

**INSTRUCTIONAL PROGRAMS**  
**ASSOCIATE DEGREES**  
**CERTIFICATES**  
**TRANSFER**

## OFFICE OF INSTRUCTION

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The Office of Instruction is responsible for overall curriculum and program development, administration and supervision of the college's instructional program. Programs are offered by one of the four divisions listed below. On the following pages, in alphabetical order, is a complete description of each program's major requirement.

**Important:** Associate degree and certificate programs have additional college requirements beyond the major. See pages 37-38 for the complete requirements for the associate's degree. See page 37 for the complete requirements for certificates.

## BUSINESS AND WORKFORCE DEVELOPMENT DIVISION

Dean: Linda Hayes  
 Staff Assistant: Jonna Pounds  
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 Web: www.canadacollege.edu/business

Programs are offered at three locations: main campus, Menlo Park/OICW Center and the Cañada College Education and Technology Downtown Center.

### Courses and Programs:

- Accounting
- Architecture
- Athletics - Varsity
- Business Administration
- Business Management
- Business/Office Technology
- Cooperative Education
- Early Childhood Education/Child Development
- Economics
- Education
- Fashion Design
- Human Services
- Interior Design
- Multimedia
- Paralegal
- Physical Education - Team Sports, Individual Sports, Fitness, Dance
- Real Estate

## HUMANITIES DIVISION

Dean: Kuni Hay  
 Staff Assistant: Joan Murphy  
 Office: Building 3, Room 205  
 Phone: (650) 306-3336  
 Email: canhumanities@smccd.net  
 Web: www.canadacollege.edu/humanities

### Courses and Programs:

- Art
- CBET (Community-Based English Tutoring)
- English
- English Institute/English as a Second Language
- Foreign Languages
- History
- Music
- Philosophy
- Political Science
- Psychology
- Social Science
- Sociology
- Speech Communication
- Theater Arts

English as a Second Language (ESL) courses are offered through the English Institute. There are no majors or transfer programs available in ESL.

## SCIENCE AND TECHNOLOGY DIVISION

Dean: vacant  
 Staff Assistant: Georgia Clark  
 Office: Building 18, Room 109  
 Phone: (650) 306-3291  
 Email: canscitech@smccd.net  
 Web: canadacollege.edu/science

### Courses and Programs:

- Anthropology
- Astronomy
- Biological Sciences
- Health Science
- Chemistry
- Computer Information Systems
- Engineering
- Geography
- Geology
- Mathematics
- Oceanography
- Paleontology
- Physics
- Radiologic Technology

# UNIVERSITY CENTER AND ACADEMIC SUPPORT SERVICES DIVISION

Dean: Phyllis Lucas-Woods  
 Staff Assistant: Debbie Joy  
 Office: Building 22, Room 101  
 Phone: (650) 306-3399  
 Email: caninstrucserv@smccd.net  
 Web: www.canadacollege.edu/support\_services

### Courses and Programs:

- Disabled Student Program Services (DSPS)
- Extended Opportunity Programs & Services (EOPS)
- Learning Center
- Library
- University Center

### Areas of Study that Apply to Transfer, Associate Degree or Certificate Programs

Area of Study	Certif.	AA	AS	Trans.
ACCOUNTING	•		•	•
ANTHROPOLOGY		•		•
ART		•		•
BIOLOGY			•	•
BIOLOGY WITH HEALTH SCIENCES EMPHASIS			•	•
BUSINESS ADMINISTRATION	•		•	•
BUSINESS MANAGEMENT				
Retail	•		•	
BUSINESS/CORPORATE MEETING PLANNER	•			
BUSINESS/INFORMATION TECHNOLOGY				
Network Specialist	•		•	
Hardware/Software Support Specialist	•		•	
BUSINESS/OFFICE TECHNOLOGY				
Administrative Support Assistant	•		•	
Administrative Assistant	•		•	
BUSINESS/SMALL BUSINESS	•		•	
COMPUTER INFORMATION SCIENCE & SYSTEMS			•	•
Internet Programming	•			

Area of Study	Certif.	AA	AS	Trans.
EARLY CHILDHOOD EDUCATION	•		•	•
Child Development	•			
Family Development	•			
ECONOMICS		•		•
ENGINEERING			•	•
ENGLISH		•		•
FASHION DESIGN	•		•	•
FOREIGN LANGUAGE		•		•
GEOGRAPHY		•		•
HISTORY		•		•
HUMAN SERVICES	•		•	
Community Health Worker	•			
Family Development	•			
INTERIOR DESIGN	•		•	•
Kitchen & Bath Design	•			
Residential & Commercial Design	•			
LIBERAL ARTS		•		•
MATHEMATICS				•
MULTIMEDIA	•	•		•
MUSIC		•		•
NURSING				•
PARALEGAL	•		•	
PHILOSOPHY		•		•
PHYSICAL EDUCATION		•		•
Fitness Specialist Emphasis	•	•		
PHYSICAL SCIENCES			•	
Chemistry				•
Physics				•
PHYSICAL THERAPY				•
POLITICAL SCIENCE		•		•
PSYCHOLOGY		•		•
RADIOLOGIC TECHNOLOGY			•	
SOCIAL SCIENCES				
International Studies		•		•
SOCIOLOGY		•		•
SPEECH		•		•
THEATER ARTS		•		•
UNIVERSITY STUDIES		•		•

## ACCOUNTING

<b>Certificate of Proficiency</b>	<b>27.5 - 29.5 units+</b>
<b>Associate in Science Degree</b>	<b>27.5 - 29.5 units*</b>
<b>Transfer Program</b>	<b>Available</b>

+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

The Business Department offers a transfer curriculum to a four-year university, an AS Degree, and a certificate program designed to give the students both formal and practical training in accounting. The accounting AS degree and certificate programs are designed to give students enough practical experience so that they can secure a position in either the public, governmental, or private accounting sector when they have completed the recommended 27.5 - 29.5 units. Courses specifically required for the student's major must be evaluated by a letter grade, not by the credit (CR) grade.

