

COMPUTER GRAPHICS

COGR-160 Computer Graphics I 4 cr.
 Introductory course includes concepts of computer graphics, modeling techniques, interfaces, terminology, and color theory; principles of two-dimensional computer animation, image processing, and presentation media; and computer design theory. Primary emphasis upon PC computer software to produce animations of logos, titles and text, graphs, cartoon characters, cycling colors and special effects; presentation software; desktop publishing; and still image processing. Theory will include design criteria, storyboard preparation, image manipulation, and hands-on computer use for instructional, marketing, graphic design, and artistic purposes. Semester offered: Fall.

COGR-165 Computer Graphics II 4 cr.
 Continuation of the Computer Graphics I with an emphasis on three-dimensional design, process, presentation, and imaging using PC-based computer graphics media and animation software, with a minor emphasis upon MAC-based programs and processes. This course will include preparation of three-dimensional images used for presentations, printed materials, and short animations. A final project will involve using composite three-dimensional objects for visualizing abstract concepts, solid objects in motion, or moving figures for education, sales, and marketing purposes. Prerequisite: COGR 160. Semester offered: Spring.

COMPUTER SCIENCE

COSC-095 Basic Computer Skills 1 cr.
 Learn your way around the computer and its related components. Covers keyboard and mouse operations. Become familiar with the operating system's desktop, icons, and menus. Prerequisites: RDNG 050 or APRD 039. Semester offered: On Demand.

COSC-096 Working With Windows 1 cr.
 Managing and organizing files and folders. Copying and moving files to a different folder or disk. Sort and find files. Prerequisites: RDNG 050 or APRD 039. Semester offered: On Demand.

COSC-097 Basic Computer/Internet Skills 3 cr.
 Learn your way around the computer and the Internet. Covers keyboard and mouse operations; operating systems' desktop, icons, and menu system; and searching the internet and use of e-mail. This course combines COSC 095, COSC 096, and COSC 099 Semester offered: Fall, Spring, and Summer.

COSC-099 Basic Internet Skills 1 cr.
 Practical search techniques and common vocabulary to make your searches more effective. Learn to use e-mail. Prerequisites: RDNG 050 or APRD 039. Semester offered: On Demand.

COSC-111 Computer Literacy 3 cr.
 The evolution of computers, their application and their economic and social implications including a brief introduction to programming and computer literacy with a non-technical emphasis. For non-computing majors. Prerequisites: MATH 050 or APAR 040, ENGL 095 or APEN 070, and RDNG 050 or APRD 039. Semester offered: Fall, Spring, and Summer.

COSC-116 Spreadsheets 3 cr.
 Comprehensive coverage of current spreadsheeting software - from basic data entry and formatting to complex functions, data importation, and Macro creation. Students will be taught most of the features available in the software, and will be required to apply those skills throughout the course. Special emphasis is placed on spreadsheet development for mathematical and financial/accounting applications. This course can be used to prepare for the corresponding Microsoft Certified Application Specialist exam. Prerequisites: MATH 096 or APAL 061, ENGL 095 or APEN 070, RDNG 113 OR APRD 081. Semester Offered: Fall, Spring.

COSC-118 Computer Programming Fundamentals I w/C++ 3 cr.
 An introduction to programming and computing integrating problem solving and algorithmic design using the object-oriented programming language C++. Prerequisites: MATH 095 OR APAL 061, ENGL 095 or APEN 070, RDNG 095 or APRD 058. Semester offered: Fall and Spring.

COSC-122 Game Programming I 3 cr.
 This course is an introduction to game programming as well as an introduction to the C++ computer programming language. A variety of game programs are presented in the textbook and most assignments involve making changes and/or improvements to the existing game programs. Games include Lost Fortune, Guess My Number, Word Jumble, Hangman, Tic-Tac-Toe, and Blackjack. Semester offered: on demand.

COSC-125 Business Microcomputer Applications 3 cr.
 This course is designed to provide students with real world examples and procedures that will prepare them to be skilled users of microcomputers. Students gain hands-on experience in utilizing database, spreadsheet, and word processing applications in the Windows operating system. Semester offered: Fall, Spring, and Summer.[NM Common Course Number: BCIS 1113, Business Transfer Module]

COSC-135 Computer/Basic Management 3 cr.
 A course in management using the computer for Automotive Technology students covering concepts in shop management, small business administration and accounting, and computer systems. Permission of Instructor. Semester offered: On Demand.

COSC-137 Energy Industry Microcomputer 3 cr.
 This course is designed to give students in the School of Energy specific skills in using microcomputers. Students will be given hands-on experience in using scheduling, word processing, spreadsheet and graphic presentation applications. Students will also learn to work with a computer operating system. Pre-requisites: RDNG 095 or APRD 058

COSC-185 Database Management Systems 3 cr.
 This course instructs students in the most current and widely used database programs on microcomputers. It teaches the concepts and procedures needed to become a designer, developer, and informed user of databases. Topics covered in this course include creating and editing tables, forms, reports, data access pages, and using the World Wide Web and hyperlink fields. This course can be used to prepare for the corresponding Microsoft Certified Application Specialist exam. Semester offered: Fall and Spring.

