INTRODUCTION TO COMPUTERS AND THEIR USE (UC:CSU) - 3 UNITS
DESCRIPTION: The course introduces students to fundamental "Computer Literacy" concepts. Students will learn to use Windows 7 on the PC-compatible computers as well as MS Office 2013, a word processing program, (MS WORD), a spreadsheet program (MS EXCEL), MS PowerPoint and Database (MS Access). This class is intended for students requiring "hands-on" knowledge of computer applications. This class will be accepted as a prerequisite for all advanced applications classes listed under CSIT and CAOT.

INTRODUCTION TO COMPUTER SCIENCE (CSU) - 3 UNITS
DESCRIPTION: This course introduces students to fundamental concepts of computer science and programming. Applications will NOT be taught. Programming will be introduced with the BASIC/ PYTHON programming language. This class is intended for Computer Science, Engineering, Math and Science majors. It is a prerequisite for all CSIT programming classes and is acceptable as a prerequisite for application classes.

APPLE APPLICATION DEVELOPMENTS - 3 UNITS
RECOMMENDED: Any object oriented programming language like C++ or Java.
DESCRIPTION: This class uses tools and APIs required to build applications for the iPhone platform using the iPhone SDK. User interface designs for mobile devices and unique user interactions using multi-touch technologies. Object oriented design using model-view-controller pattern, memory management, Objective-C programming language. iPhone APIs and tools including Xcode, Interface Builder and Instruments on Mac OS X. The class will also introduce the Android Software Development Kit (SDK) that allows developers to create applications for the Android platform.

APPLE CARE ADMINISTRATOR - 3 UNITS
DESCRIPTION: Apple Care Administration provides a comprehensive curriculum covering Apple products and technologies. The course includes Apple-developed diagnostic tools to help diagnose and prevent problems on Apple hardware running Mac OS X. The information will also cover the Mac OS X operating system, Apple architecture, and system components. The course will also include setup, configuration, customization and troubleshooting on the Apple iPad and associated hardware. The foundation provided with the course provides students with the information needed to implement, configure, manage and maintain a computer system running Mac OS X and IOS operating systems. The course will also provide the background needed to become an Apple Certified Support Professional. Each student will be assigned a Mac computer for use during class.

BEGINNING MICRO ASSEMBLY LANGUAGE (UC:CSU) - 3 UNITS
PREREQUISITE: CS 902. NOTE: CSIT 917 is offered in spring semester only.
DESCRIPTION: This course will cover the assembly language for the INTEL based computers. Processor architecture as it relates to the assembly language programmer, as well as the interaction between the assembly language and the operating system, will be explained. It is assumed that students understand fundamental algorithm design. This class concentrates on assembly language programming techniques.

MICRO-COMPUTER APPLICATION SOFTWARE (CSU) - 4 UNITS
RECOMMENDED: CSIT 901 or equivalent experience.
DESCRIPTION: This course illustrates how the Microsoft Office 2010 software package can be used to solve typical business problems. Students will use EXCEL, WORD, PowerPoint, ACCESS and Share Point. Share point is a server based solution from Microsoft for managing and provisioning of intranet portals, extranets and websites, document management and file management, collaboration spaces, social networking tools.

DATABASE DESIGN AND PROGRAMMING (CSU) - 3 UNITS
RECOMMENDED: CS 930 or equivalent experience.
DESCRIPTION: This class explains the concept of relational databases. It illustrates how the MICROSOFT ACCESS database management system may be used in common business applications such as report and screen design, database design, and computer aided decision making. This course covers advanced ACCESS features including SQL Programming.

INTRODUCTION TO OPERATING SYSTEMS (CSU) - 3 UNITS
RECOMMENDED: CS 901 or CS 902 or equivalent experience.
DESCRIPTION: This course covers operating system topics in the A+ certification exam. It provides students with the technical foundation in current Microsoft operating systems. It covers hands-on experience in OS installation, configuration, administration, and troubleshooting. It also covers OS command line interfaces, batch file programming, and windows scripting. This course prepares students to perform operating system support tasks. It is a required prerequisite to enter WLAC’s Microsoft Certified Systems Administrator (MCSA or CISCO (CCNA) training program.

