

IT Information Technology

IT 1130 Introduction to Information Technology **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

An introduction to IT as an academic discipline and the structure of the Bachelor of Science in Information Technology degree. It also provides students with an introduction to the range of applications of Information Technology. Finally, it introduces students to some of the techniques that they will need for later courses.

Prerequisite(s): None.

IT 1230 Introduction to Web Technologies **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course gives non-IT majors a thorough introduction to technologies used in the creation of websites. It focuses on the basic web concepts and introduces the tools and methods for sound web design. Throughout it stresses the best practices of design and development. The course also introduces students to the principles of good human computer-interface design, including design for people with disabilities.

IT 1231 Introduction to Computer Concepts and Applications **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Study of hardware and software components of computers, and the impact of computers on society. Discussion of the capabilities and the limitations of computers, and the kinds of problems that are best solved by computers. Experience with using personal computer productivity tools to solve problems. Emphasis on the major uses of computers. Not designed for the computer science major.

Prerequisite(s): MATH 1001 or MATH 1111.

IT 1330 Programming for Information Technology **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Introduction to basic concepts and techniques of a contemporary programming language. Topics include language syntax, variables, decision structures, loop structures, functions, and IDE. Development of modular programs for event-driven applications.

Prerequisite(s): MATH 111.

IT 1430 Web Page Development Web Page Development **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A thorough introduction to the languages used to create web pages. Throughout it stresses the importance of good coding style. The course also introduces students to the principles of good human computer interface design, including design for people with disabilities. Finally, the course introduces students to an object-based language. **Prerequisite(s):** Familiarity with productivity tools.

IT 2130 Web Application Design and Development I **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers design, programming, and implementation of web-based applications. Students will learn to create 3-tier (client server-database) web applications using sessions, cookies, and databases to store information.

Prerequisite(s): A minimum grade of "C" in all of the following: IT 1130 and IT 1430 and STAT 2231 and MATH 2130 and prior or concurrent enrollment in MATH 1232 or MATH 1441.

IT 2131 Web Application Design and Development II **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers modern web applications using client-side programming, server-side programming, third party APIs, and database technology.

Prerequisite(s): A minimum grade of "C" in IT 2130 or IT 3130.

IT 2230 Introduction to Application Development **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Introduction to mobile computing and mobile application software development. Topics include mobile computing devices, mobile operating systems, app programming languages and APIs, app development environments, app programming and development cycles.

Prerequisite(s): CSCI 1301 (Introduction to Programming Principles) or IT 1330.

IT 2333 IT Infrastructure **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course allows students to develop a thorough understanding of the IT infrastructure which includes computer hardware and networks that support various IT applications, and network security. This course allows students to develop this knowledge as well as some fundamental skills in server, network system administration and management, and to become aware of the importance of information assurance and security in the design, implementation and administration of an IT Infrastructure.

Prerequisite(s): A minimum grade of "C" in all of the following: IT 1130 and prior or concurrent enrollment in STAT 2231.

IT 2430 Data Programming I **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course provides students with an introduction to the main concepts in programming including variables, expressions, statements, conditional execution, functions, iteration, strings, and files.

Prerequisite(s): A minimum grade of "C" in all of the following: IT 1130, IT 1430, MATH 2130 and STAT 2231.

IT 2431 Data Programming II **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course provides students with an introduction to the main concepts in programming related to data. The course focuses on data storage and the use of regular expressions to search data. The course also includes an overview of object oriented concepts. **Prerequisite(s):** A minimum grade of "C" in IT 2430 and prior or concurrent enrollment in MATH 1232 or MATH 1441.

IT 2530 Operating Systems **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Principles of the management of memory, processors, processes and deadlocks, synchronization of computing tasks, files, devices, and systems. Principles of network organization and network operating systems. Analysis and evaluation of comparative operating systems.

Prerequisite(s): CSCI 1150 (Fundamentals of the Internet and World Wide Web) or IT 2333.

IT 2531 Introduction to Cyber Security **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course teaches the fundamental concepts and principles of cyber security techniques. Topics include computer and network security, cyber stalking, social networks, fraud and abuse, web security, malware, computer viruses, encryption, techniques used by hackers and how to combat them, simulation and identification of different threat models, software vulnerabilities analysis, risk assessment and mitigation, prediction of potential attack vectors through data analysis and evaluation. Hands on activities will be performed with emphasis on personal cyber and information security.