### CERTIFICATE OF PROFICIENCY - ACCOUNTING

#### Core and Selective Requirements

#### Complete Core Courses, 21.5-23.5 units

	Units
ACTG 121 Financial Accounting	4-5
ACTG 131 Managerial Accounting	4-5
ACTG 180 Payroll & Business Taxes	1.5
ACTG 190 Quickbooks® and Quickbooks Pro® for the Paraprofessional I	1.5
ACTG 192 Quickbooks® and Quickbooks Pro® for the Paraprofessional II	1.5
BUS. 100 Survey of Business	3
BUS. 430 Computer Applications, Part I	1.5
BUS. 431 Computer Applications, Part II	1.5
BUS. 435 Spreadsheets	3

#### Selective Courses, choose a minimum of 6 units from the following:

Any Accounting course  
 Any Business course  
 Cooperative Education course

### ASSOCIATE IN SCIENCE - ACCOUNTING

#### Core and Selective Requirements

#### Complete Core & Selective Courses, 27.5-29.5 units, listed under the Certificate of Proficiency

### TRANSFER PROGRAM - ACCOUNTING

Cañada College offers lower division coursework required for transfer in the area of Accounting/Business Administration. Usually an Accounting program of study is listed under Business Administration. Students should use PROJECT ASSIST (www.assist.org) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

## ANTHROPOLOGY

<b>Associate in Arts Degree</b>	<b>18 units*</b>
<b>Transfer Program</b>	<b>Available</b>

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

Anthropology is the study of peoples of the world from prehistoric to contemporary times. It is concerned with the variability of human populations and their biocultural history. Physical Anthropology concentrates on various biological characteristics, and Cultural Anthropology focuses on socially learned traits.

### ASSOCIATE IN ARTS - ANTHROPOLOGY

#### Core and Selective Requirements

#### Complete Core Courses, 6 units

	Units
ANTH 110 Cultural Anthropology	3
ANTH 125 Physical Anthropology	3

#### Selective Courses, choose a minimum of 12 units from the following:

	Units
ANTH 105 Peoples and Cultures of the World	3
ANTH 360 Indians of North America	3
ANTH 370 Olmec, Maya, Aztec People & Cultures of Mexico & Central America	3
BIOL 110 Principles of Biology	4
or BIOL 130 Human Biology	3
ECON 100 Principles of Macro Economics	3
GEOG 100 Physical Environment	3
GEO 100 Survey of Geology	3
MATH 200 Elementary Probability & Statistics	4
PALN 110 Ancient Life & Past Environments	3

### TRANSFER PROGRAM - ANTHROPOLOGY

Cañada College offers lower division coursework required for transfer in the area of Anthropology. Students should use PROJECT ASSIST (www.assist.org) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

## ART

**Associate in Arts Degree** 18 units\*  
**Transfer Program** Available

*\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.*

The Art Department at Cañada College affords a unique experience to the serious student seeking a sound foundation in aesthetics and skill development. The faculty is composed of artist-teachers whose personal sensibilities range from the Classical to the Expressionist. The program has been designed to offer a continuity of study through structured courses based on the life-time experiences of each of the artist-teachers. The ultimate goal of the program is to support each student in the search for a personal form and the development of capabilities by which this form can be manifested.

### ASSOCIATE IN ARTS - ART Core and Selective Requirements

#### Complete Core Courses, 9 units

	Units
ART 101 History of Art I	3
ART 102 History of Art II	3
ART 103 History of Art III	3

#### Selective Courses, choose a minimum of 9 units from the following list:

ART 201 Form and Composition I	3
ART 204 Drawing I	3
ART 221 Painting I	3
Any other ART 200/300 series courses	6-12

### TRANSFER PROGRAM - ART

Cañada College offers lower division coursework required for transfer in the area of Art. Students should use PROJECT ASSIST ([www.assist.org](http://www.assist.org)) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

*For Multimedia certificates and degrees see MULTIMEDIA section.*

## BIOLOGICAL SCIENCES

**Associate in Science Degree - Biology** 30 units\*  
**Associate in Science Degree -**

**Biology/Health Sciences** 26 - 28 units\*  
**Transfer Program** Available

**Professional School Preparation** Available

*(Pre-Dental, Pre-Medicine, Pre-Pharmacy, Pre-Veterinary, Pre-Optometry)*

*\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.*

A major in Biological Sciences is a preparation for advanced academic work, for careers in civil service, industry, or teaching; as a background for professional training in such fields as biological science education, biotechnology, nursing, public health, environmental health, pre-medicine and all related areas of biology. Natural resources are among the most important assets of man and the wise use of renewable resources is basic to development in the economic, social and political areas. The basic pre-professional requirements necessary to transfer are offered in the Biological Sciences, Physical Sciences, and Mathematics Departments.

