

BOT 101 General Botany Lecture (3)
 3 hours lecture
Note: Not open to students with prior credit in BOT 100
Transfer acceptability: CSU; UC – BOT 100 and 101/101L combined: maximum credit, 4 units
 The diversity, structure, and function of major plant groups including cellular metabolism, soil water relationships, classification, genetics, life cycle patterns, growth, and the basic ecological and evolutionary concepts of botany.

BOT 101L General Botany Laboratory (1)
 3 hours laboratory
Prerequisite: Completion of, or concurrent enrollment in, BOT 101
Note: Not open to students with prior credit in BOT 100
Transfer acceptability: CSU; UC – BOT 100 and 101/101L combined: maximum credit, 4 units
 A laboratory course in plant biology. Special emphasis on the structure, growth, function, genetics, and life cycles of major plant groups. This is a general education course intended for non-science majors.

BOT 110 Botany of Spring Wildflowers (4)
 3 hours lecture 3 hours laboratory
Transfer acceptability: CSU; UC
 The identification, distribution, and interrelationships of plants in their natural environment; ecological principles; and representative plant communities. Special emphasis will be given to the study of plant families and the use of taxonomic keys.

BOT 115 Plants and People (3)
 3 hours lecture
Transfer acceptability: CSU; UC – No credit if taken after 100 or 101/101L
 The role of plants in the world ecosystem, including past and present cultural and economic uses for food, medicine, and industrial products. Principles of plant structure and function, with selected topics on plant diversity, plant adaptations, and the interrelationships between plants and people will also be discussed.

BOT 195 Field Study of Native Plants (1,2,3)
 2, 4 or 6 hours lecture/laboratory
Note: May be taken 4 times
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.
 Extended field study of the flora of selected geographical areas including habitats, adaptations, and identification of native and naturalized species. See Class Schedule for locality to be visited. Fee charged.

BOT 197 Botany Topics (.5-4)
 Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: May be taken 4 times
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus. Topics in Botany. See Class Schedule for specific topic offered. Course title will designate subject covered.

Business Education (BUS)
See also Accounting, Business Management, Insurance, International Business, Legal Studies, Office Information Systems, Paralegal Studies, Real Estate
 Contact the Business Education Department for further information, (760) 744-1150, ext. 2488

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Advertising, Marketing, and Merchandising

This program is designed to provide a general academic background of coursework pertinent to entry-level employment and/or upper division education in the field of product or service distribution.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
ACCT 103 and	Financial Accounting	
ACCT 104 or	Accounting Spreadsheet Lab	
BUS 105	Bookkeeping Fundamentals	3,5
BUS 110	Business Mathematics	3
BUS 115	Business Law	3
BUS 140	Selling for Business	3
BUS 145/		
FASH 125	Retailing/Promotion	3
BUS 150	Advertising	3
BUS 155	Marketing	3
Electives (Select 10-11 units)		
BUS 100	Introduction to Business	3
BUS 125	Business English	3
BUS/FCS 136	Personal Finance	3
BUS 157	E-Commerce	3
BUS 158	Marketing Internship	3
BUS 170	Word for Business Basic	1
BUS 205	Business Writing	3
BMGT 110	Human Resource Management	3
BMGT 105	Small Business Management	3
CSIS 105 or	Computer Concepts/Microcomputer Applications	
CSIS/R CSIS 120	Microcomputer Applications	3
MATH 120	Elementary Statistics	3
OIS 101	Beginning Keyboarding	3
SPCH 100	Oral Communication	3
TOTAL UNITS		31-34

Recommended Elective: BUS 171

Business Administration

Provides a program to prepare the student for transfer. Since requirements vary at each four-year school, transfer students must consult with a counselor, or a Business Education Department advisor, to develop a program for the specific school they wish to attend.

A.A. DEGREE MAJOR

Program Requirements		Units
ACCT 103	Financial Accounting	4
ACCT 104	Accounting Spreadsheet Lab	1
ACCT 108	Managerial Accounting	4
BUS 115 or	Business Law	
BUS 117	Legal Environment of Business	3
BUS 175	Excel Basic	1
BUS 205	Business Writing	3
CSIS 105 or	Computer Concepts/Microcomputer Applications	
CSIS/R CSIS 120	Microcomputer Applications	3
ECON 100 or	Basic Economics	
ECON 101 and	Principles of Economics (Macro)	
ECON 102	Principles of Economics (Micro)	3,6
MATH 120	Elementary Statistics	3
MATH 130	Calculus for the Social Sciences	4
TOTAL UNITS		29 - 32

Business-General

This program is primarily designed for students who are seeking an overview of business educational opportunities prior to a career commitment in a particular area.

A.A. DEGREE MAJOR

Program Requirements	Units
ACCT 103 and Financial Accounting	
ACCT 104 or Accounting Spreadsheet Lab	
BUS 105 Bookkeeping Fundamentals	3,5
BUS 100 Introduction to Business	3
BUS 110 Business Mathematics	3
BUS 115 Business Law	3
BUS 125 Business English	3
BUS 155 Marketing	3
BMGT 101 or Introduction to Management	
BMGT 105 Small Business Management	3
CSIS 105 or Computer Concepts/Microcomputer Applications	
CSIS/R CSIS 120 Microcomputer Applications	3
Electives (Select 6-9 units)	
ACCT 108 Managerial Accounting	4
ACCT 115 Sales Tax, Payroll Taxes, and Employee Benefits	2
BUS 116 Business Law	3
BUS 130 Intro Purchasing and Supply Chain Management	3
BUS 140 Selling for Business	3
BUS 145/ Retailing/Promotion	3
FASH 125 Advertising	3
BUS 150 E-Commerce	3
BUS 157 Marketing Internship	3
BUS 158 Business Writing	3
BUS 205 Beginning Keyboarding	3
OIS 101* or Intermediate Keyboarding	3
TOTAL UNITS	30 - 35

* Not required if acceptable level skill has been completed in high school. Students excused from OIS 101 must substitute an elective.

Recommended Electives: BUS 170, 171; PSYC 100; ECON 101

E-Business

Provides a program, which prepares students in the basic skills necessary to use e-commerce in an ever changing and competitive entrepreneurial market.

CERTIFICATE OF PROFICIENCY

Program Requirements	Units
BMGT 105 Small Business Management	3
BUS 155 Marketing	3
BUS 157 E-Commerce	3
GC 217 Online Store Design I	3
Electives (Select 3 units)	
BUS 138 Business Ethics	2
BUS 142 Customer Service	1
BUS 180 Access for Business	1
BUS 190 Internet for Business	1
GC 218 Online Store Design II	3
GC 290 Copyright Graphic Designers/Web Developers	1
GC 291 Contracts Graphic Designers/Web Developers	1
GC 292 Legal Issues Graphic Designers/Web Developers	3
TOTAL UNITS	15

Entrepreneurship

Provides a program to prepare the student for owning and managing a business.

CERTIFICATE OF PROFICIENCY

Program Requirements	Units
BMGT 105 Small Business Management	3
BUS 105 Bookkeeping Fundamentals	3
BUS 155 Marketing	3
BUS 157 E-Commerce	3
BUS 170 Word for Business - Basic	1
BUS 175 Excel Basic	1
Electives (Select 3 units)	
BUS 138 Business Ethics	2
BUS 142 Customer Service	1
BUS 171 Word for Business - Advanced	1
BUS 180 Access for Business	1
BUS 185 PowerPoint for Business	1
BUS 190 Internet for Business	1
TOTAL UNITS	17

Internet

As the vast web of global and local information networks grow, several skills and forms of literacy are becoming essential for anyone who wants to obtain the full benefits of the Communications Age. An individual's ability to capitalize on the opportunities offered by interactive communications requires mastery of these information and communication proveniences:

- **Navigational skills** - The ability to move smoothly among arrays of autonomous and globally interconnected information, contacts, forums, and discussion groups in order to locate and connect to information and expertise from relevant sources.
- **Information literacy** - An understanding of which information is most useful, relevant, and reliable, as well as the ability to analyze, distill, integrate, compose, and classify information to create knowledge.
- **Distribution skills** - Frameworks for rethinking methods of packaging, presenting, providing access, and disseminating information and knowledge in this new medium.
- **Communications literacy** - Integrating new forms of information, knowledge, and message development into evolving patterns of organizational and interpersonal communication.