Prerequisite(s): None.

IT 3132 Web Software Web Programming **3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A survey of software development tools and frameworks used in the development and deployment of web and mobile based systems. Course content includes the implementation of client-side and sever-side dynamic content.

Prerequisite(s): A minimum grade of "C" in IT 2333 or IT 2431.

IT 3133 E-Commerce**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Principles and practices of E-commerce. including transaction and electronic payment systems, and business, legal, and security issues as they relate to E-commerce.

Prerequisite(s): IT 3233.**IT 3134 Advanced Mobile Application Development****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

An advanced course in Mobile App Development with more advanced techniques such as the development of gaming applications and applications for database access.

IT 3230 Data Visualization**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course introduces students to the field of data visualization. The course covers basic design and evaluation principles to prepare and analyze large datasets, and standard visualization techniques for different types of data. The course prepares students to communicate clearly, efficiently, and in a visually compelling manner to a variety of audiences.

Prerequisite(s): A minimum grade of "C" in IT 3233 and STAT 2231.**IT 3231 Data Communications****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Fundamentals of practical aspects of computer networks and data communications; standards, protocols, topologies, architectures, routing devices, wireless technologies, and monitoring and management.

Prerequisite(s): A minimum grade of "C" in IT 2530.**IT 3233 Database Design and Implementation****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course provides students with the opportunity to develop in-depth knowledge of database design, implementation, and systems development. The course covers data modeling concepts, approaches and techniques, and stages in database development processes (conceptual and logical design, implementation and maintenance). The course also covers methods and approaches used in system analysis and design, including the system development life cycle. To reinforce the course concepts, students will carry out projects based on real world situations.

Prerequisite(s): A minimum grade of "C" in (CSCI 1236 OR IT 2430) AND MATH 2130.**IT 3234 Systems Acquisition, Design, and Implementation****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course provides a study of the acquisition, design, and implementation of information technology systems, including methods for investigating solutions, project planning and control, documentation, and specifications.

Prerequisite(s): A minimum grade of "C" in IT 3233.**IT 3432 Advanced Analytics Programming****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course provides students with the necessary tools and techniques to manipulate, process, clean and analyze data at an advanced level using Python. Specifically, students will use IPython, NumPy, and pandas to load, clean, transform, visualize and analyze data.

Prerequisite(s): A minimum grade of "C" in IT 2431 and IT 3233.**IT 3530 Fundamentals of Information Systems Security****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Current standards and best practice in information assurance and security. Topics include the evaluation of security models, threat analysis, security risk assessment and risk mitigation, disaster recovery planning, cryptography and encryption algorithms, and security policy formation and implementation.

Prerequisite(s): CSCI 2120.**IT 4130 IT Issues and Management****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Covers case studies of IT development projects to assist the student in the recognition of the need of an IT development project. The student will study and critique the development, implementation and management of both successful and unsuccessful projects.

Prerequisite(s): Prior or concurrent enrollment and a minimum grade of "C" in IT 3234.**IT 4136 Knowledge Discovery and Data Mining****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

The course covers the process of automatically extracting valid, useful, and previously unknown information from data sources and using the information to make decisions. This course is designed to provide students with a solid understanding of the knowledge discovery process and the use of data mining concepts and tools as part of that process.

Prerequisite(s): A minimum grade of "C" in all of the following: (IT 3233) AND (STAT 2231 OR BUSA 3131).**IT 4137 Data Science and Big Data Analytics Capstone Project****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers the process of analyzing big data sets to potentially gain actionable insights for an organization. This course provides students with a solid understanding of the life cycle approach to data analytics and the tools and techniques necessary to solve problems in big data and data analytics.

Prerequisite(s): A minimum grade of "C" in BUSA 3132 and IT 3230 and IT 3432 and IT 4136 and MGNT 3430 and STAT 2232.**IT 4234 Datacenter Management****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers datacenter infrastructure and management including technologies such as: virtualization, networking, server consolidation, green IT computing, and network storage configurations. Using virtualized platforms (hypervisors), various server, networking and infrastructure configurations are deployed, analyzed and managed. A number of server operating systems are deployed, administered and managed via remote locations. Best practices for security policies of cloud resources including permissions, privileges and server management are analyzed and performed.

