Pass-No Pass (P-NP) course.

CAOS 91AN  Word Processing II (Word 2010)  2 Units
Prerequisite: Computer Applications and Office Systems 91AN.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Advanced word processing concepts and applications using a computer software program.

CAOS 93AN  Spreadsheet I (Excel 2010)  2 Units
Prerequisite: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90GA.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
A general introduction to basic data manipulation skills and techniques used with spreadsheets: editing, computation, database management, graphing.

CAOS 93BN  Spreadsheet II (Excel 2010)  2 Units
Prerequisite: Computer Applications and Office Systems 93AN.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Advanced spreadsheet design using unique spreadsheet features: graphing, information retrieval, table searches, financial business calculations for decision making.

CAOS 98Z  Internship, Business/Computer Systems Division  1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90GA.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Introduction to presentation software using Microsoft PowerPoint. Course provides hands-on experience to produce text, graphic, chart and graph images for professional presentations.

CAOS 98U  Introduction to Business Graphics (Office 2010)  2 Units
(Formerly Computer Applications and Office Systems 130N.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90GA.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Introduction to presentation software using Microsoft PowerPoint. Course provides hands-on experience to produce text, graphic, chart and graph images for professional presentations.

CAOS 98V  2 Units
CAOS 98W  3 Units
CAOS 98X  4 Units
CAOS 98Y  5 Units
CAOS 98Z  6 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lab per unit of supervised internship in an authorized office or agency (48 hours total for each unit of credit per quarter).
(Any combination of Computer Applications and Office Systems 98U-Z may be taken up to six times, not to exceed 18 units, for credit. During each internship, students will be placed at different employer locations, different working environments, and/or given different assignments within the same company or department--thus providing the students with various opportunities to learn different skills. Students may repeat the same internship location and working environment if the student, employer, and instructor believe it would provide the student with increased work experience.)

CAOS 102N  Microsoft Windows I (Windows 7)  1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90GA.
Two hours lecture-laboratory (24 hours total per quarter).
Pass-No Pass (P-NP) course.
Use of an operating environment which extends the Microsoft Disk Operating System (MS DOS) and the use of the Microsoft Windows Desktop Applications programs.

Computer Applications and Office Systems

NOTE: The CAOS program is being phased out. CAOS classes will no longer be offered after spring quarter 2013. See http://caos.deanza.edu/selfpacedcourses.html for details.

CAOS 83A  Digital Imaging Software (Photoshop)  4 Units
(Formerly Computer Applications and Office Systems 112A.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90GA.
(Also listed as Arts 83A. Students may enroll in either department, but not both, for credit.)
Eight hours lecture-laboratory (96 hours total per quarter).
Basic and intermediate principles using digital imaging software to produce graphics for websites and business documents.

CAOS 84A  Business English I  2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 114 or equivalent.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Review of English grammar, punctuation, usage, and writing skills and applications of these skills to basic business communications.

CAOS 90GA  Computer Literacy I (PC)  2 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Introduction to a computer - hardware and software. Theory and interactive learning activities using word processing, spreadsheet, presentation graphics, database, e-mail, operating systems, and Internet applications.

CAOS 91AN  Word Processing I (Word 2010)  2 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Concepts and applications using a word processing computer software program.
CAOS 104I Ten-Key on the Microcomputer 1/2 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 173.
One hour lecture-laboratory (12 hours total per quarter).
Pass-No Pass (P-NP) course.
Development of ten-key numeric data entry skills. Emphasis on developing speed and accuracy in entering numeric data in an office environment.

CAOS 104O Introduction to Filing 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 173 and 102N.
Two hours lecture-laboratory (24 hours total per quarter).
Pass-No Pass (P-NP) course.
Enterivity concepts and terminology of filing rules for an office environment.

CAOS 107G Business Office Math 2 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Review of basic math skills with emphasis on business applications and critical thinking problems. Instruction and application exercises involving math tasks needed for employment.

CAOS 108 Personal Computer Security Basics 4 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 300A or equivalent.
(Also listed as Computer Information Systems 108. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Beginner’s computer security course for small office or home users. Learn to stop hackers, worms, viruses, spyware, Web bugs and identity theft. Learn vulnerabilities found in Web browsers, e-mail and operating systems. Protect against online purchase dangers, install firewalls, manage cookies, restrict ports, analyze log files, evaluate wireless networks and examine encryption.

