

**Certificate and A.A./A.S. Degree Programs  
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# CERTIFICATE and A.A./A.S. DEGREE PROGRAMS

Each individual department's curriculum sheet for its certificate and degree programs is also available in the Counseling Center and on the Web at [www.deanza.edu/counseling/degrecert.html](http://www.deanza.edu/counseling/degrecert.html). Division offices for the various departments often have sheets available as well.

Students transferring to other colleges should complete as many requirements of that college as possible. Articulation agreements between De Anza and California public four-year institutions are available on the Web at [www.assist.org](http://www.assist.org). Students should also contact a counselor or adviser for program planning from the catalog of the desired transfer institution and maintain regular contact prior to transfer.

Although care has been taken to ensure the accuracy of the information that follows, there may be unintended errors and changes or deletions without notification.

## General Requirements

### To Earn a Certificate or Degree

1. Complete the appropriate curriculum requirements.
2. Meet the corresponding general requirements as specified below (unless otherwise noted).

#### Skills Certificate

Skills Certificates (programs requiring fewer than 18 units) are issued by the individual departments and are not notated on official college transcripts. Contact the department directly for assistance and to apply for Skills Certificates.

#### Requirements:

A passing grade ("C" or better/"P") in each required course  
*Note: Each course must be completed at De Anza College.*

#### Certificates of Achievement and Achievement-Advanced

Certificates of Achievement and Achievement-Advanced are awarded by the college and notated on official transcripts. Visit the Counseling and Advising Center to apply for these and for academic planning assistance.

#### • Certificate of Achievement

##### Requirements:

A minimum "C" grade in each major course  
*Note: A maximum of six (6) quarter units may be transferred from other academic institutions.*

#### • Certificate of Achievement-Advanced

##### Requirements:

1. A minimum "C" grade in each major course
2. Demonstrated proficiency in English and mathematics as evidenced by eligibility for EWRT 1A or ESL 5 and eligibility for MATH 114  
*Note: A maximum of 18 quarter units may be transferred from other academic institutions.*

#### A.A./A.S. Degree

A.A./A.S. degrees are awarded by the college and notated on official transcripts.

##### Requirements:

1. Completion of all General Education (GE) requirements (31-42 quarter units) for the A.A./A.S. degree. GE units must be completed with a minimum 2.0 GPA ("C" average)

2. Completion of all major requirements. Each major course must be completed with a minimum "C" grade.  
 Major courses can also be used to satisfy GE requirements (except for Liberal Arts degrees).

*Note: A maximum of 22 quarter units from other academic institutions may be applied toward the major.*

3. Completion of a minimum of 90 degree-applicable quarter units (GE and major units included). All De Anza courses must be completed with a minimum 2.0 GPA ("C" average). All De Anza courses combined with courses transferred from other academic institutions must be completed with a minimum 2.0 GPA ("C" average).

*Note: A minimum of 24 quarter units must be earned at De Anza College.*

**NOTE:** Major courses for certificates and degrees must be completed with a letter grade unless a particular course is offered on a pass/no-pass basis only.

## Accounting/Bookkeeping

### Accounting

#### Certificate of Achievement

Complete the following and meet the corresponding certificate requirements as specified in the previous column.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 1C	Managerial Accounting	4
ACCT 86	Computer Accounting Systems	5
ACCT 88	Excel Spreadsheets for Accounting	2
ACCT 105	Basic Financial Accounting Procedures	1

*Complete a minimum of six (6) units from the following:*

ACCT 64	Payroll and Business Tax Accounting (3)	6
ACCT 66	Cost Accounting (5)	
ACCT 67A	Federal Income Tax (4)	
ACCT 70	Budgeting and Planning (5)	
ACCT 75	Accounting for Government and Nonprofit Entities (5)	
ACCT 87AH	Computerized Accounting Programs (Peachtree - Windows) (2)	
ACCT 87AI	Computerized Accounting Programs (Quickbooks) (2)	
	Total Units Required . . . . .	26

#### Recommended

BUS 10	Introduction to Business (5)	
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### Accounting: Practice Emphasis

#### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified in the previous column.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 1C	Managerial Accounting	4
ACCT 51A	Intermediate Accounting	4
ACCT 51B	Intermediate Accounting	4
ACCT 58	Auditing	4
ACCT 66	Cost Accounting	5
ACCT 86	Computer Accounting Systems	5
ACCT 88	Excel Spreadsheets for Accounting	2
BUS 18	Business Law I	5

† This certificate was submitted for State approval.  
 Please check with the department for the status.

<i>Complete a minimum of four (4) units from the following:</i>		4
ACCT 64	Payroll and Business Tax Accounting (3)	
ACCT 67A	Federal Income Tax (4)	
ACCT 67B	Advanced Individual Tax: CA Emphasis (4)	
ACCT 68	Advanced Tax Accounting (4)	
ACCT 70	Budgeting and Planning (5)	
ACCT 75	Accounting for Government and Nonprofit Entities (5)	
ACCT 87AH	Computerized Accounting Programs (Peachtree - Windows) (2)	
ACCT 87AI	Computerized Accounting Programs (Quickbooks) (2)	
ACCT 105	Basic Financial Accounting Procedures (1)	
BUS 10	Introduction to Business (5)	
BUS 69	Investment Fundamentals (4)	
Total Units Required . . . . .		45

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Accounting: Practice Emphasis Certificate of Achievement-Advanced	45 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Accounting: Taxation Emphasis**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 1C	Managerial Accounting	4
ACCT 64	Payroll and Business Tax Accounting	3
ACCT 67A	Federal Income Tax	4
ACCT 67B	Advanced Individual Tax: CA Emphasis	4
ACCT 68	Advanced Tax Accounting	4
ACCT 86	Computer Accounting Systems	5
ACCT 88	Excel Spreadsheets for Accounting	2
BUS 18	Business Law I	5

*Complete a minimum of six (6) units from the following:* 6

ACCT 51A	Intermediate Accounting (4)	
ACCT 51B	Intermediate Accounting (4)	
ACCT 58	Auditing (4)	
ACCT 66	Cost Accounting (5)	
ACCT 70	Budgeting and Planning (5)	
ACCT 75	Accounting for Government and Nonprofit Entities (5)	
ACCT 87AH	Computerized Accounting Programs (Peachtree - Windows) (2)	
ACCT 87AI	Computerized Accounting Programs (Quickbooks) (2)	
ACCT 105	Basic Financial Accounting Procedures (1)	
BUS 10	Introduction to Business (5)	
BUS 69	Investment Fundamentals (4)	
REST 50	Real Estate Principles (4)	
Total Units Required . . . . .		45

*Recommended*

BUS 10	Introduction to Business (5)
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**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Accounting: Taxation Emphasis Certificate of Achievement-Advanced	45 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Bookkeeping**

**Certificate of Achievement**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 64	Payroll and Business Tax Accounting	3
ACCT 86	Computer Accounting Systems	5
ACCT 88	Excel Spreadsheets for Accounting	2
ACCT 105	Basic Financial Accounting Procedures	1
CAOS 104I	10-Key on the Microcomputer	1/2
CAOS 107G	Business Office Math	2

*Complete two (2) courses from:* 4

ACCT 87AH	Computerized Accounting Programs (Peachtree - Windows) (2)	
ACCT 87AI	Computerized Accounting Programs (Quickbooks) (2)	
ACCT 107	Certified Bookkeeper Review (2)	
Total Units Required . . . . .		25 1/2

*Recommended*

BUS 10	Introduction to Business (5)
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**Tax Practitioner**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 64	Payroll and Business Tax Accounting	3
ACCT 67A	Federal Income Tax	4
ACCT 67B	Advanced Individual Tax: CA Emphasis	4
ACCT 68	Advanced Tax Accounting	4
ACCT 86	Computer Accounting Systems	5
ACCT 88	Excel Spreadsheets for Accounting	2
ACCT 105	Basic Financial Accounting Procedures	1
BUS 18	Business Law I	5

*Complete a minimum of nine (9) units from the following:* 9

ACCT 1C	Managerial Accounting (4)	
ACCT 66	Cost Accounting (5)	
ACCT 70	Budgeting and Planning (5)	
ACCT 75	Accounting for Government and Nonprofit Entities (5)	
ACCT 87AH	Computerized Accounting Programs (Peachtree - Windows) (2)	
ACCT 87AI	Computerized Accounting Programs (Quickbooks) (2)	
Total Units Required . . . . .		45

*Recommended*

BUS 10	Introduction to Business (5)
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# Administration of Justice

## Corrections/Probation

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ADMJ 1	Introduction to Administration of Justice	4
ADMJ 50	Crime, Correction and Society	4
ADMJ 54	Youth and the Law	4
ADMJ 56	Practical Writing for Administration of Justice	4
ADMJ 64X	Administration of Justice Internship	2
ADMJ 73	Crime and Criminology	4
ADMJ 74A	Interviewing, Interrogation and Crisis Intervention	4
ADMJ 75	Principles and Procedures of the Justice System	4
ADMJ 78	Correctional Investigation	4
<i>Complete three (3) courses from the following:</i> 12-13		
ADMJ 3	Concepts of Criminal Law (5)	
ADMJ 11	Federal Courts and Constitutional Law (4)	
ADMJ 25	Law and Social Change (4)	
ADMJ 29	Cultural Pluralism and American Law and Justice (4)	
ADMJ 51	Women in Crime (4)	
ADMJ 55	Alcohol, Narcotics and Drug Abuse (4)	
ADMJ 62	Sexual Assault, Police and Community Response (4)	
ADMJ 90A	Legal Aspects of Evidence (4)	
Major	Corrections/Probation	46-47 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
		Total Units Required . . . . .90 units

### Recommended

ADMJ 5, 53; HIST 17A, 17B; P E 28A; PSYC 1, 4; SOC 1; Spanish (any level); Occupational Work Experience

## Law Enforcement

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ADMJ 1	Introduction to Administration of Justice	4
ADMJ 3	Concepts of Criminal Law	5
ADMJ 5	Community Relations	4
ADMJ 56	Practical Writing for Administration of Justice	4
ADMJ 61	Criminal Investigation	4
ADMJ 64X	Administration of Justice Internship	2
ADMJ 75	Principles and Procedures of the Justice System	4
ADMJ 90A	Legal Aspects of Evidence	4
<i>Complete three (3) courses from the following:</i> 12-13		
ADMJ 11	Federal Courts and Constitutional Law (4)	
ADMJ 25	Law and Social Change (4)	
ADMJ 29	Cultural Pluralism and American Law and Justice (4)	
ADMJ 50	Crime, Correction and Society (4)	
ADMJ 51	Women in Crime (4)	
ADMJ 53	Criminal Law II (5)	
ADMJ 54	Youth and the Law (4)	
ADMJ 55	Alcohol, Narcotics and Drug Abuse (4)	
ADMJ 60	Patrol Procedures (4)	
ADMJ 62	Sexual Assault, Police and Community Response (4)	
ADMJ 73	Crime and Criminology (4)	

ADMJ 74A	Interviewing, Interrogation and Crisis Intervention (4)	
Major	Law Enforcement	43-44 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
		Total Units Required . . . . .90 units

## Private Security

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ADMJ 1	Introduction to Administration of Justice	4
ADMJ 60	Patrol Procedures	4
ADMJ 64X	Administration of Justice Internship	2
ADMJ 75	Principles and Procedures of the Justice System	4
<i>Complete a minimum of 23 units from the following:</i>		23
ADMJ 3	Concepts of Criminal Law (5)	
ADMJ 11	Federal Courts and Constitutional Law (4)	
ADMJ 29	Cultural Pluralism and American Law and Justice (4)	
ADMJ 50	Crime, Correction and Society (4)	
ADMJ 53	Criminal Law II (5)	
ADMJ 54	Youth and the Law (4)	
ADMJ 55	Alcohol, Narcotics and Drug Abuse (4)	
ADMJ 56	Practical Writing for Administration of Justice (4)	
ADMJ 61	Criminal Investigation (4)	
ADMJ series	ADMJ 64, 64X, 64Y, 64Z Administration of Justice Internship (1-4)	
ADMJ 90A	Legal Aspects of Evidence (4)	
ADMJ 251	Laws of Arrest for School Peace Officers (832.2 P.C.) (3)	
		Total Units Required . . . . .37

### A.A. Degree

Complete the following and meet the A.A./A.S. degree requirements as specified on page 50.

ADMJ 1	Introduction to Administration of Justice	4
ADMJ 3	Concepts of Criminal Law	5
ADMJ 60	Patrol Procedures	4
ADMJ 64X	Administration of Justice Internship	2
ADMJ 75	Principles and Procedures of the Justice System	4
<i>Complete a minimum of 20 units from the following:</i>		20
ADMJ 11	Federal Courts and Constitutional Law (4)	
ADMJ 29	Cultural Pluralism and American Law and Justice (4)	
ADMJ 50	Crime, Correction and Society (5)	
ADMJ 53	Criminal Law II (5)	
ADMJ 54	Youth and the Law (4)	
ADMJ 55	Alcohol, Narcotics and Drug Abuse (4)	
ADMJ 61	Criminal Investigation (4)	
ADMJ 73	Crime and Criminology (4)	
ADMJ 74A	Interviewing, Interrogation and Crisis Intervention (4)	
ADMJ 90A	Legal Aspects of Evidence (4)	
Major	Private Security	39 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
		Total Units Required . . . . .90 units

**For the Paralegal certificate and degree, see Paralegal Studies.**

# Administrative Assistant/ Office Technology

## Administrative Assistant/Office Technology

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

If possible, take courses in the order they are listed below (CAOS 94 may be taken earlier in the sequence.)

Complete one (1) course from: 1-1 1/2

CAOS 70AA\* Elementary Keyboarding I (1 1/2)

CAOS 173\* Keyboarding Skill Development (1)

\* Contact the CAOS department for procedures to substitute this course based on previous knowledge or experience.

Complete one (1) course from: 1/2-2

CAOS 90GA\* Computer Literacy 1 (PC) (2)

CAOS 100G\* Orientation to the PC (1/2)

\* Contact the CAOS department for procedures to substitute this course based on previous knowledge or experience.

Complete one (1) course from: 1

CAOS 102L Microsoft Windows I (Windows XP) (1)

CAOS 102M Microsoft Windows I (Windows Vista) (1)

Complete one (1) course from: 2

CAOS 91AL Word Processing I (Word XP/2002) (2)

CAOS 91AM Word Processing I (Word 2007) (2)

Complete one (1) course from: 2

CAOS 91BL Word Processing II (Word XP/2002) (2)

CAOS 91BM Word Processing II (Word 2007) (2)

Complete:

CAOS 94 Introduction to Internet and World Wide Web or CIS 94 1

Total Units Required . . . . . 7 1/2-9 1/2

### Certificate of Achievement†

Complete the requirements listed for the Skills Certificate plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Administrative Assistant/Office Technology Skills Certificate 7 1/2-9 1/2

Complete one (1) course from: 2

CAOS 93AL Spreadsheet I (Excel XP/2002) (2)

CAOS 93AM Spreadsheet I (Excel 2007) (2)

Complete one (1) course from: 2

CAOS 93BL Spreadsheet II (Excel XP/2002) (2)

CAOS 93BM Spreadsheet II (Excel 2007) (2)

Complete one (1) course from: 2

CAOS 110L Database I (Access XP/2002) (2)

CAOS 110M Database I (Access 2007) (2)

Complete one (1) course from: 2

CAOS 130L Introduction to Business Graphics (PowerPoint XP/2002) (2)

CAOS 130M Introduction to Business Graphics (PowerPoint 2007) (2)

Complete the following:

CAOS 104K Introduction to Proofreading Skills 1

CAOS 104O Introduction to Filing 1

CAOS 176 Telephone Communications 1

Total Units Required . . . . . 18 1/2-20 1/2

### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Administrative Assistant/Office Technology Certificate of Achievement 18 1/2-20 1/2

Complete the following:

CAOS 84A Business English I 2

CAOS 106 Adobe Acrobat 1

CAOS 107G Business Office Math 2

CAOS 108 Personal Computer Security Basics or CIS 108 4

CAOS 180J Spelling Skills 1

Complete one (1) course from: 2

CAOS 111L Database II (Access XP/2002) (2)

CAOS 111M Database II (Access 2007) (2)

Complete a minimum of four (4) units from the following: 4

CAOS 113A Web Authoring Software (Dreamweaver) (4)

CAOS 113I Web Authoring Software I (Dreamweaver) (2)

CAOS 113Q Web Authoring Software II (Dreamweaver) (2)

Total Units Required . . . . . 34 1/2-36 1/2

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements Administrative Assistant/Office Technology Certificate of Achievement-Advanced 34 1/2-36 1/2

Complete the following:

BUS 56 Human Relations in Business 5

BUS 85 Business Communication 3

CAOS 81H 10-Key and Electronic Calculator 1

CAOS 94 Introduction to Internet and World Wide Web or CIS 94 1

CAOS 98X\* Internship, Business/Computer Systems Division 4

\* Contact the CAOS department for procedures to substitute work experience as an Administrative Assistant for this course.

Complete a minimum of four (4) units from the following which do not duplicate courses chosen from the lists above: 4

ACCT 1A Financial Accounting I (4)

BUS 10 Introduction to Business (5)

CAOS 90GA Computer Literacy I (PC) (2)

CAOS 93BM Spreadsheets II (Excel 2007) (2) or CAOS 93BL

Orientation to the PC (1/2)

CAOS 104I Ten-Key on the Microcomputer (1/2)

CAOS 105 Introduction to HTML (1)

CAOS 111M Database II (Access 2007) (2)

or CAOS 111L

CAOS 112A Digital Imaging Software (Photoshop) (4)

CAOS 112I Digital Imaging Software I (Photoshop) (2)

CAOS 112Q Digital Imaging Software II (Photoshop) (2)

CAOS 114A Web Graphics/Animation Software (Flash) (3)

CAOS 115A E-Commerce Software (Dreamweaver/UltraDev) (3)

CAOS 116I Web Development Graphics Software I (2)

CAOS 116Q Web Development Graphics Software II (2)

† This certificate was submitted for State approval. Please check with the department for the status.

CAOS 118A	Advanced Web Graphics (Flash) (2)
CAOS 161	Computer Forensics (4)
CAOS 173	Keyboarding Skill Development (1)
CAOS 180G	Job Finding Techniques (1)
SPCH 10	Fundamentals of Oral Communication (4)
Major	Administrative Assisting/ Office Technology 52 1/2-54 1/2 units
GE	General Education (31-42 units)
Electives	Elective courses required when major units plus GE units total is less than 90 Total Units Required . . . . .90 units

## Art

### Art History

#### Certificate of Achievement†

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete four (4) of the following Western and

Multicultural Arts courses:

ARTS 2A	History of Art (Europe from Prehistory through Early Christianity) (4)	16
ARTS 2B	History of Art (Europe During Middle Ages/ Renaissance) (4)	
ARTS 2C	History of Art (Europe from the Baroque Period through Impressionism) (4)	
ARTS 2D	History of Art (Europe and the United States/ Post-Impressionism) (4)	
ARTS 2F	History of Art (Multicultural Arts in the U.S.) (4)	
ARTS 2G	Arts of Asia (4)	
ARTS 2H	History of Art: Native Arts of Mesoamerica and South America (4)	
ARTS 2J	History of Art: Indigenous Arts of the World (4)	
ARTS 2K	History of Art: Visual Arts of Islam (4)	
ARTS 2L	History of Art: Visual Arts of Africa (4)	

Complete one (1) course from:

ARTS 3TE	Today's Working Artist (4)	4
ARTS 3TC	Women, Society, and the Visual Arts (4)	

Complete:

ARTS 4A	Beginning Drawing	3
Complete one (1) course from:		3
ARTS 8	Design (3)	
ARTS 10A	Three-Dimensional Design (3)	
ARTS 53A	Introduction to Visual Technology (3)	
Total Units Required . . . . .		26

#### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Art History Certificate of Achievement 26

Complete the following:

ARTS 1B	Architecture Past and Present	4
ARTS 3TD	Public Places, Private Spaces - American Art	4

Complete one (1) course from the following Art series that was not previously completed for the Art History Cert. of Achievement:

ARTS 2A	History of Art (Europe from Prehistory through Early Christianity) (4)	4
ARTS 2B	History of Art (Europe During Middle Ages/ Renaissance) (4)	
ARTS 2C	History of Art (Europe from the Baroque Period through Impressionism) (4)	
ARTS 2D	History of Art (Europe and the United States/ Post-Impressionism) (4)	

ARTS 2F	History of Art (Multicultural Arts in the U.S.) (4)	
ARTS 2G	Arts of Asia (4)	
ARTS 2H	History of Art: Native Arts of Mesoamerica and South America (4)	
ARTS 2J	History of Art: Indigenous Arts of the World (4)	
ARTS 2K	History of Art: Visual Arts of Islam (4)	
ARTS 2L	History of Art: Visual Arts of Africa (4)	

Complete four (4) courses from the courses listed below that were not previously selected to complete the requirements for the Art

History Certificate of Achievement: 12

ARTS 4B	Intermediate Drawing (3)	
ARTS 8	Design (3)	
ARTS 10A	Three-Dimensional Design (3)	
ARTS 12	Design and Color (3)	
ARTS 15A	Introduction to Acrylic Painting (3)	
ARTS 15B	Intermediate Acrylic Painting (3)	
ARTS 16A	Oil Painting I (3)	
ARTS 16B	Oil Painting II (3)	
ARTS 18A	Ceramics (3)	
ARTS 53A	Introduction to Visual Technology (3)	
ARTS 56	Computer Graphic Design/ Electronic Publishing (3)	
Total Units Required . . . . .		50

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 51.