Prerequisite(s): A minimum grade of "C" in CISM 3134 and IT 2333.**IT 4335 Network Architecture****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers the hardware required for interconnecting digital devices for the purpose of enabling data communication through a network. Bus architectures, ports, network cards, cabling, routers, switches. Ensuring network reliability. Optimizing network performance.

Prerequisite(s): A minimum grade of "C" in CISM 3134 and IT 2333.**IT 4336 Network Security****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Concepts of network security, including: countermeasures and safeguards to networks such as remote access controls, firewalls, intrusion detection systems, data encryption, and virtual private networks.

Prerequisite(s): IT 3530.**IT 4337 Ethical Hacking****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Concepts of hacker techniques and tools, including: cryptographic concepts, a technical overview of hacking, including port scanning, enumeration of computer systems, wireless vulnerabilities, web and database attacks, malware, and penetration testing. Social aspects of hacking, including social engineering. Incident response.

Prerequisite(s): IT 3530.

IT 4338 Client/Server Systems**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Architectures and concepts of n-tier client/server models. Client/server interfaces and communications protocols: Open Database Connectivity (ODEC) and Java Database Connectivity (JDBC). Design and development of web-based applications involving front clients, middle-tier application servers, and backend databases.

Prerequisite(s): IT 3233.**IT 4339 Network Design and Administration****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Advanced topics on network and data administration. Topics include installation, configuration, access control, network security, web servers, and firewalls.

Prerequisite(s): IT 3231.**IT 4430 Graphics Design****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Creation of two and three-dimensional computer graphics and animations using both professional programming libraries and standard CGI tools. Survey of hardware and software used in the computer graphics industry, classic algorithms and data structures for raster graphics, representation and processing of three dimensional objects, and an introduction to procedural animation and image processing for special effects.

Prerequisite(s): IT 3234.**IT 4530 Senior Capstone Project I****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course provides students with the opportunity to develop in-depth knowledge of IT project design and implementation. The course covers the main topics of IT project management including requirements specification, project integration, scope, time, cost, quality, human resources, communications, and risk management. In addition, techniques and methods used in IT project management will be covered. To reinforce the course concepts, students will complete projects related to their specialization. **Prerequisite(s):** Prior or concurrent enrollment and a minimum grade of "C" in IT 3234 and Senior standing.

IT 4531 Senior Capstone Project II**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Continuation of the major design/research project begun in IT 4530. Project implementation, documentation, and reporting in a symposium format are expected.

Prerequisite(s): IT 4530.**IT 4790 Internship in Information Technology****3 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

A campus-approved and coordinated IT-experience-based internship will be required of each student. The internship will include at least 280 hours of work. A written report by the student, along with an employer evaluation of the student's work will be required.

Prerequisite(s): Permission of the Instructor.**IT 4830 Special Problems in Information Technology****3 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

A customized course that is under the direction of a faculty sponsor. Special Problems is designed to offer students an opportunity to pursue studies at a level or on topics not covered in scheduled courses. The scope and nature of the material covered is determined in consultation with the faculty sponsor.

Prerequisite(s): Permission of Department Chair.**IT 4890 Directed Study in Information Technology****1-3 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

Designed for independent study and research in selected areas of Information Technology under faculty supervision.

Prerequisite(s): Permission of Department Chair or Director.**IT 5090 Selected Topics in Information Technology****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Provides an opportunity for in-depth study of selected topics or emerging areas in information technology.

Prerequisite(s): Permission of Instructor.**Cross Listing(s):** IT 5090G.**IT 5090G Selected Topics in Information Technology****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Provides an opportunity for in-depth study of selected topics or emerging areas in information technology. Graduate students will be given an extra assignment determined by the instructor that undergraduates will not be required to do.

Prerequisite(s): Permission of Instructor.**Cross Listing(s):** IT 5090.**IT 5135 Data Analytics****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers the basic issues involved in building and populating a data mart to support the planning, designing and building of business intelligence applications and data analytics. Core concepts related to business intelligence and analytics are covered.

Prerequisite(s): A minimum grade of "C" in all of the following: (IT 3233) AND (STAT 2231 OR BUSA 3131).**Cross Listing(s):** IT 5135G.**IT 5135G Data Analytics****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers the basic issues involved in building and populating a data mart to support the planning, designing and building of business intelligence applications and data analytics. Core concepts related to business intelligence and analytics are covered. For graduate students a significant research project will be assigned as a culminating experience.