This certificate offers preparation skills for the above areas of emphasis involving the Internet.

Emphasis in Business

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
BMGT 105 Small Business Management	3
BUS 140 Selling for Business	3
BUS 150 Advertising	3
BUS 155 Marketing	3
BUS 170 Word for Business - Basic	1
BUS 171 Word for Business - Advanced	1
BUS 157 E-Commerce	3
CSIS/R CSIS 137 Web Site Development with XHTML	2
GC/	
R GC 202 or Web Page Layout I	3
GC 230 and Web Page Layout I – Part I	1.5
GC 231 Web Page Layout I – Part II	1.5
LT 154 Information for Life Long Learning	3
TOTAL UNITS	25

**Internet –
Emphasis in Graphic Communication**

**A.A. DEGREE MAJOR OR
CERTIFICATE OF ACHIEVEMENT**

(See Graphic Communications)

Retail Management

A comprehensive program designed to prepare current and future retail employees for the fast paced challenges in a competitive retail environment. This certificate has been endorsed by the Western Association of Food Chains and its member companies.

CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
ACCT 103	Financial Accounting	4
ACCT 104	Accounting Spreadsheet Lab	1
BMGT 101	Introduction to Management	3
BMGT 110	Human Resource Management	3
BUS 110	Business Mathematics	3
BUS 145/		
FASH 125	Retailing/Promotion	3
BUS 155	Marketing	3
BUS 205	Business Writing	3
OIS 120	Intro to Office Info Systems	3
SPCH 115	Interpersonal Communication	3
TOTAL UNITS		29

Salesperson - Retail

This program is designed to prepare students for entry into the retail sales force. Students will gain a working knowledge of sales techniques and customer service principles within the marketing environment. Emphasis will be placed on a consultative approach toward encouraging sales.

CERTIFICATE OF PROFICIENCY

Program Requirements		Units
(Select 3 classes totaling 9 units)		
BUS 140	Selling for Business	3
BUS 145/		
FASH 125	Retailing/Promotion	3
BUS 150	Advertising	3
BUS 155	Marketing	3
Elective Courses (Select 6 units)		
BUS 100	Introduction to Business	3
BUS 110	Business Mathematics	3
BUS 138	Business Ethics	2
BUS 142	Customer Service	1
TOTAL UNITS		15

COURSE OFFERINGS

BUS 100 Introduction to Business (3)
3 hours lecture
Transfer acceptability: CSU; UC
Preparation for survival within the global economy. Topics such as small business management, managerial theory, international business, and marketing represent several important class components. Includes strong career guidance component.

BUS 105 Bookkeeping Fundamentals (3)
3 hours lecture
Note: Not open to students who have completed ACCT 103
Transfer acceptability: CSU;
Comprehensive coverage of the basic bookkeeping cycle, including journalizing, posting, worksheet and financial statements; payroll records; petty cash systems; reconciliation of bank statements. Designed to give practical preparation for bookkeeping positions.

BUS 110 Business Mathematics (3)
3 hours lecture
Transfer acceptability: CSU
Theory and practical application to business situations of computing trade and cash discounts, commissions, payrolls, property taxes, interest, bank discount, compound interest, present value, annuities, sinking funds, insurance, consumer credit, and depreciation.

BUS 115 Business Law (3)
3 hours lecture
Transfer acceptability: CSU; UC – BUS 115, 116, 117 combined: maximum credit, one course; CAN BUS 8
Law in its relationships to business contracts, agency, bailment, and sales.

BUS 116 Business Law (3)
3 hours lecture
Recommended preparation: A minimum grade of 'C' in BUS 115
Transfer acceptability: CSU; UC – BUS 115, 116, 117 combined: maximum credit, one course
Law in its relationships to negotiable instruments, partnerships, corporations, real property, insurance, wills and estates, and bankruptcy.

BUS 117 Legal Environment of Business (3)
3 hours lecture
Transfer acceptability: CSU; UC – BUS 115, 116, 117 combined: maximum credit, one course; CAN BUS 12
Business legal systems, sources of law, social and ethical influences, judicial and administrative systems, contracts, torts, bankruptcy, agency, business organizations, securities regulation, regulation of property, and protection of intellectual property interests.

BUS 125 Business English (3)
3 hours lecture
Transfer acceptability: CSU
Practical approaches to solving the common problems of English language usage, as specifically applied to business-oriented written material. Coverage includes business vocabulary, spelling, grammar, idioms, sentence structure, and punctuation.

BUS 130 Introduction to Purchasing and Supply Chain Management (3)
3 hours lecture
Transfer acceptability: CSU
Basic principles in purchasing and supply chain management, relationship management, application of processes, inventory management, source selection, obtaining and evaluating offers, buying techniques, contract writing and legal aspects.

BUS 136 Personal Finance (3)
3 hours lecture
Note: Cross listed as FCS 136
Transfer acceptability: CSU
A study of the effective management of personal and family resources. Budgeting, buying of goods and services, banking, credit, taxation, investing, insurance, home ownership, estate planning, and consumer protection.

BUS 138 Business Ethics (2)
2 hours lecture
Transfer acceptability: CSU
This course provides a systems approach for making business decisions that are

responsible, practical, and defensible. It examines the gray zone of ethical quandaries and provides a methodical process for selecting alternative solutions that are ethical and good for business.

BUS 140 Selling for Business (3)
3 hours lecture

Transfer acceptability: CSU

A study of the working principles of selling in a business environment including prospecting for customers, understanding buying behavior, developing a sales presentation, closing the sale while delivering the best customer service, and maintaining professional relationships.

BUS 142 Customer Service (1)
1 hour lecture

Transfer acceptability: CSU

This course covers the entire spectrum of customer service, which includes anything a business does for a customer in order to enhance the customer experience. Central focus of the course is recognition that it is much more costly to attract new customers than it is to maintain current customers.

BUS 145 Retailing/Promotion (3)
3 hours lecture

Note: Cross listed as FASH 125

Transfer acceptability: CSU

Principles and techniques of retailing, promotion, and advertising pertinent to retail policies and procedures. Includes psychological aspect of retailing. Working foundation for those looking forward to employment in this area.

BUS 150 Advertising (3)
3 hours lecture

Transfer acceptability: CSU

A study of advertising media and methods as sales promotional tools in marketing activities including, but not limited to, such areas as the production and evaluation of advertisements and advertising media.

BUS 155 Marketing (3)
3 hours lecture

Transfer acceptability: CSU

A study of the role and functions of marketing in the wholesale and retail distribution of industrial and consumer goods and services, to familiarize students with marketing policies and practices, integration of marketing activities, and pertinent government regulations.

BUS 157 E-Commerce (3)
3 hours lecture

Recommended preparation: BUS 190

Transfer acceptability: CSU

Addresses the methods by which a business can harness the powers of the Web to sell its product. Examines planning an e-business, web site creation and hosting, e-commerce stores, electronic payment issues and security, marketing an e-business, copyright, and privacy policy issues.

BUS 158 Marketing Internship (3)
3 hours lecture

Note: Course not offered every semester

Transfer acceptability: CSU

A group process whereby students form their own promotions company. Students will work with a local business owner for the purpose of creating and implementing a promotional event to be held on campus, at the client's place of business, or at another location, as identified through the research component of their plan. Students will engage in activities which include, but are not limited to, market research, advertising, public relations, and budgeting.

BUS 165 Keyboarding (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit

Transfer acceptability: CSU

Touch-typing of alphabetic, numeric, and symbol keys on a computer keyboard;

development of speed and accuracy on straight copy; introduction to basic business document formatting.

BUS 170 Word for Business – Basic (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Recommended preparation: A keyboarding speed of 20 net words a minute
Note: May be open entry/open exit; May be taken 4 times with different subject matter; Maximum of 4 completions in any combination of BUS 170, BUS 171; This course cannot be used to satisfy the Office Information Systems A.A. Degree/Certificates.