CAOS 113A Web Authoring Software (Dreamweaver) 4 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 300A or equivalent.
(Also listed as Arts 113A. Students may enroll in either department, but not both, for credit.)
Eight hours lecture-laboratory (96 hours total per quarter).
Pass-No Pass (P-NP) course.
Basic and intermediate principles of building Web pages/sites using Web authoring software. Introduction to Web authoring terminology and software. This course is for the content person to develop and maintain an effective website.

CAOS 114A Web Graphics/Animation Software (Flash) 3 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 300A or equivalent.
(Also listed as Arts 114A and CAD and Digital Imaging 114A. Students may enroll in only one department for credit.)
Six hours lecture-laboratory (72 hours total per quarter).
Pass-No Pass (P-NP) course.
Basic and intermediate principles of graphics/animation for the Web. Web graphics/animation terminology and software. This course is for the content person to build a website.

CAOS 170F Windows 7 Administration 4 1/2 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 102N.
(Also listed as Computer Information Systems 170F. Students may enroll in either department, but not both, for credit.)
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Provides knowledge and skills to setup, configure, use, and support Windows 7 operating system. Course covers Windows 7 features including installing, upgrading, configuring and troubleshooting. Learn how to configure Windows security, network connectivity and subsystems. Additional topics include configuring/troubleshooting mobile computing and learning how to use Windows 7’s built-in applications.

CAOS 173 Keyboarding Skill Development 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
(May be taken up to three times for credit.)
Pass-No Pass (P-NP) course.
Speed and accuracy development in keyboarding skills.

CAOS 176 Telephone Communications 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
Pass-No Pass (P-NP) course.
Techniques for handling incoming and outgoing phone calls, listening skills and customer relations.

Computer Information Systems

CIS 2 Computers and the Internet in Society 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
A critical examination of the capabilities and uses of the Internet, computers and cellular communications, and how they are changing business, law, politics, health, education, entertainment, and society.

CIS 3 Business Information Systems 4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Introduction to management information systems, systems design and development, data communications, databases, information, office automation, computer hardware and software concepts. Use of common software packages for business applications including word processing, spreadsheets, database, and Internet web tools.

CIS 14A Visual Basic .NET Programming I 4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).

CIS 14B Visual Basic .NET Programming II 4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Computer Information Systems 14A or equivalent.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Develop professional looking and deployable Visual Basic applications using advanced controls, user-created classes, incorporating databases with ADO.NET 3.5, calling APIs, and creating Web applications.

CIS 15AG Introduction to Computer Programming Using C 4 1/2 Units
(Students may receive credit for either Computer Information Systems 15AG and 15BG or 26A, but not both.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 114 or equivalent; Computer Information Systems 50.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Problem solving, algorithms and structured program design. Programming, testing and debugging of well-structured programs in C. Introduction to data types, expressions, control structures, functions, sequential files, and one-dimensional arrays.

CIS 15BG Intermediate Problem Solving in C 4 1/2 Units
(Students may receive credit for either Computer Information Systems 15AG and 15BG or 26A, but not both.)
Prerequisite: Computer Information Systems 15AG.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
A systematic approach to the design, construction and management of computer programs, emphasizing design, programming style, documentation, testing and debugging techniques. Strings, multidimensional arrays and structures. Pointers: their use in arrays, parameters and dynamic allocation. Introduction to linked lists.

CIS 15C Data Structures 4 1/2 Units
Prerequisite: Computer Information Systems 15BG or 26A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 212 or equivalent.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Stacks, queues, linked lists, trees, heaps, and graphs; internal and external sorting; use of recursion; hashing; structured programming; and abstract data type concepts; team project.

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
CIS 18A  Introduction to UNIX/LINUX  4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Computer Information Systems 10. Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Introduction to the features of the UNIX/LINUX operating system including text editing, text file manipulation, electronic mail, Internet utilities, directory structures, input/output handling, and shell features.

CIS 18B  Advanced UNIX/LINUX  4 1/2 Units
Prerequisite: Computer Information Systems 14A or 15AG; and Computer Information Systems 18A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Coverage of regular expressions, grep, sed, and awk utilities.

CIS 18C  Shell Programming  4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; any introductory programming course and Computer Information Systems 18B.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Programming in bash shell, Bourne shell, Korn shell, and C shell.

CIS 21JA  Introduction to 8086/IA 32  Processor Assembly Language  4 1/2 Units
Prerequisite: Computer Information Systems 15BG or 26A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 210 or equivalent.
Introduction to the syntax and semantics of 8086 and IA32 assembly language, standard instruction set, selected pseudo and macro instructions, arrays, 8086/286/386/486/Pentium features.