Major	Requirements for Art History Certificate of Achievement-Advanced	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90

### Museum Studies

#### Certificate of Achievement†

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ARTS 70	Viewing Bay Area Art Museums and Galleries	1
ARTS 71	Gallery Exhibition Design	3
ARTS 72	Internship in Art	1
ARTS 1A	Introduction to the Visual Arts	4
ARTS 4A	Beginning Drawing	3
ARTS 8	Basic Design	3
ARTS 10A	Three-Dimensional Design	3
Total Units Required . . . . .		18

### Ceramics

#### Certificate of Achievement†

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ARTS 4A	Beginning Drawing	3
ARTS 8	Design	3
ARTS 10A	Three-Dimensional Design	3
ARTS 18A	Ceramics	3
ARTS 18B	Ceramics (Wheel Throwing)	3
ARTS 18C	Ceramics (Intermediate Wheel Throwing)	3
ARTS 18E	Ceramics (Advanced Wheel Throwing)	3
ARTS 18D	Ceramics (Hand Building)	3

Complete a minimum of two (2) units from: 2

ARTS 20 series	ARTS 20, 20X, 20Y, 20Z Ceramics Lab (1/2-3)	
Total Units Required . . . . .		26

**Certificate of Achievement-Advanced**

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Ceramics Certificate of Achievement 26

Complete a minimum of 21 units from the following: 21

- ARTS 19G Ceramic Glaze Calculation (3)
- ARTS 19H Raku (Ceramics) (3)
- ARTS 19I Ceramic Sculpture (3)
- ARTS 19J Ceramic Techniques (3)
- ARTS 19K Ceramic Decoration (3)
- ARTS 19M Low Fire Ceramics (3)
- ARTS 19N Porcelain Ceramics (3)
- ARTS 50 Primitive Firing of Ceramics (3)
- ARTS 51 Ceramics Kiln Construction (3)

Complete a minimum of three (3) units from: 3

- ARTS 77 series ARTS 77, 77X, 77Y
- Special Projects in Art (1-3)
- Total Units Required . . . . . 50

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

- Major Requirements for the Ceramics Certificate of Achievement-Advanced 50 units
- GE General Education (31-42 units)
- Electives Elective courses required when major units plus GE units total is less than 90
- Total Units Required . . . . . 90

**Painting**

**Certificate of Achievement†**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete one (1) course from: 4

- ARTS 2D History of Art (Post-Impressionism/ Present) (4)
- ARTS 3TE Today's Working Artist (4)

Complete the following:

- ARTS 4A Beginning Drawing 3
- ARTS 4B Intermediate Drawing 3
- ARTS 12 Design and Color 3

Complete one (1) course from the following: 3

- ARTS 4D Representational Drawing (3)
- ARTS 8 Design (3)
- ARTS 10A Three-Dimensional Design (3)
- ARTS 53A Introduction to Visual Technology (3)

Complete one (1) of the following sequences: 9

- ARTS 15A Acrylic Painting I (3)
- ARTS 15B Acrylic Painting II (3)
- ARTS 15C Acrylic Painting III (3)

or

- ARTS 16A Oil Painting I (3)
- ARTS 16B Oil Painting II (3)
- ARTS 16C Oil Painting III (3)
- Total Units Required . . . . . 25

**Certificate of Achievement-Advanced**

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Painting Certificate of Achievement 25

Complete the following:

- ARTS 4C Life Drawing 3
- ARTS 53B Introduction to Visual Technology 3

Complete the sequence from the list below that was not

previously selected for the Painting Certificate of Achievement: 9

- ARTS 15A Acrylic Painting I (3)
- ARTS 15B Acrylic Painting II (3)
- ARTS 15C Acrylic Painting III (3)

or

- ARTS 16A Oil Painting I (3)
- ARTS 16B Oil Painting II (3)
- ARTS 16C Oil Painting III (3)

Complete a minimum of three (3) units from: 3

- ARTS 77 series ARTS 77, 77X, 77Y
- Special Projects in Art (1-3)
- Total Units Required . . . . . 43

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

- Major Requirements for the Painting Certificate of Achievement-Advanced 43 units
- GE General Education (31-42 units)
- Electives Elective courses required when major units plus GE units total is less than 90
- Total Units Required . . . . . 90

**Sculpture**

**Certificate of Achievement†**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete one (1) course from: 4

- ARTS 2D History of Art (Post-Impressionism/ Present) (4)
- ARTS 3TE Today's Working Artist (4)

Complete the following:

- ARTS 4A Beginning Drawing 3
- ARTS 4B Intermediate Drawing 3
- ARTS 8 Design 3
- ARTS 10A Three-Dimensional Design 3
- ARTS 37A Sculpture 3
- ARTS 37B Intermediate Sculpture 3
- Total Units Required . . . . . 22

**Certificate of Achievement-Advanced**

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements Sculpture Certificate of Achievement 22

Complete the following:

- ARTS 10B Intermediate Three-Dimensional Design 3
- ARTS 37C Advanced Sculpture 3
- ARTS 58A Furniture Design 3
- ARTS 58B Intermediate Furniture Design 3
- ARTS 58C Advanced Furniture Design 3
- Total Units Required . . . . . 37

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

- Major Requirements for Sculpture Certificate of Achievement-Advanced 37 units
- GE General Education (31-42 units)
- Electives Elective courses required when major units plus GE units total is less than 90
- Total Units Required . . . . . 90 units

† This certificate was submitted for State approval. Please check with the department for the status.

## Automotive Technician

*An evening, in-service program for practicing apprentices and technicians*

### Automotive Technician

#### Certificate of Achievement-Advanced (Options A-F)

Complete the requirements for your option choice and meet the corresponding certificate requirements as specified on page 50.

##### Option A: Automotive Machining Technology

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60B	Automotive Electronics	4 1/2
AUTO 64	Automotive Machining and Engine Repair	9
AUTO 64HP	High Performance Engine Preparation	9
ASE	Certifications M1, 2, and 3	18*
Total Units Required		52 1/2

##### Option B: Automotive Engine Repair Technology

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60B	Automotive Electronics	4 1/2
AUTO 60C	Automotive Ignition, Fuel, and Emissions Systems	9
AUTO 64	Automotive Machining and Engine Repair	9
ASE	Certification A1	6*
Total Units Required		40 1/2

##### Option C: Automotive Engine Performance Technology

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60A	Electrical Schematic Diagnosis	4 1/2
AUTO 60B	Automotive Electronics	4 1/2
AUTO 60C	Automotive Ignition, Fuel, and Emissions Systems	9
AUTO 60D	Ignition Analysis and Oscilloscope Diagnosis	4 1/2
ASE	Certification A6	6*
Total Units Required		40 1/2

##### Option D: Advanced Engine Performance Technology

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60A	Electrical Schematic Diagnosis	4 1/2
AUTO 60B	Automotive Electronics	4 1/2
AUTO 60E	Automotive Fuel Injection	4 1/2
AUTO 60F	No-Start Diagnosis	4 1/2
AUTO 60G	Advanced Automotive Scan Tool Diagnosis	4 1/2
AUTO 60H	Advanced Driveability and Onboard Diagnosis	4 1/2
AUTO 60J	Advanced Lab Scope and Waveform Diagnosis	4 1/2
ASE	Certifications A8 and L1	12*
Total Units Required		55 1/2

##### Option E: Automotive Chassis Technology

Choose Path 1 or Path 2:

Path 1

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60A	Electrical Schematic Diagnosis	4 1/2
AUTO 60B	Automotive Electronics	4 1/2
AUTO 61A	Automotive Brake Systems	4 1/2
AUTO 61B	Automotive Electronically Controlled Brake Systems	4 1/2
ASE	Certification A5	6*
Total Units Required		36

Path 2

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60A	Electrical Schematic Diagnosis	4 1/2
AUTO 60B	Automotive Electronics	4 1/2
AUTO 62A	Steering, Suspension and Alignment	9
AUTO 62B	Advanced Wheel Alignment	9
ASE	Certification A4	6*
Total Units Required		45

##### Option F: Automotive Powertrain Technology

AUTO 53A	Automotive Mechanisms	3
AUTO 60	Automotive Electrical Systems	9
AUTO 60A	Electrical Schematic Diagnosis	4 1/2
AUTO 60B	Automotive Electronics	4 1/2
AUTO 63	Automotive Transmissions and Transaxles	9
AUTO 63A	Automatic Final Drivetrain	4 1/2
AUTO 63D	Transmission Diagnostic and Repair Techniques	4 1/2
ASE	Certifications A2 and A3	12*
Total Units Required		51

\* ASE certification units apply to De Anza's Auto Technician program only and are not transferrable.

#### A.S. Degree (Options A-F)

Complete the prerequisite below and the Certificate of Achievement-Advanced option of your choice for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Prerequisite

*Completion of a four-year apprenticeship or Automotive Service Excellence (ASE) certification.*

*Recommended: One year of automotive educational experience (high school, ROP or De Anza's AUTO 50 series).*

Major Requirements: one (1) Automotive Technician Certificate of Achievement-Advanced (Option A-F)

GE General Education (31-42 units)

Electives Elective courses required when major units plus GE units total is less than 90  
Total Units Required . . . . .90 units

## Automotive Technology

*An entry-level program for full-time day students*

#### Certificate of Achievement-Advanced (Options A-C)

Complete the required courses for your option choice and meet the corresponding certificate requirements as specified on page 50.

##### Option A: Automotive Machining and Engine Repair

AUTO 53A	Automotive Mechanisms	3
AUTO 53B	Automotive Electrical and Mechanical Systems	2
AUTO 57A	Career Research and Employment in the Automotive Industry	2
AUTO 58	Hazardous Materials	1/2
AUTO 94A	Principles of Four Stroke Cycle Gas and Diesel Engines	5
AUTO 94B	Automotive Machining and Engine Service	5
AUTO 94C	Automotive Machining and Engine Service	5
AUTO 94D	Automotive Machining and Engine Service	5
AUTO 94E	Automotive Machining and Engine Service	5
AUTO 94F	Automotive Machining and Engine Service	5
Total Units Required		37 1/2

† This certificate was submitted for State approval. Please check with the department for the status.

**Option B: Automotive Engine Performance**

AUTO 53A	Automotive Mechanisms	3
AUTO 53B	Automotive Electrical and Mechanical Systems	2
AUTO 57A	Career Research and Employment in the Automotive Industry	2
AUTO 58	Hazardous Materials	1/2
AUTO 99A	Automotive Electricity, Battery, and Cranking Systems	6 1/4
AUTO 99B	Automotive Charging, Ignition, and Accessory Systems	6 1/4
AUTO 99C	Introduction to Engine Performance Systems	6 1/4
AUTO 99D	Intermediate Engine Performance Systems	6 1/4
AUTO 99E	Basic Engine Performance Diagnostic Procedures	6 1/4
AUTO 99F	Intermediate Engine Performance Diagnostic Procedures	6 1/4
	Total Units Required . . . . .	45

**Option C: Automotive Chassis and Powertrain**

AUTO 53A	Automotive Mechanisms	3
AUTO 53B	Automotive Electrical and Mechanical Systems	2
AUTO 57A	Career Research and Employment in the Automotive Industry	2
AUTO 58	Hazardous Materials	1/2
AUTO 91A	Automotive Brake Systems	5
AUTO 92A	Automotive Steering and Suspension	5
AUTO 92B	Automotive Alignment	5
AUTO 93A	Automotive Final Drivetrain	5
AUTO 93B	Standard Transaxles	1 1/2
AUTO 93C	Automatic Transmissions	5
AUTO 93D	Automatic Transaxles	1 1/2
AUTO 93E	Diagnostic Techniques	1
AUTO 93F	Automotive Transmission Service	5
	Total Units Required . . . . .	41 1/2

**A.S. Degree (Options A-C)**

Complete the prerequisite below and the requirements listed for the Certificate of Achievement-Advanced option of your choice for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Prerequisite

*Approved Automotive Technology Course Sequence Contract. See department for an application.*

*Recommended: One (1) year of automotive educational experience (high school, ROP or De Anza's Auto 50 series).*

Major	Requirements: one (1) Automotive Technology Certificate of Achievement-Advanced (Option A-C)	
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

**Biological Sciences**

**A.S. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

BIOL 6A	Form and Function in the Biological World	6
BIOL 6B	Cell and Molecular Biology	6
BIOL 6C	Evolution, Systematics, and Ecology	6
CHEM 1A	General Chemistry	5
CHEM 1B	General Chemistry	5
CHEM 1C	General Chemistry and Qualitative Analysis	5

Complete a minimum of 15 units from one (1) of these two (2) options:

15-18

**Option 1: Organic Chemistry**

CHEM 12A	Organic Chemistry (5)
CHEM 12B	Organic Chemistry (5)
CHEM 12C	Organic Chemistry (5)

**Option 2: Physics**

PHYS 2A	General Introductory Physics (5)	
PHYS 2B	General Introductory Physics (5)	
PHYS 2C	General Introductory Physics (5)	
	or	
PHYS 4A	Physics for Scientists and Engineers (Mechanics) (6)	
PHYS 4B	Physics for Scientists and Engineers (Electricity and Magnetism) (6)	
PHYS 4C	Physics for Scientists and Engineers (Fluids, Waves, Optics, and Thermodynamics) (6)	
Major	Biological Sciences	48-51 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

*Recommended elective courses:*

BIOL 13, BIOL 15, BIOL 26, BIOL 40A-C, ES 1, ESCI 19,
MATH 1A-D, MATH 10

*Students may complete either the Organic Chemistry or the Physics option in order to receive the A.S. Degree in Biological Sciences from De Anza College.*

*For students planning to transfer to a four-year institution, it may be beneficial to complete both the Organic Chemistry option and the Physics option. Course sequences in chemistry and physics are required in most B.S. Biology programs. For your specific transfer situation, please visit the Counseling Center and consult with the four-year institution.*

**Business Administration**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
BUS 10	Introduction to Business	5
BUS 18	Business Law I	5
	Complete two (2) courses from the following:	7-10
BUS 21	Business and Society (5)	
BUS 54	Business Mathematics (5)	
BUS 55	Introduction to Entrepreneurship (5)	
BUS 56	Human Relations in Business (5)	
BUS 57	Human Resource Management (4)	
BUS 58	The Business Plan (3)	
BUS 60	International Business Management (5)	
BUS 65	Leadership (5)	
BUS 70	Principles of E-Business (5)	
BUS 87	Introduction to Selling (4)	
BUS 89	Advertising (5)	
BUS 90	Principles of Marketing (5)	
BUS 96A	Principles of Management (5)	
CIS 3	Business Information Systems (5)	
	Total Units Required . . . . .	21-24

† This certificate was submitted for State approval. Please check with the department for the status.

## A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
ACCT 1B	Financial Accounting II	4
ACCT 1C	Managerial Accounting	4
BUS 10	Introduction to Business	5
BUS 18	Business Law I	5
BUS 56	Human Relations in Business	5
BUS 60	International Business Management	5
BUS 90	Principles of Marketing	5
BUS 96A	Principles of Management	5
CIS 3	Business Information Systems	5
Major	Business Administration	47 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

### Recommended

Cooperative Education  
 BUS 21, 54, 55, 57, 58, 59, 65, 69, 70, 80, 85, 87, 89, 93  
 ECON 1, 2  
 EWRT 1B or 2 or ESL 6  
 MATH 10

## Entrepreneurship

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

BUS 55	Introduction to Entrepreneurship	5
BUS 59	Promoting Your Small Business	5
<i>Complete three (3) courses from the following:</i>		13-15
BUS 58	The Business Plan (3)	
BUS 60	International Business Management (5)	
BUS 65	Leadership (5)	
BUS 70	Principles of E-Business (5)	
BUS 90	Principles of Marketing (5)	
Total Units Required . . . . .		23-25

## Business Software Applications

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

<i>Complete one (1) course from:</i>		1-1 1/2
CAOS 70AA*	Elementary Keyboarding I (1 1/2)	
CAOS 173*	Keyboarding Skill Development (1)	
<i>Complete one (1) course from:</i>		1/2-2
CAOS 90GA*	Computer Literacy I (PC) (2)	
CAOS 100G*	Orientation to the PC (1/2)	
* Contact the CAOS department for procedures to substitute this course based on previous knowledge or experience.		
<i>Complete one (1) course from:</i>		1
CAOS 102L	Microsoft Windows I (Windows XP) (1)	
CAOS 102M	Microsoft Windows I (Windows Vista) (1)	
<i>Complete one (1) course from:</i>		2
CAOS 91AL	Word Processing I (Word XP/2002) (2)	
CAOS 91AM	Word Processing I (Word 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 93AL	Spreadsheets I (Excel XP/2002) (2)	
CAOS 93AM	Spreadsheets I (Excel 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 110L	Database I (Access XP/2002) (2)	
CAOS 110M	Database I (Access 2007) (2)	
Total Units Required . . . . .		8 1/2-10 1/2

## Certificate of Achievement †

Complete the requirements listed for the Skills Certificate plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Business Software Applications Skills Certificate	8 1/2-10 1/2
<i>Complete one (1) course from:</i>		2
CAOS 91BL	Word Processing II (Word XP/2002) (2)	
CAOS 91BM	Word Processing II (Word 2007) (2)	
<i>Complete the following:</i>		
CAOS 105	Introduction to HTML	1
CAOS 108	Personal Computer Security Basics or CIS 108	4
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3
<i>Complete a minimum of six (6) units from the following which do not duplicate courses previously chosen:</i>		6
ACCT 1A	Financial Accounting I (4)	
BUS 85	Business Communication (3)	
CAOS 90GA	Computer Literacy I (PC) (2)	
CAOS 94	Introduction to Internet and World Wide Web (1) or CIS 94	
CAOS 112A	Digital Imaging Software (Photoshop) (4)	
CAOS 112I	Digital Imaging Software I (Photoshop) (2)	
CAOS 112Q	Digital Imaging Software II (Photoshop) (2)	
CAOS 113A	Web Authoring Software (Dreamweaver) (4)	
CAOS 113I	Web Authoring Software I (Dreamweaver) (2)	
CAOS 113Q	Web Authoring Software II (Dreamweaver) (2)	
CAOS 113M	Web Authoring Software I (Frontpage) (2)	
CAOS 114A	Web Graphics/Animation Software (Flash) (3)	
CAOS 115A	E-Commerce Software (Dreamweaver/UltraDev) (4)	
CAOS 130M	Introduction to Business Graphics (PowerPoint 2007) (2) or CAOS 130L	
CIS 15AG	Introduction to Computer Programming Using C (5)	
CIS 89A	World Wide Web Page Development (3)	
CAOS series	CAOS 198, 198W, 198X, 198Y Topics in Computer Applications and Office Systems (1/2-2) <i>Up to three (3) units from this series can apply.</i>	
Total Units Required . . . . .		24 1/2-26 1/2

### Certificate of Achievement-Advanced

Complete the requirements listed for the Skills Certificate plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Business Software Applications Skills Certificate	8 1/2-10 1/2
<i>Complete one (1) course from:</i>		2
CAOS 91BL	Word Processing II (Word XP/2002) (2)	
CAOS 91BM	Word Processing II (Word 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 93BL	Spreadsheets II (Excel XP/2002) (2)	
CAOS 93BM	Spreadsheets II (Excel 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 111L	Database II (Access XP/2002) (2)	
CAOS 111M	Database II (Access 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 130L	Introduction to Business Graphics (PowerPoint XP/2002) (2)	
CAOS 130M	Introduction to Business Graphics (PowerPoint 2007) (2)	

† This certificate was submitted for State approval. Please check with the department for the status.

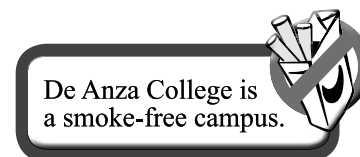
<i>Complete the following:</i>		
BUS 85	Business Communication	3
CAOS 94	Introduction to Internet and World Wide Web <i>or CIS 94</i>	1
CAOS 105	Introduction to HTML	1
CAOS 108	Personal Computer Security Basics <i>or CIS 108</i>	4
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3
<i>Complete one (1) course from:</i>		4-5
CIS 14A	Visual Basic.NET Programming I (4)	
CIS 15AG	Introduction to Computer Programming Using C (5)	
<i>Complete a minimum of nine (9) units from the following which do not duplicate courses previously chosen:</i>		9
ACCT 1A	Financial Accounting I (4)	
ACCT 86	Computer Accounting Systems (4)	
CAOS 91AM	Word Processing I (Word 2007) (2) <i>or CAOS 91AL</i>	
CAOS 91BM	Word Processing II (Word 2007) (2) <i>or CAOS 91BL</i>	
CAOS 110M	Database I (Access 2007) (2) <i>or CAOS 110L</i>	
CAOS 112A	Digital Imaging Software (Photoshop) (4)	
CAOS 112I	Digital Imaging Software I (Photoshop) (2)	
CAOS 112Q	Digital Imaging Software II (Photoshop) (2)	
CAOS 113A	Web Authoring Software (Dreamweaver) (4)	
CAOS 113I	Web Authoring Software I (Dreamweaver) (2)	
CAOS 113M	Web Authoring Software I (Frontpage) (2)	
CAOS 113Q	Web Authoring Software II (Dreamweaver) (2)	
CAOS 114A	Web Graphics/Animation Software (Flash) (3)	
CAOS 115A	E-Commerce Software (Dreamweaver/UltraDev) (4)	
CIS 3	Business Information Systems (5)	
CIS 18A	Introduction to UNIX (4)	
CIS 50	Introduction to Computers, Data Processing, and Applications (3) <i>or CIS 89A-World Wide Web Page Development (3)</i>	
CAOS series	CAOS 198, 198W, 198X, 198Y Topics in Computer Applications and Office Systems (1/2-2) <i>Up to three (3) units from this series can apply.</i>	
Total Units Required . . . . .		41 1/2-44 1/2

**A.A. Degree**

Complete the requirements listed for the Skills Certificate plus the following, and meet the A.A./A.S degree requirements as specified on page 50.

Requirements	Business Software Applications Skills Certificate	8 1/2-10 1/2
<i>Complete one (1) course from:</i>		2
CAOS 91BL	Word Processing II (Word XP/2002) (2)	
CAOS 91BM	Word Processing II (Word 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 93BL	Spreadsheets II (Excel XP/2002) (2)	
CAOS 93BM	Spreadsheets II (Excel 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 111L	Database II (Access XP/2002) (2)	
CAOS 111M	Database II (Access 2007) (2)	
<i>Complete one (1) course from:</i>		2
CAOS 130L	Introduction to Business Graphics (PowerPoint XP/2002) (2)	
CAOS 130M	Introduction to Business Graphics (PowerPoint 2007) (2)	

<i>Complete one (1) course from:</i>		3-5
BUS 56	Human Relations in Business (5)	
BUS 85	Business Communication (3)	
<i>Complete the following:</i>		
CAOS 94	Introduction to Internet and World Wide Web <i>or CIS 94</i>	1
CAOS 108	Personal Computer Security Basics <i>or CIS 108</i>	4
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3
CIS 170E	Windows Vista Enterprise	4
<i>Complete one (1) course from:</i>		4-5
CIS 14A	Visual Basic.NET Programming I (4)	
CIS 15AG	Introduction to Computer Programming Using C (5)	
<i>Complete a minimum of 13 units from the following which do not duplicate courses previously chosen:</i>		13
ACCT 1A	Financial Accounting I (4)	
ACCT 1B	Financial Accounting II (4)	
ACCT 86	Computer Accounting Systems (5)	
BUS 10	Introduction to Business (5)	
BUS 54	Business Mathematics (5)	
CAOS 84A	Business English I (2)	
CAOS 84B	Business English II (1)	
CAOS 91AM	Word Processing I (Word XP/2002) (2) <i>or CAOS 91AL</i>	
CAOS 91BM	Word Processing II (Word XP/2002) (2) <i>or CAOS 91BL</i>	
CAOS 105	Introduction to HTML (1)	
CAOS 112A	Digital Imaging Software (Photoshop) (4)	
CAOS 112I	Digital Imaging Software I (Photoshop) (2)	
CAOS 112Q	Digital Imaging Software II (Photoshop) (2)	
CAOS 113A	Web Authoring Software (Dreamweaver) (4)	
CAOS 113I	Web Authoring Software I (Dreamweaver) (2)	
CAOS 113M	Web Authoring Software I (Frontpage) (2)	
CAOS 113Q	Web Authoring Software II (Dreamweaver) (2)	
CAOS 114A	Web Graphics/Animation Software (Flash) (3)	
CAOS 115A	E-Commerce Software (Dreamweaver/UltraDev) (4)	
CAOS series	CAOS 198, 198W, 198X, 198Y Topics in Computer Applications and Office Systems (1/2-2) <i>Up to three (3) units from this series can apply.</i>	
CIS 50	Introduction to Computers, Data Processing, and Applications (3) <i>or CIS 3 Business Information Systems (5)</i>	
CIS 18A	Introduction to UNIX (4)	
MATH 10	Elementary Statistics and Probability (5)	
Major	Business Software Applications	48 1/2-53 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units



# Child Development

## Child Development

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

*Current Infant and Child CPR/First Aid Certificate required.*

C D 10G	Child Development (The Early Years)	4
C D 12	Child, Family and Community Interrelationships	4
C D 50	Principles/Practicum of Teaching Young Children	3

*Complete a minimum of nine (9) units from the following:*

C D 10H	Child Development (Middle Childhood and Adolescence) (4)	9
C D 52	Observation and Assessment/Young Child (3)	
C D 53	Creative Arts for the Young Child (3)	
C D 54	Curriculum for Early Childhood Programs (3)	
C D 55	Literacy Development and Activities for the Young Child (3)	
C D 56	Understanding and Working with English Language Learners (3)	
C D 58	Infant/Toddler Development (4)	
C D 61	Music and Movement (Developmental Foundations) (3)	
C D 63	Math and Science Activities/Young Child (3)	
C D 64	Health, Safety and Nutrition for the Young Child (3)	
C D 65	Programs for School-Age Child Care (3)	
C D 71	Constructive Guidance and Discipline (3)	
C D 72	Partnerships with Families in Early Childhood Education (3)	