Transfer acceptability: CSU

Hands on application with Microsoft Word. Students will create, save, close, open, edit, and print a variety of business documents utilizing the following software features: finding and replacing text, moving and copying text; spell, thesaurus, grammar, and auto text; character, paragraph, page, and document formatting; envelopes; tables; columns; borders and special characters; footnotes and endnotes; draw objects and graphics; hyperlinks; styles and templates; outlines; smart tags; and headers/footers. Class Schedule will designate software package covered.

BUS 171 Word for Business – Advanced (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Recommended preparation: A minimum grade of 'C' in BUS 170

Note: May be open entry/open exit; May be taken 4 times with different subject matter; Maximum of 4 completions in any combination of BUS 170, BUS 171; This course cannot be used to satisfy the Office Information Systems A.A. Degree/Certificates.

Transfer acceptability: CSU

Refinement of basic word processing skills and practice of the more sophisticated software features of merge; labels; fields; index and table of contents; macros; master and subdocuments; customizing Word; on-screen forms; charts; bookmarks and cross-referencing; creating and editing Word web pages; comparing and merging documents; linking and embedding objects; and tracking changes. In addition, more advanced printing, file management, and integration of related software will be covered. The Class Schedule will designate software version covered.

BUS 175 Excel Basic (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Recommended preparation: BUS 110

Note: May be open entry/open exit; may be taken 4 times

Transfer acceptability: CSU

Introduction to a currently used computer spreadsheet application program. Concepts include defining, designing and navigating spreadsheets; creating, editing, formatting, and printing spreadsheets; working with formulas and functions; and working with charts and graphics. A variety of spreadsheets will be created and edited within practical applications designed for the business environment. Class Schedule will designate software package covered.

BUS 176 Excel Intermediate (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Recommended preparation: A minimum grade of 'C' in BUS 175 or Equivalent

Note: May be open entry/open exit; may be taken 4 times

Transfer acceptability: CSU

Development of intermediate spreadsheet skills to manipulate worksheet content using a current computer spreadsheet application program. Intermediate concepts include working with lists, filtering, conditional formatting, pivot tables/charts, worksheet groups, workbook templates, lookup functions, auditing tools, document sharing features, macro basics, and publishing to a web page. Concepts are introduced using practical applications designed for the business environment. Class schedule will designate software package covered.

BUS 177 Excel Advanced (1)
Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Recommended preparation: A minimum grade of 'C' in BUS 176 or Equivalent

Note: May be open entry/open exit; may be taken 4 times

Transfer acceptability: CSU

Development of advanced skills using a current computer spreadsheet application program. Advanced concepts and skills include performing complex analyses using data tables, arrays, scenarios, goal seek and problem-solving tools, and application add-ins; importing data from external sources including text, database, schema, XML, and web files and real-time sources; defining queries; and, writing and executing macros and sub-routines. Concepts and software features are introduced applying practical applications designed for the business environment. Class schedule will designate software package covered.

BUS 180 Access for Business (I)

Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit; may be taken 4 times

Transfer acceptability: CSU

Introduction to a currently used computer database program. Skills include planning, designing, and using a database; tables; forms and sub forms; reports; queries; and relationships within practical applications designed for the business environment. Class Schedule will designate software package covered.

BUS 185 PowerPoint for Business (I)

Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit; may be taken 4 times

Transfer acceptability: CSU

Introduction to a currently used computer presentations program to produce effective presentations using overheads, 35mm photographic slides, or on-screen slides. Skills include defining and designing presentations; preparing slides using the slide, slide sorter, outline, notes page, and slide show views; formatting and animating the presentation; and applying templates within practical applications applied to the business environment. Class Schedule will designate software package covered.

BUS 186 Microsoft Publisher (I)

2 hours lecture/laboratory

Recommended preparation: R CSIS 170 and R CSIS 127 or BUS 170 or OIS 136.I

Note: May be open entry/open exit, cross listed as R CSIS 130, may be taken 4 times.

Hands-on applications of Microsoft Publisher; a comprehensive software package that combines text, graphics, illustrations, and photographs to produce typeset quality documents for local printer output or for commercial printing. Includes: newsletters; brochures; flyers; web pages; business cards; letterheads and envelopes; advertising and marketing materials; and greeting cards; PDF and web file formats; and printing options.

BUS 187 Project for Business (I)

Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit; may be taken 4 times with different subject matter

Transfer acceptability: CSU

Hands-on application with Microsoft Project, a comprehensive software package that includes the processes of initiating, planning, executing, controlling, and closing a project to meet project goals. Students will identify ways of completing projects more efficiently and effectively by covering the topics of planning a project; creating a project schedule; communicating project information; assigning resources and costs to a project; tracking the progress of and closing a project; and, sharing project information with other people and applications.

BUS 188 Voice Recognition (I)

Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit; may be taken 4 times with different subject matter

Transfer acceptability: CSU

Hands-on application with a current voice recognition software package. Training includes training the software to recognize the user's voice; speaking accurately to improve the user's voice profile; opening and closing programs; selecting text; creating, editing, and formatting a variety of business documents; capitalizing, moving, inserting, saving, opening, and printing a variety of business documents; customizing the software; managing applications and documents; and, managing keyboard and mouse control techniques.

BUS 190 Internet for Business (1)

Course requires 32 hours lecture/laboratory. Students should refer to course listing in Class Schedule for scheduling options.

Note: May be open entry/open exit, may be taken 2 times

Transfer acceptability: CSU

Basic concepts of navigating the Internet and Intranet including terminology, bookmarks/favorites, copying/pasting web pages, search sites/engines, file transfer, e-mail, and attachments with practical applications designed for the business environment. In addition, basic web pages will be created and edited using HTML.

BUS 197 Business Topics (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Business. See Class Schedule for specific topic offered. Course title will designate subject covered.

BUS 205 Business Writing (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in BUS 125 or eligibility determined through the Business English placement process

Recommended preparation: ENG 100

Transfer acceptability: CSU

Principles of effective writing applied to business communications. Develops skill in analysis, organization, composition, and presentation of various types of letters, memos, and reports to elicit the desired responses. Formal analytical report required.

Business Management (BMGT)

Contact the Business Education Department for further information, (760) 744-1150, ext. 2488

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Business Management

This program includes a selection of courses that provides academic preparation to individuals who are seeking employment, or are currently employed, within the management structure of business.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
Core Courses (Select 18-20 units)	
ACCT 103 and Financial Accounting	
ACCT 104 or Accounting Spreadsheet Lab	
BUS 105 Bookkeeping Fundamentals	3, 5
BUS 100 Introduction to Business	3
BUS 110 Business Mathematics	3
BUS 115 Business Law	3



BUS 155	Marketing	3
BUS 205	Business Writing	3
CSIS 105 or CSIS/R CSIS 120	Computer Concepts/Microcomputer Microcomputer Applications	3
ECON 100 or ECON 101 or BUS/FCS 136	Basic Economics Principles of Economics (Macro) Personal Finance	3
MATH 120	Elementary Statistics	3
PSYC 100	Introduction to Psychology	3
SPCH 100	Oral Communication	3
Management Courses (Select 8-9 units)		
BMGT 101	Introduction to Management	3
BMGT 105	Small Business Management	3
BMGT 110	Human Resource Management	3
BMGT 115	Organizational Theory and Design	3
BMGT 125	Introduction to Labor Relations	3
BMGT 130	Management/Leadership Issues	3
BMGT 197	Business Management Topics	.5-4
Elective Courses (Select 3-4 units)		
ACCT 108	Managerial Accounting	4
BUS 130	Intro Purchase/Supply Chain Management	3
BUS 140	Selling for Business	3
BUS 145/ FASH 125	Retailing/Promotion	3
BUS 157	E-Commerce	3
BUS 158	Marketing Internship	3
BUS 170	Word for Business - Basic	1
BUS 171	Word for Business - Advanced	1
BUS 187	Project for Business	1
BUS 197	Business Topics	.5-4
RE 100	Real Estate Principles	3
CE 100	Cooperative Education	1,2,3,4

TOTAL UNITS **29 – 33**

COURSE OFFERINGS

BMGT 101 Introduction to Management (3)

3 hours lecture

Transfer acceptability: CSU

A leadership course designed to enhance understanding of responsibilities associated with management in business. Topics will cover management styles and human behavior factors associated with managing staff.