CIS 21JB  Advanced Programming: Series 86 and IA32/Pentium Assembly Language  4 1/2 Units
Prerequisite: Computer Information Systems 21JA.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 210 or equivalent.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Coverage of theory and application of advanced programming techniques, with emphasis on combining multiple modules in a single program, inter-program connection, interrupt level programming and macro writing, recursive and re-entrant techniques.

CIS 26A  C as a Second Programming Language  4 1/2 Units
(This course is intended for students who are competent in another programming language. Students may receive credit for either Computer Information Systems 15AG and 15BG or 26A, but not both.)
Prerequisite: An Introductory Programming Language course such as Computer Information Systems 14A.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
An introduction to the C programming language and its applications. Topics covered include: basic input/output, structured program design and implementation, basic control structures and keywords, arrays and pointers, character and string manipulation, arithmetic expressions, and functions and program modularization.

CIS 26B  Advanced C Programming  4 1/2 Units
Prerequisite: Computer Information Systems 15BG or 26A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 212 or equivalent.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Applications of advanced features of C and the C-library functions including: binary and random-access input/output, dynamic data structures, bit manipulation, string parsing and string-to-numeric conversion, event and error processing, function pointers, recursion, and variable-length argument list functions.

CIS 27  Programming in C++ for C Programmers  4 1/2 Units
(Students may receive credit for either Computer Information Systems 71A and 71B or 27, but not both.)
Prerequisite: Computer Information Systems 15BG or 26A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
A comprehensive introduction to the C++ programming language and its applications.

CIS 28  Object Oriented Analysis and Design  4 1/2 Units
Prerequisite: Computer Information Systems 27 or 35A or equivalent experience.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Defines and illustrates the object oriented paradigm for analyzing, designing and implementing object oriented computer applications. Trade-offs between various object oriented techniques will be illustrated with a series of real world applications to allow the student to optimize his/her solutions for robustness and reuse.

CIS 29  Advanced C++ Programming  4 1/2 Units
(Formerly Computer Information Systems 52G.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Computer Information Systems 27.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Advanced topics in C++ including: namespace, string and streamstring classes, cast operators, multiple inheritance, exception handling, compilation concepts, library templates, the Standard Template Library and programming style.

CIS 30A  Introduction to C# Programming  4 1/2 Units
(Formerly Computer Information Systems 65A.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Introduction to C# programming, .NET Environment, computing context, primitive types, flow of control constructs, operators, text I/O, objects and classes, interfaces, packages, GUI, exceptions, and threads.

CIS 30B  Advanced C# Programming  4 1/2 Units
(Formerly Computer Information Systems 65B.)
Prerequisite: Computer Information Systems 30A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Emphasis on foundation technologies in C# that enable you to write server side programs in C#. Concepts include inner classes, collections, exceptions, file I/O, reflection, cloning, and multi-threading.

CIS 31  Operating System Concepts  5 Units
Advisory: Computer Information Systems 15BG and 21JA.
Five hours lecture (60 hours total per quarter).
Concepts and use of operating systems: multiprogramming and multiprocessing systems; processes and threads, mutual exclusion, indefinite postponement, deadlocks; scheduling considerations and security management.

CIS 33A  Programming in PERL  4 1/2 Units
(Formerly Computer Information Systems 33.)
Prerequisite: Computer Information Systems 18A and either Computer Information Systems 15BG or 26A.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
A complete coverage of the core PERL language. Topics covered will include: basic loops and control structures, the elemental data types and operators, subroutines and variable scoping, regular expressions and text parsing, manipulation of files and directories, advanced list processing with grep and map, references, built-in functions and core modules, and advanced input/output including random-access files and formatting.

CIS 33B  Advanced PERL Programming  4 1/2 Units
Prerequisite: Computer Information Systems 33A and either Computer Information Systems 15BG or Computer Information Systems 26A.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Exploration of advanced topics from the core PERL distribution and essential non-core modules. Topics include reference-based data structures, object-oriented programming, connecting to SQL-based relational databases, non-relational database and file structures, process creation and management, and TCP/IP Client/Server programming.