*Practicum Requirement (3-5 units) from the following:* 3-5

C D 51	Student Teaching Practicum (5)	
C D 57	Self Assessment for Teachers of Young Children (3)	
	Total Units Required . . . . .	23-25

*The Certificate of Achievement fulfills requirements to qualify as a teacher in a center licensed by the Department of Social Services.*

*Students who wish to qualify as a Director must also take C D 59G Supervision and Administration of Child Development Programs (Management Systems) and C D 59H Supervision and Administration of Child Development Programs (Leadership Skills).*

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

*Current Infant and Child CPR/First Aid Certificate required.*

C D 10G	Child Development (The Early Years)	4
C D 10H	Child Development (Middle Childhood and Adolescence)	4
C D 12	Child, Family and Community Interrelationships	4
C D 50	Principles/Practicum of Teaching Young Children	3
C D 52	Observation of the Young Child	3
C D 54	Curriculum for Early Childhood Programs	3
C D 55	Literacy Development and Activities for the Young Child	3
C D 64	Health, Safety and Nutrition for the Young Child	3
C D 68	Teaching in a Diverse Society	3

*Complete a minimum of three (3) units from the following:* 3

C D 53	Creative Arts for the Young Child (3)	
C D 56	Understanding and Working with English Language Learners (3)	
C D 57	Self Assessment for Teachers of Young Children (3)	
C D 58	Infant/Toddler Development (4)	
C D 59G	Supervision and Administration of Child Development Programs (Management Systems) (4)	
C D 59H	Supervision and Administration of Child Development Programs (Leadership Skills) (4)	
C D 60	Exceptional Children (3)	
C D 61	Music and Movement (Developmental Foundations) (3)	
C D 63	Math and Science Activities for the Young Child (3)	
C D 65	Programs for School-Age Child Care (3)	
C D 67	Supervision and Administration of Child Development Programs (3)	
C D 71	Constructive Guidance and Discipline (3)	
EDUC 1	Introduction to Elementary Education in a Diverse Society (3)	

*Practicum Requirement (5 units)*

C D 51	Student Teaching Practicum	5
	<i>May be repeated up to three (3) times.</i>	
	Total Units Required . . . . .	38

*The Certificate of Achievement-Advanced is designed to meet the Child Development course requirements for a Child Development Teacher Permit. The Permit also requires 24 quarter units (equivalent of 16 semester units) of General Education courses.*

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

*Current Infant and Child CPR/First Aid Certificate required.*

C D 10G	Child Development (The Early Years)	4
C D 10H	Child Development (Middle Childhood and Adolescence)	4
C D 12	Child, Family and Community Interrelationships	4
C D 50	Principles/Practicum of Teaching Young Children	3
C D 52	Observation of the Young Child	3
C D 54	Curriculum for Early Childhood Programs	3
C D 55	Literacy Development and Activities for the Young Child	3
C D 56	Understanding and Working with English Language Learners	3
C D 60	Exceptional Children	3
C D 64	Health, Safety and Nutrition for the Young Child	3
C D 67	Supervision and Administration of Child Development Programs	3
C D 68	Teaching in a Diverse Society	3

<i>Complete a minimum of three (3) units from the following:</i>		3
C D 53	Creative Arts for the Young Child (3)	
C D 57	Self Assessment for Teachers of Young Children (3)	
C D 58	Infant/Toddler Development (4)	
C D 59G	Supervision and Administration of Child Development Programs (Management Systems) (4)	
C D 59H	Supervision and Administration of Child Development Programs (Leadership Skills) (4)	
C D 61	Music and Movement (Developmental Foundations) (3)	
C D 63	Math and Science Activities for the Young Child (3)	
C D 65	Programs for School-Age Child Care (3)	
C D 71	Constructive Guidance and Discipline (3)	
C D 72	Partnerships with Families in Early Childhood Education (3)	
C D 73	Early Childhood Mental Health (3)	
C D 74	Early Childhood Mental Health Seminar and Fieldwork (3)	
C D 75	Social Emotional Development in Early Childhood (3)	
EDUC 1	Introduction to Elementary Education in a Diverse Society (3)	
<i>Practicum Requirement (10 units)</i>		
C D 51	Student Teaching Practicum (5) <i>May be repeated up to three (3) times.</i>	10
Major	Child Development	52 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Early Childhood Mental Health**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

C D 10G	Child Development (The Early Years)	4
C D 58	Infant/Toddler Development	4
C D 72	Partnerships with Families in Early Childhood Education	3
C D 73	Early Childhood Mental Health	3
C D 74	Early Childhood Mental Health Seminar and Fieldwork	3
C D 75	Social Emotional Development in Young Children	3
Total Units Required . . . . .		20

**Early Intervention/Special Education Assistant**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

*Current Infant and Child CPR/First Aid Certificate required.*

C D 10G	Child Development (The Early Years)	4
C D 12	Child, Family and Community Interrelationships	4
C D 50	Principles/Practicum of Teaching Young Children	3
C D 52	Observation of the Young Child	3

C D 55	Literacy Development and Activities for the Young Child	3
C D 58	Infant/Toddler Development	4
C D 60	Exceptional Children	3
C D 64	Health, Safety and Nutrition for the Young Child	3
C D 73	Early Childhood Mental Health	3
C D 90	Facilitating Inclusion in Early Childhood Programs: Intervention Strategies	3

*Complete a minimum of three (3) units from the following:*

C D 10H	Child Development (Middle Childhood and Adolescence) (4)	3
C D 53	Creative Arts for the Young Child (3)	
C D 56	Understanding and Working with English Language Learners (3)	
C D 57	Self Assessment for Teachers of Young Children (3)	
C D 61	Music and Movement (Developmental Foundations) (3)	
C D 63	Math and Science Activities for the Young Child (3)	
C D 68	Teaching in a Diverse Society (3)	
C D 71	Constructive Guidance and Discipline (3)	
C D 75	Social Emotional Development in Early Childhood (3)	

<i>Practicum Requirement (5 units)</i>		5
C D 51	Student Teaching Practicum <i>May be repeated up to three (3) times.</i>	

*The practicum experience must be completed in an Early Intervention/ Special Education Environment with an inclusion component or an Inclusion Environment.*

Total Units Required . . . . . 41

*The Certificate of Achievement-Advanced is designed to meet the Early Intervention Assistant II requirements. It is the equivalent of the Teacher level permit on the California CTC Child Development Matrix. The Teacher level permit also requires 24 quarter units (equivalent of 16 semester units) of General Education courses.*

**Computer Aided Design (CAD)**

**SolidWorks**

**Skills Certificate**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

<i>Complete a minimum of 12 units from the following:</i>		12
CDI 60C	SolidWorks (Beginning) (4) <i>or other CDI 60 series course</i>	
CDI 61C	SolidWorks (Intermediate) (4) <i>or other CDI 61 series course</i>	
CDI 62C	SolidWorks (Advanced) (4) <i>or other CDI 62 series course</i>	
CDI 63D	SolidWorks (SURFACES) (4) <i>or other CDI 63 series course</i>	
CDI 64D	SolidWorks (PDMWorks) (2) <i>or other CDI 64 series course</i>	
CDI 67D	SolidWorks (COSMOSWorks) (4) <i>or other CDI 67 series course</i>	
Total Units Required . . . . .		12

## AutoDesk

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.  
Contact the department to apply for this Skills Certificate.

<i>Complete a minimum of 12 units from the following:</i>		12
CDI 80C	AutoCAD (Beginning) (4) or other CDI 80 series course	
CDI 81C	AutoCAD (Intermediate) (4) or other CDI 81 series course	
CDI 82C	AutoCAD Civil 3D (4) or other CDI 82 series course	
CDI 83C	AutoCAD Architectural Desktop (4) or other CDI 83 series course	
CDI 85C	AutoDesk Inventor (4) or other CDI 85 series course	
Total Units Required . . . . .		12

### Pro/ENGINEER

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

<i>Complete a minimum of 20 units from the following:</i>		20
CDI 70C	Pro/ENGINEER Wildfire (Beginning) (4) or other CDI 70 series course	
CDI 71C	Pro/ENGINEER Wildfire (Intermediate) (4) or other CDI 71 series course	
CDI 72C	Pro/ENGINEER Wildfire (Advanced) (4) or other CDI 72 series course	
CDI 73C	Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4) or other CDI 73 series course	
CDI 74C	Pro/ENGINEER Wildfire (Pro/SURFACE) (4) or other CDI 74 series course	
CDI 75C	Pro/ENGINEER Wildfire (Pro/MOLD) (4) or other CDI 75 series course	
CDI 76C	Pro/ENGINEER Wildfire (Pro/CABLE) (4) or other CDI 76 series course	
CDI 77C	Pro/ENGINEER Wildfire (Pro/MECHANICA) (4) or other CDI 77 series course	
CDI 78D	Pro/ENGINEER (INTRALINK) (2) or other CDI 78 series course	
CDI 79C	Pro/ENGINEER Wildfire (Pro/Update) (4) or other CDI 79 series course	
Total Units Required . . . . .		20

### Computer Aided Design - Mechanical

#### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

<i>Complete a minimum of eight (8) units from the following:</i>		8
CDI 60C	SolidWorks (Beginning) (4) or other CDI 60 series course	
CDI 61C	SolidWorks (Intermediate) (4) or other CDI 61 series course	
CDI 62C	SolidWorks (Advanced) (4) or other CDI 62 series course	
CDI 63D	SolidWorks (SURFACES) (4) or other CDI 63 series course	
CDI 64D	SolidWorks (PDMWorks) (2) or other CDI 64 series course	
CDI 67D	SolidWorks (COSMOSWorks) (4) or other CDI 67 series course	

*Complete a minimum of 12 units from the following:* 12

CDI 70C	Pro/ENGINEER Wildfire (Beginning) (4) or other CDI 70 series course
CDI 71C	Pro/ENGINEER Wildfire (Intermediate) (4) or other CDI 71 series course
CDI 72C	Pro/ENGINEER Wildfire (Advanced) (4) or other CDI 72 series course
CDI 73C	Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4) or other CDI 73 series course
CDI 74C	Pro/ENGINEER Wildfire (Pro/SURFACE) (4) or other CDI 74 series course
CDI 75C	Pro/ENGINEER Wildfire (Pro/MOLD) (4) or other CDI 75 series course
CDI 76C	Pro/ENGINEER Wildfire (Pro/CABLE) (4) or other CDI 76 series course
CDI 77C	Pro/ENGINEER Wildfire (Pro/MECHANICA) (4) or other CDI 77 series course
CDI 78D	Pro/ENGINEER (INTRALINK) (2) or other CDI 78 series course
CDI 79C	Pro/ENGINEER Wildfire (Pro/Update) (4) or other CDI 79 series course

*Complete a minimum of eight (8) units from the following:* 8

CDI 80C	AutoCAD (Beginning) (4) or other CDI 80 series course	
CDI 81C	AutoCAD (Intermediate) (4) or other CDI 81 series course	
CDI 82C	AutoCAD Civil 3D (4) or other CDI 82 series course	
CDI 83C	AutoCAD Architectural Desktop (4) or other CDI 83 series course	
CDI 85C	AutoDesk Inventor (4) or other CDI 85 series course	
Total Units Required . . . . .		28

### A.S. Degree

Complete the following and meet the A.A./A.S. degree requirements as specified on page 50.

<i>Complete a minimum of 12 units from the following:</i>		12
CDI 60C	SolidWorks (Beginning) (4) or other CDI 60 series course	
CDI 61C	SolidWorks (Intermediate) (4) or other CDI 61 series course	
CDI 62C	SolidWorks (Advanced) (4) or other CDI 62 series course	
CDI 63D	SolidWorks (SURFACES) (4) or other CDI 63 series course	
CDI 64D	SolidWorks (PDMWorks) (2) or other CDI 64 series course	
CDI 67D	SolidWorks (COSMOSWorks) (4) or other CDI 67 series course	

<i>Complete a minimum of 20 units from the following:</i>		20
CDI 70C	Pro/ENGINEER Wildfire (Beginning) (4) or other CDI 70 series course	
CDI 71C	Pro/ENGINEER Wildfire (Intermediate) (4) or other CDI 71 series course	
CDI 72C	Pro/ENGINEER Wildfire (Advanced) (4) or other CDI 72 series course	
CDI 73C	Pro/ENGINEER Wildfire (Pro/SHEETMETAL) (4) or other CDI 73 series course	
CDI 74C	Pro/ENGINEER Wildfire (Pro/SURFACE) (4) or other CDI 74 series course	
CDI 75C	Pro/ENGINEER Wildfire (Pro/MOLD) (4) or other CDI 75 series course	
CDI 76C	Pro/ENGINEER Wildfire (Pro/CABLE) (4) or other CDI 76 series course	
CDI 77C	Pro/ENGINEER Wildfire (Pro/MECHANICA) (4) or other CDI 77 series course	
CDI 78D	Pro/ENGINEER (INTRALINK) (2) or other CDI 78 series course	
CDI 79C	Pro/ENGINEER Wildfire (Pro/Update) (4) or other CDI 79 series course	
<i>Complete a minimum of 12 units from the following:</i>		12
CDI 80C	AutoCAD (Beginning) (4) or other CDI 80 series course	
CDI 81C	AutoCAD (Intermediate) (4) or other CDI 81 series course	
CDI 82C	AutoCAD Civil 3D (4) or other CDI 82 series course	
CDI 83C	AutoCAD Architectural Desktop (4) or other CDI 83 series course	
CDI 85C	AutoDesk Inventor (4) or other CDI 85 series course	
<i>Complete:</i>		
CDI 51	Geometric Dimensioning and Tolerancing	2
Major	Computer Aided Design	46 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Computer Applications and Office Systems

*(See the Section Index for Administrative Assistant/Office Technology or Business Software Applications.)*

## Computer Information Systems

### Computer Systems Security

### Home/Small Business Computer Security

#### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

#### Prerequisites/Corequisites

*Complete one (1) course from:* 1/2-2

CAOS 90GA\* Computer Literacy I (PC) (2)

CAOS 100G\* Orientation to the PC (1/2)

<i>Complete one (1) course from:</i>		1
CAOS 102L	Microsoft Windows I (Windows XP) (1)	
CAOS 102M	Microsoft Windows I (Windows Vista) (1)	
<b>Requirements</b>		
CIS 108	Personal Computer Security Basics or CAOS 108	4
CAOS 150A	Desktop Hardware (A+ Certification I)	3
CIS 170E	Windows Vista Enterprise	4 1/2
Total Units Required . . . . .		13-14 1/2

\* Based on previous experience or knowledge, student may substitute another CAOS course of equal or greater unit value with departmental approval.

## Computer Crime Investigation (Forensics) and Security

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CAOS 90GA*	Computer Literacy I (PC)	2
ADMJ 75	Principles and Procedures of the Justice System	4
CIS 31	Operating System Concepts	5
CIS 170E	Windows Vista Enterprise	4 1/2
CIS 165	Security+ (Network Security Fundamentals) or CAOS 165	4
CAOS 150A	Desktop Hardware (A+ Certification I)	3
CIS 161	Computer Forensics or CAOS 161	4
Total Units Required . . . . .		26 1/2

\* Based on previous experience or knowledge, student may substitute another CAOS course of equal or greater unit value with departmental approval.

## Enterprise Security Professional

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisites/Corequisites

CIS 66*	Introduction to Data Communication and Networking	5
CIS 75A*	Internet Concepts and TCP/IP Protocols	5

#### Requirements

CIS 108	Personal Computer Security Basics or CAOS 108	4
CIS 76	Introduction to Network Security	4
CIS 75C	Enterprise Security Threats Management	4 1/2
CIS 75D	Enterprise Security Policy Management	3
Total Units Required . . . . .		25 1/2

\* Based on previous experience or knowledge, student may substitute another CIS course of equal or greater unit value with departmental approval.

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisites/Corequisites

CIS 66*	Introduction to Data Communication and Networking	5
CIS 75A*	Internet Concepts and TCP/IP Protocols	5

\* Based on previous experience or knowledge, student may substitute another CIS course of equal or greater unit value with departmental approval.

#### Requirements

CIS 108	Personal Computer Security Basics or CAOS 108	4
CIS 170E	Windows Vista Enterprise	4 1/2
CIS 75C	Enterprise Security Threats Management	4 1/2
CIS 75D	Enterprise Security Policy Management	3
CIS 75E	Enterprise Emergency Response Planning	2
CIS 165	Security+ (Network Security Fundamentals) or CAOS 165	4

CIS 161	Computer Forensics or CAOS 161	4
CIS 76	Introduction to Network Security	5
Total Units Required . . . . .		41

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Enterprise Security Professional Certificate of Achievement-Advanced	41 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Database Design**

**Database Design for Developers (Oracle)**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 64A	Database Management Systems	4 1/2
CIS 64B	Introduction to SQL	4 1/2
CIS 64C	Introduction to PL/SQL	4 1/2
CIS 64D	Database Tuning	3
Total Units Required . . . . .		25 1/2

**Network Design and Administration**

**Network Administration**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

<i>Complete one (1) course from:</i>		1/2-2
CAOS 90GA*	Computer Literacy I (PC) (2)	
CAOS 100G*	Orientation to the PC (1/2)	
* Based on previous experience or knowledge, student may substitute another CAOS course of equal or greater unit value with departmental approval.		
<i>Complete one (1) course from:</i>		1
CAOS 102L	Microsoft Windows I (Windows XP) (1)	
CAOS 102M	Microsoft Windows I (Windows Vista) (1)	
<i>Complete the following:</i>		
CIS 108	Personal Computer Security Basics or CAOS 108	4
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3
CIS 66	Introduction to Data Communication and Networking	5
CIS 3	Business Information Systems	4 1/2
CIS 170E	Windows Vista Enterprise	4 1/2
Total Units Required . . . . .		22 1/2-24

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 66	Introduction to Data Communication and Networking	5
CIS 67A	Local Area Networks	4
CIS 67B	Introduction to Wide Area Networking	4
CIS 75A	Internet Concepts and TCP/IP Protocols	5
<i>Complete one (1) course from:</i>		4 1/2
CIS 18B	Advanced UNIX/LINUX (4 1/2)	
CIS 33A	Programming in PERL (4 1/2)	

<i>Complete one (1) course from:</i>		4 1/2-5
CIS 31	Operating System Concepts (5)	
CIS 170E	Windows Vista Enterprise (4 1/2)	
Total Units Required . . . . .		40 1/2-41

**Recommended Course Sequence**

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
CIS 15AG	CIS 15BG	CIS 18B or 33A	CIS 67B
CIS 18A	CIS 66	CIS 67A (CIS 170E)	CIS 75A (CIS 31)

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Network Administration Certificate of Achievement-Advanced	40 1/2-41 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Recommended Course Sequence**

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	5th Qtr	6th Qtr
CIS 15AG	CIS 15BG	CIS 18B or 33A	CIS 67A	(CIS 170E)	
CAOS 151G	CIS 18A	CIS 66	CIS 67B or (CIS 31)		CIS 75A

**Programming/Network Programming**

**Business Programming**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
BUS 10	Introduction to Business	5
CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 14A	Visual Basic.NET Programming I	4 1/2
CIS 14B	Visual Basic.NET Programming II	4 1/2
CIS 64A	Database Management Systems	4 1/2
CIS 66	Introduction to Data Communication and Networking	5

<i>Complete one (1) course from:</i>		4 1/2
CIS 15C	Data Structures (4 1/2)	
CIS 63	Systems Design (4 1/2)	

<i>Complete one (1) course from*:</i>		4-4 1/2
CIS 3	Business Information Systems (4 1/2)	
CIS 14C	Visual Basic.NET Programming III (4 1/2) (must have CIS 14B)	
CIS 67A	Local Area Networks (4)	
Total Units Required . . . . .		46-46 1/2

**Recommended Course Sequence:**

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
ACCT 1A	CIS 14A	CIS 66	CIS 64
CIS 15AG (*CIS 3)	CIS 15BG CIS 63	CIS 14B/15C BUS 10	(*CIS 14C) (*CIS 67A)

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Business Programming Certificate of Achievement-Advanced	46-46 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

**Recommended Course Sequence:**

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	5th Qtr	6th Qtr
ACCT 1A	BUS 10	CIS 66	CIS 64	CIS 63	(*CIS 67A or CIS 3)
CIS 15AG	CIS 15BG	CIS 14A	CIS 14B/15C	(*CIS 14C)	

† This certificate was submitted for State approval. Please check with the department for the status.

## Network Basics

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 66	Introduction to Data Communication and Networking	5
CIS 67A	Local Area Networks	4
CIS 75A	Internet Concepts and TCP/IP Protocols	5
Total Units Required		18 1/2

## Network Programming

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 15C	Data Structures	4 1/2
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 26B	Advanced C Programming	4 1/2
CIS 66	Introduction to Data Communication and Networking	5
CIS 75A	Internet Concepts and TCP/IP Protocols	5
CIS 75B	Internet Programming with TCP/IP	5

Complete one (1) course from the following: 4 1/2-5

CIS 18B	Advanced UNIX/LINUX (4 1/2)	
CIS 21JA	Introduction to 8086 IA32 Processor Assembly Language (4 1/2)	
CIS 31	Operating System Concepts (5)	
CIS 33A	Programming in PERL (4 1/2)	
CIS 67A	Local Area Networks (4)	
CIS 67B	Introduction to Wide Area Networking (4)	
Total Units Required		42-42 1/2

#### Recommended Course Sequence:

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
CIS 15AG	CIS 15BG	CIS 15C	CIS 75B
CIS 18A	CIS 66	CIS 26B	CIS 31 or 67A or 67B
	CIS 75A	18B or 21JA or 33A	

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Network Programming Certificate of Achievement-Advanced	42-42 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required		90 units

#### Recommended Course Sequence:

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	5th Qtr	6th Qtr
CIS 15AG	CIS 15BG	CIS 15C	CIS 26B	CIS 75A	(CIS 18B or 31 or 33A or 67A or 67B)
		CIS 18A	CIS 66	CIS 75B	

## Programming in C/C++

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 15C	Data Structures	4 1/2

Complete one (1) course from:

CIS 26B	Advanced C Programming (4 1/2)
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CIS 27	Programming in C++ for C Programmers (4 1/2)	
Total Units Required		18

## Programming in JAVA

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 35A	Introduction to Java Programming	4 1/2
CIS 35B	Advanced Java Programming	4 1/2
CIS 53	Distributed Processing Using Java	4 1/2
Total Units Required		22 1/2

## Programming in PERL

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 33A	Programming in PERL	4 1/2
CIS 33B	Advanced PERL Programming	4 1/2
Total Units Required		22 1/2

## Systems Programming

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 15C	Data Structures	4 1/2
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 21JA	Introduction to 8086 IA32 Processor Assembly Language	4 1/2
CIS 26B	Advanced C Programming	4 1/2
CIS 27	Programming in C++ for C Programmers	4 1/2
CIS 31	Operating System Concepts	5

Complete one (1) course from\*: 4 1/2-5

CIS 18B	Advanced UNIX/LINUX (4 1/2)	
CIS 28	Object Oriented Analysis and Design with C++ (4 1/2)	
CIS 35A	Introduction to Java Programming (4 1/2)	
CIS 66	Introduction to Data Communication and Networking (5)	
Total Units Required		41-41 1/2

#### Recommended Course Sequence:

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	5th Qtr
CIS 15AG	CIS 15BG	CIS 15C	CIS 27	(*CIS 18B or 28 or 35A or 66)
CIS 18A	CIS 21JA	CIS 26B	CIS 31	

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Systems Programming Certificate of Achievement-Advanced	41-41 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required		90 units

#### Recommended Course Sequence:

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	5th Qtr	6th Qtr
CIS 15AG	CIS 15BG	CIS 15C	CIS 26B	CIS 27	(*CIS 18B or 28 or 35A or 66)
CIS 18A	CIS 21JA	CIS 31			

## UNIX/LINUX Operating System

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 15AG	Introduction to Computer Programming Using C	4 1/2
CIS 15BG	Intermediate Problem Solving in C	4 1/2
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 18B	Advanced UNIX/LINUX	4 1/2
CIS 18C	Shell Programming	4 1/2
	Total Units Required	22 1/2

## Visual Basic Programming

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 3	Business Information Systems	4 1/2
CIS 14A	Visual Basic.NET Programming I	4 1/2
CIS 14B	Visual Basic.NET Programming II	4 1/2
CIS 14C	Visual Basic.NET Programming III	4 1/2
	Total Units Required	18

## Web Development

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

	<i>Complete one (1) course from:</i>	4 1/2
CIS 15AG	Introduction to Computer Programming Using C (4 1/2)	
CIS 14A	Visual Basic Programming I (4 1/2)	
	<i>Complete the following:</i>	
CIS 18A	Introduction to UNIX/LINUX	4 1/2
CIS 89A	World Wide Web Page Development	3
CIS 89C	Client Side Programming with JavaScript	4 1/2
CIS 94	Introduction to Internet and World Wide Web or CAOS 94	1
CAOS 113A	Web Authoring Software (Dreamweaver) (or both CAOS 113I, 113Q – 2 units ea.)	4
	Total Units Required	21 1/2

### Technical Support/System Support Services

## Help Desk

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

	<i>Complete one (1) course from:</i>	1/2-2
CAOS 90GA*	Computer Literacy I (PC) (2)	
CAOS 100G*	Orientation to the PC (1/2)	

\* Based on previous experience or knowledge, student may substitute another CAOS course of equal or greater unit value with departmental approval.