### ASSOCIATE IN SCIENCE - BIOLOGICAL SCIENCES Core and Selective Requirements

#### Complete Core Courses, 18 units:

	Units
PHYS 210 General Physics I	4
or PHYS 250 Physics with Calculus I	4
BIOL 225 Biology of Organisms	5
BIOL 230 Introduction to Cell Biology	4
CHEM 210 General Chemistry I	5
<b>Core Total</b>	<b>18</b>

#### Selective Courses, choose a minimum of 12 units from the following list:

	Units
BIOL 130 Human Biology	3
CHEM 220 General Chemistry II	5
BIOL 250 Human Anatomy	4
BIOL 240 General Microbiology	4
BIOL 260 Human Physiology	5
BIOL 103 Native Plants and Wildflowers	3
BIOL 310 Nutrition	3
MATH 241/242 Applied Calculus I/II	5/5
or MATH 251/252/253 Analytical Geometry & Calculus I/II/III	5/5/5
PHYS 220 General Physics II or PHYS 260/270 Physics with Calculus II/III	4 or 4/4
MATH 200 Elementary Probability and Statistics	4

## ASSOCIATE IN SCIENCE DEGREE-BIOLOGY/ HEALTH SCIENCES

### Core and Selective Requirements

#### Complete Core Courses, 16-18 units

	Units
BIOL 110 Principles of Biology	4
<i>One of the following courses:</i>	
CHEM 192 Elementary Chemistry or CHEM 210 General Chemistry I	4-5
<i>And two of the following courses:</i>	
BIOL 250 Human Anatomy*+	4
BIOL 240 General Microbiology+•	4
BIOL 260 Human Physiology+•	5
<i>*generally required for Radiologic Technology Program</i>	
<i>+generally required for Nursing Programs</i>	
<i>•generally required for Respiratory Therapy Programs</i>	

#### Selective Courses, choose a minimum of 10 units from the following list:

BIOL 240 General Microbiology	4
BIOL 250 Human Anatomy	4
BIOL 260 Human Physiology	5
BIOL 310 Nutrition	3
HSCI 430 First Aid	1
CHEM 220 General Chemistry II	5
PHYS 210/220 General Physics I/II	4/4
ANTH 110 Cultural Anthropology	3
PSYC 100 General Psychology	3
PSYC 201 Child Development	3
MATH 200 Elementary Probability and Statistics	4
BIOL 225 Biology of Organisms	5
BIOL 230 Introduction to Cell Biology	4
MATH 241/242 Applied Calculus I/II	5/5
FITN 250 Personal Trainer Preparation:	
Anatomy & Physiology	3
LCTR 151 Allied Health Science Vocabulary	1

### TRANSFER PROGRAM - BIOLOGICAL SCIENCE

Cañada College offers lower division coursework required for transfer in the area of Biological Sciences. Students should use PROJECT ASSIST ([www.assist.org](http://www.assist.org)) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

### PROFESSIONAL SCHOOL PREPARATION

#### (Pre-Dentistry, Pre-Medicine, Pre Pharmacy, Pre-Veterinary, Pre-Optometry)

Many students are interested in careers in the health science - medicine, dentistry, veterinary medicine, optometry - and wonder what they should major in at Cañada College. Students often have the misconception that "pre-med" is an academic major and it is not. Students should major in what they enjoy as long as they take the appropriate courses required for professional school (medical, dental, veterinary) admission. Some students choose majors like biological science, genetics, or microbiology, where there is a great deal of overlap between courses required for their major and the professional school undergraduate requirements. Many other students choose majors not directly related to their career objective, such as English, psychology, anthropology, and use their elective units to meet the professional school requirements. Professional schools,

especially medical schools, are looking for well-rounded students who have taken courses in the humanities and social sciences, and who have participated in activities and community work. More information can be found at numerous websites (i.e., [www.aamc.org](http://www.aamc.org)) and by speaking with a Counselor/Advisor.

Each professional school has a minimum number of prerequisite courses to be taken at the undergraduate level. Requirements vary from school to school. Many prerequisite courses may be taken at Cañada College. The following is not a definitive list, but an overview of requirements for most schools. Biology 225, 230, Chemistry 210, 220, Mathematics 241 & 242, Physics 210 & 220, Psychology 100, English 100, and 110 or 165, Humanities and Social Science coursework.

## BUSINESS ADMINISTRATION

**Certificate of Proficiency - Business Administration** 25–28 units+

**Associate in Science Degree - Business Administration** 27–34 units\*

**Transfer Program - Business Administration** Available  
+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

The Business Department offers a transfer program, an AS Degree. The transfer program listed is the same for all business disciplines at four-year colleges and universities. The AS Degree is designed to help a student develop a general business awareness for the world of work, a four-year college, or university. Courses specifically required for the student's major transfer core requirements must be evaluated by a letter grade, not by the credit (CR) grade.

### CERTIFICATE OF PROFICIENCY - BUSINESS ADMINISTRATION

#### Core and Selective Requirements

#### Complete Core Courses, 25–28 units

	Units
ACTG 121 Financial Accounting	4-5
BUS. 100 Survey of Business	3
BUS. 101 Human Relations in Business	3
or MGMT 204 Managing Employees Effectively	3
BUS. 103 Introduction to Business Information Systems	3
BUS. 115 Business Mathematics	3
or MATH 120 Intermediate Algebra	5
BUS. 108 Business Writing & Presentation Methods	3
BUS. 201 Business Law	3
MGMT 215 Management of Human Resources	3

#### Selective Courses, 6 units

May be any Accounting or Business or Cooperative Education course	6
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### ASSOCIATE IN SCIENCE - BUSINESS ADMINISTRATION

#### Core and Selective Requirements

#### Complete Core Courses, 21–28 units

	Units
ACTG 121 Financial Accounting	4-5
ACTG 131 Managerial Accounting	4-5
ECON 100 Principles of Macro Economics	3
ECON 102 Principles of Micro Economics	3
MATH 200 Elementary Probability & Statistics	4
MATH 125 Elementary Finite Mathematics	3
or MATH 241 Applied Calculus I	5
or MATH 251 Analytical Geometry & Calculus I	5