CIS 35A  Introduction to Java Programming  4 1/2 Units
(Students may receive credit for either Computer Information Systems 61A and 61B or 35A, but not both.)
Prerequisite: Computer Information Systems 15BG or 26A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Introduction to Java programming, computing context, primitive types, flow of control constructs, operators, text I/O, objects and classes, interfaces, packages, GUI and exceptions.
CIS 35B Advanced Java Programming 4 1/2 Units
Prerequisite: Computer Information Systems 35A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Emphasis on foundation technologies in Java that enable you to write server side programs in Java. Concepts include inner classes, collections, exceptions, file I/O, reflections, cloning, swing, multi-threading and JavaBeans.

CIS 50 Introduction to Computers, Data Processing, and Applications 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
Computer information systems (IS) basic terms and concepts. Important IS trends. Using systems development to build information systems. Survey of functions and components of an information system including applications software, systems software, telecommunications, networks, the Internet and Web. Social and organization issues.

CIS 53 Distributed Processing Using Java 4 1/2 Units
Prerequisite: Computer Information Systems 35B.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Distributed computing using Java features including: JDBC, Java Servlets, Java Server Pages, RMI, Enterprise JavaBeans, Java Transaction Services, XML and Java. Introduction to Web Services.

CIS 61A Introduction to Computer Programming Using Java 4 1/2 Units
(Students may receive credit for either Computer Information Systems 61A and 61B, or 35A, but not both.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 114 or equivalent.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
This course is an introduction to computer programming. Its primary objective is to teach problem solving using the Java programming language. Emphasis will be placed on structured procedural programming with an introduction to object-oriented programming. This course is designed primarily for computer science and related transfer majors.

CIS 61B Intermediate Problem Solving in Java 4 1/2 Units
(Students may receive credit for either Computer Information Systems 61A and 61B or 35A, but not both.)
Prerequisite: Computer Information Systems 61A.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
A systematic approach to the design, construction and management of computer programs, emphasizing design, programming style, documentation, testing and debugging techniques. Strings, multi-dimensional arrays and Classes. References: their use in arrays, parameters and containment. Introduction to linked lists.

CIS 63 Systems Design 4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Current tools of structured systems analysis and design: data flow diagrams, structure charts, HIPO charts, VTOCs, data structure/dictionaries, decision trees and tables, pseudo code.