#### Requirements

	<i>Complete one (1) course from:</i>	2
CAOS 91AL	Word Processing I (Word XP/2002) (2)	
CAOS 91AM	Word Processing I (Word 2007) (2)	
	<i>Complete one (1) course from:</i>	2
CAOS 93AL	Spreadsheets I (Excel XP/2002) (2)	
CAOS 93AM	Spreadsheets I (Excel 2007) (2)	
	<i>Complete one (1) course from:</i>	1
CAOS 102L	Microsoft Windows I (Windows XP) (1)	
CAOS 102M	Microsoft Windows I (Windows Vista) (1)	
	<i>Complete one (1) course from:</i>	2
CAOS 130L	Introduction to Business Graphics (PowerPoint XP/2002) (2)	

CAOS 130M Introduction to Business Graphics (PowerPoint 2007) (2)

	<i>Complete one (1) course from:</i>	2
CAOS 110L	Database I (Access XP/2002) (2)	
CAOS 110M	Database I (Access 2007) (2)	
	<i>Complete the following:</i>	
CIS 108	Personal Computer Security Basics or CAOS 108	4
CAOS 112A	Digital Imaging Software (Photoshop IBM) (or both CAOS 112I and 112Q - 2 units ea.)	4
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3
CIS 170E	Windows Vista Enterprise	4 1/2
	Total Units Required	25-26

## System Support Services

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

	<i>Complete one (1) course from:</i>	2		
CAOS 91AL	Word Processing I (Word XP/2002) (2)			
CAOS 91AM	Word Processing I (Word 2007) (2)			
	<i>Complete one (1) course from:</i>	2		
CAOS 91BL	Word Processing II (Word XP/2002) (2)			
CAOS 91BM	Word Processing II (Word 2007) (2)			
	<i>Complete one (1) course from:</i>	2		
CAOS 93AL	Spreadsheets I (Excel XP/2002) (2)			
CAOS 93AM	Spreadsheets I (Excel 2007) (2)			
	<i>Complete one (1) course from:</i>	2		
CAOS 110L	Database I (Access XP/2002) (2)			
CAOS 110M	Database I (Access 2007) (2)			
	<i>Complete one (1) course from:</i>	2		
CAOS 130L	Introduction to Business Graphics (PowerPoint XP/2002) (2)			
CAOS 130M	Introduction to Business Graphics (PowerPoint 2007) (2)			
	<i>Complete one (1) course from:</i>	4 1/2		
CIS 14A	Visual Basic.NET Programming I (4 1/2)			
CIS 15AG	Introduction to Computer Programming Using C (4 1/2)			
	<i>Complete the following:</i>			
CAOS 150A	Desktop Hardware (A+ Certification Part I)	3		
CIS 66	Introduction to Data Communication and Networking	5		
CIS 67A	Local Area Networks	4		
CIS 108	Personal Computer Security Basics or CAOS 108	4		
CIS 170E	Windows Vista Enterprise	4 1/2		
SPCH 70	Effective Organizational Communication	4		
TWRT 61	Introduction to Technical Writing	4		
	<i>Complete one (1) course from the following:</i>	2-5		
BUS 21	Business and Society (5)			
CAOS 93BM	Spreadsheets II (Excel 2007) (2) or CAOS 93BL			
CAOS 111M	Database II (Access 2007) (2) or CAOS 111L			
CIS 2	Computers and Society (4)			
CIS 3	Business Information Systems (4 1/2)			
CIS 50	Introduction to Computers (3)			
	Total Units Required	45-48		
	<i>Recommended Course Sequence</i>			
	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
	CAOS 91AL/AM	CAOS 110L/M	CAOS 150A	CIS 66
	CAOS 91BL/BM	CAOS 130L/M	CIS 170E	CIS 67A
	CAOS 93AL/AM	CIS 108	TWRT 61	CIS 14A or 15AG
	(BUS 21 or CIS 2 or CIS 3 or CIS 50)			SPCH 70

† This certificate was submitted for State approval. Please check with the department for the status.

## A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for System Support Services Certificate of Achievement-Advanced	45-48 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	90 units

### Recommended Course Sequence:

1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
CAOS 91AL/AM	CAOS 110L/M	CS 14A or 15AG	CIS 66
CAOS 91BL/BM	CAOS 130L/M	CIS 108	SPCH 70
CAOS 93AL/AM	CIS 170E	CIS 170D	
(BUS 21 or CIS 2, 3 or CAOS 111L/M, 93BL/BM)			
5th Qtr	6th Qtr		
CIS 67A	CAOS 150A		
TWRT 61			

## English

### A.A. Degree

*This degree was submitted for State approval. Please check with the department for the status.*

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

#### Prerequisite

EWRT 1A Composition and Reading

#### Requirements

<i>Complete one (1) course from:</i>	5
EWRT 1B Reading, Writing, and Research (5)	
EWRT 2 Critical Reading, Writing, and Thinking (5)	
<i>Complete three (3) courses from the following:</i>	12
ELIT 46A Major British Writers (Medieval and Renaissance) (4)	
ELIT 46B Major British Writers (Neo-Classical and Romantic) (4)	
ELIT 46C Major British Writers (Victorian and Modern) (4)	
ELIT 48A Major American Writers (Colonial and Romantic, 1620-1855) (4)	
ELIT 48B Major American Writers (The Advent of Realism, 1855-1920) (4)	
ELIT 48C Major American Writers (The Modern Age, 1914-present) (4)	
<i>Complete one (1) course from the following:</i>	4-5
EWRT 1C Literature and Composition (5)	
ELIT 10 Introduction to Fiction (4)	
ELIT 11 Introduction to Poetry (4)	
ELIT 12 Introduction to Dramatic Literature (4)	
ELIT 17 Introduction to Shakespeare (4)	
<i>Complete two (2) courses from the following that do not duplicate courses selected above:</i>	8
ELIT 15A A Literary and Historical Study of the Old Testament (4) or HIST 15A	
ELIT 15B A Literary and Historical Study of the New Testament (4) or HIST 15B	
ELIT 20 Major Authors (variable topics) (4)	
ELIT 21 Women in Literature (4) or WMST 21	
ELIT 22 Mythology and Folklore (4)	
ELIT 24 Asian American Literature (4) or ICS 24	

ELIT 25	Introduction to Linguistics (4) or LING 1	
ELIT 39	Contemporary Literature (4)	
ELIT 44	International Literature (4)	
ELIT 46A	Major British Writers (Medieval and Renaissance) (4)	
ELIT 46B	Major British Writers (Neo-Classical and Romantic) (4)	
ELIT 46C	Major British Writers (Victorian and Modern) (4)	
ELIT 48A	Major American Writers (Colonial and Romantic, 1620-1855) (4)	
ELIT 48B	Major American Writers (The Advent of Realism, 1855-1920) (4)	
ELIT 48C	Major American Writers (The Modern Age, 1914-present) (4)	
ELIT 58	Children's Literature (4) or EDUC 58	
EWRT 30	Introduction to Creative Writing (4)	
Major	English	29-30 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	90 units

## Environmental Studies

### Biodiversity Specialist

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ES 95	Introduction to Environmental Careers	1
ESCI 1	Environmental Science	4
ESCI 1L	Environmental Science Lab	1
ESCI 19	Environmental Biology	5
ESCI 20	Introduction to Biodiversity	5
ESCI 21	Biodiversity 2	5
ESCI 30	Conservation Biology	5
	Total Units Required	26

#### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Biodiversity Specialist	
	Certificate of Achievement	26
ES 1	Introduction to Environmental Studies	4
ES 80	California Field Studies	1
ES 85A	California Native Plants and Animals	2
ES 91X	Environmental Education and Nature-Based Learning	2
GEO 1	Physical Geography	4
	<i>Complete one (1) course from the following:</i>	5
CHEM 1A	General Chemistry (5)	
CHEM 10	Introduction to Chemistry (5)	
CHEM 30A	Survey of Chemistry (5)	
CHEM 50	Preparatory Course for General Chemistry (5)	5
	Total Units Required	44

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements	Biodiversity Specialist	
	Certificate of Achievement-Advanced	44
ESCI 50	Introduction to Wildlife Corridor Technician: Connectivity	2

<i>Complete a minimum of four (4) units from the following:</i>		4
ES 2	Humans, the Environment and Sustainability (4)	
ES 3	Imagery of the Environment (4)	
ES 6	Introduction to Environmental Law (4)	
ES 55	Ten Steps to Effective Learning in Environmental Studies (1)	
ES 65	Environmental Stewardship (1)	
ES 66	Environmental Leadership (1)	
ES 67	Environmental Team-Building (1)	
ES 68	Community-Based Coalitions and Stakeholders (1)	
ES 85B	Cheeseman Environmental Study Area Interpretive Training (2)	
ES 86	Global Field Studies (4)	
ES 90	Environmental Research and Field Methods (4)	
ES 91Z	Environmental Education and Nature-Based Learning (4)	
ESCI 52	Wildlife Corridor Technician: Animal Tracking Techniques (1)	
ESCI 55	Wildlife Corridor Technician: Corridor Design (1)	
MET 10	Weather Processes (4)	
MET 10L	Meteorology Laboratory (1)	
PHYS 2A	General Introductory Physics (5)	
PHYS 4A	Physics for Scientists and Engineers (6)	
PHYS 50	Preparatory Physics (4)	
Major	Biodiversity Specialist	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	.90 units

### Energy Management and Climate Policy

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ES 1	Introduction to Environmental Studies	4
ES 58	Introduction to Green Building	1
ES 64	AB 32 (CA Global Warming Solutions Act)	1
ES 65	Environmental Stewardship	1
ES 66	Environmental Leadership	1
ES 69	Energy Reliability and Your Organization	1
ES 70	Introduction to Energy Management Technology	1
ES 71	The Building Envelope	1
ES 72	Heating, Ventilating and Air Conditioning (HVAC) Systems	1
ES 73	Electric Motors and Drives	1
ES 74	Lighting Distribution Systems	1
ES 75	Electric Power Systems	1
ES 76	Energy Star Products	1
ES 76A	Solar Thermal Systems	1
ES 78	Energy Management Systems and Controls	1
ES 79	Renewable and Alternative Energy Systems	1
ES 90	Environmental Research and Field Methods	4
ESCI 61	Introduction to Photovoltaic (PV) Technology	3
	Total Units Required . . . . .	26

### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Energy Management and Climate Policy Certificate of Achievement	26
ES 6	Introduction to Environmental Law	4
ES 61A	Environmental Protection and Pollution Prevention: Local and Regional	4
ES 67	Environmental Team-Building	1
ES 68	Community-Based Coalitions and Stakeholders	1
ES 95	Introduction to Environmental Careers	1
ES 95B	Environmental Studies Internships	2
	Total Units Required . . . . .	39

#### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements	Energy Management and Climate Policy Certificate of Achievement-Advanced	39
ESCI 1	Environmental Science I	4
ESCI 1L	Environmental Science I Lab	1
ESCI 63	Photovoltaic (PV) Technology Field Project	2

*Complete a minimum of four (4) units from the following:*

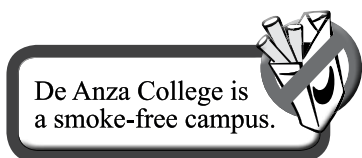
ES 2	Humans, the Environment and Sustainability (4)	4
ES 3	Imagery of the Environment (4)	
ES 55	Ten Steps to Effective Learning in Environmental Studies (1)	
ESCI 19	Environmental Biology (5)	
ESCI 50	Introduction to Wildlife Corridor Technician: Connectivity (2)	
ESCI 52	Wildlife Corridor Technician: Animal Tracking Techniques (1)	
ESCI 53	Wildlife Corridor Technician: Data Collection (1)	
ESCI 54	Wildlife Corridor Technician: Data Analysis (1)	
ESCI 55	Wildlife Corridor Technician: Corridor Design (1)	
Major	Energy Management and Climate Policy	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	.90 units

### Environmental Compliance and Pollution Prevention

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ES 1	Introduction to Environmental Studies	4
ES 6	Introduction to Environmental Law	4
ES 50	Introduction to Pollution Prevention, Hazardous Waste, and Environmental Justice	4
ES 56	Environmental Health and Justice	4
ES 61A	Environmental Protection and Pollution Prevention: Local and Regional	4
ES 61B	Environmental Protection and Pollution Prevention: State and Federal	4
ES 63	Agenda 21: Blueprint for Sustainability	1
ES 64	AB 32 (CA Global Warming Solutions Act of 2006)	1
	Total Units Required . . . . .	26



**Certificate of Achievement-Advanced**

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Environmental Compliance and Pollution Prevention Certificate of Achievement	26
ES 58	Introduction to Green Building	1
ES 65	Environmental Stewardship	1
ES 66	Environmental Leadership	1
ES 79	Renewable and Alternative Energy Systems	1
ES 90	Environmental Research and Field Methods	4
ES 95	Introduction to Environmental Careers	1
ESCI 1	Environmental Science	4
ESCI 1L	Environmental Science Lab	1
	Total Units Required	40

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements	Environmental Compliance and Pollution Prevention Certificate of Achievement-Advanced	40
ESCI 50	Introduction to Wildlife Corridor Technician: Connectivity	2
ESCI 61	Introduction to Photovoltaic (PV) Technology	3
	<i>Complete a minimum of five (5) units from the following:</i>	5
ES 55	Ten Steps to Effective Learning in Environmental Studies (1)	
ES 67	Environmental Team-Building (1)	
ES 68	Community-Based Coalitions and Stakeholders (1)	
ES 69	Energy Reliability and Your Organization (1)	
ES 70	Introduction to Energy Management Technology (1)	
ES 80	California Field Studies (1)	
ES 85A	California Native Plants and Animals (2)	
ES 91X	Environmental Education and Nature-Based Learning (2)	
ES 91Z	Environmental Education and Nature-Based Learning (4)	
ES 95B	Environmental Studies Internship (2)	
ESCI 19	Environmental Biology (5)	
ESCI 20	Introduction to Biodiversity (5)	
ESCI 21	Biodiversity 2 (5)	
	Total Units Required	50
Major	Environmental Compliance and Pollution Prevention	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	90 units

**Wildlife Corridor Technician**

**Certificate of Achievement**

The Wildlife Corridor Technician certificate requirements are also part of the Environmental Stewardship Certificate of Achievement-Advanced and Degree programs.

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ES 1	Introduction to Environmental Studies	4
ES 65	Environmental Stewardship	1
ES 66	Environmental Leadership	1
ES 67	Environmental Team-Building	1
ES 68	Community-Based Coalitions and Stakeholders	1

ESCI 1	Environmental Science	4
ESCI 1L	Environmental Science Lab	1
ESCI 50	Introduction to Wildlife Corridor Technician: Connectivity	2
ESCI 52	Wildlife Corridor Technician: Animal Tracking Techniques	1
ESCI 53	Wildlife Corridor Technician: Data Collection	1
ESCI 54	Wildlife Corridor Technician: Data Analysis	1
ESCI 55	Wildlife Corridor Technician: Corridor Design	1
ESCI 56	Wildlife Corridor Technician: Plant Survey Techniques	1
ESCI 57	Wildlife Corridor Technician: Advanced Tracking	2
ESCI 58	Wildlife Corridor Technician: Advanced Tracking 2	4
	Total Units Required	26

**Environmental Stewardship**

**Certificate of Achievement-Advanced**

Complete the requirements listed for the Wildlife Corridor Technician Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Wildlife Corridor Technician Certificate of Achievement	26
ES 3	Imagery of the Environment	4
ES 63	Agenda 21: Blueprint for Sustainability	1
ESCI 20	Introduction to Biodiversity	5
	<i>Complete a minimum of five (5) units from the following:</i>	5
ES 80	California Field Studies (1)	
ESCI 82,X,Y,Z	Central Coast Wildlife Corridors: Coyote Valley series (1-4 units)	
ESCI 83,X,Y,Z	Central Coast Wildlife Corridors: Salinas River Drainage series (1-4 units)	
ESCI 84,X,Y,Z	Central Coast Wildlife Corridors: San Benito River Drainage series (1-4 units)	
ESCI 85,X,Y,Z	Central Coast Wildlife Corridors: Pajaro River Drainage series (1-4 units)	
ESCI 86,X,Y,Z	Central Coast Wildlife Corridors: Pacheco Pass series (1-4 units)	
ESCI 87,X,Y,Z	Central Coast Wildlife Corridors: Diablo Range series series (1-4 units)	
ESCI 88,X,Y,Z	Central Coast Wildlife Corridors: Santa Cruz Mountains series (1-4 units)	
ESCI 90	Santa Clara County Field Studies: Tule Elk (1)	
ESCI 91	Santa Clara County Field Studies: American Badger (1)	
ESCI 92	Santa Clara County Field Studies: Raptors (1)	
	Total Units Required	41

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements	Environmental Stewardship Certificate of Achievement-Advanced	41
	<i>Complete a minimum of nine (9) units from the following:</i>	9
ES 2	Humans, the Environment and Sustainability (4)	
ES 6	Introduction to Environmental Law (4)	
ES 55	Ten Steps to Effective Learning in ES (1)	
ES 56	Environmental Health and Justice (4)	
ES 61A	Environmental Protection and Pollution Prevention: Local and Regional (4)	
ES 69	Energy Reliability and Your Organization (1)	
ES 70	Introduction to Energy Management (1)	

ES 71	The Building Envelope (1)	
ES 76	Energy Star Products (1)	
ES 85A	California Native Plants and Animals (2)	
ES 86	Global Field Studies (4)	
ES 90	Environmental Research and Field Methods (4)	
ES 91X	Environmental Education and Nature-Based Learning (2)	
ES 91Z	Environmental Education and Nature-Based Learning (4)	
ES 93	Sustainability Across the Curriculum (1)	
ES 95	Introduction to Environmental Careers (1)	
ES 95B	Environmental Studies Internship (2)	
ESCI 19	Environmental Biology (5)	
ESCI 21	Biodiversity 2 (5)	
ESCI 30	Conservation Biology (5)	
CHEM 1A	General Chemistry (5)	
CHEM 10	Introduction to Chemistry (5)	
CHEM 30A	Survey of Chemistry (5)	
CHEM 50	Preparatory Course for General Chemistry (5)	
GEO 1	Physical Geography (4)	
HIST 28	Social Environmental History (4)	
MET 10	Weather Processes (4)	
MET 10L	Meteorology Laboratory (1)	
PHYS 50	Preparatory Physics (4)	
Major	Environmental Stewardship	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	.90 units

## Film Production

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Complete one (1) course from the following: 4-4 1/2

F/TV 2A	History of Cinema (1895-1950) (4)	
F/TV 2AW	History of Cinema (1895-1950) (4 1/2)	
F/TV 2B	History of Cinema (1950-Present) (4)	
F/TV 2BW	History of Cinema (1950-Present) (4 1/2)	

Complete the following:

F/TV 1	Introduction to Film	4
F/TV 20	Basic Digital Film/Video Production	4
F/TV 22	16MM Film Production I	4
F/TV 50	Introduction to Film/Television Directing	4
F/TV 52A	16MM Film Production II	4
F/TV 53	Non-Linear Editing	4
F/TV 60A	Scriptwriting for Film and Video I	4

Complete a minimum of one-half (1/2) unit from the production workshop series of courses: 1/2-8

F/TV 58R-Z	Film/Television Production Workshop	
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Complete a minimum of six (6) units from the following: 6

ARTS 53B	Introduction to Visual Technology (3)	
F/TV 10	Introduction to Electronic Media (4)	
F/TV 41	Film Genres (variable topics) (4)	
F/TV 42	National Cinemas (4)	
F/TV 43	Film Artists (variable topics) (4)	
F/TV 45	History of Experimental Film/Video (4)	
F/TV 48	Cinema and the African-American (4)	
F/TV 51A	Intermediate Digital Film and Video Production (4)	

F/TV 51B	Video Remote Production II (4)	
F/TV 52B	16MM Film Production III (4)	
F/TV 54 series	F/TV 54, 54X, 54Y, 54Z	
	Film/Television Production Laboratory (1/2-3)	
	Up to three (3) units from this F/TV series may apply.	

F/TV 55A	Video Studio Production (4)	
F/TV 57A	Non-Fiction Workshop I (The Documentary) (4)	
F/TV 59	The Role of the Video Producer (4)	
F/TV 60B	Scriptwriting for Film and Video II (4)	
F/TV 60C	Scriptwriting for Film and Video III (4)	
F/TV 61	TV Scriptwriting for Training and Communications (4)	
F/TV 62	Lighting for Television and Film (4)	
F/TV 63A	Studio and Remote Audio Production (3)	
F/TV 64A	Fiction Screenwriting I (4)	
F/TV 64B	Fiction Screenwriting II (4)	
F/TV 64C	Fiction Screenwriting III (4)	
F/TV 65	Current Practices in the Film/Video Profession (4)	
F/TV 66	Basic Techniques of Animation: 3D Media (3)	
F/TV 68	Sound for Animation (3)	
F/TV 69	Principles of Animation: Character and Motion (3)	
F/TV 70H	The Animation Storyboard (3)	
F/TV 71	Intermediate Animation Workshop (3)	
F/TV 72	Advanced Animation Workshop (3)	
F/TV 75G	History of Animation (4)	
F/TV 76 series	F/TV 76, 76W, 76X	
	Special Topics in Film Studies (1/2-2)	
F/TV 85	Motion Graphics (3)	
F/TV 92	Topics (Guest Artist/Craftsman) (1/2)	
F/TV 98G	Fiction Workshop (The Writer, Producer, Director) (3)	
F/TV 98H	Fiction Workshop (Technical Crew) (3)	
F/TV 98J	Fiction Workshop (Editing/Post Production) (3)	

HUMI 1	Creative Minds (4)	
HUMI 2	But Is It Art? Questions and Criticism (4)	
HUMI 15	Discussion on the Arts (4)	
PHTG 2	Intermediate Photography (3)	
PHTG 3	Advanced Photography (3)	

Major	Film Production	38 1/2-46 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	.90 units

## Film/Television Production: Animation Emphasis

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

F/TV 20	Basic Film/Video Production	4
F/TV 66A	Basic Techniques of Animation: 3D Media	3
F/TV 67I	Drawing for Animation: Layout and Visual Development	3
F/TV 68	Sound for Animation	3
F/TV 69	Principles of Animation: Character and Motion	3
F/TV 70G	Screenwriting for Animation	4
F/TV 70H	The Animation Storyboard	3
F/TV 71	Animated Film Production Workshop	3
F/TV 72	Advanced Animation Workshop	3
F/TV 75G	History of Animation	4
F/TV 75I	Contemporary World Animation	4
F/TV 83A	Introduction to 2D Computer Animation	3

† This certificate was submitted for State approval.  
Please check with the department for the status.

