CISY - 1003 Intro to Microcomputer Appl, 3.00 Credits
Level: Lower
An introductory course in business computing, focusing on microcomputer technology utilizing operating system commands, word processing, spreadsheets, and database software used in business organizations.

CISY - 1023 Intro to Information Tech, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This is an introductory course in information technology and computer applications. The course focuses on computer concepts and technology emphasizing secure file and memory management within various operating systems. The course also covers operating system commands, spreadsheets, databases, web tools and other applications used in business and scientific environments.

CISY - 1103 Info Technology Management, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course will introduce the student to multiple aspects of information technology management including: representing, storing, manipulating, and using digital information. Topics include: computer hardware and software fundamentals, essential applications, networking and the Internet, and computer user security and risks. Students will develop skills in collecting, analyzing, and using information from a variety of resources in order to complete class projects.

CISY - 1113 Computer Programming I, 3.00 Credits
Level: Lower
Applied Learning-Other
This course covers the fundamentals of computer problem solving and programming. Topics include: program development process, differences between the object-oriented, structured, and functional programming methodologies, phases of language translation (compiling, interpreting, linking, executing), and error conditions associated with each phase, primitive data types, memory representation, variables, expressions, assignment, fundamental programming constructs (sequence, selection, iteration), algorithms for solving simple problems, tracing execution, subprograms/functions/methods, parameter passing, secure coding techniques (criteria for selection of a specific type and use, input data validation), and professional behavior in response to ethical issues inherent in computing.

CISY - 1123 Intro to Programming for IT, 3.00 Credits
Level: Lower
Applied Learning-Practicum
An introductory programming course for information technology or CIS majors. The development of solutions through a set of logical steps and basic control structures (including selection and iteration) will be introduced. Students will write, debug and execute programs using a high level visual programming language.

CISY - 2133 Computer Programming II, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better
Level: Lower
Applied Learning-Other
This course covers the fundamentals of algorithms and object oriented software development. Topics include: modern IDE for software development, primitive and reference data types, encapsulation, information hiding, selection, iteration, functions/methods, parameters, recursion, exception handling, generic linear data structures (arrays, records/structs) and maps, file types, file I/O, simple GUIs with event handling, programming to an interface, lambda expressions, semantics of inheritance and use of polymorphism, relation with subtyping, search (sequential, binary), select (min, max), and sort (bubble, insertion, selection) algorithms, complexity notation, documentation using standard tools, program testing (unit testing) and debugging, reasoning about control flow in a program, and societal impacts related to computing and software.

CISY - 2141 Info Tech A+ Cert Prep, 1.00 Credit
Level: Lower
Applied Learning-Practicum
This course will prepare students to pass the Information Technology certification exam A+ (CompTIA). Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

CISY - 2143 Microcomputer Systems I, 3.00 Credits
Prerequisite(s): CISY 1003 with D or better or CISY 1103 with D or better or CISY 1023 with D or better
Level: Lower
Applied Learning-Practicum
This course provides an exposure to computer operating systems and hardware. Topics include hardware, troubleshooting, operating system commands, system utilities, memory managers, graphical user interface (GUI) software and computer security.

CISY - 2153 Database Appl and Programng I, 3.00 Credits
Prerequisite(s): CISY 1023 with D or better
Level: Lower
Applied Learning-Creative Work
A comprehensive exposure to the use of database software concepts, capabilities and application; focusing on relational database techniques, SQL, normalization, database programming and developing application systems. A final/comprehensive project will be required.

CISY - 3001 Info Tech Cert. Prep. Course, 1.00 Credit
Level: Lower
This course will prepare students to pass an Information Technology related certification exam related to a topic agreed upon by student and faculty member. Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

CISY - 3023 Advanced Microcmptr Spreadshts, 3.00 Credits
Prerequisite(s): CISY 1003 with D or better or CISY 1023 with D or better or CISY 1103 with D or better
Level: Lower
Applied Learning-Practicum
A comprehensive exposure to the use of microcomputer spreadsheet: concepts, capabilities and applications beyond the introductory level focusing on developing expertise in using a contemporary spreadsheet software package and companion products to develop business systems.

CISY - 3193 Computer Architecture & Organi, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better
Level: Lower
This course covers fundamentals of computer architecture and organization. Topics include: classical von Neumann machine, major functional units, primary memory, representation of numerical (integer and floating point) and nonnumerical data, CPU architecture, instruction encoding, fetch-decode-execute cycle, instruction formats, addressing modes, symbolic assembler, assembly language programming, handling of subprogram calls at assembly level, mapping between high level language patterns and assembly/machine language, interrupts and I/O operations, virtual memory management, and data access from a magnetic disk.