CIS 64A Data Base Management Systems 4 1/2 Units
Prerequisite: Computer Information Systems 15BG.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Rudiments of data base design, implementation and use. Basic understanding of various data modeling techniques. Overview and comparison of data base management systems. Emphasis on relational data bases; introduction to SQL.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 73</td>
<td>UNIX/LINUX Systems Programming</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Coverage of systems programming in the UNIX/LINUX/Posix environments, with emphasis on low-level UNIX/LINUX/Posix system calls from C programs and shell scripts. Discussion of differences in major UNIX/LINUX/Posix environments.</td>
</tr>
<tr>
<td>CIS 74</td>
<td>Computer Software Quality Assurance</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Analysis of types of software; software development life cycle; top down design and structured programming; multimedia; standards and practices; software configuration management; software testing; documentation; software error types; causes; software quality assurance plans and procedures; software discrepancy reports, analysis; software visibility for managers.</td>
</tr>
<tr>
<td>CIS 75A</td>
<td>Internet Concepts and TCP/IP Protocols</td>
<td>5</td>
<td>Five hours lecture (60 hours total per quarter). The architecture and underlying protocols of the Internet. The Internet will be examined as a layered product. Layers discussed will include mid-level packet delivery and address computation and high-level client/server applications using the TCP/IP protocol suite.</td>
</tr>
<tr>
<td>CIS 75B</td>
<td>Internet Programming with TCP/IP</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Writing client/server applications using the TCP/IP protocol suite. All server classes - &quot;well known&quot;, iterative, concurrent, and polling - will be explored and used. Typical Internet programming problems will be addressed including resource availability, machine addressing, and differences in data representation between communicating computers.</td>
</tr>
<tr>
<td>CIS 75C</td>
<td>Enterprise Security Threats Management</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Learn how to apply Enterprise Security Concepts to monitor security threats, outages and analyze such results. Learn to predict hacker's mindset and respond to hacker attack. Raise awareness in your workplace about security policy and procedures. System Administrators, IT Managers and Analysts would benefit from this course as well as technologists wanting to broaden their impact.</td>
</tr>
<tr>
<td>CIS 76</td>
<td>Introduction to Network Security</td>
<td>4</td>
<td>Four hours lecture (48 hours total per quarter). Network security using the standard protocols and algorithms. All three goals of security including confidentiality, integrity, and availability will be discussed. Attacks on security including active and passive are discussed and elaborated on. Two major techniques of security, cryptography and steganography, are described with emphasis on cryptography. The emphasis is on mechanisms and services provided by the network security.</td>
</tr>
<tr>
<td>CIS 77</td>
<td>Special Projects in Computer Information Systems</td>
<td>1</td>
<td>Three hours lecture (36 hours total per quarter). Learn the basics of process mapping in examining work flow and relationships to improve the efficiency of an organization, improve communication and understanding, and find ways to optimize a process.</td>
</tr>
<tr>
<td>CIS 77X</td>
<td>Process Management</td>
<td>3</td>
<td>Three hours lecture (36 hours total per quarter). Fundamentals of computerized accounting using integrated general ledger software packages and electronic spreadsheet software. Conversion of a manual system to a computer system.</td>
</tr>
<tr>
<td>CIS 77Y</td>
<td>Managing Technology Projects</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Introduction to the theory and practice of the design and management of technology projects, including planning, performing, and monitoring of projects. Subjects explored are estimating costs and schedules, analyzing client expectations, guiding diverse groups of people toward a common goal, while earning a profit. Use of common software packages for project management.</td>
</tr>
<tr>
<td>CIS 78</td>
<td>Computer Accounting Systems</td>
<td>5</td>
<td>Five hours lecture (60 hours total per quarter). Learn the basics of process mapping in examining work flow and relationships to improve the efficiency of an organization, improve communication and understanding, and find ways to optimize a process.</td>
</tr>
<tr>
<td>CIS 79A</td>
<td>Web Page Development</td>
<td>3</td>
<td>Two hours lecture, three hours laboratory (60 hours total per quarter). Fundamentals of Web page design and creation: designing, encoding, and maintaining pages on the World Wide Web using HTML/XHTML.</td>
</tr>
<tr>
<td>CIS 79B</td>
<td>Client-Side Programming with JavaScript</td>
<td>4 1/2</td>
<td>Four hours lecture, one and one-half hours laboratory (66 hours total per quarter). Fundamentals of client-side programming for Web pages requiring data collection or other user interaction. Students will create Web pages that execute on the client (personal system) using JavaScript.</td>
</tr>
</tbody>
</table>
CIS 95A Project Management 5 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Five hours lecture (60 hours total per quarter).
Focus on your role as a Project Manager; selecting a project; selecting a team; documentation and tracking of a project using Project Manager Book of Knowledge (PMBOOK) Theory.

CIS 95B Project Planning and Control 4 Units
Prerequisite: Computer Information Systems 95A or equivalent experience.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Create a project scope statement that will act as a basis for creating a project plan. Build a project plan that integrates time, resources and communication with cost and quality of work. Plan controls to proactively mitigate risks.

CIS 95C Risk Assessment and Mitigation 4 Units
Prerequisite: Computer Information Systems 95A or equivalent experience.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Focus on responding to uncertain events or conditions for a positive or negative effect on project objectives. Implement techniques for planning for risks and learn to change project plans to reduce the probability and/or impact of the risk.

CIS 95D Managing Outsourcing 3 Units
Prerequisite: Computer Information Systems 95A or equivalent experience.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
Learn to acquire goods and services from an outer organization using procurement and solicitation processes. Perform contract administration till completion and settlement of contract.

CIS 95E CAPM and PMP Exam Preparation 4 Units
Prerequisite: Computer Information Systems 95A or equivalent experience.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Prepares the student for attempting the Project Management Professional (PMP) or Certified Associate in Project Management (CAPM) examination provided by Project Management Institute (PMI). Topics include management of integration, scope, time, cost, quality, human resources, communications, risk and procurement.

CIS 108 Personal Computer Security 4 Units
Basics
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 90A or equivalent.
(Also listed as Computer Applications and Office Systems 108. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Beginner's computer security course for small office or home users. Learn to stop hackers, worms, viruses, spyware, Web bugs and identity theft. Learn vulnerabilities found in Web browsers, e-mail and operating systems. Protect against online purchase dangers, install firewalls, manage cookies, restrict ports, analyze log files, evaluate wireless networks and examine encryption.