**Short Film Requirement**

F/TV 80H	Animated Film Completion for Certificate/Degree	1
	Students create a short personal film and enroll in F/TV 80H in the quarter in which it will be completed.	

*Complete a minimum of nine (9) units from the following:*

ARTS 4C	Life Drawing (3)	9
F/TV 62	Lighting for Television and Film (4)	
F/TV 67G	Drawing for Animation (Human Figure) (3)	
F/TV 67H	Drawing for Animation (Animal Expression) (3)	
F/TV 75H	Classic Hollywood Animation (4)	
F/TV 75J	The Animated Feature Film (4)	
F/TV 75K	Japanese Animation (4)	
F/TV 77X	Animation History Area Studies (1)	
F/TV 77Y	Animation History Area Studies (2)	
F/TV 79G	Workshop with Professional Traditional Animator (3)	
F/TV 79H	Workshop with Professional Computer Animator (4)	
F/TV 80G	Independent Projects in Animation (2)	
F/TV 81 series	F/TV 81, 81X, 81Y, 81Z Seminar in Animation Production Topics (1/2-3)	
F/TV 83B	Advanced 2D Computer Animation (4)	
F/TV 84A	Introduction to 3D Computer Animation (4)	
F/TV 84B	Intermediate 3D Computer Animation (4)	
F/TV 84C	Advanced 3D Computer Animation (4)	

*F/TV 77X, Y and 81, X, Y, Z are repeatable as topics vary;  
F/TV 79G, 79H are repeatable as instructors and topics vary.*  
Total Units Required . . . . . 50

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Film/TV Production: Animation Emphasis Certificate of Achievement-Advanced	50 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

**Animation Production**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

F/TV 66A	Basic Techniques of Animation: 3D Media	3
F/TV 67I	Drawing for Animation: Layout and Visual Development	3
F/TV 69	Principles of Animation: Character and Motion	3
F/TV 70H	The Animation Storyboard	3
F/TV 71	Animated Film Production Workshop	3
F/TV 75G	History of Animation	4
F/TV 75I	Contemporary World Animation	4
F/TV 83A	Introduction to 2D Computer Animation	3
	Total Units Required . . . . .	26

**Animation History and Criticism**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

F/TV 75G	History of Animation	4
F/TV 75H	Classic Hollywood Animation	4
F/TV 75I	Contemporary World Animation	4
F/TV 75J	The Animated Feature Film	4
F/TV 75K	Japanese Animation	4

<i>Complete one (1) course (variable topics) from:</i>	1-2
F/TV 77X	Animation History Area Studies (1)
F/TV 77Y	Animation History Area Studies (2)

*Complete a minimum of (3) units from the following:*

F/TV 2A	History of Cinema (1895-1950) (4)	3
F/TV 2B	History of Cinema (1950-Present) (4)	
F/TV 41	Film Genres (variable topics) (4)	
F/TV 42	National Cinemas (4)	
F/TV 43	Film Artists (variable topics) (4))	
F/TV 66A	Basic Techniques of Animation: 3D Media (3)	
F/TV 69	Principles of Animation: Character and Motion (3)	
F/TV 70H	The Animation Storyboard (3)	
	Total Units Required . . . . .	24-25

*The Animation History and Criticism Certificate of Achievement is a one-year program designed for:*

- a) Animation Production students seeking a more complete knowledge of the field and a historical context for their work.
- b) Prospective or current university Film Studies majors who wish to investigate an area of cinematic history rarely explored at film schools.
- c) Prospective or current Animation or Multimedia teachers who wish to expand their expertise in Animation History to complement their production skills and augment their teaching.
- d) Prospective or current Film Studies teachers, seeking to diversify their backgrounds and qualify themselves to teach Animation History courses at other institutions.

**Computer Animation**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

F/TV 20	Basic Film/Video Production	4
F/TV 66A	Basic Techniques of Animation: 3D Media	3
F/TV 67I	Drawing for Animation: Layout and Visual Development	3
F/TV 68	Sound for Animation	3
F/TV 69	Principles of Animation: Character and Motion	3
F/TV 70G	Screenwriting for Animation	4
F/TV 70H	The Animation Storyboard	3
F/TV 72	Advanced Animation Workshop	3
F/TV 75G	History of Animation	4
F/TV 75I	Contemporary World Animation	4
F/TV 83A	Introduction to 2D Computer Animation	3
F/TV 84A	Introduction to 3D Computer Animation	4
F/TV 84B	Intermediate 3D Computer Animation	4
F/TV 84C	Advanced 3D Computer Animation	4

*Short Film Requirement*

F/TV 80H	Animated Film Completion for Certificate/Degree	1
	Students create a short personal film and enroll in F/TV 80H in the quarter in which it will be completed.	

*Complete a minimum of 10 units from the following:*

ARTS 4C	Life Drawing (3)	10
F/TV 60A	Scriptwriting for Film and Video I (4)	
F/TV 62	Lighting for Television and Film (4)	
F/TV 67G	Drawing for Animation (Human Figure) (3)	
F/TV 67H	Drawing for Animation (Animal Expression) (3)	
F/TV 71	Animated Film Production Workshop (3)	
F/TV 75H	Classic Hollywood Animation (4)	
F/TV 75J	The Animated Feature Film (4)	
F/TV 75K	Japanese Animation (4)	

† This certificate was submitted for State approval. Please check with the department for the status.

F/TV 77X	Animation History Area Studies (1)	
F/TV 77Y	Animation History Area Studies (2)	
F/TV 79G	Workshop with Professional Traditional Animator (3)	
F/TV 79H	Workshop with Professional Computer Animator (4)	
F/TV 80G	Independent Projects in Animation (2)	
F/TV series	F/TV 81, 81X, 81Y, 81Z Seminar in Animation Production Topics (1/2-3)	
F/TV 83B	Advanced 2D Computer Animation (4)	
<i>F/TV 77X, Y and 81,X,Y,Z are repeatable as topics vary;</i>		
<i>F/TV 79G, 79H are repeatable as instructors and topics vary.</i>		
	Total Units Required . . . . .	60

## Film/Television Production: Television Emphasis

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

F/TV 20	Basic Digital Film/Video Production	4
F/TV 53	Non-Linear Editing	4
F/TV 55A	Video Studio Production	4
F/TV 59	The Role of the Media Producer	4
F/TV 60A	Scriptwriting for Film and Video I	4
	Total Units Required . . . . .	20

### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Film/Television Production: TV Emphasis Certificate of Achievement	20
F/TV 10	Introduction to Electronic Media	4
F/TV 50	Introduction to Film/Television Directing	4
F/TV 51A	Intermediate Digital Film/Video Production	4
F/TV 63A	Studio and Remote Audio Production	4
	Total Units Required . . . . .	36

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

Requirements	Film/Television Production: TV Emphasis Certificate of Achievement-Advanced	36
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Complete one (1) course from the following: 4-4 1/2

F/TV 2A	History of Cinema (1895-1950) (4)	
F/TV 2AW	History of Cinema (1895-1950) (4 1/2)	
F/TV 2B	History of Cinema (1950-Present) (4)	
F/TV 2BW	History of Cinema (1950-Present) (4 1/2)	

Complete a minimum of six (6) units from the following which do not duplicate courses taken above: 6

ARTS 53B	Introduction to Visual Technology (3)	
F/TV 1	Introduction to Film (4)	
F/TV 2A	History of Cinema (1895-1950) (4)	
F/TV 2AW	History of Cinema (1895-1950) (4 1/2)	
F/TV 2B	History of Cinema (1950-Present) (4)	
F/TV 2BW	History of Cinema (1950-Present) (4 1/2)	
F/TV 22	16MM Film Production I (4)	
F/TV 41	Film Genres (variable topics) (4)	
F/TV 42	National Cinemas (4)	
F/TV 43	Film Artists (variable topics) (4)	
F/TV 45	History of Experimental Film/Video (4)	
F/TV 48	Cinema and the African-American (4)	
F/TV 52A	16MM Film Production II (4)	
F/TV 52B	16MM Film Production III (4)	

F/TV series	F/TV 54, 54X, 54Y, 54Z Film/Television Production Laboratory (1/2-3) Up to three (3) units from this F/TV series may apply.	
F/TV 57A	Non-Fiction Workshop I: The Documentary (4)	
F/TV series	F/TV 58R-Z Film/Television Production Workshop (1/2-8)	
F/TV 60C	Scriptwriting for Film and Video III (4)	
F/TV 61	TV Scriptwriting for Training and Communications (4)	
F/TV 62	Lighting for Television and Film (4)	
F/TV 64A	Fiction Screenwriting I (4)	
F/TV 64B	Fiction Screenwriting II (4)	
F/TV 64C	Fiction Screenwriting III (4)	
F/TV 65	Current Practices in the Film/Video Profession (4)	
F/TV 66A	Basic Techniques of Animation: 3D Media (3)	
F/TV 68	Sound for Animation (3)	
F/TV 69	Principles of Animation: Character and Motion (3)	
F/TV 70H	The Animation Storyboard (3)	
F/TV 71	Intermediate Animation Workshop (3)	
F/TV 72	Advanced Animation Workshop (3)	
F/TV 75G	History of Animation (4)	
F/TV 76 series	F/TV 76, 76W, 76X Special Topics in Film Studies (1/2-2)	
F/TV 85	Motion Graphics (3)	
F/TV 92	Topics: Guest Artist/Craftsman (1/2)	
F/TV 98G	Fiction Workshop (The Writer, Producer, Director) (3)	
F/TV 98H	Fiction Workshop (Technical Crew) (3)	
F/TV 98J	Fiction Workshop (Editing/Post Production) (3)	
HUMI 1	Creative Minds (4)	
HUMI 2	But Is It Art? Questions and Criticism (4)	
HUMI 15	Discussion on the Arts (4)	
PHTG 1	Basic Photography (3)	
PHTG 2	Intermediate Photography (3)	
PHTG 3	Advanced Photography (3)	
Major	Film/Television Production: TV Emphasis	46-46 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Global Studies

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete one (1) course from:		4
HIST/ICS 3A	World History (4)	
HIST/ICS 3B	World History (4)	
HIST/ICS 3C	World History (4)	
Complete one (1) course from:		4
ANTH 2	Cultural Anthropology (4)	
ECON 1	Principles of Macroeconomics (4)	
GEO 10	World Regional Geography (4)	
Complete the following:		
ES 1	Introduction to Environmental Studies	4
ICS/SPCH 7	Intercultural Communication	4
INTL 5	Global Issues and Perspectives	4
LCEN 50	Introduction to Online Research	1
	Total Units Required . . . . .	21

**Certificate of Achievement-Advanced**

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Global Studies Certificate of Achievement	21
<i>Complete:</i>		
One year (3 quarters) of college-level world language		15
<i>World Languages offered: Arabic, Cantonese, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Mandarin, Persian, Russian, Spanish, Urdu, Vietnamese</i>		
Total Units Required		36

**A.A. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

<i>Complete one (1) course from:</i>		
HIST/ICS 3A	World History (4)	4
HIST/ICS 3B	World History (4)	
HIST/ICS 3C	World History (4)	
<i>Complete the following:</i>		
ANTH 2	Cultural Anthropology	4
ECON 1	Principles of Macroeconomics	4
ES 1	Introduction to Environmental Studies	4
GEO 10	World Regional Geography	4
ICS/SPCH 7	Intercultural Communication	4
INTL 5	Global Issues and Perspectives	4
LCEN 50	Introduction to Online Research	1
	Language Requirement	0-15

One year (3 quarters) of college-level world language or three (3) years of high school foreign language or the equivalent

*Complete 24 units from the courses listed below. Selections may be from one area of study or a combination of areas of emphasis. The HIST/ICS World History course completed as a major core requirement may not also count toward completion of the 24 major elective units.*

**Arts and Humanities**

ARTS 2A	History of Art (Europe from Prehistory through Early Christianity) (4)
ARTS 2B	History of Art (Europe During Middle Ages/Renaissance) (4)
ARTS 2C	History of Art (Europe from the Baroque Period through Impressionism) (4)
ARTS 2D	History of Art (Europe and the United States/Post-Impressionism) (4)
ARTS 2G	Arts of Asia (4)
ARTS 3TC	Women, Society and the Visual Arts (4)
F/TV 2A	History of Cinema (1895-1950) (4)
F/TV 2B	History of Cinema (1950-Present) (4)
F/TV 42	National Cinemas (4)
HUMI 9	Introduction to Comparative Religion (4)
HUMI 10	Introduction to Western Religions (4)
HUMI 14A	Introduction to Eastern Philosophy (India) (4)
HUMI 14B	Introduction to Eastern Philosophy (China) (4)
HUMI 14C	Introduction to Eastern Philosophy (Japan) (4)
INTL 11	Vietnamese Literature (4)
INTL 13	Introduction to Korean Popular Culture (4)
INTL 15	Introduction to the Arab World (4)
MUSI 1C	Introduction to Music: World Music in America (4)

**Global Environment**

ES 6	Introduction to Environmental Law (4)
ESCI 19	Environmental Biology (5)
ESCI 30	Conservation Biology (4)
GEO 1	Physical Geography (4)

**Globalization Issues**

BUS 21	Business and Society (5)
CIS 2	Computers and Society (4)
POLI 3	International Relations (4)
SOC 1	Introduction to Sociology (4)

**International Business**

BUS 21	Business and Society (5)
BUS 56	Human Relations in Business (5)
BUS 60	International Business Management (5)
BUS 70	Principles of E-Business (5)
BUS 87	Introduction to Selling (4)
BUS 89	Advertising (5)
BUS 90	Principles of Marketing (5)
ECON 2	Microeconomics (4)
POLI 3	International Relations (4)

**World History**

ANTH 4	World Prehistory (4)
HIST 3A	World History (4)
HIST 3B	World History (4)
HIST 3C	World History (4)
HIST 4A	History of Western Civilization (4)
HIST 4B	History of Western Civilization (4)
HIST 4C	History of Western Civilization (4)
HIST 4D	History of Western Civilization (4)
HIST 7A	Colonial Latin American History (4)
HIST 7B	Modern Latin American History (4)
HIST 16A	History of Africa to 1800 (4)
HIST 16B	History of Africa from 1800 to Present (4)
HIST 19A	History of Asian Civilization (4)
HIST 19B	History of Asian Civilization (4)
ICS 37	Ancient People of Mesoamerica (4)
INTL 30	Introduction to Islamic Studies (4)

**World Languages**

ANTH 6	Linguistic Anthropology (4)
ELIT 44	International Literature (Fiction) (4)
LING 1	Introduction to Linguistics (4)
World Lang.	World Language units in addition to Language Requirement above (5-15)

*World Languages offered: Arabic, Cantonese, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Mandarin, Persian, Russian, Spanish, Urdu, Vietnamese*

Major	Global Studies	53-68 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required		90 units

**Graphic and Interactive Design**

**Graphic Design**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ARTS 4A	Beginning Drawing	3
ARTS 4B	Intermediate Drawing	3
ARTS 8	Design	3
ARTS 12	Design and Color	3
ARTS 53A	Introduction to Visual Technology	3
ARTS 55A	Graphic Design-Communication	3
Total Units Required		18

*Recommended*

ARTS 74	Representational Drawing (3)
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† This certificate was submitted for State approval. Please check with the department for the status.

### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Graphic Design Certificate of Achievement	18
ARTS 53B	Introduction to Visual Technology	3
ARTS 55B	Graphic Design-Communication	3
ARTS 55C	Graphic Design-Communication: Production Techniques	3
ARTS 56	Computer-Aided Graphic Design: Electronic Publishing	3
ARTS 57	Graphic Design-Typography	3
ARTS 63	Business Practices for Graphic Designers	3
ARTS 65	Graphic Design for the World Wide Web	3
ARTS 86	Electronic Illustration Techniques	3
	Total Units Required	42

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Graphic Design Certificate of Achievement-Advanced	42 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	.90 units

### Interactive Design

#### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement in Graphic Design plus the following, and meet the corresponding certificate requirements as specified on page 50.

Requirements	Graphic Design Certificate of Achievement	18
ARTS 53B	Introduction to Visual Technology	3
ARTS 55B	Graphic Design-Communication	3
ARTS 55C	Graphic Design-Communication: Production Techniques	3
ARTS 57	Graphic Design-Typography	3
ARTS 63	Business Practices for Graphic Designers	3
ARTS 65	Graphic Design for the World Wide Web	3
ARTS 85	Motion Graphics	3

Complete a minimum of six (6) units from the following:

ARTS 86	Electronic Illustration Techniques (3)	6
ARTS 113A	Web Authoring Software (4)	
ARTS 114A	Web Graphics/Animation Software (Flash) (3)	
CIS 89A	World Wide Web Page Development (3)	
CIS 92C	Advanced World Wide Web Page Development (3)	
F/TV 69	Principles of Animation: Character and Motion (3)	
F/TV 83A	Introduction to 2D Computer Animation (2)	
MUSI 51	Introduction to Electronic Music (3)	
PHTG 1	Basic Photography (3)	
	Total Units Required	45

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced in Interactive Design for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Interactive Design Certificate of Achievement-Advanced	45 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	.90 units

## Health Technologies

### Business Office Clerk

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Prerequisite/Corequisite		
HTEC 50	Introduction to Health Technologies	1
Requirements		
CAOS 70AA*	Elementary Keyboarding I	1 1/2
CAOS 90GA**	Computer Literacy (PC)	2
CAOS 91AM	Word Processing I (Word 2007) or CAOS 91AL	2
CAOS 110M	Database I (Access 2007) or CAOS 110L	2
CAOS 104O	Introduction to Filing	1
HTEC 60A	Basic Medical Terminology	3
HTEC 72	Medical Office Financial Procedures	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 96	Health Technology Externship- Business Office Clerk	4
HTEC 101D	Skill Building in Medical Office Financial Procedures	1
* CAOS 70A may be substituted.		
** May be substituted with another CAOS course of equal or greater unit value.		
	Total Units Required, Including Prerequisite	20 1/2

### Insurance and Coding

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Prerequisite/Corequisite		
HTEC 50	Introduction to Health Technologies	1
Requirements		
BIOL 54G*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54H*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54I*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54J*	Applied Human Anatomy and Physiology	1 1/2
HTEC 60A	Basic Medical Terminology	3
HTEC 60G	Advanced Medical Terminology	2
HTEC 60H	Advanced Medical Terminology	2
HTEC 61	Medical Communications	1 1/2
HTEC 72	Medical Office Financial Procedures	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 96	Health Technology Externship-Coding	4
HTEC 101C	Skill Building in Medical Communications and Transcription	1
HTEC 101D	Skill Building in Medical Office Financial Procedures	1
	Total Units Required, Including Prerequisite	24 1/2

\* The BIOL 40A,B,C series may be substituted for the BIOL 54G, H, I, J series.

#### Recommended

CAOS 104O	Introduction to Filing (1)
CAOS 81H	10-Key and Electronic Calculator (1)
CAOS 90GA	Computer Literacy (PC) (2)
CAOS 70AA	Elementary Keyboarding I (1 1/2)
CAOS 84A	Business English I (2)
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL

† This certificate was submitted for State approval.  
Please check with the department for the status.

## Lab Assisting

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

HTEC 50 Introduction to Health Technologies 1

*Student must present current American Red Cross or American Heart Association First Aid and Adult CPR Pro card to receive certificate.*

#### Requirements

HTEC 60A	Basic Medical Terminology	3
HTEC 60G	Advanced Medical Terminology	2
HTEC 60H	Advanced Medical Terminology	2
HTEC 90G	Basic Patient Care	1 1/2
HTEC 64A	Basic Clinical Lab Procedures	1 1/2
HTEC 64B	Advanced Clinical Lab Procedures (Hematology)	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 91	Medical Office Diagnostic Tests	1 1/2
HTEC 95	Health Technology Externship	3
HTEC 96	Health Technology Externship	4
HTEC 101A	Skill Building in Clinical Lab Procedures	1
HTEC 101B	Skill Building in Basic Patient Care	1
HTEC 101F	Skill Building in Medical Office Diagnostic Tests	1
	Total Units Required, Including Prerequisites . . . . .	25 1/2

#### Recommended

CAOS 90GA	Computer Literacy (PC) (2)
CAOS 70AA	Elementary Keyboarding I (1 1/2)
HLTH 57A	First Aid/Workplace, Community and Wilderness (1)
HLTH 57E	CPR and Automated External Defibrillation (1/2)

## Medical File Clerk

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

HTEC 50 Introduction to Health Technologies 1

#### Requirements

CAOS 70AA*	Elementary Keyboarding I	1 1/2
CAOS 90GA**	Computer Literacy (PC)	2
CAOS 91AM	Word Processing I (Word 2007) or CAOS 91AL	2
CAOS 110M	Database I (Access 2007) or CAOS 110L	2
CAOS 104O	Introduction to Filing	1
HTEC 60A	Basic Medical Terminology	3
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 96	Health Technology Externship-Medical File Clerk	4

\* CAOS 70A may be substituted.

\*\* May be substituted with another CAOS course of equal or greater unit value.

Total Units Required, Including Prerequisite . . . . . 18

## Medical Reception

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisites/Corequisites

HTEC 50 Introduction to Health Technologies 1

*Student must present current American Red Cross or American Heart Association First Aid and Adult CPR Pro card to receive certificate.*

#### Requirements

CAOS 84A	Business English I	2
CAOS 176	Telephone Communications	1
HTEC 60A	Basic Medical Terminology	3
HTEC 61	Medical Communications	1 1/2
HTEC 68	Medical Reception Externship	2
HTEC 71	Medical Office Reception	1
HTEC 72	Medical Office Financial Procedures	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 75	Medical Office Management	1 1/2
HTEC 101C	Skill Building in Medical Communications and Transcription	1
HTEC 101D	Skill Building in Medical Office Financial Procedures	1
HTEC 101G	Skill Building in Medical Office Management	1
	Total Units Required, Including Prerequisites . . . . .	19

#### Recommended

HLTH 57A	First Aid/Workplace, Community and Wilderness (1)
HLTH 57E	CPR and Automated External Defibrillation (1/2)
CAOS 90GA	Computer Literacy (PC) (2)
CAOS 70AA	Elementary Keyboarding I (1 1/2)
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL

## Medical Records Clerk

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

HTEC 50 Introduction to Health Technologies 1

#### Requirements

CAOS 70AA*	Elementary Keyboarding I	1 1/2
CAOS 90GA**	Computer Literacy (PC)	2
CAOS 91AM	Word Processing I (Word 2007) or CAOS 91AL	2
CAOS 110M	Database I (Access 2007) or CAOS 110L	2
CAOS 104O	Introduction to Filing	1
HTEC 60A	Basic Medical Terminology	3
HTEC 71	Medical Office Reception	1
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 96	Health Technology Externship-Medical Records Clerk	4

\* CAOS 70A may be substituted.

\*\* May be substituted with another CAOS course of equal or greater unit value.

Total Units Required, Including Prerequisite . . . . . 19

## Medical Transcription

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

HTEC 50 Introduction to Health Technologies 1

#### Requirements

BIOL 54G*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54H*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54I*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54J*	Applied Human Anatomy and Physiology	1 1/2
HTEC 60A	Basic Medical Terminology	3
HTEC 60G	Advanced Medical Terminology	2

† This certificate was submitted for State approval. Please check with the department for the status.