BMGT 105 Small Business Management (3)

3 hours lecture

Transfer acceptability: CSU

For owners and managers of small businesses. Analysis of personal qualifications, forms of ownership, sources of information, financing, planning, legal problems, record keeping, advertising, insurance, sales promotions, credit, public relations, and current aids to successful management.

BMGT 110 Human Resource Management (3)

3 hours lecture

Transfer acceptability: CSU

A survey of the history and present status of human resource management in the United States. Emphasis on modern techniques of recruitment, placement, wage administration, communications, training, labor relations, and employer/employee relationships in modern industry and business.

BMGT 115 Organizational Theory and Design (3)

3 hours lecture

Transfer acceptability: CSU

Policies and methods of organization in business enterprises of various types and sizes. Functional components of business organization: planning, controlling, coordinating, and directing to meet organizational objectives. Establishing lines of authority and functions of departments or units with emphasis on systems management.

BMGT 125 Introduction to Labor Relations (3)

3 hours lecture

Transfer acceptability: CSU

Introduction to, and development of, an appreciation for labor relations; review of procedures involved in negotiation and administration of labor agreements; development of an understanding of the involvement of labor and management in a collective bargaining agreement; and an overview of the general nature of the labor management relationship and labor law as they currently exist in the United States.

BMGT 130 Management/Leadership Issues (3)

3 hours lecture

Transfer acceptability: CSU

Examination of current issues in management and leadership including: organizing, staffing, decision making, motivating, communicating, and applying such skills to a business organization. Concepts related to group dynamics, change, conflict, organizational communications, and productivity are explored.

BMGT 197 Business Management Topics (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Business Management. See Class Schedule for specific topic offered. Course title will designate subject covered.

Cabinet and Furniture Technology (CFT)

Contact the Trade and Industry Department for further information, (760) 744-1150, ext. 2545

Associate in Arts degree requirements, Certificate of Achievement requirements and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Cabinetmaking and Furniture Design

Provides the student with the theory and skills needed for employment in the field of cabinetmaking and furniture design.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
CFT 100	Fundamentals of Woodworking	2,3,4
CFT 105	Machine Woodworking/Furniture	2,3,4
CFT 110	Machine Tool Joinery I	2,3,4
CFT 111	Machine Tool Joinery II	2,3,4
CFT 153	Studio Furniture Design I	2,3,4
CFT 165	Cabinet/Face Frame Construction	2,3,4
CFT 167	Cabinetmkg/32mm European Construction	2,3,4
CFT 195	Finishing Tech/Touch-Up/Repair	2,3,4
Group One (Select 12 units)		
CFT 149	Hand Joinery I	2,3,4
CFT 150	Hand Joinery II	2,3,4
CFT 151	Veneering Technology I	2,3,4
CFT 152	Veneering Technology II	2,3,4
CFT 155	Classic American Chair Designs	2,3,4
CFT 157	Chair/Seating Prototype Construction	2,3,4
CFT 158	Chair/Seating Production Manufacturing	2,3,4

CFT 161	Tables/Prototype Construction	2,3,4	CFT 157	Chair/Seating Prototype Construction	2,3,4
CFT 162	Tables/Production Manufacturing	2,3,4	CFT 158	Chair/Seating Production Manufacturing	2,3,4
Group Two (Select 12 units)			CFT 161	Tables/Prototype Construction	2,3,4
CFT 120	Advanced Furniture Lab	.5-3	CFT 162	Tables/Production Manufacturing	2,3,4
CFT 130	Stringed Instrument Making	2,3,4	CFT 163	Plastic Laminate Fabrication Techniques	.5,1
CFT 141	Making Woodworking Tools	.5,1,2,3	CFT 164	Cabinet Installation	.5,1
CFT 142	The Art and Craft of Planemaking	.5,1,2,3	CFT 170	Workbench Design and Production	2,3,4
CFT 143	Decorative Box Making	2,3,4	CFT 171	Furniture for the Wood Shop	2,3,4
CFT 144	Production Furniture Making (Toys)	.5,1	CFT 172	Turbo CAD for Cabinets and Furniture	2,3,4
CFT 154	Studio Furniture Design II	2,3,4	CFT 175	Jigs and Fixtures	2,3,4
CFT 156	Advanced Classic American Chair Design	2,3,4	CFT 180	Wood Bending And Lamination/Wood Tech.	2,3,4
CFT 163	Plastic Laminate Fabrication Techniques	.5,1	CFT 186	Machine Tool/Production Carving	1,2,3,4
CFT 164	Cabinet Installation	.5,1	CFT 187	Introduction to Carving	1,2,3,4
CFT 166	Cabinetmaking/Production & Manufacturing	2,3,4	CFT 188	Intermediate Carving	1,2,3,4
CFT 168	Cabinetmaking/Architectural Millwork	2,3,4	CFT 189	Advanced Carving	1,2,3,4
CFT 169	Cabinetmaking/Computer Cabinet Layout	.5,1,2,3	CFT 190	Specialty and Manufactured Hardware	.5,1,2,3
CFT 170	Workbench Design and Production	2,3,4	CFT 196	Special Problems in CFT	1-6
CFT 171	Furniture for the Wood Shop	2,3,4	CFT 197	Cabinet and Furniture Technology Topics	.5-4
CFT 172	Turbo CAD for Cabinets and Furniture	2,3,4	CFT 198	Advanced Wood Finishing	2,3,4
CFT 175	Jigs and Fixtures	2,3,4	CFT 295	Directed Study in Woodworking	1,2,3,4,5,6
CFT 180	Wood Bending And Lamination/Wood Tech.	2,3,4	TOTAL UNITS		36-48
CFT 185	Machine Tool Set Up and Maintenance	2,3,4	Furniture Making		
CFT 186	Machine Tool/Production Carving	1,2,3,4	Provides the student with the theory and skills needed for employment in the field of furniture production and manufacturing.		
CFT 187	Introduction to Carving	1,2,3,4	A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT		
CFT 188	Intermediate Carving	1,2,3,4	Program Requirements		
CFT 189	Advanced Carving	1,2,3,4	CFT 100	Fundamentals of Woodworking	2,3,4
CFT 190	Specialty and Manufactured Hardware	.5,1,2,3	CFT 105	Machine Woodworking/Furniture	2,3,4
CFT 196	Special Problems in CFT	1-6	CFT 110	Machine Tool Joinery I	2,3,4
CFT 197	Cabinet and Furniture Technology Topics	.5-4	CFT 111	Machine Tool Joinery II	2,3,4
CFT 198	Advanced Wood Finishing	2,3,4	CFT 151	Veneering Technology I	2,3,4
CFT 295	Directed Study in Woodworking	1,2,3,4,5,6	CFT 152	Veneering Technology II	2,3,4
TOTAL UNITS		40 - 56	CFT 153	Studio Furniture Design I	2,3,4

Cabinetmaking and Millwork

Provides the student with the theory and skills needed for employment in the cabinet and millwork industry.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units	
CFT 100	Fundamentals of Woodworking	2,3,4
CFT 105	Machine Woodworking/Furniture	2,3,4
CFT 165	Cabinet/Face Frame Construction	2,3,4
CFT 167	Cabinetmkg/32mm European Const	2,3,4
CFT 168	Cabinetmaking/Architectural Millwork	2,3,4
CFT 195	Finishing Tech/Touch-Up/Repair	2,3,4
Group One (Select 12 units)		
CFT 110	Machine Tool Joinery I	2,3,4
CFT 111	Machine Tool Joinery II	2,3,4
CFT 151	Veneering Technology I	2,3,4
CFT 152	Veneering Technology II	2,3,4
CFT 153	Studio Furniture Design I	2,3,4
CFT 166	Cabinetmaking/Production & Manufacturing	2,3,4
CFT 169	Cabinetmaking/Computer Cabinet Layout	.5,1,2,3
CFT 185	Machine Tool Set-up and Maintenance	2,3,4
Group Two (Select 12 units)		
CFT 97	Cabinet and Furniture Technology Topics	.5 4
CFT 120	Advanced Furniture Lab	.5-3
CFT 142	The Art and Craft of Planemaking	.5,1,2,3
CFT 143	Decorative Box Making	2,3,4
CFT 149	Hand Joinery I	2,3,4
CFT 150	Hand Joinery II	2,3,4
CFT 154	Studio Furniture Design II	2,3,4
CFT 155	Classic American Chair Designs	2,3,4
CFT 156	Adv Classic American Chair Design	2,3,4