INTRODUCTION TO LINUX (CSU)-3 units
RECOMMENDED: Computer Science 934 or equivalent experience.
DESCRIPTION: This course gives students a solid foundation in the fundamentals of the Linux operating system which plays a crucial role in academic and corporate computing. The topics include Linux Overview and Architecture, The Kernel and Shell, File System, Users and Groups Management, Permission and Ownership Management, Services and Processes Management. Students gain system-level experience through problem-solving lab exercises at the command line and in the graphical user interface.
CO SCI 936 INTRODUCTION TO DATA STRUCTURES (UC:CSU) - 3 UNITS
PREREQUISITE: CSIT 990.
DESCRIPTION: This course covers data structures and advanced programming techniques utilizing the JAVA programming language. Data structures will include multi-dimensional arrays, stacks, queues, dynamically allocated linked lists and trees.

CO SCI 937 E-COMMERCE ESSENTIALS (CSU) 3 Units (RPT3)
DESCRIPTION: Students will learn to develop a dynamic, interactive (E-Commerce/business) website using software such as PHP and MySQL. This course introduces electronic commerce, E-Commerce/business concepts and technology, development and integration of PHP and MySQL into an E-Commerce/business website, online catalog, and website security. This course also focuses on the development of dynamic, interactive website pages.

CO SCI 939 PROGRAMMING IN C (UC:CSU) - 3 UNITS
PREREQUISITE: CSIT 902 or equivalent experience.
DESCRIPTION: This course introduces object-oriented programming in the C++ language using the Visual C++ compiler. It is assumed that students understand fundamental algorithm design. This course concentrates on the C++ language and object oriented programming.

CO SCI 952 INTRODUCTION TO WEB TECHNOLOGIES - 3 UNITS
RECOMMENDED: CS 901 or equivalent experience.
DESCRIPTION: This course takes students through the developmental phases of web page construction using Dreamweaver. Students will learn everything from basic skills such as creating web pages, tables, and forms, to more advanced skills like using template and CSS, adding media to a web page, and publishing the site on the Internet. This class is the first course in a series for web site development and e-commerce. It is a technical course, not an art course.

CO SCI 953 DATABASE MANAGEMENT USING ORACLE - 3 UNITS (RPT 3)
RECOMMENDED: CS933 or equivalent experience.
DESCRIPTION: This course will use Oracle to provide a rich environment for illustrating multi-user and client/server database concepts, such as managing concurrent users and sharing database resources, and allows users to develop database applications in a production environment using the database developer utilities. This course also addressed database development activities including using SQL commands to create tables and insert, update, delete, and view date values.

CO SCI 957 INTRODUCTION TO WEB PAGE DESIGN - 3 UNITS
RECOMMENDED: CS 952 or equivalent experience.
DESCRIPTION: This course introduces students to building dynamic and interactive web pages using modern web programming languages including HTML 5 and CSS (Cascading Style Sheet). This course features hands-on assignments and projects, a step-by-step methodology, as well as additional exercises.

CO SCI 958 WEB PAGE DEVELOPMENT USING HTML (HYPER TEXT) - 3 UNITS
DESCRIPTION: This course teaches students to build web pages using current web languages. It will give students hands-on experience in building web pages from scratch. The topics covered include building web pages with tables, image maps, frames, and forms. This course covers topics such as Pop-Up windows and Validating forms. This course also covers integrating HTML with Javascript, XML and PHP, popular web programming languages.

CO SCI 962 WEB PROGRAMMING USING JAVASCRIPT 4 UNITS
PREREQUISITE: CS 902 AND CS 957 or equivalent experience.
DESCRIPTION: This course teaches students to create dynamic Web pages using the popular Web scripting language, JavaScript. This is the course for beginning web programmers with prior knowledge of HTML. JavaScript, a popular scripting language, adds interactive functions to HTML pages and is widely supported in Web browsers and other Web tools. This course also discusses the Document Object Model (DOM) specification published by the World Wide Web Consortium (W3C). This course features hands-on projects, a step-by-step methodology, as well as additional exercises.

CO SCI 963 WEB APPLICATION PROGRAMMING USING ASP.NET - 3 UNITS (RPT 3)
RECOMMENDED: CS933 and CS938.
DESCRIPTION: This is the next generation of Active Server Pages! Revolutionizing the way Web applications are developed, ASP.NET is built on Microsoft's .NET framework. Microsoft has added new functionality to ASP to make Web application development easier and tool friendly. This comprehensive course will not only tackle beginning Web Programming and how to create and maintain interactive and dynamic Web applications, it will also explore the Internet as an essential business tool. This course guides the student from beginning Web applications, to object-oriented programming, to using advanced Web form server controls. NOTE: CS 963 is offered in the Fall semester only.