HTEC 60H	Advanced Medical Terminology	2
HTEC 61	Medical Communications	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 74**	Medical Transcription with Advanced Terminology (1 1/2) (taken three times)	4 1/2
HTEC 96	Health Technology Externship-Medical Transcription	4
	Total Units Required, Including Prerequisite . . . . .	25 1/2

\* The BIOL 40A,B,C series may be substituted for the BIOL 54G, H, I, J series.

\*\* This course may be taken three times (the student will be given different tapes to transcribe in each course)

**Recommended**

HTEC 101C	Skill Building in Medical Communications and Transcription (1)	
CAOS 90GA	Computer Literacy (PC) (2)	
CAOS 70AA	Elementary Keyboarding I (1 1/2)	
CAOS 84A	Business English I (2)	
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL	

**Phlebotomy Technician I**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

**Prerequisites/Corequisites**

HTEC 50	Introduction to Health Technologies	1
CAOS 70AA*	Elementary Keyboarding I	1 1/2
CAOS 90GA**	Computer Literacy (PC)	2
CAOS 91AM**	Word Processing I (Word 2007) or CAOS 91AL	2
HLTH 57A	First Aid in the Workplace, Community and Wilderness	1/2
HLTH 57E	CPR and Automated External Defibrillation	1/2

Student must present current American Red Cross or American Heart Association First Aid and Adult CPR Pro card to receive certificate.

\* CAOS 70A may be substituted.

\*\* May be substituted with another CAOS course of equal or greater unit value.

**Requirements**

HTEC 60A	Basic Medical Terminology	3
HTEC 64A	Basic Clinical Lab Procedures	1 1/2
HTEC 64B	Advanced Clinical Lab Procedures (Hematology)	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 95	Health Technology Externship-Phlebotomy	3
HTEC 101A	Skill Building in Clinical Lab Procedures	1
	Total Units Required, Including Prerequisites . . . . .	19

The Phlebotomy Technician I program has been approved by the California Department of Public Health-Laboratory Field Services.

**Medical Assisting**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

**Prerequisites/Corequisites**

HTEC 50	Introduction to Health Technologies	1
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Student must present current American Red Cross or American Heart Association First Aid and Adult CPR Pro card to receive certificate.

**Requirements**

ACCT 1A	Financial Accounting I	4
BIOL 54G*	Applied Human Anatomy and Physiology	1 1/2

BIOL 54H*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54I*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54J*	Applied Human Anatomy and Physiology	1 1/2
CAOS 84A	Business English I	2
CAOS 104O	Introduction to Filing	1
CAOS 110M	Database I (Access 2007) or CAOS 110L	2

HTEC 60A	Basic Medical Terminology	3
HTEC 60G	Advanced Medical Terminology	2
HTEC 60H	Advanced Medical Terminology	2
HTEC 61	Medical Communications	1 1/2
HTEC 64A	Basic Clinical Lab Procedures	1 1/2
HTEC 64B	Advanced Clinical Lab Procedures (Hematology)	1 1/2
HTEC 68	Medical Reception Externship	2
HTEC 71	Medical Office Reception	1
HTEC 72	Medical Financial Procedures	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 74	Medical Transcription with Advanced Terminology	1 1/2

HTEC 75	Medical Office Management	1 1/2
HTEC 90G	Basic Patient Care	1 1/2
HTEC 90H	Medical Office Sterile Techniques	1 1/2
HTEC 91	Medical Office Diagnostic Tests	1 1/2
HTEC 93	Pharmacology for Medical Assistants	1 1/2
HTEC 94	Administration of Medications	1
HTEC 95	Health Technology Externship-Medical Assisting	3
HTEC 96	Health Technology Externship-Medical Assisting	4
HTEC 110	Health Technologies Employment Preparation	1 1/2
	Total Units Required, Including Prerequisites . . . . .	52

\* The BIOL 40A,B,C series may be substituted for the BIOL 54G, H, I, J series.

**Recommended**

CAOS 90GA	Computer Literacy (PC) (2)	
CAOS 70AA	Elementary Keyboarding I (1 1/2)	
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL	
CAOS 81H	10-Key and Electronic Calculator (1)	
HTEC 101A-G	Skill Building Labs (1 unit each)	
HLTH 57A	First Aid/Workplace, Community and Wilderness (1/2)	
HLTH 57E	CPR and Automated External Defibrillation (1/2)	

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Medical Assisting Certificate of Achievement-Advanced	52 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

**Recommended**

PSYC 1^	General Psychology (4)	
SOC 1^	Introduction to Sociology (4)	
CAOS 81H	10-Key and Electronic Calculator (1)	
CAOS 176	Telephone Communications (1)	

^ Any Psychology or Sociology course will be acceptable. Units may apply toward GE requirement.

† This certificate was submitted for State approval. Please check with the department for the status.

## Medical Secretary

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

#### Prerequisite/Corequisite

HTEC 50	Introduction to Health Technologies	1
<b>Requirements</b>		
ACCT 1A	Financial Accounting I	4
BIOL 54G*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54H*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54I*	Applied Human Anatomy and Physiology	1 1/2
BIOL 54J*	Applied Human Anatomy and Physiology	1 1/2
CAOS 81H	10-Key and Electronic Calculator	1
CAOS 84A	Business English I	2
CAOS 104O	Introduction to Filing	1
CAOS 110M	Database I (Access 2007) or CAOS 110L	2
HTEC 60A	Basic Medical Terminology	3
HTEC 60G	Advanced Medical Terminology	2
HTEC 60H	Advanced Medical Terminology	2
HTEC 61	Medical Communications	1 1/2
HTEC 68	Medical Reception Externship	2
HTEC 71	Medical Office Reception	1
HTEC 72	Medical Office Financial Procedures	1 1/2
HTEC 73	Medical Law and Ethics	1 1/2
HTEC 74	Medical Transcription with Advanced Terminology	1 1/2
HTEC 75	Medical Office Management	1 1/2
HTEC 96	Health Technology Externship-Medical Secretary	4
HTEC 101C**	Skill Building in Medical Communications and Transcription (1,1)	2
HTEC 101D	Skill Building in Medical Office Financial Procedures	1
HTEC 101G	Skill Building in Medical Office Management	1
	<b>Total Units Required, Including Prerequisite</b>	<b>42 1/2</b>

\* The BIOL 40A,B,C series may be substituted for the BIOL 54G, H, I, J series.

\*\* This course must be taken twice.

#### Recommended

CAOS 90GA	Computer Literacy (PC) (2)
CAOS 70AA	Elementary Keyboarding I (1 1/2)
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL
CAOS 176	Telephone Communications (2)

## Intercultural Studies

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ICS 4	Ethnic Identity and Social Stratification	4
ICS 7	Intercultural Communication	4
ICS 9	Studying Race and Ethnicity: Theories and Methods	4
	<i>Complete a minimum of 12 units from the following:</i>	<b>12</b>
ICS 8	Women of Color in the USA (4)	
ICS 10	An Introduction to African American Studies (4)	
ICS 11	The Roots of the African American Experience (4)	

ICS 20	Asian American Experiences in History (4)	
ICS 22	Contemporary Issues in the Asian American Community (4)	
ICS 29	Cultural Pluralism and American Law and Justice (4)	
ICS 30	Introduction to Chicano Studies (4)	
ICS 31	Chicano Culture (4)	
ICS 32	Chicano History (4)	
ICS 43	American Indian History (4)	
ICS 44	American Indian Religious and Philosophical Thought (4)	
	<b>Total Units Required</b>	<b>24</b>

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ICS 4	Ethnic Identity and Social Stratification	4
ICS 5	History of Art (Multicultural Arts in the U.S.)	4
ICS 7	Intercultural Communication	4
ICS 9	Studying Race and Ethnicity: Theories and Methods	4
ICS Electives	Complete eight (8) units of ICS electives listed below (unduplicated by GE Requirements)	8

*Complete one (1) of the three (3) options below:* **16**

#### Option 1: General Multicultural Background

Complete 16 units from three (3) or more of the following categories.

#### Option 2: Two Ethnic Areas

Complete 16 units from two (2) of the following categories.

#### Option 3: One Ethnic Area

Complete 16 units from one (1) of the following categories.

### African American

ICS 10	An Introduction to African American Studies (4)
ICS 11	The Roots of the African American Culture (4)
ICS 12	An Introduction to African American Literature (4)
ICS 14	Cinema and the African American (4) <i>also listed as F/TV 48</i>
ICS 16A	History of Africa to 1800 (4)
ICS 16B	History of Africa from 1800 to Present (4)
ICS 18A	African American History to 1865 (4)
ICS 18B	African American History since 1865 (4)

### Asian American

INTL 19A	History of Asian Civilization: China and Japan (through 18th Century) (4) <i>also listed as HIST 19A</i>
INTL 19B	History of Asian Civilization: China and Japan (through 19th and 20th Centuries) (4) <i>also listed as HIST 19B</i>
ICS 20	Asian American Experiences in History (4)
ICS 21	History of the Chinese in the United States (4)
ICS 22	Contemporary Issues in the Asian American Community (4)

### Chicano

ICS 30	Introduction to Chicano Studies (4)
ICS 31	Chicano Culture (4)
ICS 32	Chicano History (4)
ICS 33	Chicanos and the Arts (4)
ICS 35	Chicano/a Literature (4)

### Latin American

ICS 38A	Colonial Latin American History (4)
ICS 38B	Modern Latin American History (4)

## Multicultural

ICS 3A	World History (4)	
ICS 3B	World History (4)	
ICS 3C	World History (4)	
ICS 6	Multicultural Perspectives in Teaching and Learning (4)	
ICS 8	Women of Color in the U.S.A. (4)	
ICS 17	Critical Consciousness and Social Change (4)	
ICS 29	Cultural Pluralism and American Law and Justice (4)	
ICS 77	Special Projects in Intercultural Studies (1)	
ICS 78	Special Group Projects in Intercultural Studies (1/2)	

## Native American

ICS 41	American Indians Today (4)	
ICS 42	American Indians in California (4)	
ICS 43	American Indian History (4)	
ICS 44	American Indian Religious and Philosophical Thought (4)	
ICS 45	Survey of American Indian Arts (4)	
ICS 46	American Indian Literature (4)	
	Total Units Required . . . . .	40

### A.A. Degree

For the major, complete all requirements for the Certificate of Achievement-Advanced in Intercultural Studies **except** where 16 units are required in Options 1, 2, and 3 above, complete 20 units. Also meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Intercultural Studies Certificate of Achievement-Advanced plus four additional units	44 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Internet Literacy and Research

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50. Contact the department to apply for this Skills Certificate.

CAOS 94	Introduction to Internet and World Wide Web or CIS 94	1
LCEN 50	Introduction to Online Research	1
LCEN 53	Advanced Internet Search Techniques	1
LCEN 55	Emerging Internet Technologies	1
	Complete two (2) courses from the following:	3-4
LCEN 51	Business Resources on the World Wide Web (1)	
CAOS 113I	Web Authoring Software I (Dreamweaver) (2)	
CAOS 113Q	Web Authoring Software II (Dreamweaver) (2)	
	Total Units Required . . . . .	7-8

## Journalism

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Prerequisite		
EWRT 1A	Composition and Reading	
Requirements		
	Complete one (1) course from:	5
EWRT 1B	Reading, Writing, and Research (5)	
EWRT 2	Critical Reading, Writing, and Thinking (5)	

Complete the following:

JOUR 2	Mass Communication and Its Impact on Society	4
JOUR 21A	News Writing and Reporting	3
JOUR 21B	Feature Writing and Reporting	3
JOUR 61	Newspaper and Student Media Staff	3
PHTG 1	Basic Photography	3

Complete one (1) course from:  
JOUR 77 series JOUR 77W, 77X, 77Y, 77Z  
Special Projects in Journalism (1-4) 1-4

Complete one (1) course from:  
JOUR 78 series JOUR 78W, 78X, 78Y, 78Z  
Special Topics in Journalism (1-4) 1-4

Complete a minimum of four (4) units from the following: 4

ARTS 55A	Graphic Design/Communication (3)	
ARTS 65	Graphic Design for the World Wide Web (3)	
CIS 89A	World Wide Web Page Development (3)	
EWRT 65	Literary Magazine (1)	
EWRT 65X	Literary Magazine (2)	
F/TV 20	Basic Digital Film/Video Production	
ICS 7	Intercultural Communication (4) or SPCH 7	

ICS 29	Cultural Pluralism and American Law and Justice (4)	
LCEN 50	Introduction to Online Research (1)	
POLI 1	American Government and Politics (4)	
SPCH 9	Argumentation: Analysis of Oral and Written Communication (5)	

TWRT 61 Introduction to Technical Writing (4)

Major	Journalism	27-33 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Leadership and Social Change

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

SOSC 17	Grassroots Democracy: Leadership and Power or WMST 17	4
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Leadership Skills  
Complete one (1) course from the following: 4-5

BUS 65	Leadership (5)	
E S 66	Environmental Leadership (4)	
E S 67	Environmental Team-Building (4)	
ICS 55	Civic Leadership for Community Empowerment (4)	

Understanding Social Change  
Complete a minimum of four (4) units from the following: 4

ICS 17	Critical Consciousness and Social Change (4) or PHIL 17	
POLI 15	Grassroots Democracy: Race, Culture and Liberation (4) or WMST 15	
POLI 16	Grassroots Democracy: Social Movements Since the 1960s (4) or WMST 16	
SOC 5	Sociology of Globalization and Social Change (4)	

† This certificate was submitted for State approval. Please check with the department for the status.

Complete a minimum of six (6) units from the following:

COOP 53 series COOP 53W, 53X, 53Y, 53Z  
Occupational Volunteer Community  
Service Learning Internship (2-8)

COOP 73 series COOP 73W, 73X, 73Y, 73Z  
General Volunteer Service Learning  
Community Internship (2-8)

ICS 80 series ICS 80, 80W, 80X, 80Y, 80Z  
Community Based Learning in ICS (1/2-4)

LART 80 series LART 80, 80W, 80X, 80Y, 80Z  
Community Based Learning in  
Language Arts (1/2-4)

SOSC 80 series LART 80, 80W, 80X, 80Y, 80Z  
Community Based Learning in  
Social Sciences (1/2-4)

SPCH 60 Facilitating Collaborative  
Communication (4)  
Total Units Required . . . . . 18-19

6 **Persian** 1, 2, 3, 4, 5, 6  
**Philosophy** 1, 2, 3, 4, 5, 7, 8, 9, 14A, 14B, 14C, 20A, 20B,  
20C, 24, 30, 49  
**Photography** 1, 2, 3, 4, 7, 20, 21, 52, 52X, 54, 56A, 56B, 57A,  
57B, 58, 58A, 58B, 65  
**Physical Education (Dance)** 22, 22K, 22L, 23A, 23B, 23H,  
23L, 23M, 24A, 24B, 24C, 25A, 37A, 37B, 49A  
**Russian** 1, 2, 3  
**Sign Language** 1, 2, 3  
**Spanish** 1, 2, 3, 4, 5, 6  
**Speech Communication** 1, 8, 9, 10, 15  
**Theatre Arts** 1, 20A, 20B, 20C  
**Urdu** 1, 2, 3, 4, 5, 6  
**Vietnamese** 1, 2, 3, 4, 5, 6  
**Women's Studies** 3C, 21, 23, 49

Major	Arts and Letters Emphasis	27 units
GE	General Education (31-42 units)	
Electives	Elective courses req'd. when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Liberal Arts

Complete a minimum of 27 units from one (1) of the four (4) emphasis areas below in addition to the A.A. degree General Education requirements. Courses used for the 27-unit major requirement may not be used to satisfy the General Education requirements. See the A.A./A.S. degree requirements as specified on page 50. Students are limited to earning one (1) Liberal Arts degree.

### A.A. Degree (Four Emphasis Options)

#### Arts and Letters Emphasis

**Arabic** 1, 2, 3, 4, 5, 6  
**Arts** 1A, 1B, 2A, 2B, 2C, 2D, 2F, 2G, 2H, 2J, 2K, 2L, 3TC, 3TD, 3TE, 4A, 4B, 4C, 4D, 8, 10A, 10B, 12, 14A, 14B, 14C, 15A, 15B, 15C, 16A, 16B, 16C, 18A, 18B, 18C, 18D, 18E, 19G, 19H, 19I, 19J, 19K, 19M, 19N, 20, 20X, 20Y, 20Z, 37A, 37B, 37C, 50, 51, 53A, 53B, 55A, 55B, 55C, 56, 57, 58A, 58B, 58C, 59, 63, 64, 65, 70, 71, 72, 85, 86  
**Cantonese** 1, 2, 3  
**Dance** 22, 22K, 22L, 23A, 23B, 23H, 23L, 23M, 24A, 24B, 24C, 25A, 27A, 27B, 27C, 27D, 37A, 37B, 38A, 49A  
**Education** 58  
**English as a Second Language** 6  
**English Literature** 1, 3, 4, 5, 6, 10, 11, 12, 15A, 15B, 17, 19, 20, 21, 22, 23, 24, 25, 26, 39, 44, 46A, 46B, 46C, 48A, 48B, 48C, 58, 97  
**English Writing** 1B, 1C, 2, 30, 40, 41, 42, 50  
**Environmental Studies** 3  
**Film and Television** 1, 2A, 2AW, 2B, 2BW, 10, 20, 41, 42, 43, 48, 75K, 85  
**French** 1, 2, 3, 4, 5, 6, 10  
**German** 1, 2, 3, 4, 5, 6  
**Hebrew** 1, 2, 3  
**Hindi** 1, 2, 3  
**History** 4A, 4B, 4C, 4D, 15A, 15B  
**Humanities** 1, 2, 5, 6, 7, 9, 10, 14A, 14B, 14C, 15, 16, 17, 18, 20  
**Intercultural Studies** 5, 11, 12, 14, 24, 33, 35, 44, 45, 46  
**International Studies** 10, 11, 15, 21, 22, 23, 24, 54  
**Italian** 1, 2, 3, 4  
**Japanese** 1, 2, 3, 4, 5, 6  
**Journalism** 2, 21A, 21B  
**Korean** 1, 2, 3, 4, 5, 6  
**Linguistics** 1  
**Mandarin** 1, 2, 3, 4, 5, 6  
**Music** 1A, 1B, 1C, 1D, 3A, 3B, 3C, 4A, 4B, 4C, 5A, 8, 9, 10A, 10B, 12A, 12B, 12C, 13A, 13B, 14A, 14B, 14C, 15A, 15B, 15C, 18, 20, 21, 22, 24, 25G, 25H, 25J, 25K, 25M, 25N, 27A, 27B, 29, 31A, 31B, 31C, 32A, 34, 42, 45, 46, 48, 51, 53, 56, 58A, 58B

## Business and Computer Information

### Systems Emphasis

**Accounting** 1A, 1B, 1C, 51A, 51B, 52, 58, 64, 66, 67A, 67B, 68, 70, 75, 76, 86, 87AH, 87AI, 88, 92  
**Business** 10, 18, 21, 51, 51A, 51B, 51C, 51D, 52, 54, 55, 56, 57, 58, 59, 60, 61, 65, 67A, 67B, 69, 70, 80, 85, 87, 88, 89, 90, 91, 92, 93, 95A, 96A  
**Computer Applications and Office Systems** 94  
**Computer Information Systems** 2, 3, 14A, 14B, 14C, 15AG, 15BG, 15C, 18A, 18B, 18C, 21JA, 21JB, 26A, 26B, 27, 28, 29, 30A, 30B, 31, 33A, 35A, 35B, 50, 53, 57, 61A, 61B, 63, 64A, 64B, 64C, 64D, 66, 67A, 67B, 73, 74, 75A, 75B, 75C, 75D, 75E, 76, 79, 86, 89A, 89C, 92A, 94  
**Economics** 1, 2  
**English Writing** 61  
**Learning Center** 50, 51, 53, 55  
**Math** 1A, 1B, 1C, 10, 11, 12  
**Paralegal Studies** 18, 52A  
**Real Estate** 50, 51, 52A, 53, 54, 56A, 56B, 59, 61  
**Speech Communication** 70  
**Technical Writing** 61

Major	Business and Computer Information Systems Emphasis	27 units
GE	General Education (31-42 units)	
Electives	Elective courses req'd. when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Science, Math and Engineering Emphasis

**Anthropology** 1, 1L  
**Astronomy** 4, 10  
**Biology** 5, 6A, 6B, 6C, 8, 10, 11, 13, 15, 26, 40A, 40B, 40C, 45, 54G, 54H, 54I, 54J  
**Business** 88  
**CAD and Digital Imaging** 51, 58A-L, 59A-L, 60A-F, 61A-F, 62A-F, 67A-L, 69A-L, 70A-F, 71A-F, 72A-F, 73A-F, 74A-F, 75A-F, 76A-F, 77A-F, 79A-F, 80A-F, 81A-F, 82A-L, 83A-L, 88A-L, 89A-L  
**Chemistry** 1A, 1B, 1C, 10, 12A, 12B, 12C, 30A, 30B, 50  
**Computer Applications and Office Systems** 94  
**Computer Information Systems** 2, 3, 14A, 14B, 14C, 15AG, 15BG, 15C, 18A, 18B, 18C, 21JA, 21JB, 26A, 26B, 27, 28, 29, 30A, 30B, 31, 33A, 35A, 35B, 50, 53, 56G, 57, 61A, 61B, 63, 64A, 64B, 64C, 64D, 66, 67A, 67B, 73, 74, 75A, 75B, 75C, 75D, 75E, 76, 79, 89A, 89C, 94  
**Education** 46  
**Engineering** 2, 10, 35, 37, 45, 57

† This certificate was submitted for State approval.  
Please check with the department for the status.