Program Requirements	Units	
CFT 100	Fundamentals of Woodworking	2,3,4
CFT 105	Machine Woodworking/Furniture	2,3,4
CFT 110	Machine Tool Joinery I	2,3,4
CFT 111	Machine Tool Joinery II	2,3,4
CFT 151	Veneering Technology I	2,3,4
CFT 152	Veneering Technology II	2,3,4
CFT 153	Studio Furniture Design I	2,3,4
CFT 154	Studio Furniture Design II	2,3,4
CFT 157 or	Chair/Seating Prototype Construction	
CFT 161	Tables/Prototype Construction	2,3,4
CFT 195	Finishing Tech/Touch-Up/Repair	2,3,4
Group One (Select 5-6 units)		
CFT 149	Hand Joinery I	2,3,4
CFT 150	Hand Joinery II	2,3,4
CFT 155	Classic American Chair Designs	2,3,4
CFT 180	Wood Bending And Lamination/Wood Tech.	2,3,4
CFT 187	Introduction to Carving	1,2,3,4
CFT 188	Intermediate Carving	1,2,3,4
Group Two (Select 5-6 units)		
CFT 97	Cabinet and Furniture Technology Topics	.5 4
CFT 120	Advanced Furniture Lab	.5-3
CFT 130	Stringed Instrument Making	2,3,4
CFT 141	Making Woodworking Tools	.5,1,2,3
CFT 142	The Art and Craft of Planemaking	.5,1,2,3
CFT 143	Decorative Box Making	2,3,4
CFT 144	Production Furniture Making (Toys)	.5,1
CFT 156	Advanced Classic American Chair Design	2,3,4
CFT 158	Chair/Seating Production Manufacturing	2,3,4
CFT 162	Tables/Production Manufacturing	2,3,4
CFT 165	Cabinet/Face Frame Construction	2,3,4
CFT 166	Cabinetmaking/Production & Manufacturing	2,3,4
CFT 167	Cabinetmaking/32mm European Construction	2,3,4
CFT 168	Cabinetmaking/Architectural Millwork	2,3,4
CFT 169	Cabinetmaking/Computer Cabinet Layout	.5,1,2,3
CFT 170	Workbench Design and Production	2,3,4
CFT 171	Furniture for the Wood Shop	2,3,4
CFT 172	Turbo CAD for Cabinets and Furniture	2,3,4

CFT 175	Jigs and Fixtures	2,3,4
CFT 185	Machine Tool Set Up and Maintenance	2,3,4
CFT 186	Machine Tool/Production Carving	1,2,3,4
CFT 189	Advanced Carving	1,2,3,4
CFT 190	Specialty and Manufactured Hardware	.5,1,2,3
CFT 196	Special Problems in CFT	1-6
CFT 197	Cabinet and Furniture Technology Topics	.5-4
CFT 198	Advanced Wood Finishing	2,3,4
CFT 295	Directed Study in Woodworking	1,2,3,4,5,6

TOTAL UNITS **30 – 52**

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.

CFT 70 **Drawing for the Construction/Cabinet/
Millwork Trades** (3)

2 hours lecture 3 hours laboratory

Note: Cross listed as DT 70

Planning, drawing, interpreting, estimating construction, and cabinet work and millwork drawing.

CFT 97 **Cabinet and Furniture Technology Topics** (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to class schedule.

Note: May be taken 4 times

Topics in Cabinet and Furniture Technology. See Class Schedule for specific topic covered. Course title will designate subject covered.

CFT 100 **Fundamentals of Woodworking** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Transfer acceptability: CSU

An introductory course in design and construction of wood products. Survey, use, care and selection of woodworking machines and hand tools. Explanation of the basic techniques of milling, joinery, assembly, and finishing.

CFT 105 **Machine Woodworking/Furniture** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 2 times

Study, design, and development of practical applications for basic cabinet construction as utilized by the wood products industry. Includes partitions, face frame, carcass, and basic door and drawer construction. Operation of woodworking machines, tools and processes, techniques, and care and suitability of tools and machines.

CFT 110 **Machine Tool Joinery I** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 3 times; maximum of 4 completions in any combination of CFT 110, CFT 111

Through the construction of a specific furniture project, students will advance to a sophisticated level of joinery and design-utilizing mortise and tenon, dovetails, frame and panel, and other joinery appropriate to fine furniture. With the addition of advanced machinery training, students will be able to develop and build a custom design of their choice, creating heirloom furniture in either traditional or contemporary styling.

CFT 111 **Machine Tool Joinery II** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 110

Note: May be taken 3 times; maximum of 4 completions in any combination of CFT 110, CFT 111

Completion of student built cabinet furniture project that incorporated solid wood and traditional joinery in its design. Students will explore door and drawer construction methods, furniture hardware, and various finishing choices. Creation of special moldings and spindle turnings for decorating the carcass will also be explored.

CFT 120 **Advanced Furniture Lab** (.5-3)

1½ - 9 hours laboratory

Prerequisite: CFT 100

Note: May be taken 4 times

Laboratory for students who need additional lab time to complete difficult, complex projects. Students will work under the supervision of an instructor.

CFT 130 **Stringed Instrument Making** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 4 times

Through the fabrication of a steel stringed guitar, students will study the: history, tone theory, construction processes, materials, finishing and set up of stringed instruments. Students will work together, production style, milling raw lumber from local sources into guitar part blanks. Students will then work individually constructing their own guitar. Traditional and modern methods of construction and fabrication are explored.

CFT 141 **Making Woodworking Tools** (.5,1,2,3)

1, 2, 4, or 6 hours lecture/laboratory

Note: May be taken 4 times

Making traditional woodworking tools used to make furniture and chairs. Topics include the history and uses of tools, materials and design, layout of the stock, equipment needed to make and finish the tools, sharpening and fitting the blades, forging and heat treating steel parts. Types of tools include spoke shaves, shaving horses, steaming devices and bending forms.

CFT 142 **The Art and Craft of Planemaking** (.5,1,2,3)

1, 2, 4, or 6 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 3 times

This course will teach students to make wooden hand planes. Through the use of lecture, handouts, demonstrations and videos, the following topics will be covered: the history of planemaking; tuning and using wooden and metal planes; designing a plane; making and tuning laminated planes; cutting, tempering and sharpening a plane iron; designing, making and using a wooden plane.

CFT 143 **Decorative Box Making** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 2 times

Concentrates on the skills and techniques needed to make finely crafted heirloom quality boxes. Types of boxes include: jewelry, cigar humidor, and silver chest. Topics include: design, function, selection of materials, construction techniques, partitions, linings, hardware, assembly techniques, hinge installation, and finishing techniques.

CFT 144 **Production Furniture Making (Toys)** (.5,1)

2 hours lecture/laboratory

Note: May be taken 4 times

Methods and techniques of manufacturing production are learned through lecture and demonstration. Skills are acquired as these methods and techniques are applied in extensive lab work in a production mode. To enable the production of relatively large quantities with varied complexity, this course utilizes the manufacture of quality wooden toys, which are donated to local charities.

CFT 149 **Hand Joinery I** (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 2 times

Exploration of hand tool techniques with application to fine furniture. Skills will be developed through the construction of sample joints and a simple project. Topics include: marking and layout tools, cutting tools, use of the workbench and its accessories, hand saws and their use, Japanese vs. Western tools, dovetail joinery, mortise and tenon joinery, squaring and sizing with a hand plane, sharpening hand tools and building a simple carcass.