COSC-190 Database Concepts and Principles 3 cr.

A comprehensive course providing a solid, modern foundation in the fundamentals of database processing. Coverage includes understanding and applying entity-relationship data modeling, relational database design and table normalization, the SQL language and database coding, and introduction to popular multi-user databases, and current database access standards. Semester offered: Fall.

COSC-202 Web Development I 3 cr.

Introduction to HTML code. Creating and designing a web page in HTML, adding tables and using frames in web design. Use XML to create interactive, dynamic Web pages. Implement cascading style sheets. Prerequisites: MATH 096 or APAL 040, ENGL 095 or APEN 070, and RDNG 113 or APRD 081. Semester Offered: Fall.

COSC-203 Web Development II 3 cr.

This course expands on existing HTML/XHTML skills learned in COSC 202 with advanced techniques of clientside web page development using a variety of cutting edge technologies and software to help produce professional looking and structured multimedia web sites. Prerequisite: COSC 202. Semester Offered: Spring.

COSC-214 Visual Basic I 3 cr.

An introduction to object oriented, event-driven business application programming and graphical user interfaces in the Microsoft Windows environment. Semester Offered: On demand.

COSC-218 Computer Programming Fundamentals II with C++ 3 cr.

Intermediate level course in object-oriented programming with emphasis on development and use of classes in the Microsoft Visual Studio. NET environment using C++. Inheritance, polymorphism, pointers, and templates are covered. The Standard Template Library is presented as an introduction to data structures. Prerequisite: COSC 118. Semester offered: Spring.

COSC-223 Applications-Based Programming 3 cr.

Microcomputer program design and implementation with an emphasis on programming from an application environment. Includes the Windows programming environment, advanced database programming, and advanced use of macros in word processing and spreadsheeting environments. Prerequisites: AOAP 210, COSC 116, 185. Semester Offered: On demand.

COSC-225 Information Systems Design 3 cr.

Information system design techniques for computer-based information systems, including problem definition techniques, design procedures for input, output and file organization. Course uses the seminar approach with group simulation projects. Prerequisites: COSC 118 and COSC 185 or COSC 214 and COSC 185. Semester Offered: On demand.

COSC-236 UNIX 3 cr.

An introduction to the Linux operating system. A study of basic installation, operation, administration and troubleshooting services for the Linux operating system on workstations and servers. May be preparation for an industry certification. Prerequisite: COSC 262 or equivalent. Semester offered: Fall.

COSC-240 Java Programming 3 cr.

Object-Oriented programming in Java. The course covers all the basics of Java Programming with special emphasis on classes, graphics, and animation. Prerequisite: COSC 118. Semester offered: Fall.

COSC-243 Web Programming on UNIX 3 cr.

Designing server-side applications for the Apache and SQL web server, installed on UNIX and/or Windows systems. Interacting with databases using SQL. Developing dynamic Web pages using ASP.NET, Visual Basic.NET, and CGI/Perl. Prerequisites: COSC 118 or COSC. Semester offered: Spring.

COSC-262 Data Structures With C++ 3 cr.

A course in data structures, software methodologies, and analysis of algorithms using the object-oriented programming language C++. The Standard Template Library (STL) is covered in detail. Prerequisite: COSC 218. Semester Offered: Fall.

COSC-270 Windows GUI Programming 3 cr.

Designing programs for the Windows Graphical User Interface. A modern object-oriented language with good GUI capabilities will be used. Prerequisite: COSC 262. Semester offered: Spring.

COSC-280 Cooperative Education 3 cr.

Supervised cooperative work program. Student is employed in a data processing environment. Student will be supervised and rated by the employer and instructor. Semester offered: On Demand.

COSMETOLOGY**COSM-110 Theory I** 3 cr.

Introduces the student to the cosmetology industry concerning professional image, ethics, first aid, NM state laws and regulations, chemistry and electricity.

COSM-111 Color Theory II 3 cr.

Reviews the NM cosmetology state laws and regulations and professional standards. It also includes a study of the practices and techniques that are needed to pass the state board exam for cosmetology.

COSM-120 Sterilization and Sanitation 2 cr.

This course covers related theory, safety, methods of sterilization of materials and implements, preparation, procedures and practices, public sanitation and chemical agents.

COSM-130 Shampoos, Rinses and Scalp Treatment 2 cr.

Introduces the student to the preparation, procedures and practices, materials, implements, hair analysis, scalp disorders, related chemistry, record keeping and safety.

COSM-140 Facials 3 cr.

Introduces the related theory, anatomy, physiology, procedures and practical applications, products, theory of massage, various skin conditions, makeup application, removal of unwanted hair, client consultations, record keeping and safety.