CIS 140A Automated Web Page Testing 2 Units
with Selenium IDE
Prerequisite: Computer Information Systems 89A or equivalent.
Co-requisite: Computer Information Systems 140A students must also enroll in Computer Information Systems 89C.
Advisory: Computer Information Systems 74d.
One hour lecture, three hours laboratory (48 hours total per quarter).
An introduction to the open-source Selenium Integrated Development Environment (SIDE) used for automating the testing of web pages. Topics covered will include: download and installation; user forums; record/replay; use of gloobing and regular expressions within patterns; use of XPath and DOM expressions to locate page elements; test suite creation; the Selenium command set; the use of JavaScript snippets as arguments to Selenium commands; and the use of JavaScript within user extensions.

CIS 170F Windows 7 Administration 4 1/2 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Computer Applications and Office Systems 102N.
(Also listed as Computer Applications and Office Systems 170F. Students may enroll in either department, but not both, for credit.)
Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).
Provides knowledge and skills to setup, configure, use, and support Windows 7 operating system. Course covers Windows 7 features including installing, upgrading, configuring and troubleshooting. Learn how to configure Windows security, network connectivity and subsystems. Additional topics include configuring/troubleshooting mobile computing and learning how to use Windows 7's built-in applications.

CIS 200W Topics in Computer Information Systems 1 Unit

CIS 200X 2 Units
CIS 200Y 3 Units
CIS 200Z 4 Units
Credit course - Does not apply to De Anza Associate degree.
Requisite/Advisory: None.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
(Any combination of Computer Information Systems 200W, 200X, 200Y and 200Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.)
A planned program of exposure to fundamental concepts and applications of selected Computer Information Systems topics. Concepts and theories as applied to the specific topic.

Counseling

COUN 80X Special Topics in Counseling 1 Unit
COUN 80Y 2 Units
COUN 80Z 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
(Any combination of Counseling 80X, 80Y and 80Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.)
Selected counseling topics with a focus on academic and personal development.

COUN 200 Orientation to College 1/2 Unit
COUN 200X 1 Unit
(Formerly Counseling 100 and 100X respectively.)
Credit course - Does not apply to De Anza Associate degree.
Requisite/Advisory: None.
Two hours lecture-laboratory for each unit of credit (24 hours total for each unit of credit per quarter).
Pass/No Pass (P-NP) course.
An orientation to De Anza College that includes programs, services, policies, degrees, certificates, transfer requirements, and college culture. Focus will be on strategies needed for academic success and the development of a two quarter Educational Plan.

Dance

DANC 22 Body Awareness and Conditioning for Dancers 1 Unit
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
(Dance 22 may be taken up to three times for credit.)
Principles of dance and conditioning through floor work derived from ballet, contemporary dance and other psycho-physical disciplines. Topics may include but are not limited to: body mechanics, muscle groups critical to dance, flexibility, alignment, self-assessment, dance injury prevention, and strengthening the mind-body connection.

DANC 22K Theory and Technique of Ballet I 1 Unit
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Dance 22.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 22K and 22L, may be taken up to six times for credit for the family of courses.)
Introduction to the discipline and creative art of classical ballet, including the development of elementary movement techniques, a working ballet vocabulary, exposure to great works and artists from a global perspective, theory and practice of barre and center floor exercises.

DANC 22L Theory and Technique of Ballet II 2 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Dance 22K.
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 22K and 22L, may be taken up to six times for credit for the family of courses.)

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
Principles and practice of the discipline and creative art of classical ballet, combining: traditional techniques of Russian, French, and Italian schools; barre and center floor work emphasizing alignment/centering, motion through space, and the acquisition of an intermediate working ballet vocabulary.

DANC 23A Theory and Technique of Contemporary (Modern) Dance I
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 23A and 23B, may be taken up to six times for credit for the family of courses.)
Introduction to the discipline and creative art of contemporary dance. Students will be exposed to a basic movement theory, technique and repertoire from global artists.

DANC 23B Theory and Technique of Contemporary (Modern) Dance II
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Dance 23A.
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 23A and 23B, may be taken up to six times for credit for the family of courses.)
The discipline and creative art of contemporary dance focusing on practice, theory, technique, and movement explorations in time and space, developing a working intermediate contemporary dance vocabulary.

DANC 23H Dance Composition
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
(Dance 23H may be taken twice for credit, for a total of four units.)
Introduction to the fundamental elements and techniques of individual and group dance composition.