<b>Environmental Science</b>	1, 1L, 19, 20, 21, 30, 81
<b>Environmental Studies</b>	2, 56, 58
<b>Geography</b>	1, 55
<b>Geology</b>	10
<b>Health</b>	21, 51
<b>Math</b>	1A, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 22, 23, 44, 46, 49A, 49B, 51
<b>Meteorology</b>	10, 10L
<b>Nutrition</b>	10
<b>Physical Education</b>	51
<b>Physics</b>	2A, 2B, 2C, 4A, 4B, 4C, 4D, 10, 50
Major	Science, Math and Engineering Emphasis 27 units
GE	General Education (31-42 units)
Electives	Elective courses req'd. when major units plus GE units total is less than 90
	Total Units Required . . . . .90 units

<b>Social and Behavioral Sciences Emphasis</b>	
<b>Administration of Justice</b>	1, 3, 5, 11, 25, 29, 50, 51, 53, 54, 55, 60, 61, 62, 73, 74A, 75, 78, 90A, 95
<b>Anthropology</b>	2, 3, 4, 6, 69
<b>Arts</b>	3TC
<b>Business</b>	21, 80
<b>Career Life Planning</b>	70, 75
<b>Child Development</b>	10G, 10H, 12, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59G, 59H, 60, 61, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 80, 90
<b>Computer Information Systems</b>	2
<b>Economics</b>	1, 2
<b>Education</b>	1, 56, 73, 74
<b>Environmental Studies</b>	1, 2, 3
<b>Geography</b>	1, 4, 10, 55
<b>History</b>	2, 3A, 3B, 3C, 4A, 4B, 4C, 4D, 7A, 7B, 9, 10, 11, 16A, 16B, 17A, 17B, 17C, 18A, 18B, 19A, 19B, 28
<b>Human Development</b>	10, 20, 50, 53
<b>Humanities</b>	13
<b>Intercultural Studies</b>	3A, 3B, 3C, 4, 7, 8, 9, 10, 11, 16A, 16B, 17, 18A, 18B, 20, 22, 28, 29, 30, 31, 32, 37, 38A, 38B, 41, 42, 43, 44, 55
<b>International Studies</b>	5, 8, 13, 19A, 19B, 30, 33
<b>Journalism</b>	2
<b>Paralegal Studies</b>	3, 11, 54, 74A, 75, 90A, 95
<b>Philosophy</b>	10, 17
<b>Political Science</b>	1, 2, 3, 5, 10, 11, 13, 15, 16, 33, 75, 95
<b>Psychology</b>	1, 2, 3, 4, 5, 6, 8, 9, 10G, 10H, 12, 14, 15, 24, 60, 63, 67, 74A
<b>Social Sciences</b>	15, 16, 17, 52G, 52H, 52I, 52J
<b>Sociology</b>	1, 5, 8, 15, 20, 25, 28, 35, 50, 51, 54, 73
<b>Speech Communication</b>	7, 16, 60, 70
<b>Women's Studies</b>	1, 3C, 8, 9, 12, 15, 16, 17, 28, 52G, 52H, 52I, 52J
Major	Social and Behavioral Sciences Emphasis 27 units
GE	General Education (31-42 units)
Electives	Elective courses req'd. when major units plus GE units total is less than 90
	Total Units Required . . . . .90 units

## Management

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

BUS 10	Introduction to Business	5
BUS 57	Human Resource Management	4
BUS 65	Leadership	5
BUS 96A	Principles of Management	5

<i>Complete one (1) course from the following:</i>		5
BUS 18	Business Law I (5)	
BUS 52	Supervision in the Public Sector (5)	
BUS 55	Introduction to Entrepreneurship (5)	
BUS 56	Human Relations in Business (5)	
BUS 60	International Business Management (5)	
	Total Units Required . . . . .	24

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

BUS 10	Introduction to Business	5
BUS 18	Business Law I	5
BUS 21	Business and Society	5
BUS 56	Human Relations in Business	5
BUS 57	Human Resource Management	4
BUS 60	International Business Management	5
BUS 65	Leadership	5
BUS 96A	Principles of Management	5

*Complete a minimum of 14 units from the following:* 14

BUS 54	Business Mathematics (5)	
BUS 55	Introduction to Entrepreneurship (5)	
BUS 58	The Business Plan (3)	
BUS 70	Principles of E-Business (5)	
BUS 87	Introduction to Selling (4)	
BUS 90	Principles of Marketing (5)	
ACCT 1A	Financial Accounting I (4)	
COOP 51 series	COOP 51, 51W, 51X	

Occupational Work Experience (1-4)

*Note: Four (4) units in COOP courses may apply.*

ECON 1	Principles of Macroeconomics (4)	
SPCH 16	Interpersonal Communication (4)	14

Major	Management	53 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required . . . . .	90 units

## Manufacturing and Computer-Aided Numerical Control (CNC)

### CAD/CAM–Mastercam

#### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

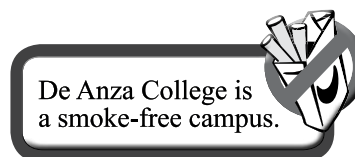
Contact the department to apply for this Skills Certificate.

<i>Complete one (1) course from:</i>		4 1/2
MCNC 76A - 76E series (introductory)	(4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam		

<i>Complete one (1) course from:</i>		4 1/2
MCNC 76F - 76K series (4 1/2 each)		
CAD/CAM Based CNC Programming Using Mastercam		

<i>Complete one (1) course from:</i>		4 1/2
MCNC 76L - 76Q series (4 1/2 each)		
Advanced CAD/CAM Based CNC Programming Using Mastercam		

Total Units Required . . . . . 13 1/2



## CNC Machine Operator

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

MCNC 71	Introduction to Machining and CNC Processes	4 1/2
MCNC 75A	Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation: Mills	4 1/2
MCNC 75B	Computer-Aided Numerical Control (CNC) Programming and Operation: Lathes, Advanced Mills	4 1/2
	Total Units Required	13 1/2

## CNC Machinist

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete two (2) units from: 2

MCNC 56	Special Projects in Manufacturing and CNC (1)	
MCNC 56X	Special Projects in Manufacturing and CNC (2)	

Complete the following:

MCNC 64	Manufacturing Materials and Processes	4
MCNC 71	Introduction to Machining and CNC Processes	4 1/2
MCNC 72	Applied Geometric Inspection Dimensioning and Tolerancing; Coordinate Measuring Machines	3
MCNC 75A	Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation: Mills	4 1/2
MCNC 75B	Computer-Aided Numerical Control (CNC) Programming and Operation: Lathes, Advanced Mills	4 1/2
MCNC 75C	CNC Lathes and Horizontal Machining Centers; Programming and Operation, 4th Rotary Axis, Fixture Design	4 1/2

Complete one (1) course from: 4 1/2

MCNC 76A - 76E series (introductory) (4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam	

Complete one (1) course from: 4 1/2

MCNC 76F - 76K series (4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam	

Complete one (1) course from: 4 1/2

MCNC 76L - 76Q series (4 1/2 each)	
Advanced CAD/CAM Based CNC Programming Using Mastercam	

Total Units Required . . . . . 40 1/2

### A.S. Degree

*This degree was submitted for State approval. Please check with the department for the status.*

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for CNC Machinist Certificate of Achievement-Advanced	40 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	.90 units

## CNC Research and Development Machinist

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

MCNC 64	Manufacturing Materials and Processes	4
MCNC 71	Introduction to Machining and CNC Processes	4 1/2
MCNC 72	Applied Geometric Inspection Dimensioning and Tolerancing; Coordinate Measuring Machines	3
MCNC 75A	Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation: Mills	4 1/2
MCNC 75B	Computer-Aided Numerical Control (CNC) Programming and Operation: Lathes, Advanced Mills	4 1/2
MCNC 75C	CNC Lathes and Horizontal Machining Centers; Programming and Operation, 4th Rotary Axis, Fixture Design	4 1/2
MCNC 77	Conventional Machine Tools, Tool Design, Abrasive Machining	4 1/2
AUTO 53A	Automotive Mechanisms	3
AUTO 53B	Electromechanical Systems	2

Complete one (1) course from: 4 1/2

MCNC 76A - 76E series (introductory) (4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam	

Complete one (1) course from: 4 1/2

MCNC 76F - 76K series (4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam	

Complete one (1) course from: 4 1/2

MCNC 76L - 76Q series (4 1/2 each)	
Advanced CAD/CAM Based CNC Programming Using Mastercam	

Total Units Required . . . . . 48

### A.S. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for CNC Research and Development Machinist Certificate of Achievement-Advanced	48 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required	.90 units

## Manufacturing Systems Technician

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

AUTO 53A	Automotive Mechanisms	3
AUTO 53B	Electromechanical Systems	2
MCNC 64	Manufacturing Materials and Processes	4
MCNC 71	Introduction to Machining and CNC Processes	4 1/2
MCNC 75A	Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation: Mills	4 1/2
MCNC 77	Conventional Machine Tools, Tool Design, Abrasive Machines	4 1/2
	Total Units Required	22 1/2

† This certificate was submitted for State approval. Please check with the department for the status.

## Product Model Making

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

ARTS 10A	Three Dimensional Design and Lab	3
ARTS 10B	Advanced Three Dimensional Design and Lab	3
MCNC 64	Manufacturing Materials and Processes	4
MCNC 71	Introduction to Machining and CNC Processes	4 1/2
MCNC 75A	Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation: Mills	4 1/2
MCNC 75B	Computer-Aided Numerical Control (CNC) Programming and Operation: Lathes, Advanced Mills	4 1/2

<i>Complete one (1) course from one (1) of these series:</i>		4
CDI 60A-F	SolidWorks (Beginning) (4)	
CDI 70A-F	Pro/ENGINEER (Beginning) (4)	
<i>Complete one (1) course from:</i>		4 1/2
MCNC 76A - 76E series	(introductory) (4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam		
<i>Complete one (1) course from:</i>		4 1/2
MCNC 76F - 76K series	(4 1/2 each)	
CAD/CAM Based CNC Programming Using Mastercam		
<i>Complete one (1) course from:</i>		4 1/2
MCNC 76L - 76Q series	(4 1/2 each)	
Advanced CAD/CAM Based CNC Programming Using Mastercam		
Total Units Required . . . . .		41

### A.S. Degree

Complete the requirements listed for the Certificate of Achievement-Advanced for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Major	Requirements for Product Model Making Certificate of Achievement-Advanced	41 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Marketing Management

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

BUS 10	Introduction to Business	5
BUS 87	Introduction to Selling	4
BUS 89	Advertising	5
BUS 90	Principles of Marketing	5
<i>Complete one (1) course from the following:</i>		3-5
ACCT 1A	Financial Accounting I (4)	
BUS 18	Business Law I (5)	
BUS 54	Business Mathematics (5)	
BUS 56	Human Relations in Business (5)	
BUS 59	Promoting Your Small Business (5)	
BUS 60	International Business Management (5)	
BUS 65	Leadership (5)	
BUS 70	Principles of E-Business (5)	
BUS 93	Consumer Behavior (3)	
BUS 96A	Principles of Management (5)	
Total Units Required . . . . .		22-24

### Certificate of Achievement-Advanced

Complete the following and meet the corresponding certificate requirements as specified on page 50.

BUS 10	Introduction to Business	5
BUS 87	Introduction to Selling	4

BUS 89	Advertising	5
BUS 90	Principles of Marketing	5
<i>Complete five (5) courses from the following:</i>		22-25
ACCT 1A	Financial Accounting I (4)	
BUS 18	Business Law I (5)	
BUS 54	Business Mathematics (5)	
BUS 56	Human Relations in Business (5)	
BUS 59	Promoting Your Small Business (5)	
BUS 60	International Business Management (5)	
BUS 65	Leadership (5)	
BUS 70	Principles of E-Business (5)	
BUS 93	Consumer Behavior (3)	
BUS 96A	Principles of Management (5)	
Total Units Required . . . . .		41-44

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ACCT 1A	Financial Accounting I	4
BUS 10	Introduction to Business	5
BUS 18	Business Law I	5
BUS 54	Business Mathematics	5
BUS 60	International Business Management	5
BUS 87	Introduction to Selling	4
BUS 89	Advertising	5
BUS 90	Principles of Marketing	5
BUS 96A	Principles of Management	5

<i>Complete a minimum of nine (9) units from the following:</i>		9
BUS 21	Business and Society (5)	
BUS 56	Human Relations in Business (5)	
BUS 57	Human Resource Management (4)	
BUS 59	Promoting Your Small Business (5)	
BUS 65	Leadership (5)	
BUS 70	Principles of E-Business (5)	
BUS 85	Business Communication (3)	
BUS 93	Consumer Behavior (3)	
SPCH 16	Interpersonal Communication (4)	
COOP 51 series	COOP 51, 51W, 51X	
Occupational Work Experience (1-4)		
<i>Note: Up to four (4) units of COOP may apply.</i>		
Major	Marketing Management	52 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Massage Therapy

### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

<i>Students must present current First Aid and CPR cards to receive a certificate in Massage Therapy.</i>		
BIOL 40A	Human Anatomy and Physiology (84 hours)	5
P E 11	Stretching (24 hours)	1/2
P E 53	Stress Management (24 hours)	2
P E 54	Introduction to Massage (72 hours)	4
P E 54A	Intermediate Massage (60 hours)	3
P E 54B	Sports Massage (60 hours)	3
P E 54C	Advanced Massage Skills (72 hours)	4
P E 54D	Clinical Practicum in Massage Therapy (84 hours)	3
P E 54T	Internship in Massage Therapy (36 hours)	1
Total Units Required		
(516 hours minimum) . . . . .		25 1/2

† This certificate was submitted for State approval. Please check with the department for the status.

### Certificate of Achievement-Advanced

Complete the requirements listed for the Certificate of Achievement plus the following, and meet the corresponding certificate requirements as specified on page 50.

*Student must present current First Aid and CPR cards to receive a certificate in Massage Therapy.*

Requirements	Massage Therapy	
	Certificate of Achievement	25 1/2
BIOL 40B	Human Anatomy and Physiology (84 hours)	5
P E 54E	Table Shiatsu (72 hours)	4
P E 85	Exercise Science (24 hours)	2
P E 85M	Introduction to Athletic Injuries (48 hours)	2
	<i>Complete two (2) units of internship (72 hours) in addition to the one (1) unit of internship required for the Certificate of Achievement.</i>	2
P E 54T	Internship in Massage Therapy (1) (36 hours)	
P E 54U	Internship in Massage Therapy (2) (72 hours)	
	<i>Complete a minimum of four (4) units from the following:</i>	4
BUS 55	Introduction to Entrepreneurship (5) (60 hours)	
NUTR 62	Nutrition and Athletic Performance (2) (24 hours)	
P E 2Q	Tai Chi (1/2) (24 hours)	
P E 35	Care and Prevention of Athletic Injuries (4) (72 hours)	
P E 54F	Introduction to Chair Massage (3) (60 hours)	
	Total Units Required (876 hours minimum) . . . . .	44 1/2

### A.A. Degree

Complete the requirements listed for the Certificate of Achievement plus the following for the major, and meet the A.A./A.S. degree requirements as specified on page 50.

*Student must present current First Aid and CPR cards to receive a degree in Massage Therapy.*

Requirements	Massage Therapy	
	Certificate of Achievement	25 1/2
BIOL 40B	Human Anatomy and Physiology (84 hours)	5
P E 54E	Table Shiatsu (72 hours)	4
P E 54F	Chair Massage (60 hours)	3
P E 85	Exercise Science (24 hours)	2
P E 85M	Introduction to Athletic Injuries (48 hours)	2
	<i>Complete three (3) units of internship (108 hours) in addition to the one (1) unit of internship required for the Certificate of Achievement.</i>	3
P E 54T	Internship in Massage Therapy (1) (36 hours)	
P E 54U	Internship in Massage Therapy (2) (72 hours)	
P E 54V	Internship in Massage Therapy (3) (108 hours)	
P E 54W	Internship in Massage Therapy (4) (144 hours)	
	<i>Complete a minimum of 7 1/2 units from the following:</i>	7 1/2
BIOL 40C	Human Anatomy and Physiology (5) (84 hours)	
BUS 55	Introduction to Entrepreneurship (5) (60 hours)	
NUTR 62	Nutrition and Athletic Performance (2) (24 hours)	
P E 2Q	Tai Chi (1/2) (24 hours)	
P E 35	Care and Prevention of Athletic Injuries (4) (72 hours)	
P E 85A	Personal Fitness Trainer (2) (42 hours)	
Major	Massage Therapy	52 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
	Total Units Required (1,020 hours minimum) . . . . .	90 units

† This certificate was submitted for State approval. Please check with the department for the status.

## Medical Assisting

*(See Health Technologies.)*

## Medical Laboratory Technology

### Certificate of Achievement-Advanced

*Note: to receive the Medical Laboratory Technology Certificate of Achievement-Advanced, the student must have an A.A./A.S. degree or higher.*

Complete the following and meet the corresponding certificate requirements as specified on page 50.

**Complete prerequisites and requirements with a "C" grade or better.**

#### Prerequisites

*State of California Phlebotomy Certification*

*Complete one (1) of the following sequences:* 15-18

BIOL 40A	Human Anatomy and Physiology (5)
BIOL 40B	Human Anatomy and Physiology (5)
BIOL 40C	Human Anatomy and Physiology (5)

or

BIOL 6A	Form and Function in the Biological World (6)
BIOL 6B	Cell and Molecular Biology (6)
BIOL 6C	Evolution and Ecology (6)

*Complete the following:*

BIOL 26	Introductory Microbiology	6
CHEM 30A	Survey of Chemistry	5
CHEM 30B	Survey of Chemistry	5
	Prerequisite Units Required . . . . .	31-34

#### Requirements

HTEC 80A	Clinical Hematology Lecture	4 1/2
HTEC 80	Clinical Hematology Laboratory	1 1/2
HTEC 81A	Clinical Urinalysis Lecture	1 1/2
HTEC 81	Clinical Urinalysis Laboratory	3/4
HTEC 82A	Clinical Coagulation Lecture	1 1/2
HTEC 82	Clinical Coagulation Laboratory	3/4
HTEC 83A	Clinical Microbiology Lecture	4 1/2
HTEC 83	Clinical Microbiology Laboratory	1 1/2
HTEC 84A	Clinical Immunology/Immuno-hematology Lecture	4 1/2
HTEC 84	Clinical Immunology/Immuno-hematology Laboratory	1 1/2
HTEC 85C	Clinical Chemistry I Lecture	4 1/2
HTEC 85A	Clinical Chemistry I Laboratory	1 1/2
HTEC 85D	Clinical Chemistry II Lecture	4 1/2
HTEC 85B	Clinical Chemistry II Laboratory	1 1/2
HTEC 180	Clinical Hematology/Urinalysis/Coagulation Practicum	6
HTEC 183	Clinical Microbiology Practicum	6
HTEC 184	Clinical Immunology/Immuno-hematology Practicum	4 1/2
HTEC 185	Clinical Chemistry Practicum	6
	Total Units Required, Including Prerequisites . . . . .	88-91

### A.A. Degree

- 1) For the major, complete all of the prerequisites and requirements listed for the Medical Laboratory Technology Certificate of Achievement-Advanced (see above).
- 2) Meet De Anza's A.A./A.S. degree requirements as specified on page 50.

# Music

## A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

### Advisory

MUSI 10A or qualifying score on the Music placement examination. Music placement examination offered upon request or during first day of class in MUSI 3A.

### Requirements

MUSI 3A	Comprehensive Musicianship	4
MUSI 3B	Comprehensive Musicianship	4
MUSI 3C	Comprehensive Musicianship	4
MUSI 4A	Comprehensive Musicianship II	4
MUSI 4B	Comprehensive Musicianship II	4
MUSI 4C	Comprehensive Musicianship II	4

*NOTE: MUSI 3A offered Fall and Winter quarters only, MUSI 3B and 3C offered Winter and Spring quarters only.*

Complete one (1) course from the series: 1 1/2  
 MUSI 25G-N Performance Workshop (1 1/2 ea.)  
 (Select the appropriate one.)

Complete one (1) course from the following: 4  
 MUSI 1A Introduction to Music: Western Cultures (4)  
 MUSI 1B Introduction to Music: Jazz Styles (4)  
 MUSI 1C Introduction to Music: World Music (4)  
 MUSI 1D Introduction to Music: Rock - from  
 Roots to Rap (4)

Complete a minimum of 12 units from the following  
 (choral or instrumental): 12

MUSI 15A	Guitar Ensemble I (2)
MUSI 15B	Guitar Ensemble II (2)
MUSI 15C	Guitar Ensemble III (2)
MUSI 20	De Anza Chorale (2)
MUSI 21	Vintage Singers (2)
MUSI 22	Early Music Rehearsal and Performance (1)
MUSI 24	De Anza Women's Chorus (1 1/2)
MUSI 27A	Vocal Jazz Ensemble I (1 1/2)
MUSI 27B	Vocal Jazz Ensemble II (2)
MUSI 27C	Vocal Jazz Ensemble III (3)
MUSI 27D	Vocal Jazz Ensemble IV (4)
MUSI 31A	Chamber Orchestra (2)
MUSI 31B	Chamber Orchestra (2)
MUSI 31C	Chamber Orchestra (2)
MUSI 34	Jazz Ensemble (2)
MUSI 42	Symphonic Wind Ensemble (2)

Complete a minimum of five (5) units from the following which  
 do not duplicate those chosen from the lists above: 5

MUSI 1A	Introduction to Music: Western Cultures (4)
MUSI 1B	Introduction to Music: Jazz Styles (4)
MUSI 1C	Introduction to Music: World Music (4)
MUSI 1D	Introduction to Music: Rock - from Roots to Rap (4)
MUSI 5A	Modal Counterpoint (3)
MUSI 8	Intermediate Electronic Music (3)
MUSI 9	Jazz Piano (2)
MUSI 12A	Class Piano I (1 1/2)
MUSI 12B	Class Piano II (1 1/2)
MUSI 12C	Class Piano III (1 1/2)
MUSI 13A	Beginning Singing I (1 1/2)
MUSI 13B	Beginning Singing II (1 1/2)
MUSI 14A	Beginning Classical Guitar (1 1/2)
MUSI 14B	Intermediate Classical Guitar (1 1/2)
MUSI 14C	Advanced Guitar (1 1/2)
MUSI 18	Intermediate Piano (1 1/2)
MUSI 25G-N	Performance Workshop series (1 1/2 ea.)
MUSI 32A	Jazz Solo Voice (1 1/2)

MUSI 32B	Jazz Solo Voice II (2 1/2)	
MUSI 46	Beginning Winds and Percussion (1 1/2)	
MUSI 48	Jazz Improvisation (1 1/2)	
MUSI 51	Introduction to Electronic Music (3)	
MUSI 53	The Music Business (3)	
MUSI 58A	African and African-Influenced Percussion and Rhythms (1 1/2)	
MUSI 58B	Intermediate African and African-Influenced Percussion and Rhythms (1 1/2)	
Major	Music	46 1/2 units
GE	General Education (31-42 units)	
Electives	Elective courses req'd. when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Nursing Programs

### LVN Transition to Registered Nurse and Registered Nurse

#### A.S. Degree Requirements for Nursing Programs

Visit the Counseling Center to apply for the degree and for academic planning assistance.

See the Nursing Program Web site for application guidelines and materials at [www.deanza.edu/nursing](http://www.deanza.edu/nursing).

1. Completion of a minimum of 90 quarter units of college credit, of which:
  - A minimum of 24 quarter units must be earned at De Anza College.
  - A maximum of 22 quarter units from another institution may be applied toward the MAJOR.
2. Completion of General Education requirements for Nursing A.S. degree students with a minimum 2.0 GPA ("C" average).
3. Completion of all De Anza courses must be with a minimum 2.0 GPA ("C" average), and all De Anza courses combined with courses transferred from other colleges or universities must be with minimum 2.0 GPA ("C" average).

For the Nursing programs, completion of all major requirements with a letter grade of "C" grade or better is required. Major requirement courses can also be used to satisfy GE requirements.

### Licensed Vocational Nurse

#### Transition to Registered Nurse

##### A.S. Degree

*Admission to the program is limited. The Licensed Vocational Nurse (LVN) Transition to Registered Nurse (RN) Program is a minimum of three (3) quarters in length, not including summer. LVN Transition to RN students enter the Registered Nursing program as advanced placement students as determined by the Executive Head of the Nursing Program. The majority of courses are held in the daytime.*

##### Admission Criteria

Admission to the program is limited and based on the following:

- Completion of all prerequisites with the minimum grade requirements specified below.
- Completion of a nursing program application.
- Participation in the random selection process.
- Current California Vocational Nurse License.
- Intravenous Certification.
- Evidence of good health.
- Background check and drug testing prior to entry into the program. Clinical sites may limit student participation depending on findings, which may prevent the student from completing the graduation requirements.

##### Prerequisites

Complete with a "C" grade or better:

ANTH 2	Cultural Anthropology (4)	
or		
SOC 1	Introduction to Sociology (4)	4
MATH 114	Intermediate Algebra	5

† This certificate was submitted for State approval. Please check with the department for the status.

Complete the following with a "C" grade or better and a minimum combined grade point average (GPA) of 3.0 ("B" average):

BIOL 26^	Introductory Microbiology	6
BIOL 40A^	Human Anatomy and Physiology	5
BIOL 40B^	Human Anatomy and Physiology	5
BIOL 40C^	Human Anatomy and Physiology	5
BIOL 45^	Nutrition for the Health Professions	4
EWRT 1A	Composition and Reading (5)	
or		
ESL 5*	ESL: Advanced Composition and Reading (5)	5
PSYC 1	General Psychology	4
PSYC 14	Developmental Aspects of Psychology	4
SPCH 1	Public Speaking (4)	
or		
SPCH 10	Fundamentals of Oral Communication (4)	4
	Prerequisite Units Required . . . . .	51

^ Course must be completed within seven (7) years of nursing program admission screening.