CO SCI 965 INTRODUCTION TO COMPUTER NETWORKS - 3 UNITS (CSU)
RECOMMENDED: CS 934 or equivalent experience. Students are encouraged to take CS 992 Hardware Hands-on Lab concurrently.
DESCRIPTION: This course covers network topics in CompTIA Network+ certification exam. It serves as a general introduction for students who need a foundation in computer networking technology, local area networks (LANs) and wide area networks (WANs). It covers network media, topology, network architecture, wired and wireless network standards and protocols. This course is a required prerequisite to enter WLAC's Computer Security training program.
CO SCI 967  **Linux,Apache,MySQL,PHP** - 3 UNITS - (RPT3)
RECOMMENDED: CS 935 or equivalent experience.
DESCRIPTION: This course intends to provide students hands-on experience working on the most popular "Green" e-Commerce open source software bundles – L.A.M.P, Xen Virtualization and Eucalyptus Cloud computing. This is an intermediate to advanced hands-on advanced Linux application course. Using CentOS as base operating system, discussing Linux concepts, covering directories, permissions, file systems, package management, networking, host based security, shell scripting as well as Web development with LAMP (Linux,Apache,MySQL & PHP). Kickstart for quick mass server deployment, Virtualization with Xen Hypervisor, Virtual Instance deployment with kickstart on Xen server. Students will construct working Open Source Eucalyptus Cloud, build CentOS image for EMI, and manage EBS volume for Cloud's Virtual Machines.

CO SCI 972  **INTRODUCTION TO CISCO NETWORK FUNDAMENTALS** - 3 UNITS
RECOMMENDED: CS 934 and CS 965 (or equivalent experience).
DESCRIPTION: This course covers topics including networking, network terminology and protocols, network standards, LAN, WAN, the layers of the OSI reference model, cabling and cabling tools. In addition, this course provides students with their first exposure to Cisco routers, router programming, and routing protocols. Students will be introduced to router startup and setup configuration, the Cisco Internet-working Operating System (IOS), routing protocols and network management issues. The course utilizes hands-on lab exercises and demonstrations to reinforce network concepts and theories. This course is equivalent to Cisco's Semester I & II of the Cisco Network Academy.

CO SCI 974  **INTRODUCTION TO CISCO ROUTERS** - 3 UNITS
PREREQUISITE: CS 972.
DESCRIPTION: This course covers advanced networking topics including LAN Switching, VLANs, LAN/WAN design, VLSM, advanced routing protocols, such as, OSPF, EIGRP, RIPv2, and Access Control List. In addition, students will learn more advanced Cisco router configuration techniques. The course utilizes hands-on lab exercises and demonstrations to reinforce network concepts and theories. This course is equivalent to Cisco’s Semester III & IV of the Cisco Network Academy.

CO SCI 980  **INTRODUCTION TO COMPUTER AND INFORMATION SECURITY** - 3 UNITS
RECOMMENDED: CS 934 and CS 965 (or equivalent experience).
DESCRIPTION: This course introduces the basic concepts of computer security. Students will learn a full range of security concepts & techniques and apply them to the most popular operating systems and applications used today. Topics include network vulnerabilities, access control, cryptography & public key infrastructure, auditing & intrusion detection, network & communication security. Lab simulation involves security settings on Client/Server OS. This course, combined with CS985, is designed to help candidates prepare to complete CompTIA Security+ certification. It is also one of the courses leading to degree/ certificate in Network & Security Management.

CO SCI 982  **MICROSOFT SERVER OPERATING SYSTEM** - 3 UNITS (RPT 3)
RECOMMENDED: CS 934 and CS 965 (or equivalent experience).
DESCRIPTION: This course is intended for those who administer Microsoft Windows Server 2008, and for those preparing for the Microsoft Certified IT Professional Windows Server 2008 certification examination 70-646. This course provides the core foundation for supporting Microsoft Windows Server 2008. In addition, this course provides support professionals with the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows 2008 Server. This course is one of the required core courses for the WLAC Microsoft Network training program.

CO SCI 983  **MICROSOFT NETWORK INFRASTRUCTURE ADMINISTRATION** - 3 UNITS
RECOMMENDED: CS 982 or equivalent experience.
DESCRIPTION: This course will teach students how to plan a network infrastructure around features supported by Windows Server 2008. Students learn how to configure and support advanced TCP/IP concepts, including subnetting, VLSM (variable-length subnet mask). Students will also work with network services, such as NAT, IPSec, DHCP, DNS, RRAS, and prepare for certification exam number: 70-642. In addition, this course is appropriate for those interested in web server administration and network security. This is one of the required core courses for the WLAC Micro network training program. NOTE: CS 983 is offered in the Fall semester only.