CISY - 3223 Intro to Web Page Development, 3.00 Credits
Prerequisite(s): CISY 1023 with D or better
Level: Lower
An introductory course in web page development with HTML, CSS, and JavaScript. Also included will be various software packages that automate the web page design process. These may include Dreamweaver, Sublime, Bootstrap, and others. This course is suitable for anyone who would like to create simple, but useful web pages. Topics include: the internet, tables, frames, forms, scripting language(s), and multi-media.

CISY - 3283 Internetworking I, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This is the first of two courses in a series to be offered covering the Cisco academy semesters 1 and 2. Students will develop skills and knowledge in Network media installation and testing, router and switch installation and configuration, and concepts of Local Area Networks (LANs) and Wide Area Networks (WANs). Instruction will be completed through on-line resources, lecture, and hands-on skills development. Students will be prepared for Cisco Certified Network Associate certification exams upon completion of both courses.

CISY - 4003 Comp Prgrmming III/Data Strctu, 3.00 Credits
Prerequisite(s): CISY 2133 with D or better
Level: Lower
Applied Learning-Practicum
This course covers the fundamentals of data structures and software modeling. Topics include: modern IDE for software development and code version management systems, design and development of reusable software, software modeling (class diagram, use case, CRC card), introduction to analysis of algorithms (order notation), abstract properties, implementation and use of stacks, queues, linked lists, binary trees, binary search trees, and recursion and efficiency of recursive solutions. Additional focus will be given to range of searching (sequential, binary), selecting (min, max, median) and sorting algorithms (quicksort, merge sort, heap sort) and their time and space efficiencies. Software quality assurance (pre and post conditions, program testing), team development of software applications, and professional responsibilities and liabilities associated with software development will be discussed.

CISY - 4031 Info Tech Net+ (CompTIA) Cert., 1.00 Credit
Level: Lower
This course will prepare students to pass the Information Technology certification exam Network+(CompTIA). Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

CISY - 4033 Networking I, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This is an introductory course in networking with a survey and evaluation of network media, access methods, topologies, and terminology. Topics will include end user perspective, network cabling, hardware and software protocols, internetworking, network operating systems, and system administration. Included will be basic server installation, configuration, and management. A variety of workstation and server operating systems will be explored through extensive hands-on labs with an emphasis on network security.

CISY - 4053 Linux/Unix Admin and Scripting, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better
Level: Lower
Applied Learning-Practicum
This course takes an in-depth look at Linux and Unix-like system administration, including console and graphical interfaces. Major topics include file systems, text processing, installation, system configuration, software packages, network configuration, backup, and kernel management. A significant portion of the course will concentrate on script analysis and creation. Laboratory exercise will provide hands-on exercise in each of these topics.

CISY - 4063 Systems Analysis & Design, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better or CISY 1123 with D or better
Level: Lower
Applied Learning-Practicum
This course covers the fundamental concepts underlying all business information systems including security. Emphasis is on a structured process in the design of computer-based information systems. Current tools and techniques are applied to a case study project.

CISY - 4103 Visual Programming & Developmt, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better or CISY 1123 with D or better
Level: Lower
A visual programming environment will be used in a continuation of Computer Programming I. Emphasis will be placed on advanced algorithms, program design and development. Topics included will be sub-programs, arrays, files, and data abstraction. Debugging and proper program design and documentation will be stressed.

CISY - 4283 Internetworking II, 3.00 Credits
Prerequisite(s): CISY 3283 with D or better
Level: Lower
Applied Learning-Practicum
Students will develop skills and knowledge in network media installation and testing, router and switch installation, and concepts of Local Area Networks (LANs) and Wide Area Networks (WANs). Instruction will be completed through on-line resources, lecture, and hands-on skill development. Students will be prepared for Cisco Certified Network Associate certification exams upon completion of CISY 3283 and this course.

CISY - 4423 Intro to Mobile Robotics & Ani, 3.00 Credits
Level: Lower
Applied Learning-Practicum
The course covers basic programming techniques of mobile and stationary robotic systems with respect to autonomous function and interaction with the environment. Topics include basic programming techniques, robot platforms, use of sensors, embedded control, pre-programmed problem solving, robot construction, and human-robot interaction. Students will complete programming and robot construction projects. Theoretical concepts presented in the lecture will be reinforced in the laboratory.