#### Selective Courses, choose a minimum of 6 units from the following list:

BUS. 100 Survey of Business	3
BUS. 103 Introduction to Business Information Systems	3
CIS 118/119 Intro to Object-Oriented Program Design/Lab I	3/1

CIS 250/251 Programming Methods I: C++/Lab I: C++	3/1
BUS. 201 Business Law	3
BUS. 435 Spreadsheets	3
MATH 242 Applied Calculus II	5
MATH 252 Analytical Geometry & Calculus II	5
SPCH 100 Fundamentals of Speech Communication	3

### TRANSFER PROGRAM - BUSINESS ADMINISTRATION

Cañada College offers lower division coursework required for transfer in the area of Business Administration. Students should use PROJECT ASSIST ([www.assist.org](http://www.assist.org)) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

## BUSINESS MANAGEMENT

Certificate of Completion- Human Resources Management/  
Supervision 10 units+

Certificate of Proficiency - Business Management/Retail  
30 units+

Associate in Science - Business Management/Retail 30 units\*  
+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet  
the minimum 60 units required for the Associate degree.

The Business Department prepares students for both entry-level posi-  
tions and management positions in retail. Students are prepared to plan,  
organize, direct, and manage employees in a variety of settings.

### CERTIFICATE OF COMPLETION- HUMAN RESOURCES MANAGEMENT/SUPERVISION

*Core and Selective Requirements*

Complete Core Courses, 10 units

	Units
MGMT 204 Managing Employees Effectively	3
MGMT 215 Management of Human Resources	3
MGMT 220 Organizational Behavior	3
MGMT 680 Financial Budgeting & Control	1

### CERTIFICATE OF PROFICIENCY - BUSINESS MANAGEMENT/RETAIL

*Core and Selective Requirements*

Complete Core Courses, 30 units

	Units
ACTG 100 Accounting Procedures	3
BUS. 103 Introduction to Business Information Systems	3
BUS. 108 Business Writing and Presentation Methods	3
BUS. 115 Business Mathematics	3
BUS. 180 Marketing	3
BUS. 186 Retail Management	3
MGMT 100 Introduction to Business Management	3
MGMT 215 Management of Human Resources	3
MGMT 204 Managing Employees Effectively	3
or BUS. 101 Human Relations in Business	3
SPCH 120 Interpersonal Communication	3
<b>Core Total</b>	<b>30</b>

### ASSOCIATE IN SCIENCE - BUSINESS MANAGEMENT/ RETAIL

Complete Core Courses, 30 units, listed under the Certificate  
of Proficiency-Business Management/Retail.

## BUSINESS/CORPORATE MEETING PLANNER

Certificate of Completion 17.5 units+

+meet Certificate Program requirements listed on page 37.

The Corporate Meeting Planner certificate is designed for the person in  
a corporate setting who is responsible for organizing and planning travel  
and meeting arrangements.

### CERTIFICATE OF COMPLETION- BUSINESS/ CORPORATE MEETING PLANNER

*Core and Selective Requirements*

Complete Core Courses, 17.5 units

	Units
BUS. 149 Introduction to Business Travel Management	3
BUS. 435 Spreadsheets	3
BUS. 436 Database Management	3
BUS. 472 Introduction to Word for Windows	1.5
BUS. 474 Intermediate Word for Windows	1.5
BUS. 480 Using the Internet, Part I	1.5
BUS. 128 Corporate Meeting and Event Planning	3
BUS. 419 On-site Management	1

## BUSINESS/INFORMATION TECHNOLOGY SPECIALIST

Certificate of Completion - Home Office/Small Business Computer Security 14.5 units+

Certificate of Completion - Call Center Customer Service Support 13.5 units+

Certificate of Proficiency - Information Technology Specialist/Option 1 Network Specialist 32 units+

Certificate of Proficiency - Information Technology Specialist/Option 2 Hardware/Software Support Specialist 33 units+

Associate in Science - Network Specialist 32 units\*

Associate in Science - Hardware/Software Support Specialist 33 units\*

+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

The Information Technology Specialist program is designed to prepare students for employment in the information technology field with specialized emphasis in one of the following: Network Specialist, Desktop/Hardware Support Specialist, and Desktop/Software Support Specialist.

### CERTIFICATE OF COMPLETION - HOME OFFICE/ SMALL BUSINESS COMPUTER SECURITY

*Core and Selective Requirements*

**Complete Core Courses, 14.5 units**

	<b>Units</b>
BUS. 450 PC Maintenance & Systems Upgrades	3
BUS. 453 IT Troubleshooting Resources	1.5
BUS. 492 Networking Essentials	1.5
BUS. 680 Supporting Windows XP	3
BUS. 680 Personal Computer Security	1
BUS. 680 Network Security	3
BUS. 422 Help Desk	1.5

### CERTIFICATE OF COMPLETION - CALL CENTER CUSTOMER SERVICE SUPPORT

*Core and Selective Requirements*

**Complete Core Courses, 13.5 units**

	<b>Units</b>
BUS. 450 PC Maintenance & Systems Upgrades	3
BUS. 451 Adv. PC Maintenance & Systems Upgrades	3
BUS. 453 IT Troubleshooting Resources	1.5
BUS. 101 Human Relations in Business	3
BUS. 448 Using Microsoft Windows	1.5
BUS. 422 Help Desk	1.5

### CERTIFICATE OF PROFICIENCY- INFORMATION TECHNOLOGY SPECIALIST/OPTION 1: NETWORK SPECIALIST

The Network Specialist program is designed to prepare students for employment in supporting network environments using Microsoft products. Successful completion of the Network Specialist program will provide the students with the necessary skills and knowledge to design, implement, troubleshoot, and support Microsoft network environments. Job possibilities include network administrator, consultant, help desk technician, Windows NT Desktop Support Engineer, and PC/LAN technician.