DANC 23L Theory and Technique of Hip-Hop I (Popular American Dance)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 23L and 23M, may be taken up to six times for credit for the family of courses.)
An introduction to the discipline of creative arts through hip-hop dance with an integrated fitness approach that focuses on developing the stabilization muscles of the center of the body. Concentration will be on muscles of the torso, back, hips, inner and outer thighs, chest and abdominals will be used in conjunction with breathing, posture, and muscle awareness. Exposure to great works and artists of the field. Development of a working hip-hop dance vocabulary. Theory and practice of basic technique.

DANC 23M Theory and Technique of Hip-Hop II (Popular American Dance II)
(See general education pages for the requirement this course meets.)
Prerequisite: Dance 23L.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 23L and 23M, may be taken up to six times for credit for the family of courses.)
Explorations in the discipline of creative arts through the theory and practice of hip-hop dance intermediate/advanced level technique, with an integrated fitness approach that focuses on developing the stabilization muscles of the center of the body. Concentration will be on muscles of the torso, back, hips, inner and outer thighs, chest and abdominals will be used in conjunction with breathing, posture, and muscle awareness. Exposure to great works and multiculturals artists of the field. Development of a working hip-hop dance vocabulary and performance skills.

DANC 24A Theory and Technique of Social Dance I
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 24A, 24B and 24C, may be taken up to six times for credit for the family of courses.)
Introduction to the discipline and creative art of social dance. Exposure to basic forms of social dance in a ballroom context. Developing a working vocabulary of traditional social dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.

DANC 24B Theory and Technique of Social Dance II
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 24A, 24B and 24C, may be taken up to six times for credit for the family of courses.)
Introduction to the discipline and creative art of social dance, part two. Exposure to basic forms of social dance in a ballroom context. Developing a working vocabulary of traditional social dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.

DANC 24C Theory and Technique of Social Dance III
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 24A, 24B and 24C, may be taken up to six times for credit for the family of courses.)
The art of social dance at the advanced level. Expanded exposure to basic forms of social dance in a ballroom context. Developing a working vocabulary of traditional social dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.

DANC 25A Theory and Technique of Social Dance I
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Dance 25A may be taken up to three times for credit as long as the topics are different each time.)
Introduction to the discipline and creative art of social dance. Exposure to basic forms of social dance in a salsa dance context. Developing a working vocabulary of traditional salsa dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.

DANC 25B Theory and Technique of Social Dance II
(Formerly Dance 65B.)
(See general education pages for the requirement this course meets.)
Prerequisite: Dance 25A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture-laboratory (48 hours total per quarter).
(Dance 25B may be taken up to six times for credit.)
An intermediate/advanced discipline and creative art of salsa dance. Exposure to intermediate/advanced forms of social dance in a salsa dance context. Developing a working vocabulary of traditional salsa dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.

DANC 25C Dance Workshop (Student Productions, the De Anza Dancers)
1 Unit

DANC 27A Theory and Technique of Jazz Dance I
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory for each unit of credit (24 hours total for each unit of credit per quarter).
(Any combination of Dance 27A, 27B, 27C and 27D may be taken up to three times for credit.)
An introduction to the basic techniques of dance production and performance.
DANC 37B  Theory and Technique of Jazz  2 Units
Dance II
(See general education pages for the requirement this course meets.)
Prerequisite: Dance 37A.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200),
or English as a Second Language 261, 262 and 263.
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 37A and 37B, may be taken up to six times for credit.)
Exploring elements of time, space, shape and motion as related to jazz dance.
Body conditioning, exposure to major international influences, artists, and works.
The development of a working vocabulary in significant jazz dance styles; and practice of intermediate level techniques.

DANC 38A  Appreciation of Dance  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
A study of dance as a cultural phenomenon, form of communication, socialization,
recreation, artistic expression, and entertainment. Exploring the history, traditions
and works of outstanding artists.

DANC 48  Technical Production for Dance and Theatre  2 Units
(Formerly Dance 58.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
(Also listed as Theatre Arts 48. Students may enroll in either department, but not
both, for credit.)
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 48 and Theatre Arts 48 may be taken up to three
times as long as the topics/projects in musical drama, dance concert, etc. are
different each time.)
Introduction to the theoretical, technical and craft of dance and theatre production
with practical experience in public presentation.

DANC 49A  Topics in Theory and Technique of World Dance  1 Unit
(Formerly Dance 50A.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
Two hours lecture-laboratory (24 hours total per quarter).
(Dance 49A may be taken up to six times as long as the topics in specific dances
and cultures are different each time.)
Introduction to the art of world dance. Course will provide exposure to forms of
dance from an international perspective. Students will learn to perform the basic
skills of classical, traditional, and folk dances from various world cultures, while
developing a working vocabulary of traditional dance movements. Students will
attempt to gain an understanding and appreciation of the cultural and historical
contexts that produced the specific dance forms.