CISY - 4723 Essentials of Info Security, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better
Level: Lower
This course is a comprehensive survey of all aspects of computer security. This includes local host, network web, and database security as well as other objects that are prone to attack. Special focus will be given to the identification of security threats and countermeasures that can be taken to make these systems more secure. Students will develop a security plan for a small to mid-sized organization.

CISY - 5123 Scientific Programming, 3.00 Credits
Prerequisite(s): or MATH 1033 with D or better or MATH 1034 with D or better or MATH 1054 with D or better or MATH 2043 with D or better or MATH 1063 with D or better or MATH 1084 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
In this course students will learn structured programming techniques to solve scientific and engineering problems using conventional programming languages. Topics include data types, flow control structures, functions, I/O pointers, program design and maintenance, top-down design and programming techniques.

CISY - 5133 Sec Policies, Recov & Risk Man, 3.00 Credits
Prerequisite(s): CISY 4053 with D or better or CISY 4723 with D or better or CISY 5403 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
Students will be introduced to security policies, the tools and techniques used in security management, and risk management procedures. They will analyze risk and security threats in the organization as well as manage, test, and establish security policy. Topics such as information protection, code of practice for information security, risk management, security awareness and security evaluations will be explored. A final project in security assessment will be required.

CISY - 5203 Network Administration, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Topics will include performance issues, end-user accounts, data security, disaster recovery, supporting applications, and documentation.

CISY - 5233 Human Computer Interaction, 3.00 Credits
Prerequisite(s): CISY 4103 with D or better and CISY 3223 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course will cover the design, prototyping, and evaluation of user interface to computers. This will include the implementation of interactive computing systems for human use and the study of major phenomena surrounding them. In addition, the course will stress the importance of good interfaces and the relationship of user interface design to human-computer interaction within multi-disciplinary dynamics. Example systems, case studies, methodologies and models will be used to demonstrate the concepts and the importance of human computer interaction.

CISY - 5303 Web Programming I, 3.00 Credits
Prerequisite(s): CISY 3223 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
A comprehensive survey of HTML and web publishing software to create robust, functional web pages. This course will examine HTML standards, browser capabilities, information architecture, bandwidth considerations, image format, maps, frames, forms, and server/client side scripting. Topics of current interest will be included, such as: JavaScript, VBScript, ActiveX, Active Server Pages, Dynamic HTML, and Cascading Style Sheets.

CISY - 5403 Database Concepts, 3.00 Credits
Prerequisite(s): CISY 2153 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is a study of the terminology, design, implementation and software associated with database systems. Topics include the need for database management systems, file organization, sequential and direct access methods and physical implementation. Other topics covered are relational database design, entity and semantic models, hierarchical and network models, SQL, database applications using the internet, and sharing enterprise data. Students will design, implement, test, and debug database management systems according to industry standards.

CISY - 5613 UNIX/Linux Server Admin, 3.00 Credits
Prerequisite(s): CISY 4053 with D or better
Level: Upper
Upper Level
This course will introduce students to the techniques and practices associated with the installation, configuration, troubleshooting, and maintenance of a UNIX/Linux based network. Students will create an operational UNIX/Linux server within a network domain to support DNS, DHCP, gateway, file, print, and other services. Applications will be installed and supported for network users. Operational practices including security, user and group management, backups, logging, script use, and documentation will be addressed as a final project.

CISY - 5723 Essentials of Info Security, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better or ELET 2012 with D or better
Level: Upper
Upper Level
This is a comprehensive survey of all aspects of computer security. This will include local host, network, web, database security as well as other objects that are prone to attack. The student will focus on the identification of security threats and countermeasures that can be taken to make these systems more secure. Students will develop a security plan for a small to mid-size company.

CISY - 5813 Cloud Computing Architecture I, 3.00 Credits
Prerequisite(s): CISY 2153 with D or better and CISY 3223 with D or better
Level: Upper
Upper Level
This is an introductory course in the emerging field of cloud computing technologies. This course is the first course in a two course sequence which provides the student with a foundation and survey of the many new emerging cloud computing tools being used to recreate the internet. Topics will include SaaS, PaaS, IaaS, & IDaaS, Data Storage, Collaboration, Securing, and Disaster Recovery in the cloud. This course will be using industry leading cloud services and cloud datacenter technologies. A variety of cloud service provider's products and platforms will be explored through appropriate hands-on labs.