*Core and Selective Requirements*

**Complete Core Courses, 32 units**

	<b>Units</b>
BUS. 422 Help Desk	1.5
BUS. 425 Basic DOS	1.5
BUS. 430 Computer Applications, Part I	1.5
BUS. 447 Overview of Electronic Components & Safety Issues	1.5
BUS. 448 Using Microsoft Windows	1.5
BUS. 450 PC Maintenance & System Upgrades	3
BUS. 451 Adv. PC Maintenance & System Upgrades	3
BUS. 453 IT Troubleshooting Resources	1.5
BUS. 479 Internet for Technicians	1
COOP 670/672 Cooperative Education/Work Experience	1
Bus. 446 Introduction to Local Area Networks	1.5
Bus. 466 Using Microsoft NT	3
Bus. 492 Networking Essentials	1.5
Bus. 493 Internetworking with TCP/IP w/MS Win NT 4.0	3
Bus. 494 Implementing and Supporting MS Windows NT Workstation 4.0	3
Bus. 496 Windows NT Server 4 in the Enterprise	3

### CERTIFICATE OF PROFICIENCY- INFORMATION TECHNOLOGY SPECIALIST/OPTION 2: HARDWARE/SOFTWARE SUPPORT SPECIALIST

The Hardware/Software Support Specialist program is designed to prepare students for employment in supporting computer hardware and software used in industry. Successful completion of the program will provide the students with the necessary skills and knowledge to maintain, upgrade, and troubleshoot hardware problems and install, maintain, troubleshoot, and upgrade software packages. Job possibilities include computer support technician, hardware/software consultant, technical support analyst, software trainer, and help desk technician.

*Core and Selective Requirements*

**Complete Core Courses, 33 units**

	<b>Units</b>
BUS. 422 Help Desk	1.5
BUS. 425 Basic DOS	1.5
BUS. 430 Computer Applications, Part I	1.5
BUS. 447 Overview of Electronic Components & Safety Issues	1.5
BUS. 448 Using Microsoft Windows	1.5
BUS. 450 PC Maintenance & Systems Upgrades	3
BUS. 451 Adv. PC Maintenance & System Upgrades	3
BUS. 453 IT Troubleshooting Resources	1.5

BUS. 479 Internet for Technicians	1
COOP 670/672 Cooperative Education/Work Experience	1
BUS. 426 Advanced DOS	1.5
BUS. 431 Computer Applications, Part II	1.5
BUS. 435 Spreadsheets	2
BUS. 436 Database Management	2
BUS. 446 Introduction to Local Area Networks	1.5
BUS. 466 Using Microsoft NT	3
BUS. 680 Windows 2000 Professional	1.5
COMP 311 Introduction to the Unix Operating System	1.5
COMP 340 Introduction to Unix Systems Administration	1.5

**ASSOCIATE IN SCIENCE - INFORMATION  
TECHNOLOGY SPECIALIST/OPTION 1: NETWORK  
SPECIALIST**

*Core & Selective Requirements*

**Complete Core Courses, 32 units, listed under the Certificate of Proficiency-Information Technology Specialist/Option 1: Network Specialist.**

**ASSOCIATE IN SCIENCE - INFORMATION  
TECHNOLOGY SPECIALIST/OPTION 2: HARDWARE/  
SOFTWARE SPECIALIST**

*Core & Selective Requirements*

**Complete Core Courses, 33 units, listed under the Certificate of Proficiency- Information Technology Specialist/Option 2: Hardware/Software Support Specialist.**

## BUSINESS/OFFICE TECHNOLOGY

**Certificate of Completion - General Office 12 units+**

**Certificate of Proficiency - Administrative Support Assistant  
28.5 units+**

**Certificate of Proficiency - Administrative Assistant 31 units+**

**Associate in Science - Administrative Support Assistant  
28.5 units\***

**Associate in Science - Administrative Assistant 31 units\***

*+meet Certificate Program requirements listed on page 37.*

*\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.*

The Business Department prepares students for both entry-level positions and management positions in the automated office. Students are prepared to plan, develop, organize, and distribute information through the application of computer technology. AS Degree and certificate programs are offered by the College. Courses specifically required for the student's major must be evaluated by a letter grade, not by the credit (CR) grade.

**CERTIFICATE OF COMPLETION - GENERAL OFFICE**

*Core and Selective Requirements*

**Complete Core Courses, 12 units**

	<b>Units</b>
BUS. 415 Beginning Computer Keyboarding	1.5
<i>or</i> BUS. 417 Skill Building	1.5
BUS. 448 Using Microsoft Windows	1.5
BUS. 430 Computer Applications, Part I	1.5
BUS. 431 Computer Applications, Part II	1.5
BUS. 439 Managing Business Documents	1.5
BUS. 480 Using the Internet, Part I	1.5
BUS. 101 Human Relations in Business	3

