

INFT: INFORMATION TECHNOLOGY

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 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.

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

This course is a special topics course in information technology.

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

INFT 6010 Enterprise Networks Architecture (3 Credits)

This course focuses on foundational aspects of both enterprise and network architectural thinking and strategies essential to analyze, design, implement, evaluate, optimize, and manage of modern enterprise networking solutions.

INFT 6012 Network Design & Administration (3 Credits)

In this course, students will learn how to design enterprise networks that meet an organization's business and technical requirements. The course will also introduce students to the evolving roles and responsibilities of system administrators in today's business environments. Students will gain knowledge and practical skills applicable to any organization regardless of its size or industry; they will learn how to effectively utilize their knowledge and skills to recognize and address problems.

INFT 6015 Database Design and Management (3 Credits)

This course provides an in-depth treatment of working with Relational DBMS, and manages databases with particular reference to MySQL using PHP. It also provides some coverage of all the developments, issues, challenges and directions in securing databases. Some current trends in database management systems, such as No-SQL database systems will also be discussed.

INFT 6040 Advanced Internet Application Development (3 Credits)

Students will gain hands-on experience with HTML5 and CSS3 in this course and learn how to create and build web sites. They will also learn how to program with JavaScript & jQuery and build interactive web pages and user-centered interfaces that support responsive design. The study will also teach students how to use PHP to create dynamic web sites and provide them with the foundational knowledge in database-driven web sites developed with the help of MySQL and SQL.

INFT 6045 IT Security Policies & Procedure (3 Credits)

The course provides a system and management view of information security policies and methodologies, regulator mandates, business drivers, legal considerations and the evolving role of IT leaders to plan and implement successful sets of systems security procedures and frameworks.

INFT 6050 Mobile Systems Development (3 Credits)

The course provides an in-depth coverage of benefits and challenges of mobile system planning, design, development, and management. Students will learn how to design a mobile business system that motivates business innovation and delight their users, that can be deployed on multiple mobile platforms.

INFT 6055 Digital Forensics (3 Credits)

Identifying, preserving and extracting electronic evidence. Students learn how to examine and recover data from operating systems, core forensic procedures for any operating or file system, understanding technical issues in acquiring computer evidence and how to conduct forensically sound examinations to preserve evidence for admission and use in legal proceedings.

INFT 6060 Cyber Security (3 Credits)

Student will learn how to implement a new security plan or evaluate an existing one. Students will learn the key characteristics of an effective information systems security officer (ISSO), and paints a comprehensive portrait of an ISSO's duties, their challenges, and working environments, from handling new technologies and threats, to performing information security duties in a national security environment.

INFT 6122 Essentials of Information Technology (3 Credits)

This first course in information technology develops foundational skills in computer system and basic computer programming. Students will learn Introduction to computer information technology and basic programming: Architecture of digital computers, design of algorithms for solving various problems, and basic skills in computer programming. Algorithm design, flow charting, and debugging; elements of good programming style. Course may be instructed in any programming language.

INFT 6127 Information Technology in Organizations (3 Credits)

In this course, students will learn about the foundations of effectively managing and utilizing information in a business environment. The course will help them gain knowledge and skills to be able to take active roles in making IS decisions. Students will also gain a clear understanding of how information systems can not only support or limit the operations of a business, but also provide the business with new opportunities. IT students need to become knowledgeable and active participants in information systems decisions. The course help student begin to form and point of view of how information systems will help, hinder and create opportunities for any organizations. It is intended to provide a solid foundation of basic concepts relevant to using and managing information.

INFT 6132 Network Administration (3 Credits)

This course focuses on the planning, design, configuration, operation, and management of computer networks containing data communication devices, servers, workstations, and networked applications and support systems. It introduces students to administrative techniques inherent to basic operating systems, and also to enterprise management systems required by larger organizations. Students examine and discuss issues of scalability, performance management, and integration of internal resources with external resources such as cloud-based systems. Plan, prepare, and operate various enterprise-grade network management systems such as virus protection, intrusion detection, and workstation, server, and work performance, and fault-monitoring systems.

INFT 6137 Enterprise Systems Architecture (3 Credits)

The course offers broad systems perspective that provides a holistic approach to systems architecture. The course covers the latest in new and emerging technologies. All instructional contents are designed to give students the appropriate level and coverage of technical topics needed for ongoing professional success. The learning material are in simple terms to provide a holistic approach to both hardware and software.

INFT 6142 Computer Systems Security (3 Credits)

The course covers today's newest technologies, attacks, standards, and trends. The course contents include complete, timely coverage of all aspects of computer security, including users, software, devices, operating systems, networks, and data. Reflecting rapidly evolving attacks, countermeasures, and computing environments. The introduces best practices for authenticating users, preventing malicious code execution, using encryption, protecting privacy, implementing firewalls, detecting intrusions, and more. Students start by mastering the field's basic terms, principles, and concepts. Next, they apply these basics in diverse situations and environments, learning to "think like an attacker" and identify exploitable weaknesses. Then they will switch to defense, selecting the best available solutions and countermeasures. Finally, students will go beyond technology to understand crucial management issues in protecting infrastructure and data.

INFT 6147 Enterprise Information Security Management (3 Credits)

Students will learn about the conceptual foundations and key elements of IT security and look at its various implementations from physical security to application development security in this course. They will gain a clear understanding of how to recognize and address today's IT security vulnerabilities in different platforms from cloud-based to mobile through effective management strategies. The course will also teach students how to develop information governance policies and procedures for companies to help them safeguard their information while conducting their operations.

INFT 6152 Enterprise Web Systems (3 Credits)

The course provides the knowledge and skills you need to know to for scale products and services for any requirement. This course contents covers new technologies, strategies, and lessons, as well as new case studies from the real world IT practice. The impact on scalability, including architecture, process, people, organization, and technology. Students will learn updated strategies for structuring organizations to maximize agility and scalability. Using this guide's tools and advice, students can systematically clear away obstacles to scalability—and achieve unprecedented IT and business performance.

INFT 6157 Data and Application Security (3 Credits)

The course provides an in-depth coverage of all the developments, issues, challenges and directions in securing data and applications. It focuses on threats to data and applications security including access control violations, integrity violations, unauthorized intrusions and sabotage. Students will learn how to choose a security strategy and how to apply it.

INFT 6996 Special Topics in INFT (3 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 7005 Cyber Security Integration Strategies (3 Credits)

The new emphasis on physical security, resulting from the terrorist threat, has forced many cyber security professionals to struggle to maintain their organization's focus on protecting information assets. In order to command attention, they need to emphasize the broader role of cyber security in the strategy of their companies. Until now, however, most books about strategy and planning have focused on the production side of the business, rather than operations. The required readings in this course will integrate the importance of sound security policy with the strategic goals of an organization. It provides IT professionals and management with insight into the issues surrounding the goals of protecting valuable information assets. The text reiterates that an effective cyber security program relies on more than policies or hardware and software, instead it hinges on having a mindset that security is a core part of the business and not just an afterthought.

INFT 7010 Web Systems Integration Strategies (3 Credits)

Students will develop strategies for the successful adoption of an enterprise 3.0 paradigm and the technical solutions that best apply in specific situations. Students will find clear guidelines for using Web 3.0 technologies and standards in a productive way to align with business goals, increase efficiency, and provide measurable bottom line growth. Foster collaboration and accelerate information dissemination with blogs and wikis Implement strategies to achieve business intelligence, analytics, and semantic web goals.