CO SCI 984  **INTRODUCTION TO WINDOWS ACTIVE DIRECTORY SERVICES** 3 UNITS (RPT 3)
RECOMMENDED: CS 982 or equivalent experience.
DESCRIPTION: This course introduces students to Windows 2008 Server Active Directory Services (ADS) concepts. Students learn to plan, configure and administer an ADS infrastructure. In addition, students will also learn to use Active Directory to centrally manage users, groups, shared folders, domain controllers, and network resources. Students will also be prepared for Microsoft certification exam. This course is one of the required courses for the WLAC Microsoft Certified Systems Engineer (MCSE) training program.

CO SCI 985  **NETWORK AND INFORMATION SYSTEM SECURITY** -3 UNITS (RPT 3)
RECOMMENDED: CS 980 & Server OS or equivalent experience. NOTE: CSIT 985 is offered in Fall semester only.
DESCRIPTION: This course introduces the basic concepts of information assurance. Topics include security baselines, network and application hardening, remote communication security, web & internet security, mail & database security, security policies & procedures, organizations & operational security and computer forensics. Lab simulation involves security settings on Client/Server OS. This course, combined with CS 980, is designed to help candidates prepare to complete CompTIA Security+ exam. It is one of the courses leading to degree/certificate in network and security management.

CO SCI 987  **INFORMATION STORAGE MANAGEMENT FOR NETWORKS, VIRTUAL SERVERS AND VIRTUAL STORAGE** -3 UNITS
RECOMMENDED: CS 982 and 972.
DESCRIPTION: This course explores installation, configuration, and management of VMware vsphere, which consists of ESXi and vCenter Server. The course is based on ESXi and vCenter Server. Additional course topics include; ESXi networking and storage using vCenter Server, virtual machines migration, EMware infrastructure access, vCenter Serve resource monitoring and scalability, and storage
technologies, such as SAN, IP-SAN (iSCSI), NAS as they relate to VMware vSphere. Completion of this course will help students prepare for the VMware Certified Professional 4/5 certification exam.

**CO SCI 988 INSTALLING, CONFIGURING, AND ADMINISTERING MICROSOFT SQL** (RPT 3) 3 UNITS
RECOMMENDED: CS 982 & 933 or equivalent experience. NOTE: CS988 is offered in the Fall semester only.
DESCRIPTION: This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft Structured Query Language (SQL) Server. Share point is a server based solution from Microsoft for managing and provisioning the internet portals, extranets and websites, document management and file management, collaboration spaces, social networking tools, enterprise search, business intelligence, process/information integration, and third-party development solutions. Share point can also be used as a web application development platform.

**CO SCI 990 OBJECT ORIENTED PROGRAMMING IN JAVA** (UC:CSU) -4 UNITS
PREREQUISITE: Computer Science 939 or equivalent experience.
DESCRIPTION: This course is designed to take the students through the various phases of Java Programming from Applications and Applets to Database Programming using JBDC. The course will cover JAVA Foundation classes (JFC), detailed exposure to ‘UTIL’ and to ‘Lang’ packages of JAVA. Some networking & animation techniques using Java are covered.

**CO SCI 992 COMPUTER A+ HARDWARE LABORATORY** (RPT 3) -1 UNIT
DESCRIPTION: This class helps students understand hardware topics in Comp TIA A+ and Network + certification exam. The rapid expansion of the computer industry has generated a growing need for highly skilled workers to repair, network, and support these increasingly complex computer systems. Employment of computer specialist is expected to increase much faster than average as technology becomes more sophisticated and organizations continue to adopt and integrate these technologies. Computer Repair and Networking offers hands on training in state of the art computer hardware and software systems. This field requires the specialist to continually learn new skills to keep pace with the rapidly changing industry. This class will explore basic electronics concepts needed to troubleshoot and repair all aspects of personal computers. In this class we will develop skills such as installation of hard drives, CD drives, interface cards, network cards, etc. Operating Systems will be installed to insure system operation.
CO SCI 989 IMPLEMENTING AND MANAGING MICROSOFT EXCHANGE SERVER 3 UNITS
RECOMMENDED: CS982 or equivalent experience. NOTE: CSIT 989 is offered in spring semester only. DESCRIPTION: This course provides students with the knowledge and skills that are needed to update and support a reliable, secure messaging infrastructure. This infrastructure is used for creating, storing, and sharing information by using Microsoft Exchange Server in a medium-sized to large-sized (250 to 5,000 users) messaging environment. This course is one of the elective courses for the WLAC Microsoft MCSA/MCSE training program.