Prerequisite(s): A minimum grade of "C" in IT 3233 or BUSA 3131 and CISM 3133.**Cross Listing(s):** IT 5135.**IT 5233 Web and Mobile Security Fundamentals****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Cybersecurity is a cornerstone of web-based solutions for mobile applications, networks, and e-commerce. IT professionals must learn to predict, prepare for, and defend against cyber attacks from a myriad of sources if they are to build and support the next generation of business solutions. In this course, you will learn the principles of designing, building, and testing secure web-based solutions. You will also learn how to identify and prevent common security vulnerabilities.

Prerequisite(s): A minimum grade of "C" in IT 2333 and (IT 2130)**Cross Listing(s):** IT 5233G.**IT 5233G Web and Mobile Security Fundamentals****3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Cybersecurity is a cornerstone of web-based solutions for mobile applications, networks, and e-commerce. IT professionals must learn to predict, prepare for, and defend against cyber attacks from a myriad of sources if they are to build and support the next generation of business solutions. In this course, you will learn the principles of designing, building, and testing secure web-based solutions. You will also learn how to identify and prevent common security vulnerabilities. Graduate students will be required to complete individual advanced level research in an area beyond the scope of the undergraduate requirements that demonstrates a higher level of mastery in the subject matter with additional required deliverable representative of graduate level work, as determined by the instructor.

Prerequisite(s): Permission of instructor.**Cross Listing(s):** IT 5233.

IT 5235 Advanced Web Interfaces**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course provides an introduction and application of human-computer interaction theories to web-based applications. It covers the evaluation of user interfaces using various techniques including heuristic evaluation and user testing.

Prerequisite(s): A minimum grade of "C" in all of the following: (IT 1330 or IT 2130 or IT 2430) and IT 3132.

Cross Listing(s): IT 5235G.

IT 5235G Advanced Web Interfaces**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course provides an introduction and application of human-computer interaction theories to web-based applications. It covers the evaluation of user interfaces using various techniques including heuristic evaluation and user testing. For graduate students a significant research project will be assigned as a culminating experience.

Prerequisite(s): A minimum grade of "C" in IT 2430 or IT 2130 or IT 3130 and IT 3132.

Cross Listing(s): IT 5235.

IT 5236 Mobile Web Infrastructure**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course explores the infrastructure which forms the basis of commercial, web-enabled applications on mobile and small devices, as well as personal computers. The course will focus on designing mobile web applications that provide a high level of security, reliability, scalability and availability. Through this course, students will develop proficiencies in current web technologies employed by businesses.

Prerequisite(s): A minimum grade of "C" in IT 2131 or IT 2431.

Cross Listing(s): IT 5236G.

IT 5236G Interactive Web Design and Development**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course explores the infrastructure which forms the basis of commercial, web-enabled applications on mobile and small devices, as well as personal computers. The course will focus on designing mobile web applications that provide a high level of security, reliability, scalability, and availability. Through this course, students will develop proficiencies in current web technologies employed by businesses. Graduate students will be required to complete individual advanced level research in an area beyond the scope of the undergraduate requirements that demonstrates a higher level of mastery in the subject matter with additional required deliverables representative of graduate level work, as determined by the instructor.

Prerequisite(s): A minimum grade of "C" in IT 2431 or IT 2131 or IT 3131.

Cross Listing(s): IT 5236.

IT 5433 Information Storage and Management**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers modern storage infrastructure technology and management including: challenges and solutions for data storage and data management, intelligent storage systems, storage networking, backup recovery, and archive, business continuity and disaster recovery, security and virtualization, and managing and monitoring the storage infrastructure. Best practices for security policies of cloud resources including permissions, privileges and storage management are analyzed and performed.

Prerequisite(s): A minimum grade of "C" in CISM 3134 and IT 2333.

Cross Listing(s): IT 5433G.

IT 5433G Information Storage and Management**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course covers modern storage infrastructure technology and management including: challenges and solutions for data storage and data management, intelligent storage systems, storage networking, backup, recovery, and archive, business continuity and disaster recovery, security and virtualization, managing and monitoring the storage infrastructure. Best practices for security policies of cloud resources including permissions, privileges and storage management are analyzed and performed. For graduate students a significant research project will be assigned as a culminating experience.