**CERTIFICATE OF PROFICIENCY - ADMINISTRATIVE  
SUPPORT ASSISTANT**

*Core and Selective Requirements*

**Complete Core Courses, 28.5 units**

	<b>Units</b>
BUS. 101 Human Relations in Business	3
BUS. 108 Business Writing & Presentation Methods	3
BUS. 416 Procedures for Working in an Office	3
BUS. 430 Computer Applications, Part I	1.5
BUS. 431 Computer Applications, Part II	1.5
BUS. 435 Spreadsheets	3
BUS. 439 Managing Business Documents	1.5
BUS. 448 Using Microsoft Windows	1.5
BUS. 472 Introduction to Word for Windows	1.5
BUS. 474 Intermediate Word for Windows	1.5
BUS. 480 Using the Internet, Part I	1.5
BUS. 475 Using Outlook	1.5
SPCH 120 Interpersonal Communication	3
COOP 670 or 672 Cooperative Education/Internship	1.5

Selective Courses, choose a minimum of 6 units from the following:

Any Business courses  
Cooperative Education courses

### **CERTIFICATE OF PROFICIENCY - ADMINISTRATIVE ASSISTANT**

*Core and Selective Requirements*

**Complete Core Courses, 31 units**

	<b>Units</b>
BUS. 101 Human Relations in Business	3
BUS. 108 Business Writing & Presentation Methods	3
BUS. 416 Procedures for Working in an Office	3
BUS. 435 Spreadsheets	3
BUS. 472 Introduction to Word for Windows	1.5
BUS. 474 Intermediate Word for Windows	1.5
BUS. 475 Using Outlook	1.5
SPCH 120 Interpersonal Communication	3
BUS. 419 On-Site Management	1
BUS. 436 Database Management	3
BUS. 457 Presentation Software: Powerpoint	1.5
BUS. 478 Integrating Microsoft office	1.5
BUS. 128 Corporate Meeting and Event Planning	3
COOP 670 or 672 Cooperative Education/Internship	1.5

Selective Courses, choose a minimum of 6 units from the following:

Any Business courses  
Cooperative Education courses

### **ASSOCIATE IN SCIENCE - ADMINISTRATIVE SUPPORT ASSISTANT**

*Core and Selective Requirements*

**Complete Core & Selective Courses, 28.5 units, listed under the Certificate of Proficiency - Administrative Support Assistant.**

### **ASSOCIATE IN SCIENCE - ADMINISTRATIVE ASSISTANT**

*Core and Selective Requirements*

**Complete Core & Selective Courses, 31 units, listed under the Certificate of Proficiency - Administrative Assistant.**

Contact: Romy Thiele, On-campus program, Phone: 306-3211

Contact: Carolyn Jung, Off-campus program, Phone: 306-3213

## **BUSINESS/SMALL BUSINESS**

**Certificate of Proficiency**

**30 units+**

**Associate in Science**

**30 units\***

*+meet Certificate Program requirements listed on page 37.*

*\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.*

The Business Department offers both an A.S. Degree and a Certificate program for those students who wish to become a new business owner and or update their skills as a current business owner. The A.S. Degree and Certificate program are designed to assist students in the development of a small business.

### **CERTIFICATE OF PROFICIENCY - BUSINESS/SMALL BUSINESS**

*Core and Selective Requirements*

**Complete Core Courses, 30 units**

	<b>Units</b>
ACTG 100 Accounting Procedures	3
ACTG 194 QuickBooks® & QuickBooks Pro® for the Small Business Person I	1
ACTG 196 QuickBooks® & QuickBooks Pro® for the Small Business Person II	1
BUS. 101 Human Relations in Business	3
BUS. 108 Business Writing & Presentation Methods	3
BUS. 150 Small Business Management	3
BUS. 395 Getting Started in Business	1
BUS. 396 Developing a Business Plan	1
BUS. 397 Developing Tools to Create a Marketing Plan	1
BUS. 399 Laws Governing Small Business Owners	1
BUS. 399 Managing a Business	1
BUS. 430 Computer Applications, Part I	1.5
BUS. 431 Computer Applications, Part II	1.5
BUS. 435 Spreadsheet	3
BUS. 480 Using the Internet, Part I	3
BUS. 483 Creating Web Pages: Intro. to HTML	1
COOP 670 Cooperative Education/Work Experience	1

### **ASSOCIATE IN SCIENCE - SMALL BUSINESS**

*Core and Selective Requirements*

**Complete Core Courses, 30 units, listed under the Certificate of Proficiency-Small Business.**

Contact: Ted Brown, Phone: 599-9307

Email: [canadasbdc@smccd.net](mailto:canadasbdc@smccd.net)

Web: [www.canadacollege.net/sbdc](http://www.canadacollege.net/sbdc)

## COMPUTER INFORMATION SCIENCE AND SYSTEMS (CIS)

Certificate of Completion - Internet Programming 15 - 17 units+

Certificate of Completion - UNIX 23 units+

Associate in Science - Computer Information Systems (CIS) 31-33 units\*

Associate in Science - UNIX 23 units

Transfer Program - Computer Information Systems/Computer Science / Computer Engineering Available

+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

The Computer Information Systems Program offers an AS degree and a parallel transfer program. Students who already possess a degree will gain substantial skills in computer sciences through completion of the Core Courses. The major for the AS degree in Computer Information Systems consists of 23-25 units of Required Core Courses and 12 units of electives chosen from the list of Supporting Subject Courses which complete the major. Other electives for the AS degree may be chosen freely. To earn the AS degree, students also must complete general education and other graduation requirements.