CO SCI 990 OBJECT-ORIENTED PROGRAMMING IN JAVA - 3 UNITS
PREREQUISITE: CS 939 or equivalent experience.
DESCRIPTION: This course is designed to take the students through the various phases of Java Programming from Applications and Applets to Database Programming using JDBC. The course will cover JAVA Foundation classes (JFC), detailed exposure to "UTIL" and to "lang" packages of JAVA. Some networking & animation techniques using Java are covered.

CO SCI 992 COMPUTER A+ HARDWARE LABORATORY - 1 UNIT (RPT3)
DESCRIPTION: This class helps students understand hardware topics in CompTIA A+ and Network + certification exam. The rapid expansion of the computer industry has generated a growing need for highly skilled workers to repair, network, and support these increasingly complex computer systems. Employment of computer specialists is expected to increase much faster than average as technology becomes more sophisticated and organizations continue to adopt and integrate these technologies. Computer Repair and Networking offers hands-on training in state-of-the-art computer hardware and software systems. This field requires the specialist to continually learn new skills to keep pace with the rapidly changing industry. This class will explore basic electronics concepts needed to troubleshoot and repair all aspects of personal computers. In this class we will develop skills such as installation of hard drives, CD drive, interface cards, network cards, etc. Operating systems will be installed to insure system operation

COMPUTER APPLICATIONS/ CAOT 001A COMPUTER KEYBOARDING AND DOCUMENT APPLICATIONS 1A (CSU) (RPT 3) 1 UNIT.
DESCRIPTION: Mastery of the keyboard and the basic operations of typing and computers are developed on computers. When CAOT 1A is completed, students should enroll in CAOT 84, or CAOT 39. After completing this course, students should be able to type 20 wpm and possess a basic knowledge of MS Word.

COMPUTER APPLICATIONS/ CAOT 023A LEGAL SECRETARIAL PROCEDURES 1A (CSU) 1.00 UNIT
DESCRIPTION: This program prepares individuals with the knowledge and skills to perform secretarial duties and assume specific responsibilities in a legal office.

COMPUTER APPLICATIONS/ CAOT 023B LEGAL SECRETARIAL PROCEDURES 1B (CSU) 1.00 UNIT
DESCRIPTION: This program prepares individuals with the knowledge and skills to perform secretarial duties and assume specific responsibilities in a legal office.

COMPUTER APPLICATIONS/ CAOT 023C LEGAL SECRETARIAL PROCEDURES 1C (CSU) 1.00 UNIT
DESCRIPTION: This program prepares individuals with the knowledge and skills to perform secretarial duties and assume specific responsibilities in a legal office.

COMPUTER APPLICATIONS/ CAOT 039 Word Processing, Keyboarding and Operations (RPT-2) 3 UNITS
RECOMMENDED: Ability to type 35 wpm.
DESCRIPTION: This course teaches word processing skills, such as inputting, formatting, editing, and printing using WordPerfect. Students must arrange for additional lab time each week. NOTE: This course is required for Legal Secretary Certificate. Offered in Fall semester only.

COMPUTER APPLICATIONS/ CAOT 079 WORD PROCESSING APPLICATIONS (CSU) (RPT 3) 3 UNITS
RECOMMENDED: Ability to type 40 wpm and completion of CAOT 39 or CAOT 84.
Intermediate/advanced word processing. Students may select to use Word or WordPerfect. NOTE: This course is required for Legal Secretary Certificate. Offered in the Fall Semester only.

COMPUTER APPLICATIONS/ CAOT 084 MICROCOMPUTER OFFICE APPLICATIONS: WORD PROCESSING (CSU) (RPT 2) 3 UNITS
PREREQUISITE: Ability to type 35 wpm.
DESCRIPTION: This course teaches word processing skills, including inputting, editing, formatting and printing documents using Microsoft WORD. (Replaces CAOT 35 in Paralegal and CAOT programs). NOTE: This course is required for Legal Secretary Certificate.

COMPUTER APPLICATIONS/ CAOT 093 LEGAL DOCUMENT PRODUCTION 2 UNITS
RECOMMENDED: CAOT 39 or CAOT 84. DESCRIPTION: Designed for Paralegal Program students (required) and Legal Secretary Program students (required). This course prepares the student to produce legal documents within the law firm setting, including briefs, memos, pleadings and all other legal.