CISY - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Upper Level
A capstone course which provides an integrative experience in applying the knowledge and skills of earlier course work, with particular emphasis on computer science management information systems, and communications skills in an integrated/internship setting; requires student to present and defend, orally and in writing, solutions to experienced real-world problems encountered.

CISY - 6103 Web Server Administration, 3.00 Credits
Prerequisite(s): CISY 4053 with D or better and CISY 3223 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This is a comprehensive survey of all aspects of web server administration. Students will gain hands-on experience by actually installing and administering their own web servers. Topics include: server installation and configuration, site planning, supporting dynamic content, security, and maintenance.

CISY - 6123 Adv Pro wth Vid Game Des & Dev, 3.00 Credits
Prerequisite(s): CISY 4003 with D or better or CISY 6503 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is an advanced study of programming using current tools to create video games. Topics covered include higher-level programming techniques, writing programs that use the windows user interface, and creating and using graphic objects. The gaming topics of data structures and algorithms, artificial intelligence, physics modeling, and mathematics will also be covered. A final project will be required incorporating AI and physics.

CISY - 6503 Object-Oriented Programming, 3.00 Credits
Prerequisite(s): CISY 2133 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
Object-oriented analysis (OOA) and object-oriented design (OOD) concepts will be covered using an object-oriented programming (OOP) language such as Java. Topics include: objects, messages, classes, encapsulation, inheritance, polymorphism, code reuse, and method-driven and model-driven object-oriented approaches, methodologies and tools. Students will formulate object solutions to practical problems in the business and scientific areas.

CISY - 6703 Network Design Concepts, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better *
Level: Upper
Applied Learning-Practicum, Upper Level
In this course students will design and implement network systems, utilizing various topologies, media, and protocols. Students will control network hardware such as switches, and routers. Design concepts will be implemented through a variety of laboratory exercises. Students will be required to analyze and present a network design plan.

CISY - 7003 Project Management, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better and (CISY 5133 with D or better or CISY 5303 with D or better or CISY 5203 with D or better or CISY 5403 with D or better)
Level: Upper
Applied Learning-Practicum, Upper Level
A comprehensive approach to project management tools and applications in an interdisciplinary and global environment. Emphasizing concepts, techniques, and principles associated with project management, this course is vital to students entering the IT management field. The course will focus on the changes in the computing environment including hardware, software, and networking. Students will be able to plan, schedule, budget, estimate, control, and monitor projects. In addition, they will become familiar with resource allocation, resource loading, CPM, CMM, GANTT, and PERT. The use of project management software will be a major component of the course.

CISY - 7013 Network & Host Security, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better and CISY 4053 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course will provide a practical, hands-on approach to the security of both hosts and networks. Students will be provided with the opportunity to perform penetration testing and then apply results to updating and patching hosts to mitigate discovered vulnerabilities. It includes access control and authentication systems as well as planning and implementation for wireless network security. A variety of client and network operating systems will be used. This course assumes a prerequisite knowledge of network operating systems and introductory security concepts. A major network security project is a requirement of the course and will be presented in written and oral formats.

CISY - 7023 Compu Forensics & Legal Issues, 3.00 Credits
Prerequisite(s): CISY 5203 with D or better or CISY 5613 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course will provide a practical, hands-on approach to the process of scientifically retrieving, examining and analyzing data from computer storage media so that data can be used as evidence in court. This course assumes a prerequisite knowledge of network operating systems and security concepts. A final project will be required.

CISY - 7033 Security Tools, 3.00 Credits
Prerequisite(s): CISY 5203 with D or better or CISY 4043 with D or better or CISY 4053 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course provides a practical, hands-on approach to a myriad of security tools employed in wired and wireless networks. These security tools will include Industry Standard Firewalls, Virtual Private Networks (VPNs), wired network vulnerability scanners, wireless security probes, wireless intrusion detectors, wireless scanners and wireless encryption cracking utilities. Advanced firewall concepts and technologies will be covered in depth and include design considerations for enterprise networks, large company networks and medium business networks. The course will include VPN concepts, technologies, and configurations for site to site VPNs as well as configurations for client remote access VPNs. The course will cover various vulnerability scanners for networks with heterogeneous operating systems and advanced firewall configurations. Students, in a laboratory environment, will attack and defend networks and submit a project paper detailing lessons learned and how to best defend both wired and wireless networks. The course assumes a prerequisite knowledge of network operating systems and security concepts.