### CERTIFICATE OF COMPLETION- INTERNET PROGRAMMING

Core and Selective Requirements

Complete Core Courses, 9 units

	Units
BUS. 483 Creating Web Pages: Introduction to HTML	1
BUS. 484 Creating Web Pages: Intermediate HTML	1
COMP 321/322 JavaScript I/II	1/1
COMP 330/331 Introduction/Intermediate PERL	1/1
COMP 189 Operating Systems Overview	3

Selective courses, choose 6-8 units from Group A or Group B:

#### Group A

CIS 118 Introduction to Object-Oriented Program Design	3
CIS 119 Open Computer Lab I	1
CIS 284 Programming Methods I: Java	3
CIS 285 Open Computer Lab I: Java	1

#### Group B

COMP 103 Introduction to Computer Science	3
COMP 235 Visual Basic Programming	3

### CERTIFICATE OF COMPLETION- UNIX

Core and Selective Requirements

Complete Core Courses, 9 units

	Units
CIS 252/253 Programming Methods II: C++/Lab II C++	3/1
COMP 311 Introduction to the Unix Operating System	1.5
COMP 411 Intermediate Unix	1.5
COMP 340 Introduction to UNIX Systems Administration	1.5
COMP 680 UNIX Shell Programming	1
COMP 680 Integrating UNIX and Windows NT Systems	1

BUS. 492 Networking Essentials	1.5
BUS. 466 Using Microsoft NT	3
COOP 670 Cooperative Education/Work Experience or COOP 672 Cooperative Education Internship	2

Selective Courses, choose a minimum of 6 units from the following:

CIS 250/251 Programming Methods I: C++/Lab	3/1
COMP 236 Java Programming Language	3
COMP 330/331 Introduction/Intermediate PERL	1/1
COMP 680 Introduction to PL/SQL	1.5
COMP 480 Personal UNIX Systems	0.5

### ASSOCIATE IN SCIENCE - COMPUTER INFORMATION SYSTEMS (CIS)

Core & Selective Requirements

Complete Core Courses, 19-21 units

Choose either the C++ OR the JAVA path below.

#### C++ Path

	Units
CIS 118/119 Introduction to Object-Oriented Program Design/Lab I	3/1
CIS 250/251 Programming Methods I: C++/Lab I: C++	3/1
CIS 252/253 Programming Methods II: C++/Lab II C++	3/1

One of the following courses:

MATH 200 Elementary Probability and Statistics	4
MATH 241 Applied Calculus I	5
MATH 251 Analytical Geometry & Calculus I	5
MATH 268 Discrete Mathematics	4

One of the following courses:

COMP 235 Visual Basic Programming	3
CIS 290/291 Computer Architecture/Open Computer Lab II/3/1	3/1

#### Java Path

	Units
CIS 118/119 Introduction to Object-Oriented Program Design/Lab I	3/1
CIS 284/285 Programming Methods I: Java/Lab I: Java	3/1
CIS 286/287 Programming Methods II: Java/Lab II: Java	3/1

One of the following courses:

MATH 200 Elementary Probability and Statistics	4
MATH 251 Analytical Geometry & Calculus I	5
MATH 268 Discrete Mathematics	4

One of the following courses:

COMP 235 Visual Basic Programming	3
CIS 290/291 Computer Architecture/Open Computer Lab 3/1	3/1

Selective Courses, in addition to taking the courses for one of the paths listed above, choose a minimum of 12 units from the following list

	Units
MATH 200 Elementary Probability and Statistics	4
MATH 219 Pre-Calculus College Algebra/Trigonometry	5
MATH 241/242 Applied Calculus I/II	5/5
MATH 251/252/253 Analytical Geometry & Calculus I/II/III	5/5/5
MATH 270 Linear Algebra	3
MATH 275 Ordinary Differential Equations	3
CIS 290/291 Computer Architecture/Open Computer Lab II/3/1	3/1
COMP 235 Visual Basic Programming	3

COMP 311 Introduction to the Unix Operating System	1.5
PHYS 210/220 General Physics I/II	4/4
or PHYS 250/260/270 Physics with Calculus I/II/III	4/4/4
ENGR 210 Engineering Graphics	4
ENGR 260/261 Circuits and Devices/Lab	3/1
ENGR 270 Materials Science	3
CHEM 210/220 General Chemistry I/II	5/5
PHIL 103 Critical Thinking	3

### TRANSFER PROGRAM - COMPUTER INFORMATION SCIENCE

Cañada College offers lower division coursework required for transfer in the areas related to Computer Science. In this regard, it is suggested that students research Computer Information Systems, Management Information Systems, Computer Science, and Computer Engineering programs. Students should use PROJECT ASSIST ([www.assist.org](http://www.assist.org)) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

## EARLY CHILDHOOD EDUCATION/ CHILD DEVELOPMENT

Certificate of Completion - Family Development	9 units+
Certificate of Proficiency - Early Childhood Education/Child Development	24 units+
Associate in Science - Early Childhood Education/Child Development	24 units*
Transfer Program	Available

+meet Certificate Program requirements listed on page 37.

\*and required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate degree.

The Early Childhood Education/Child Development Program is designed to meet individual career goals, foster positive parenting skills, and increase individuals' general understanding and appreciation of childhood. Children's growth, developmentally appropriate practice, and professional development within the child care field are major aspects of the program. The child from birth to ten years is the primary focus. Current research and practical applications are combined in order to assist students in planning their most effective role with children.

Any student in the ECE/CD Program may complete the certificate program in one year if a minimum of 12 units is taken each semester. Students coming from other colleges and universities may have equivalencies established if "child" is in the title of the course and no "Elementary Education" designation exists. All courses that apply toward the certificate program must be lower division work. A minimum of 12 units must be taken at Cañada College to receive the Cañada College ECE certificate. A minimum of a "C" grade in all course work is required.