- CFT 150 Hand Joinery II** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 149
Note: May be taken 2 times
Comprehensive study of specialized woodworking techniques. The emphasis of this course will be on the development of hand tool skills. Learning exercises will be completed making traditional joinery typical of fine furniture.
- CFT 151 Veneering Technology I** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105
Note: May be taken 2 times
Introduction to the use of veneers in furniture making. Topics include: understanding veneer as a material, cutting and seaming veneer, pressing veneer using traditional and modern methods, creating sunbursts and other multi-piece matches, using and maintaining various cutting tools and sawing your own veneer.
- CFT 152 Veneering Technology II** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 151
Note: May be taken 2 times
Study and practice of advanced veneering techniques which includes working with radius shapes, hand and machine marquetry techniques, hammer veneering, and installation of bandings and stringings. Students will demonstrate their abilities in the construction of a small piece of furniture.
- CFT 153 Studio Furniture Design I** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105
Note: May be taken 2 times
Exploration of historical design concepts and their application to contemporary work. Development of drawing skills needed to design one of a kind studio furniture.
- CFT 154 Studio Furniture Design II** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 153
Note: May be taken 2 times
Implementation of students' design concepts created in CFT 153. Exploration of market opportunities and client relationships.
- CFT 155 Classic American Chair Designs** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Note: May be taken 4 times; maximum of 4 completions in any combination of CFT 155, CFT 156
Chair making which emphasizes the use of traditional chair making tools to shape raw wood into chair parts. Topics include the history of Windsor and Ladder Back chair designs; harvesting raw materials from a tree; proper sharpening of the hand tools; shaping, steam bending, kiln drying and assembling the chair parts; seat weaving; and traditional finishing appropriate to each chair style.
- CFT 156 Advanced Classic American Chair Designs** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 155
Note: May be taken 4 times; maximum of 4 completions in any combination of CFT 155, CFT 156
Chair making which emphasizes the use of traditional chair making tools to shape raw wood into chair parts. Skill development and improved craftsmanship is emphasized while learning to make more complex chairs. Advanced chair designs include: bow back, continuous arm, writing arm, double and triple settees and fan back Windsor chairs; Appalachian style three-slat side chair, four-slat arm chair, bar stools, youth rocker and six-slat rocking chair.
- CFT 157 Chair and Seating/Prototype Construction** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105
Note: May be taken 3 times
In depth study of production chair making. History of chair making and seating. Design and application of pattern making techniques on student selected projects.
- CFT 158 Chair and Seating/Production Manufacturing** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 157
Note: May be taken 3 times
Chair and seating construction; production and advanced machine tool techniques as they relate to chair making. Fine joinery, theory, and advanced techniques.
- CFT 161 Tables/Prototype Construction** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105
Note: May be taken 3 times
Table design and construction. Machine tool operations necessary to produce various table leg, trussel, and base designs.
- CFT 162 Tables/Production Manufacturing** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 161
Note: May be taken 3 times
Development and refinement of table making skills, processes, and procedures. Construction of extension and drop leaf style tables. Joinery and hardware unique to table making.
- CFT 163 Plastic Laminate Fabrication Techniques** (5,1)
1 or 2 hours lecture/laboratory
Note: May be taken 2 times
This course examines the manufacturing process for plastic laminate products, including tools, adhesives, jigs, application and installation techniques. Lectures, demonstrations, and hands-on exercises will give students the opportunity to develop the proficiency and knowledge to design, build and install plastic laminate products.
- CFT 164 Cabinet Installation** (5,1)
1 or 2 hours lecture/laboratory
Note: May be taken 2 times
Installation of both face frame and European (32mm) cabinetry. Topics include: Understanding wall structure, measuring and planning for installation, review of cabinet construction with emphasis on installation, in-depth discussion of the tools, jigs, and techniques used for installation, installation of lower face frame cabinets, installation of upper European (32mm) cabinets, finished scribing of molding.
- CFT 165 Cabinetmaking/Face Frame/Construction** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105
Note: May be taken 3 times
Traditional face frame cabinet construction as applied in kitchens and bathrooms with design, layout, and material analysis. Hands on experience in carcass construction, face frames, partitions, and construction of doors and drawers.
- CFT 166 Cabinetmaking/Production and Manufacturing** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 165
Note: May be taken 3 times
Designed to give students the knowledge and ability to enter the cabinetmaking business. Manufacturing and production techniques will be examined along with design, assembly, and installation. Students will learn to bid on jobs, estimate materials, provide client satisfaction, and produce quality work on a profitable basis.
- CFT 167 Cabinetmaking/32mm European Construction** (2,3,4)
4, 6, or 8 hours lecture/laboratory
Prerequisite: CFT 105

Note: May be taken 3 times

European 32mm production methods as used in cabinetmaking. European design and space utilization; European machinery, hardware, and the latest in European systems. Influence of the 32mm system on the American cabinetmaking industry.

CFT 168 Cabinetmaking/Architectural Millwork (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 3 times

Historical and modern architectural millworking techniques used in frame and panel systems, doors, fireplaces, wall systems, staircases, and built in components. Hands on experience on student selected projects may include woodcarving, woodturning, construction of doors and windows and the production/installation of moldings.

CFT 169 Cabinetmaking/Computer Cabinet Layout (5,1,2,3)

1, 2, 4 or 6 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 4 times

Selection and application of appropriate software as developed for the cabinet industry. Development of industrial standard cabinet plans and specifications utilizing personal-size computer and software programs.

CFT 170 Workbench Design and Production (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 2 times

Design and construction of the most basic of woodworking tools, a workbench. Process rough lumber to maximize yield and minimize waste. Students will be allowed to customize the size of their bench to fit individual requirements within limits. However, mass-production techniques will not be sacrificed. In addition, a broad review of woodworking vises and other bench accessories will be conducted so that students will be able to further customize their own bench.

CFT 171 Furniture for the Wood Shop (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 4 times

The individual student will be required to design and construct one or more projects from a broad range of furniture-quality accessories for the woodworking shop such as tool totes, tool boxes, chests and cabinets (both stationary and portable), step stools, saw horses or workbench accessories. Particular attention will be paid to artistic and functional design, utility, material selection and joinery techniques. Skills in spindle turning, marquetry and inlay, compound angle joinery, coopering, and veneering will be developed and employed depending on the project selected.

CFT 172 TurboCAD for Cabinets & Furniture (2,3,4)

4, 6, or 8 hours lecture/laboratory

Note: May be taken 3 times

Introduction to TurboCAD and to basic CAD concepts and their direct application to the design and drawing of custom cabinets and furniture, as an alternative to "pencil & paper" drawing. Topics will include: extensive 2D and 3D drawing, modifying, and editing tools; the production of measured, shop drawings as an essential first step in the construction of a project; rendering, as a tool in the visualization of concept design.

CFT 175 Jigs and Fixtures (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 4 times

Theory of production tooling, fixtures, and jigs; design and develop practical applications of production tooling, fixtures and jigs as used in current machines within the industry. Field trips to local industries will allow students to further understand tooling as used in the trades.

**CFT 180 Wood Bending and Lamination/
Wood Technology (2,3,4)**

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 4 times

Principles and practical applications of both wood bending and lamination. Mechanical and chemical means of bending wood studied and developed, specific structure and properties of wood are developed.

CFT 185 Machine Tool Set up and Maintenance (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Note: May be taken 4 times

Set up, repair, rebuild, and maintain tools and machines used in the wood-related industries. Machine tool operations studies and applied. Consumer information developed to acquaint student with machines and tools within the field. Planned maintenance schedules developed and applied.

CFT 186 Machine Tool/Production Carving (1,2,3,4)

2, 4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 105

Note: May be taken 4 times for a maximum of 9 units

Introductory woodcarving course using hand and power machine tools. Design considerations, carving techniques, production carving, and incorporation of woodcarving into cabinetmaking, furniture construction, and architectural millwork.