DANC 78L  Special Topics in Dance  1/2 Unit
DANC 78M  1 Unit
DANC 78N  2 Units
DANC 78P  3 Units
DANC 78Q  4 Units
Prerequisite: Enrollment by audition.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200),
or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory for each unit of credit (24 hours total for each unit
of credit per quarter).
(Any combination of Dance 78L-Q may be taken up to three times for credit, not
to exceed 12 units, as long as the topics are different each time.)
Special topics that incorporate theory and practice within the discipline of dance.

Drama
(See Dance and/or Theatre Arts)

Economics

ECON 1  Principles of Macroeconomics  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to macroeconomics. Topics covered will include recessions and
inflation, national income accounting, money and the banking system, money
and the price level, classical macro theory, Keynesian macro theory, monetary and fiscal
policy, and international trade.

ECON 2  Principles of Microeconomics  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Examines fundamental microeconomic issues; the allocation of resources and the
production function; pricing of output and factors of production; the distribution
of wealth and income; consumer motivations and behavior; the nature and behavior
of business firms and markets under various degrees of competition; current problems.

ECON 78I  Economic Issues in Today's World  3 Units
ECON 78J  4 Units
(Formerly Economics 40I and 40J respectively.)
Advisory: English Writing 1A or English as a Second Language 5; Economics 1
or 2.
Three hours lecture for the three unit course (36 hours total per quarter); four
hours lecture for the four unit course (48 hours total per quarter).
Basic economic analysis of current economic issues. Each topic studied is selected
according to its currency and relevance to analysis. Examines fundamental
economics issues within the context of current socio-political activity within the
local or national economic environment. By learning the economic way of thinking,
our students develop the ability to analyze complex, often ill-defined problems,
and to think strategically about both intended and unintended consequences. The
study of Economics develops a student's ability to organize thoughts, analyze
complex issues, and to make clear and persuasive recommendations. These skills
explain why economics majors score higher on law school admissions tests than
other majors, and receive among the highest starting salaries. Recent classes
have involved experimental economic techniques and their application to the
understanding and testing of theory; the changing European economic community;
liberal, conservative and radical perspectives on current economic policy; the
restructuring of the California and United States economy; public finance options
for local, state and federal government units; the use of simulations and modeling in
economic analysis; political economy; and, experimental and behavioral economic
theories and practices.

Education

EDUC 1  Introduction to Elementary Education in a Diverse Society  3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
Two hours lecture, three hours laboratory (60 hours total per quarter).
Examination of principles and practices of elementary education in today's society
including observations and supervised participation in the elementary school setting.

EDUC 46  Mathematics for Elementary Education  5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: Mathematics 114 with a grade of C or better, or a qualifying score
on Intermediate Algebra Placement Test within the past calendar year.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
(Also listed as Mathematics 46. Students may enroll in either department,
but not both, for credit.)
Five hours lecture (60 hours total per quarter).
Designed for prospective elementary and middle school teachers. An introduction
into the discipline of mathematics as the use of logical, quantitative, and spatial
reasoning in the abstraction, modeling, and problem solving of real-world situations.
The main topics in the course include the origins of mathematics, mathematical
reasoning and problem solving strategies, theory of sets, integers and integral
number theory, rational numbers and proportion, real numbers and decimal notation,
and measurement. Throughout the course students will experience the learning of
mathematics in a way that models how they can create an active learning
environment for their future students.

EDUC 56  Understanding and Working with English Language Learners  3 Units
Advisory: Completion of Child Development 10G (or Psychology 10G) or
English Writing 211 and Reading 211 (or Language Arts 211), or English as a
Second Language 272 and 273.
(Also listed as Child Development 56. Students may enroll in either department,
but not both, for credit.)
Three hours lecture (36 hours total per quarter).
Developmental and cultural examination of the dual language learner in early
childhood programs. Theories and developmental sequence of bilingual language
acquisition. Role of teacher and methods for supporting the dual language child.
(This course meets NAEYC Standard 4b: Teaching and learning: Using
developmentally effective approaches; NBPTS Early childhood/Generalist Standard
II: Equity, Fairness and Diversity; CEC Special Education Content Standards,
Standard 2: Development & Characteristics of Learners; Standard 6: Language.)

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.