Prerequisite(s): A minimum grade of "C" in CISM 3134 and IT 2333.

Cross Listing(s): IT 5433.

IT 5434 Network Security Fundamentals**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course is intended to serve the needs of individuals interested in understanding the field of network security and how it relates to other areas of information technology. The course will take a broad look at network security and provide the knowledge necessary to prepare students for further study in specialized security areas or used as a capstone course to those interested in acquiring a general knowledge of the field.

Prerequisite(s): A minimum grade of "C" in IT 2333 and CISM 3134.

Cross Listing(s): IT 5434G.

IT 5434G Network Security Fundamentals**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course is intended to serve the needs of individuals interested in understanding the field of network security and how it relates to other areas of information technology. The course will take a broad look at network security and provide the knowledge necessary to prepare students for further study in specialized security areas or used as a capstone course to those interested in acquiring a general knowledge of the field. Graduate students will be required to complete individual advanced level research in an area beyond the scope of the undergraduate requirements that demonstrates a higher level of mastery in the subject matter with additional required deliverables representative of graduate level work, as determined by the instructor.

Prerequisite(s): Permission of instructor.

Cross Listing(s): IT 5434.

IT 6130 Theoretical Foundations for Network Analysis**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course will provide a detailed review of fundamental relevant to the study of telecommunications, and data communications. Topics covered will include Shannon's Theorem, elements of Graph theory, Queuing Theory, Probability, Number Systems, Matrices and more. Students will complete several exercises using MATLAB and Microsoft Excel to reinforce topics covered in lecture by solving network related problems. Discrete event simulations software (OPNET) will also be used to observe and analyze concepts and behaviors in communications networks.

IT 7090 Selected Topics in Information Technology**1-3 Credit Hours. 1-3 Lecture Hours. 0 Lab Hours.**

This course provides the student with an opportunity for in-depth study of selected topics in information technology.

Prerequisite(s): Permission of Instructor.

IT 7130 IT Governance**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course presents a holistic approach to integrating the information technology services with the organization. It focuses on strategy, design, implementation, operations and continual improvement of information technology. IT Governance addresses how an organizations maintains flexibility through the use of Information Technology, assuring the IT organization aligns its strategies with those of the organization it supports. This course looks at multiple IT Governance structures and looks at the data that is collected in these structures.

IT 7131 Data Science Methods**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course introduces the concepts and techniques of Data Science and covers decision making support systems, business intelligence and analytics, data science positions and roles in business firms. Topics include data extraction from homogeneous and heterogeneous data sources, data processing and file types, data manipulation, conversion, and integration. Students will use software for statistical analysis and interpretation, predictive analytics, machine learning, and the fundamentals of big data technologies. Students will examine and critique current research in the field.

IT 7133 Digital Security and Forensics Investigation**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course explores the logical weapons and tools utilized in computer network exploitation, attacks and defenses. It also covers the digital forensics process, tools and methods for the detection and recovery of information on hardware or hidden within other formats. Topics also include cryptographic analysis, password recovery, the bypassing of specific target operating systems, and obtaining data from a digital device that has been destroyed on various platforms. This course also includes research components that require students to conduct research on a specific topic. Research deliverables include a term paper and presentation.

IT 7134 IT Project Management**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course is an overview of theoretical and practical concepts in management of IT projects; explores unique and particular challenges resulting from rapid technological change and dynamic environments; difficulty of managing changes in organizations resulting from introducing or revising information technology, emphasizing the change management role of the IT project leader.

IT 7135 Seminar in IT**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course is a survey of information technology research and current topics.

IT 7360 Intgrt Tech School Learn Envir**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.****IT 7891 Independent Study****1-3 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

Independent study is available for students to undertake individualized experimentation, research, study related to the discipline, or a capstone project. The specific topic will be approved by a faculty member in the program, and credit will be assigned commensurate with the magnitude of the study.

IT 7895 Special Problems in IT**1-3 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

Individual and specialized study in the one of the areas of information technology not otherwise covered in the program. Students must submit a proposal of the special problem for approval by the faculty member of record. Credit will be assigned commensurate with the magnitude of the study.

IT 7999 Thesis**1-6 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

This course focuses on the preparation and completion of the thesis.