CFT 187 Introduction to Carving (1,2,3,4)

2, 4, 6, or 8 hours lecture/laboratory

Note: May be taken 4 times; maximum of 4 completions in any combination of CFT 187, CFT 188, CFT 189

This beginning course in carving introduces students to the tools and techniques used in carving wood. The course includes specifics of available tools, their proper handling and maintenance, as well as discussions of layout and carving methods as applied to furniture and architectural millwork.

CFT 188 Intermediate Carving (1,2,3,4)

2, 4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 187

Note: May be taken 4 times; maximum of 4 completions in any combination of CFT 187, CFT 188, CFT 189

This course examines methods relating to both low and high relief carving, as well as incised lettering. More complex layout and carving techniques are undertaken. Concepts such as setting-in and blocking-out are introduced while modeling, introduced in the beginning course, is more fully developed.

CFT 189 Advanced Carving (1,2,3,4)

2, 4, 6, or 8 hours lecture/laboratory

Note: May be taken 4 times; maximum of 4 completions in any combination of CFT 187, CFT 188, CFT 189

Advanced carving is a topical study of specific carving applications as they relate to furniture or architectural millwork. Topics are largely gathered from period styles and may include ball and claw feet, Newport shells, and Philadelphia rococo, as well as contemporary interpretations, Art Nouveau, and maritime themes. See Class Schedule for specific period styles/themes to be emphasized.

CFT 190 Specialty and Manufactured Hardware (5,1,2,3)

1, 2, 4, or 6 hours lecture/laboratory

Note: May be taken 4 times

Survey of traditional, contemporary, European, and Oriental market hardware found in the cabinet and furniture industries, including consumer applications. Exploration and application of various system solutions for given problem(s). Study and application of hinges, K D fasteners, fastening systems, joint systems, drawer guides, and runners.

CFT 195 Finishing Technology/Touch Up and Repair (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 100

Finishes as used in the wood-related fields. Study and use of penetrating, surface, epoxy, catalytic, and resin surface finishes. Preparation to include staining, filling, and glazing. Chemistry of lacquers, urethanes, oils, and enamels. Instruction and practice in the touch-up of existing finishes through use of French polishing, burn-in sticks, and dry aniline staining. Repair of fine furniture as necessary prior to finishing.

CFT 196 Special Problems in Cabinet and Furniture Technology (1,2,3,4,5,6)

3, 6, 9, 12, 15, or 18 hours laboratory

Prerequisite: CFT 100 or 105

Note: May be taken 4 times

A research course through individual contract concentrating in the area of Cabinet and Furniture Technology.

CFT 197 Cabinet and Furniture Technology Topics (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Topics in Cabinet and Furniture Technology. See class schedule for specific topic covered. Course title will designate subject covered.

CFT 198 Advanced Wood Finishing (2,3,4)

4, 6, or 8 hours lecture/laboratory

Prerequisite: CFT 195

Wood finishing history, processes, and application of multiple colors and complex finishes on furniture. Topics include media, solvents and tools used to apply media, faux finishes, gilding, coloring the finishing materials, turning broken or missing parts, and veneer repair.

CFT 295 Directed Study in Woodworking (1,2,3,4,5,6)

48, 96, 144, 192, 240, 288 hours laboratory

Prerequisite: CFT 105

Independent study in furniture making, cabinet making, shop layout, design, operation, and maintenance for students who have demonstrated advanced skills and/or proficiencies in Cabinet and Furniture Technology subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Registration requires prior approval of supervising instructor.

Chemistry (CHEM)

Contact the Chemistry Department for further information, (760) 744-1150, ext. 2505

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY

Chemistry

Provides the background to begin upper division course work and prepares the student for entry level jobs that require a knowledge of chemistry. The student is advised to check with the institution to which he/she wishes to transfer for additional courses, which may be required.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
CHEM 110 General Chemistry	3
CHEM 110L General Chemistry Laboratory	2
CHEM 115 General Chemistry	3
CHEM 115L General Chemistry Laboratory	2
CHEM 210 Analytical Chemistry	5
CHEM 220 Organic Chemistry	5
CHEM 221 Organic Chemistry	5
TOTAL UNITS	25

COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.

Courses numbered under 100 are not intended for transfer credit.

CHEM 10 Chemistry Calculations (1)

1 hour lecture

Note: Credit/No Credit grading only

The basic calculation skills needed for successful performance in CHEM 100, 110, and 115. Areas such as significant figures, exponential numbers, and basic chemical problems are discussed. Emphasizes student practice of chemistry problems.

CHEM 100 Fundamentals of Chemistry (4)

3 hours lecture 3 hours laboratory

Prerequisite: One year of high school algebra

Transfer acceptability: CSU; UC – no credit if taken after CHEM 110; CAN CHEM 6; CHEM 100+105=CAN CHEM SEQ B

Introductory study of the principles and laboratory techniques of general chemistry. Laboratory must be taken concurrently with lecture.

CHEM 101 The World of Chemistry (3)

3 hours lecture

Transfer acceptability: CSU; UC – no credit if taken after CHEM 110; UC – CHEM 101 and 102 combined: maximum credit, one course

An introduction to chemistry for non science majors. Stresses a humanistic approach to chemistry and de-emphasizes mathematical problem solving. Includes chemical and physical discoveries and their impact on our standard of living, the formulation of chemical theories from chemical facts, and the use of chemical theories to make scientific and technological advances.

CHEM 102 Chemistry and Society (3)

3 hours lecture

Transfer acceptability: CSU; UC – no credit if taken after CHEM 110; UC – CHEM 101 and 102 combined: maximum credit, one course

Introductory course for non-science majors, to acquaint students with the language and tools of chemistry and to enable them to develop an appreciation for the role of chemistry in our environment and life's processes.

CHEM 105 Fundamentals of Organic Chemistry (4)

3 hours lecture 3 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 100, or CHEM 110 and 110L

Transfer acceptability: CSU; UC - CAN CHEM 8; CHEM 100+105= CAN CHEM SEQ B

An introduction to the study of organic chemistry with an emphasis on classification, reactions, and application to allied fields. Laboratory includes techniques of isolation, identification, and synthesis of organic compounds.

CHEM 109 Forensic Chemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in MATH 50

Transfer acceptability: CSU

This course trains the student in the procedures of collecting and evaluating crime scene evidence that specifically relates to chemistry. Chemical and physical analysis techniques are used to substantiate any field observations with reliable data for administration of justice and further litigation.

CHEM 110 General Chemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 100 or high school chemistry with laboratory, and two years high school mathematics including algebra
Corequisite: CHEM 110L

Transfer acceptability: CSU; UC - CHEM 110+110L=CAN CHEM 2; CHEM 110+110L+115+115L=CAN CHEM SEQ A

Principles of, and calculations in, areas such as atomic structure, solutions, chemical bonding, chemical formulas and equations, gases, energy transformations accompanying chemical changes, and descriptive chemistry.

CHEM 110L General Chemistry Laboratory (2)

6 hours laboratory

Prerequisite: Concurrent enrollment in, or completion of, CHEM 110 with a minimum grade of 'C'

Transfer acceptability: CSU; UC - CHEM 110+110L=CAN CHEM 2; CHEM 110+110L+115+115L=CAN CHEM SEQ A

Qualitative and quantitative investigations designed to accompany CHEM 110.

CHEM 115 General Chemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 110 and 110L

Recommended preparation: Concurrent enrollment in CHEM 115L

Transfer acceptability: CSU; UC - CHEM 115+115L=CAN CHEM 4; CHEM 110+110L+115+115L=CAN CHEM SEQ A

Principles of, and calculations in, areas such as reaction spontaneity, energy changes accompanying chemical reactions, rates of reactions, chemical equilibrium, acids and bases, precipitation reactions, complex ions, oxidation and reduction, nuclear reactions, and descriptive chemistry.

CHEM 115L General Chemistry Laboratory (2)

6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 110 and 110L; concurrent enrollment in, or completion of, CHEM 115

Transfer acceptability: CSU; UC - CHEM 115+115L=CAN CHEM 4; CHEM 110+110L+115+115L=CAN CHEM SEQ A

Qualitative and quantitative investigations designed to accompany CHEM 115.