\* ESL 5 restricted to students whose native language is not English.  
Note: BIOL 40A, B, C were formerly BIOL 47A, B, C, and BIOL 45 was formerly NUTR 58.

**Requirements**

Admitted students complete the major courses and General Education requirements to earn the degree.

**Major Requirements\***

Complete with a "C" grade or better:

NURS 85A	Psychiatric/Mental Health Nursing	2
NURS 85AL	Psychiatric/Mental Health Nursing (Clinical)	2 1/2
NURS 85	Advanced Medical/Surgical Concepts	2
NURS 85L	Advanced Medical/Surgical Concepts (Clinical)	2 1/2
NURS 86	Leadership/Management in Nursing	2
NURS 86L	Leadership/Management in Nursing (Clinical)	5
	Total Units Required,	
	Including Prerequisites . . . . .	67

**Recommended**

NURS 150W, Nursing Laboratory Skills

\* Fewer or more major courses from the RN curriculum may be required at the discretion of the Executive Head of the Nursing program depending on the student's previous education.

**A.S. Degree General Education Requirements**

Complete with a minimum 2.0 GPA:

- Area C - Arts and Humanities
- Intercultural Studies - one course taken in Area C or D
- Area E - Physical Education, Development and Performance: one (1) unit required

Note: A.S. Degree General Education Areas A, B, and D are satisfied through completion of the prerequisites and major courses.

**Registered Nurse (RN)**

**A.S. Degree**

Admission to the program is limited. The RN Program starts every quarter except summer quarter and is six (6) quarters in length. Nursing classes are generally not offered in the summer. The majority of courses are held in the daytime.

**Admission Criteria**

Admission to the program is limited and based on the following:

- Completion of all prerequisites with the minimum grade requirements specified below.
- Completion of a nursing program application.
- Participation in the random selection process.
- Evidence of good health.

- Background check and drug test (two times each): once each prior to entry into the program and once each prior to beginning Quarter 4 of the program. Clinical sites may limit student participation depending on findings, which may prevent the student from completing the graduation requirements.

**Prerequisites**

Complete with a passing grade of "C" or better/"P"(Pass):

NURS 50	Career Opportunities in Nursing	2
MATH 114	Intermediate Algebra	5

The following prerequisites for the Registered Nursing Program will be used for screening and admission into the RN Program.

Complete the following with a "C" grade or better and a minimum combined GPA of 3.0 ("B" average):

BIOL 26^	Introductory Microbiology	6
BIOL 40A^	Human Anatomy and Physiology	5
BIOL 40B^	Human Anatomy and Physiology	5
BIOL 40C^	Human Anatomy and Physiology	5
BIOL 45^	Nutrition for the Health Professions	4
EWRT 1A	Composition and Reading (5)	
or		
ESL 5*	ESL: Advanced Composition and Reading (5)	5
PSYC 1	General Psychology	4
PSYC 14	Developmental Aspects of Psychology	4
SPCH 1	Public Speaking (4)	
or		
SPCH 10	Fundamentals of Oral Communication (4)	4

^ Course must be completed within seven (7) years of nursing program admission screening.

\* ESL 5 restricted to students whose native language is not English.  
Note: BIOL 40A, B, C were formerly BIOL 47A, B, C, and BIOL 45 was formerly NUTR 58.

**Conditional Requirement**

Complete one (1) of the following courses with a "C" grade or better and before or during the first quarter of the RN Program:

ANTH 2	Cultural Anthropology (4)	
or		
SOC 1	Introduction to Sociology (4)	4
	Prerequisite Units Required . . . . .	53

**Requirements**

Admitted students complete the major courses and General Education requirements to earn the degree.

**Major Requirements**

Complete with a "C" grade or better:

NURS 81	Fundamental Nursing (Non Acute/ Sub Acute Care)	4
NURS 81L	Fundamental Nursing (Non Acute/ Sub Acute Care Clinical)	5
NURS 81P	Pharmacology I	1 1/2
NURS 82	Acute Fundamentals/Medical Surgical I	4
NURS 82L	Acute Fundamentals/Medical Surgical I (Clinical)	5
NURS 82P	Pharmacology II	1 1/2
NURS 83	Perinatal Nursing	2
NURS 83L	Perinatal Nursing (Clinical)	2 1/2
NURS 83A	Pediatric Nursing	2
NURS 83AL	Pediatric Nursing (Clinical)	2 1/2
NURS 83P	Pharmacology III	1 1/2
NURS 83PL	Pharmacology III Lab	1/2
NURS 84	Medical/Surgical II (Care of the Older Adult)	4
NURS 84L	Medical/Surgical II (Care of the Older Adult Clinical)	5
NURS 84C	Critical Thinking in Nursing	2
NURS 85	Advanced Medical/Surgical Concepts	2

NURS 85L	Advanced Medical/ Surgical Concepts (Clinical)	2 1/2
NURS 85A	Psychiatric/Mental Health Nursing	2
NURS 85AL	Psychiatric/Mental Health Nursing (Clinical)	2 1/2
NURS 86	Leadership/Management in Nursing	2
NURS 86L	Leadership/Management in Nursing (Clinical)	5
	Total Units Required, Including Prerequisites . . . . .	111

*Recommended*

NURS 150,150W Nursing Laboratory Skills (1/2-1)

**A.S. Degree General Education Requirements**

Complete with a minimum 2.0 GPA:

- Area C - Arts and Humanities
- Intercultural Studies - one course taken in Area C or D
- Area E - Physical Education, Development and Performance: one (1) unit required

Note: A.S. Degree General Education Areas A, B, and D are satisfied through completion of the prerequisites and major courses.

**Additional Information**

**California Nursing Assistants**

Students with a current California Nursing Assistant Certificate who complete the required criteria for entrance into the Registered Nursing Program and are admitted to the program may take the following courses in place of NURS 81 and NURS 81L at the discretion of the Executive Head of the Nursing Program:

NURS 81N	CNA Transition (Non Acute/Sub Acute Care) (3)
NURS 81NL	CNA Transition (Non Acute/Sub Acute Care Clinical) (2)

**Advanced placement due to prior nursing education**

The student must first complete the screening requirements for entrance into the Registered Nursing Program and be admitted to the program. Placement is done on a space-available basis only after equivalency of previous nursing education has been evaluated by the Executive Head of the Nursing Program.

For LVN students transitioning to the RN Program, see the LVN Transition to RN section.

**District Non-Discrimination Policy**

It is the policy of the Foothill-De Anza Community College District not to discriminate on basis of race, sex, physical handicap, religion, color, creed, national origin, sexual orientation or age in any of its educational and employment programs and activities, its policies, practices and procedures.

See the Nursing Program Web site for application guidelines and materials at [www.deanza.edu/nursing](http://www.deanza.edu/nursing).

**Paralegal Studies**

**Information for Paralegal Studies Students**

The Paralegal Studies Program at De Anza College is approved by the American Bar Association. The primary goal of the program is to educate students for positions as paralegals where they can demonstrate the competency and ethical standards demanded of the profession. The program's specific objectives are:

1. Provide paralegal students with a well-rounded, balanced education founded on a beneficial mix of general education and legal education including theory and practical courses, and stressing understanding and reasoning rather than rote learning of facts.
2. Develop in paralegal students an understanding of the basic organization and operation of the federal and California state legal systems.
3. Promote the development of paralegals who understand and appreciate the role of and ethical responsibilities of paralegals in the legal field.

4. Develop in paralegal students the following practical skills:
  - a. Written and oral communication skills
  - b. Ability to do basic legal research, including computer assisted legal research, demonstrating familiarity with both federal and state research tools
  - c. Ability to do basic legal writing including office correspondence, interoffice memoranda and memoranda of law
  - d. In-depth knowledge and ability to function in the area of civil litigation including the ability to draft documents such as pleadings and motions
  - e. Sufficient familiarity in one or more areas of law to function as a paralegal working in that substantive area

Paralegal graduates cannot give legal advice, appear in court, or otherwise engage in the unauthorized practice of law. The practice of law by non-attorneys is strictly prohibited by law.

**Certificate of Achievement-Advanced**

For a Certificate of Achievement-Advanced, students must have an A.A./A.S. degree or higher, complete the required 46 units listed below for the Paralegal Studies A.A. Degree, and meet the corresponding certificate requirements as specified on page 50.

**A.A. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

PARA 86	Legal Analysis	4
PARA 88	The Paralegal and Professional Responsibility	2
PARA 92A	Partnerships and Corporations	4
PARA 94	Introduction to California Law	4
PARA 95	Overview of American Law	4
PARA 96A	Introduction to Legal Research and Writing	4
PARA 97A	Civil Litigation Procedures	4
PARA 97B	Advanced Civil Litigation Procedures	4
Complete a minimum of 12 units from these major elective courses:		12
PARA 65 series	PARA 65, 65W, 65X, 65Y, 65Z Current Paralegal Topics (1/2-4)	
PARA 84	Trial Preparation (4)	
PARA 85	Intellectual Property Law (4)	
PARA 87	Personal Injury and Tort Litigation (4)	
PARA 89	Landlord Tenant Law (4)	
PARA 91A	California Family Law (4)	
PARA 92B	Corporate Securities Regulations (4)	
PARA 93	Bankruptcy Law (4)	
PARA 96B	Advanced Legal Research and Writing (4)	
PARA 96C	Computer Assisted Legal Research/Investigation (4)	
PARA 98	Drafting Wills and Trusts (4)	
PARA 99	California Probate Law and Procedures (4)	



† This certificate was submitted for State approval. Please check with the department for the status.

Complete a minimum of four (4) additional units from the above major elective course list or the following courses:		4
ADMJ 25	Law and Social Change (4)	
ADMJ 61	Criminal Investigation (4)	
CAOS 91AM	Word Processing I (Word 2007) (2) or CAOS 91AL	
CAOS 91BM	Word Processing II (Word 2007) (2) or CAOS 91BL	
ES 60	Environmental Law (4)	
ICS 29	Cultural Pluralism and American Law and Justice (4)	
LCEN 51	Business Resources on the World Wide Web (1)	
PARA 3	Concepts of Criminal Law (5)	
PARA 11	Federal Courts and Constitutional Law (4)	
PARA 18	Business Law I (5)	
PARA 52A	Legal Aspects of Real Estate in California I (4)	
PARA 54	Youth and the Law (4)	
PARA 64 series	PARA 64, 64X, 64Y, 64Z Paralegal Internship (1-4)	
PARA 69	Paralegal Field Trips (3)	
PARA 74A	Interviewing, Interrogation and Crisis Intervention (4)	
PARA 75	Principles and Procedures of the Justice System (4)	
PARA 90A	Legal Aspects of Evidence (4)	
Major	Paralegal Studies	46 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Personal Fitness Trainer

### Skills Certificate

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Contact the department to apply for this Skills Certificate.

Current CPR certification required when applying for the certificate.

P E 85	Exercise Science	2
P E 85A	Personal Fitness Trainer	2
P E 85S	Fitness Assessment for Personal Trainers	3
P E 77X	Special Projects	1
NUTR 62	Nutrition and Athletic Performance	2
Complete a minimum of two (2) units from the following:		2
P E 35	Care and Prevention of Athletic Injuries (4)	
P E 53	Stress Management (2)	
P E 54	Introduction to Massage (4)	
P E 85M	Introduction to Athletic Injuries (2)	
NUTR 10	Contemporary Nutrition (4)	
NUTR 62G	Dieting (Sifting Fact from Fiction) (1/2)	
Total Units Required . . . . .		12

## Photographic Arts

### A.A. Degree

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Complete the following:

F/TV 20	Basic Digital Film/Video Production	4
PHTG 1	Basic Photography	3
PHTG 54	Experimental Photography	3
PHTG 56A	Color Photography I	4
Complete one (1) course from:		3
PHTG 2	Intermediate Photography (3)	
PHTG 4	Introduction to Digital Photography (3)	

Complete one (1) course from:		3
PHTG 3	Advanced Photography (3)	
PHTG 65	Intermediate Digital Photography (3)	
Complete one (1) course from:		4
PHTG 20	Early History of Photography from Its Beginnings to 1925 (4)	
PHTG 21	Contemporary Trends in Photography (4)	
Complete one (1) course from:		4
ARTS 2D	History of Art (Post-Impressionism to the Present) (4)	
ARTS 3TE	Today's Working Artist (4)	
Complete one (1) course from the following:		3
ARTS 4A	Beginning Drawing (3)	
ARTS 10A	Three-Dimensional Design (3)	
ARTS 14A	Watercolor Painting I (3)	
ARTS 15A	Acrylic Painting I (3)	
ARTS 16A	Oil Painting I (3)	
ARTS 18A	Ceramics (3)	
ARTS 37A	Sculpture (3)	
Complete a minimum of 11 units from the following that do not duplicate courses selected above:		11
ARTS 53A	Introduction to Visual Technology (3)	
ARTS 53B	Introduction to Visual Technology (3)	
ARTS 55A	Graphic Design/Communication (3)	
F/TV 2A	History of Cinema (1895-1950) (4)	
F/TV 2B	History of Cinema (1950-Present) (4)	
F/TV 50	Introduction to Film/Television Directing (4)	
F/TV 55A	Video Studio Production (4)	
F/TV 75G	History of Animation (4)	
HUMI 1	Creative Minds (4)	
HUMI 2	But Is It Art? Questions and Criticism (4)	
HUMI 15	Discussion on the Arts (4)	
PHTG 2	Intermediate Photography (3)	
PHTG 3	Advanced Photography (3)	
PHTG 4	Introduction to Digital Photography (3)	
PHTG 7	Exploring Visual Perception (4)	
PHTG 20	History of Early Photography from Its Beginnings to 1925 (4)	
PHTG 21	Contemporary Trends in Photography (4)	
PHTG 56B	Color Photography II (4)	
PHTG 58A	Beginning Digital Imaging (3)	
PHTG 58B	Intermediate/Advanced Digital Imaging (3)	
PHTG 59	Special Projects in Photography (2)	
PHTG 65	Intermediate Digital Photography (3)	
PHTG 77 series	PHTG 77, 77X, 77Y, 77Z Special Topics in Photographic Studies (1/2-3)	
Major	Photographic Arts	42 units
GE	General Education (31-42 units)	
Electives	Elective courses req'd. when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

## Professional Photography

### Film and Digital

#### Certificate of Achievement †

Complete the following and meet the corresponding certificate requirements as specified on page 50.

PHTG 1	Basic Photography	3
PHTG 4	Introduction to Digital Photography	3
PHTG 56A	Color Photography I	4
PHTG 57A	Commercial Photography I	3
PHTG 58A	Beginning Digital Imaging	3
PHTG 65	Intermediate Digital Photography	3

† This certificate was submitted for State approval. Please check with the department for the status.

Complete one (1) course from:	3-4
PHTG 56B Color Photography II (4)	
PHTG 58B Intermediate/Advanced Digital Imaging (3)	
Total Units Required . . . . .	22-23

**A.A. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ARTS 53A Introduction to Visual Technology	3
BUS 56 Human Relations in Business	5
F/TV 20 Basic Digital Film/Video Production	4
JOUR 2 Mass Communication and Its Impact on Society	4
PHTG 1 Basic Photography	3
PHTG 4 Introduction to Digital Photography	3
PHTG 56A Color Photography I	4
PHTG 57A Commercial Photography I	3
PHTG 58A Beginning Digital Imaging	3
PHTG 65 Intermediate Digital Photography	3

Complete a minimum of 12 units from the following: 12

F/TV 50 Introduction to Film/Television Directing (4)	
PHTG 7 Exploring Visual Expression (4)	
PHTG 20 Early History of Photography from Its Beginnings to 1925 (4)	
PHTG 21 Contemporary Trends in Photography (4)	

*Note: Credit for either PHTG 20 or 21 may apply, but not both.*

PHTG 52 Photography Production Lab (1)	
PHTG 52X Photography Production Lab (2)	
PHTG 54 Experimental Photography I (3)	
PHTG 56B Color Photography II (4)	
PHTG 57B Commercial Photography II (3)	
PHTG 58B Intermediate/Advanced Digital Imaging (3)	
PHTG 59 Special Projects in Photography (2)	
PHTG 77 series PHTG 77, 77X, 77Y, 77Z	
Special Topics in Photographic Studies (1/2-3)	

Major Professional Photography	47 units
GE General Education (31-42 units)	
Electives Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .	90 units

*Recommended*

ARTS 8, BUS 10, BUS 55, other Photography courses, Occupational Work Experience, HUM1 1 or 2

**Project Management Practitioner**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

CIS 95A Project Management - A Practicum	5
CIS 95B Project Planning and Control - A Practicum	4
CIS 95C Risk Assessment and Mitigation - A Practicum	4
CIS 95D Managing Outsourcing - A Practicum	3

Complete one (1) course from the following: 2-5

CIS 79 Managing Technology Projects (5) or BUS 88	
CIS 80A Process Management (2)	
CIS 95E CAPM and PMP Exam Preparation (4)	
Total Units Required	18-21

**Real Estate**

**Certificate of Achievement-Advanced**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

BUS 18 Business Law I	5
REST 50 Real Estate Principles	4
REST 51 Real Estate Practices	4
REST 53 Real Estate Finance	4
REST 56A Real Estate Appraisal I	4

Complete a minimum of 16 units from the following: 16

ACCT 1A Financial Accounting I (4)	
BUS 10 Introduction to Business (5)	
REST 52A Legal Aspects of Real Estate in California I (4)	
REST 54 Real Estate Economics (4)	
REST 56B Real Estate Appraisal II (4)	
REST 59 Survey of Real Estate Property Management (4)	
REST 61 Real Estate Investments (4)	
Total Units Required . . . . .	37

*Recommended*

ACCT 67 Federal Income Tax (4)	
BUS 21 Business and Society (5)	
BUS 54 Business Mathematics (5)	
BUS 55 Introduction to Entrepreneurship (5)	
BUS 69 Investment Fundamentals (4)	
BUS 70 Principles of E-Business (5)	
BUS 90 Principles of Marketing (5)	
REST 135 Foreclosure Technology Tools (1/2)	

**A.A. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

ACCT 1A Financial Accounting I	4
BUS 10 Introduction to Business	5
BUS 18 Business Law I	5
REST 50 Real Estate Principles	4
REST 51 Real Estate Practices	4
REST 53 Real Estate Finance	4
REST 56A Real Estate Appraisal I	4

Complete a minimum of 16 units from the following: 16

BUS 69 Investment Fundamentals (4)	
REST 52A Legal Aspects of Real Estate in California I (4)	
REST 54 Real Estate Economics (4)	
REST 56B Real Estate Appraisal II (4)	
REST 59 Survey of Real Estate Property Management (4)	
REST 61 Real Estate Investments (4)	

Major Real Estate	46 units
GE General Education (31-42 units)	
Electives Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .	90 units

*Recommended*

ACCT 1B Financial Accounting II (4)	
ACCT 1C Managerial Accounting (4)	
ACCT 67 Federal Income Tax (4)	
ACCT 86 Computer Accounting Systems (4)	
BUS 21 Business and Society (5)	
BUS 54 Business Mathematics (5)	
BUS 55 Introduction to Entrepreneurship (5)	
BUS 87 Introduction to Selling (4)	
BUS 90 Principles of Marketing (5)	
REST 135 Foreclosure Technology Tools (1/2)	

† This certificate was submitted for State approval. Please check with the department for the status.

For more program information see the California Department of Real Estate Web site: [www.dre.ca.gov](http://www.dre.ca.gov)

**Important information about the California Real Estate Appraiser's License**

Real Estate courses at De Anza College are not designed to meet the general education requirements of the California Real Estate Appraiser's Licensing and Certification program. For further information, students interested in these licenses should contact the State of California Office of Real Estate Appraisers or go to their Web site at [www.orea.ca.gov](http://www.orea.ca.gov).

**Speech Communication**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Complete one (1) course from:	4
SPCH 1 Public Speaking (4)	
SPCH 10 Fundamentals of Oral Communication (4)	
Complete one (1) course from:	4-5
SPCH 8 Argumentation and Critical Inquiry in Oral Communication (4)	
SPCH 9 Argumentation: Analysis in Oral and Written Communication (5)	
SPCH 15 Problem Solving and Critical Reasoning in Groups (4)	
Complete a minimum of 10 units from the following which do not duplicate those taken above:	10
JOUR 2 Mass Communication and Its Impact on Society (4)	
SPCH 1 Public Speaking (4)	
SPCH 7 Intercultural Communication (4)	
SPCH 8 Argumentation and Critical Inquiry in Oral Communication (4)	
SPCH 9 Argumentation: Analysis in Oral and Written Communication (5)	
SPCH 10 Fundamentals of Oral Communication (4)	
SPCH 15 Problem Solving and Critical Reasoning in Groups (4)	
SPCH 16 Interpersonal Communication (4)	
SPCH 60 Facilitating Collaborative Communication (4)	
SPCH 70 Effective Organizational Communication (4)	
SPCH 77 series SPCH 77, 77X, 77Y, 77Z Special Individual Projects in Speech Communication (1-4)	
SPCH 78 series SPCH 78, 78X, 78Y, 78Z Special Topics in Speech Communication (1/2-4)	
<i>Note: up to four (4) units from SPCH 77, 78 series courses may apply.</i>	
Total Units Required . . . . .	18-19

**A.A. Degree**

Complete the following for the major and meet the A.A./A.S. degree requirements as specified on page 50.

Complete one (1) course from:	4
SPCH 1 Public Speaking (4)	
SPCH 10 Fundamentals of Oral Communication (4)	
Complete one (1) course from:	4-5
SPCH 8 Argumentation and Critical Inquiry in Oral Communication (4)	
SPCH 9 Argumentation: Analysis in Oral and Written Communication (5)	

Complete the following:

JOUR 2	Mass Communication	4
SPCH 7	Intercultural Communication	4
SPCH 15	Problem Solving and Critical Reasoning in Groups	4
SPCH 16	Interpersonal Communication	4
SPCH 70	Effective Organizational Communication	4
Specialty Area*	(contact an instructor to create)	12
Major	Speech Communication	40-41 units
GE	General Education (31-42 units)	
Electives	Elective courses req'd. when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

\* Contact a full-time Speech Communication instructor to create your specialty area of study (12 units). Your specialty area description with signed approval from the Speech Communication Department must accompany your application for the degree.

**Technical Writing**

**Certificate of Achievement †**

Complete the following and meet the corresponding certificate requirements as specified on page 50.

Prerequisite	EWRT 211	
	EWRT 1A recommended	
Requirements		
	TWRT 61 is the prerequisite/corequisite for TWRT 62. (Concurrent enrollment is allowed for TWRT 61 and TWRT 62.)	
	TWRT 61 is the prerequisite for TWRT 63.	
	TWRT 62 is the prerequisite for TWRT 64.	
TWRT 61	Introduction to Technical Writing	5
TWRT 62	Survey of Technical Writing	5
TWRT 63	Technical Publications	5
TWRT 64	Technical Writing Seminar	5
Total Units Required . . . . .		20

The TWRT courses above are also listed under BUS and EWRT.

**A.A. Degree**

Complete the requirements listed for the Certificate of Achievement plus a specialty area of study, and meet the corresponding A.A./A.S. degree requirements as specified on page 50.

Requirements	Technical Writing	
	Certificate of Achievement	20
Specialty Area*	(contact department chair to create)	25

\* Contact the Technical Writing department chair to create your specialty area of study (25 units minimum). Select courses from TWRT Special Topics or TWRT Special Projects courses and/or discipline areas such as:

- Computer Applications
- Computer Aided Design/Digital Imaging
- Computer Information Systems
- Graphic Design
- Journalism
- Photography

Your specialty area description with signed approval from the department chair must accompany your degree application.

Major	Technical Writing	45 units
GE	General Education (31-42 units)	
Electives	Elective courses required when major units plus GE units total is less than 90	
Total Units Required . . . . .		90 units

† This certificate was submitted for State approval. Please check with the department for the status.