use of technology tools for solving a variety of problems, evaluating student performance, and implementing blended learning systems will also be explored.

INFT 4024 IT Senior Project Proposal (2 Credits)

The senior project proposal is part one of a two-part capstone experience in which the student prepares a proposal for the senior project and engages in educational planning. Educational planning includes the preparation of a rationale essay articulating how the program of study for the bachelor's degree meets the student's educational and career goals. Prior to taking this course, students should take, Effective College Writing or Reason & Argument, Database Systems, any networking course, and any programming course. This course is taken by final year students, ideally during the semester preceding the final semester. *The course is only available to International Education Students.*

Attributes: Liberal

INFT 4025 IT Senior Project (3 Credits)

Senior Project is a capstone, applied learning experience. This course emphasizes the application of modern engineering approaches to software construction and the main objective is the development of an original, industry-strength software-intensive product by each student. Students work closely with the instructor on a topic of their choice to connect theory with practice and demonstrate their ability to integrate and apply the learning they have acquired over the course of their studies and experience. The topic of the project should give the chance to the student to apply learning from several different concentration courses, including those being taken during the same term. During the semester students will report on their project's progress by giving presentations and submitting deliverables related to the project. At the end of the semester each student will give a presentation of the project and its conclusions. *Currently, this course is only offered through the College's Center for International Education.

INFT 4996 SpTo: Special Topics in INFT (1-8 Credits)**INFT 4997 Special Topics in INFT (1-8 Credits)**

The content of this course will vary by term and section. Students may repeat this course for credit as long as the topic differs. Please refer to the Term Guide for course topic offerings.

INFT 4998 Individualized Studies in Information Technology (INFT) (1-8 Credits)

Students have the opportunity to develop individualized studies with their mentor in Information Technology (INFT). Registration for this class must be approved by the student's mentor.