CHEM 196 Special Laboratory Problems in Chemistry (2)

6 hours laboratory

Prerequisite: CHEM 105, or CHEM 110 and 110L; approval of project or research by department chairperson

Note: May be taken 2 times

Transfer acceptability: CSU; UC - Credit determined by UC upon review of course syllabus.

Special laboratory investigations with emphases upon the use of chemical instrumentation and newer chemical techniques in the synthesis of compounds and/or the investigation of problems in the fields of inorganic, analytical or organic chemistry.

CHEM 197 Chemistry Topics (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU; UC - Credit determined by UC upon review of course syllabus.

Topics in Chemistry. See Class Schedule for specific topic offered. Course title will designate subject covered.

CHEM 205 Introductory Biochemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 105

Transfer acceptability: CSU; UC

Fundamental principles of the chemistry of living systems, including structure and function of proteins, nucleic acids, carbohydrates, and lipids. Emphasis on metabolism, energy storage and utilization.

CHEM 205L Introductory Biochemistry Laboratory (1)

3 hours laboratory

Corequisite: CHEM 205

Note: May not be taken for Credit/No Credit grading

Transfer acceptability: CSU; UC (Pending)

Lab experiments designed to accompany Chemistry 205 lecture.

CHEM 210 Analytical Chemistry (5)

3 hours lecture 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 115 and 115L

Transfer acceptability: CSU; UC; CAN CHEM 12

Principles, calculations, and applications of volumetric, gravimetric, and instrumental analysis. Practice in standardizing reagents and determining the composition of samples of various materials.

CHEM 220 Organic Chemistry (5)

3 hours lecture 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 115 and a minimum grade of 'C' in CHEM 115L

Transfer acceptability: CSU; UC

Integrated treatment of organic chemistry including electronic and orbital theory with applications to carbon bonding, stereo chemistry, resonance theory, and reaction mechanisms of both aliphatic and aromatic compounds. Strong emphasis on organic nomenclature, reactions, preparations, and synthesis of organic compounds. Laboratory: Techniques and theories involved in organic reactions and preparations, qualitative organic analysis, and instrumental methods.

CHEM 221 Organic Chemistry (5)

3 hours lecture 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 220

Transfer acceptability: CSU; UC

Continuation of the integrated treatment of organic chemistry including electronic and orbital theory with applications to carbon bonding, stereo chemistry, resonance theory, and reaction mechanisms of both aliphatic and aromatic compounds. Strong emphasis on organic nomenclature, reactions, preparations, and synthesis of organic compounds. Laboratory: techniques and theories involved in organic reactions and preparations, qualitative organic analysis, and instrumental methods.

CHEM 295 Directed Study in Chemistry (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson

Note: May be taken 4 times for a maximum of 6 units

Transfer acceptability: CSU; UC - Credit determined by UC upon review of course syllabus.

Independent study for students who have demonstrated skills and/or proficiencies in chemistry subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Chicano Studies (CS)

See also Multicultural Studies

Contact the Multicultural Studies Department for further information, (760) 744-1150, ext. 2206

COURSE OFFERINGS**CS 100 Introduction to Chicano Studies (3)**

3 hours lecture

Transfer acceptability: CSU; UC

The development of contemporary Chicano culture including various pre Columbian and Hispanic cultures in Mexico and the Southwest. A cross disciplinary approach examines applicable methods and theories from sciences and humanities.

CS 101 The Chicano in the United States (3)
 3 hours lecture
Note: This course plus CS 102 meets the State requirement in American History and Institutions.
Transfer acceptability: CSU; UC
 An historical survey of the Mexican American/Chicano people in the United States. Emphasis on cultural and historical roots from pre-Columbian times through the Spanish conquest period and subsequent cultural and racial mix, including the U.S. American culture in the Southwest.

CS 102 The Chicano and the American Political System (3)
 3 hours lecture
Note: This course plus CS 101 meets the State requirement in American History and Institutions.
Transfer acceptability: CSU; UC – CS 102, AS 110 and AIS 102 combined: maximum credit, one course
 A basic and practical approach to understanding and utilizing the American political system. Includes a critical evaluation of leading issues affecting Chicanos as well as a survey of social and political organizations within the community. A description and analysis of Federal, State, and local government.

CS 105 Chicano Literature (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Chicano literature from its pre-Columbian origins. Analyzes the identity conflicts resulting from the dual cultures of Mexican and American worlds through literary works. Introduces the student to the rich and culturally diverse Chicano and Chicana authors that reflect the literary traditions that have mirrored the Chicano-Mexican reality in the United States.

CS 110 Contemporary Mexican Literature (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Mexican novels, prose and poetry from the Mexican Revolution to the present. Major landmark novels of Mexico will be examined in their social and historical context. Designed to acquaint non-Spanish major students with Mexican thought, values, and literary heritage relative to world literature.

CS 115 Literature of Latin America (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Latin American Literature which covers several epochs, genres, authors, cultures, countries, and literary movements in Mexico, Central America, South America, and the Caribbean. Some countries will stand out more than others because of the accessibility of literary works in translation.

CS 120 Introduction to Sociology of the Chicano (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 The Chicano and the Chicano community within contemporary American society seen from a sociological perspective. Includes socialization/acclimation of the Chicano and the Chicano's role in societal institutions—family, marriage, religion, education, and economics.

CS 125 The History of Mexico (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of the political, economic, and cultural development of the Mexican people and nation from the pre-Columbian period through the Revolution of 1910.

CS 155 Ancient Civilizations of Meso America (3)
 3 hours lecture
Note: Cross listed as ANTH 155
Transfer acceptability: CSU; UC
 Civilizations of Pre-Columbian Mexico and Central America with a focus on their origins and achievements.

CS 161 Elementary Classical Nahuatl (3)
 3 hours lecture
Note: Cross listed as AIS 161
Transfer acceptability: CSU; UC
 This is an introductory course on the Classical Nahuatl language of the Aztec Empire. Students will acquire a basic knowledge of Nahuatl morphology and syntax.

Child Development (CHDV)

Contact the Child Development Department for further information, (760) 744-1150, ext. 2206. For transfer information, consult a Palomar College counselor.

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Child Development courses prepare students for employment as an aide, teacher, and/or director in a preschool or a child care center (including infant/toddler facilities), family child care providers, and other Child Development careers in early childhood education fields. Courses are also appropriate for parents, nannies, recreation leaders, camp counselors, elementary school teaching assistants (some classes may be used as a foundation for elementary school teachers), social services and health care practitioners, administrators, and others working with children.

Certificates meet the course requirements for teachers, site supervisors, and directors of private child care programs licensed by the California State Department of Social Services (Title 22), Community Care Licensing. The program also meets the course requirements for the Child Development Permit issued by the California Commission on Teacher Credentialing. Child Development programs that are state funded or federally funded (Title 5 programs such as, Head Start, state preschool, etc.) follow the Child Development Permit matrix. In addition to the course work listed in the certificate, students must have experience working with young children in order to obtain an actual Child Development Permit from the State of California. For specific questions relating to the Child Development Permit, please contact the Child Development Office for further information.

It is recommended that Child Development courses be taken in the sequence indicated in this certificate. In order to earn a certificate or degree, students must achieve a minimum grade of 'C' in each of the required courses.

Child Development Teacher

The 38.5 units listed in this section enable students to complete a Teacher Certificate in Child Development.

Students also have the option of completing the General Education courses required by the college and the 38.5 units to earn an Associate of Arts Degree in Child Development.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
CHDV 100*	Child Development	3
CHDV 105	Participation and Observation	4
CHDV 110	Introduction to Special Education	3
CHDV 115*	Child, Youth, Family, and Community	3
CHDV 120	Children's Health, Safety, and Nutrition	3
CHDV 121	Pediatric CPR First Aid	.5
(This course can be challenged by showing a current CPR and FA card required by Community Care Licensing)		
CHDV 125	Art in Early Childhood	3
CHDV 130	Math/Science Early Childhood	3
CHDV 135	Music/Creative Movement	3