CISY - 7203 Web Programming II, 3.00 Credits
Prerequisite(s): CISY 5303 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
A survey of programming languages and techniques for Web development. Topics include CGI'S (Common Gateway Interface), client side programming with JavaScript, dynamic content using Java and ActiveX, server side programming using Active Server Pages and VBScript, creating dynamic database driven content, and developing web based client/server database applications.

CISY - 8303 Sftw Intgtn & Interoperability, 3.00 Credits
Prerequisite(s): CISY 6703 with D or better and CISY 4723 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
In this course, students will integrate network system components to construct a working enterprise network. Topics addressed include integration of different network topologies, interoperability between network operating systems, integration of client-server applications, web based information systems, other support systems and support of end-user needs.

CISY - 8403 Web Applications, 3.00 Credits
Prerequisite(s): CISY 7203 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this capstone course, students will create web based multi-media applications for companies and/or organizations. These applications will demonstrate client and server side design, programming and maintenance. Additional topics include: systems development life cycle, web-site hosting and administration, e-commerce, and integrated software applications.

CISY - 8503 Appl Database Management, 3.00 Credits
Prerequisite(s): CISY 5403 with D or better and CISY 6503 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this capstone course, students will create and maintain Database Applications in a commercial and/or academic setting. This course provides an integrative experience in applying the knowledge and skills of earlier course work, focusing on multi-user database systems. A major portion of this course will be design, implementation, and documentation of an enterprise data system. Additional topics may include: systems development life cycle, web applications, and application reliability and security.

CISY - 8603 Seminar Critical Issues in IT, 3.00 Credits
Prerequisite(s): CISY 4103 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
This is a research-oriented and performance-oriented course. The course addresses critical (both theoretical and pragmatic) issues in information technology (IT). Issues of concern may include, but are not limited to, IT systems security, ethics of using IT systems, human-IT systems interface, and data analysis requirements at different organizational levels. Students are expected to conduct research, present their findings, accept feedback on their presentations, and document their knowledge of their topics. Students will also complete a project working with a cross-disciplinary team and prepare strategies/materials for an effective job search. Every student is expected to attend all class presentations and guest speaker sessions.

CISY - 8703 Information Security Capstone, 3.00 Credits
Prerequisite(s): CISY 5133 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course, students will integrate, configure and analyze network system components, security tools and procedures necessary to create enterprise class network security perimeters. Topics addressed include a combination of open source and proprietary security applications covering the fundamental components of an effective network security perimeter. These components include: firewalls, Intrusion Detection Systems (IDSs), Intrusion Prevention Systems (IPS) Virtual Private Networks (VPN), authentication systems, port scanning, vulnerability scanning penetration testing, disaster recovery systems and security management systems. An in-depth analysis of the security risks associated with the TCP/IP protocol and associated sub-protocols will also be included as part of a final project.

CISY - 8706 Info Technology Internship, 6.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty. Written and oral reports and a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Students will be required to complete a series of 4 brief investigative or evaluative papers while completing the internship in areas such as career development, organizational structures, organized labor, business management, security, policies, and/or industry and market trends. Two papers will be completed in each of the 6 hour internships. These courses are offered as a two-part alternative to CISY 8712, 8706 and 8716 are to be taken in sequence as two 6 credit hour classes. These 12 hours will be equivalent of CISY 8712. Students may not enroll in CISY 8712 and CISY 8706 / 8716.

CISY - 8712 Info Technology Internship, 12.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty. Written and oral reports and a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Students will be required to complete a series of 4 brief investigative or evaluative papers while completing the internship in areas such as career development, organizational structures, organized labor, business management, security, policies, and/or industry and market trends.

CISY - 8716 Info Technology Internship, 6.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty. Written and oral reports and a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Students will be required to complete a series of 4 brief investigative or evaluative papers while completing the internship in areas such as career development, organizational structures, organized labor, business management, security, policies, and/or industry and market trends. Two papers will be completed in each of the 6 hour internships. These courses are offered as a two-part alternative to CISY 8712. 8706 and 8716 are to be taken in sequence as two 6 credit hour classes. These 12 hours will be equivalent to CISY 8712. Students may not enroll in CISY 8712 and CISY 8706 / 8716.