### CERTIFICATE OF COMPLETION - FAMILY DEVELOPMENT

#### Core and Selective Requirements

#### Complete Core Courses, 9 units

	Units
ECE. 262 or HMSV 262 Introduction to Family Support: Building Respectful Partnerships	3
ECE.264 or HMSV 264 The Life Cycle of the Family	3
HMSV 265 Family Development Portfolio, Part I	
HMSV 266 Family Development Portfolio, Part II	
or ECE. 366 or HMSV 366 Practicum in Early Childhood Education	
or ECE. 670 Cooperative Education/Work Experience	
or ECE. 672 Cooperative Education/Internship	3

### CERTIFICATE OF PROFICIENCY - EARLY CHILDHOOD EDUCATION/CHILD DEVELOPMENT

#### Core & Selective Requirements

#### Complete Core Courses, 12 units

	Units
ECE. 201 Child Development	3
or PSYC 201 Child Development	3
ECE. 210 Early Childhood Education Principles	3

or ECE. 384 Principles and Policies for Home-Based Child Care	3
ECE. 211 Early Childhood Education Curriculum	3
or ECE. 386 Activity Planning & Curriculum for Home-Based Child Care	3
ECE. 212 Child, Family, and Community	3

**Selective Courses, choose a minimum of 12 units from the following list:**

	<b>Units</b>
COOP 670 Cooperative Education/Work Experience	1-3
ECE. 213 The School-Age Child	3
ECE. 223 Infant Development	3
ECE. 225 Infant/Toddler Environments	3
ECE. 230 Creative Activities for the Young Child	3
ECE. 240 Early Childhood Education Administration: Business/Legal	3
ECE. 241 Early Childhood Education Administration: Human Relations	3
ECE. 242 Adult Supervision in ECE/CD Classrooms	2
ECE. 250 Violence & Its Impact on Children & Their Families	3
ECE. 252 Teaching Violence Intervention Strategies to Children and Families	3
ECE. 254 Anti-Bias Curriculum	3
ECE. 260 Children with Special Needs	3
ECE. 313 Health and Safety for Young Children	1
ECE. 316 First Aid for Children	.5
ECE. 317 Pediatric CPR	.5
ECE. 331 The Teaching Experience	1
ECE. 333 Observational Skills	1
ECE. 335 Handling Behavior	3
ECE. 337 Child-Parent Relationships	1-3
ECE. 350 Issues in Early Childhood Education	1-6
ECE. 351 Language Arts in Early Childhood	1
ECE. 353 Literacy in Early Childhood	1
ECE. 355 Storytelling in Early Childhood	1
ECE. 366 Practicum in Early Childhood Education	3
ECE. 380 Family Day Care Training	1-4
ECE. 382 Male Involvement in Early Childhood	1
ECE. 680 Selected Topics	.5-3
ECE. 695 Independent Study	.5-6
EDUC 100 Introduction to Education	3
LIT. 191 Children's Literature I	3
LIT. 192 Children's Literature II	3

### **AREAS OF SPECIALIZATION WITHIN THE ECE/CD PROGRAM**

In accordance with the guidelines established by the Child Development Permit for the Master Teacher, Cañada College's ECE/CD Program has created several "specializations." ("Administration" is not considered a specialization.) Six semester units in specific areas define a specialization. These focus areas can be useful to students when seeking work advancement or career development options.

#### **Infant/Toddler Care**

ECE. 223 Infant Development	3
ECE. 225 Infant/Toddler Environments	3

#### **Preschool Programming: SAFE START**

ECE. 250 Violence & Its Impact on Children & Their Families	3
ECE. 252 Teaching Violence Intervention Strategies to Children and Families	3

#### **Preschool Programming: Children's Literature**

LIT. 191 Children's Literature I	3
LIT. 192 Children's Literature II	3

#### **Developmentally Appropriate Curriculum: School-Age Care**

ECE. 213 The School-Age Child	3
ECE. 230 Creative Activities for the Young Child	3

#### **Developmentally Appropriate Curriculum: Children with Special Needs**

ECE. 260 Children with Special Needs	3
ECE. 335 Handling Behavior	3

#### **Family Support**

ECE. 262 Introduction to Family Support: Building Respectful Partnerships	3
ECE. 264 The Life Cycle of the Family	3

#### **Family Child Care: Home-Based Care**

ECE. 384 Principles & Policies for Home-Based Child Care	3
ECE. 386 Activity Planning & Curriculum for Home-Based Child Care	3

### **ASSOCIATE IN SCIENCE - EARLY CHILDHOOD EDUCATION / CHILD DEVELOPMENT**

#### *Core & Selective Requirements*

**Complete Core and Selective Courses, 24 units, listed under the Certificate of Proficiency-Early Childhood Education/Child Development.**

### **TRANSFER PROGRAM - CHILD DEVELOPMENT**

Cañada College offers lower division coursework required for transfer in areas related to Child Development and for students seeking teaching positions in a preschool, elementary, or secondary educational environment. In this regard, it is suggested that students research Child Development, Psychology, and Liberal Studies majors. Students should use PROJECT ASSIST ([www.assist.org](http://www.assist.org)) to research lower division major requirements at the transfer destination(s) of their choice. Also, work with a Counselor/Advisor to determine appropriate transfer coursework.

### **CHILD DEVELOPMENT PERMIT**

Cañada College's ECE/CD Certificate Program is aligned with the Child Development Permit regulations. The Permit has been approved by the California Department of Education and the Commission on Teacher Credentialing for child care and development centers operating under Title 5 (publicly subsidized).

The Child Development Permit emphasizes professional development and will eventually impact the entire Early Childhood Education field. The career lattice approach acknowledges the importance of many entry points into the profession. The Child Development Permit has taken the place of the Emergency Children's Center Instructional Permit, the Children's Center Supervision Permit, and the Life Children's Center Supervision Permit.