

PROGRAMS OF STUDY LEADING TO A CERTIFICATE OF ACHIEVEMENT

<p>Accounting 3</p> <p>Accounting – Computerized 4</p> <p>Accounting – Financial Planning 5</p> <p>Accounting – Managerial 6</p> <p>Administrative Assistant Level II 7</p> <p>Administrative Assistant Level III 8</p> <p>Air Conditioning and Refrigeration 9</p> <p>Aircraft Powerplant Maintenance Technology – Day .. 10</p> <p>Aircraft Powerplant Maintenance Technology – Evening 11</p> <p>Airframe Maintenance Technology – Day 12</p> <p>Airframe Maintenance Technology – Evening 13</p> <p>Alcohol/Drug Counseling 14</p> <p>Animation – 2-D Multimedia 16</p> <p>Animation – 3-D and CG Gaming 17</p> <p>Animation – Traditional 18</p> <p>Architectural Technology – Level I 19</p> <p>Architectural Technology – Technology Concentration Level II 20</p> <p>Architectural Technology – Technology Concentration Level III 21</p> <p>Architectural Technology – Design Concentration Level II 22</p> <p>Architectural Technology – Design Concentration Level III 23</p> <p>Building Automation 24</p> <p>Business: Human Resource Management – Level II .. 25</p> <p>Business: Human Resource Management – Level III .. 26</p> <p>Business: International – Level II 27</p> <p>Business: International – Level III 28</p> <p>Business: Management – Level II 29</p> <p>Business: Management – Level III 30</p> <p>Business: Retail Management – Level II 31</p> <p>Business: Retail Management – Level III 32</p> <p>Business: Small Business Management – Level II 33</p> <p>Business: Small Business Management – Level III 34</p> <p>Children’s Program Certificate: Administration 35</p> <p>Children’s Program Certificate: General – Level II 36</p> <p>Children’s Program Certificate: General – Level III 37</p> <p>Children’s Programs Certificate: Small Business Management 38</p> <p>Children’s Program Certificate: Teaching 39</p> <p>Computer and Networking Technology Level I 40</p>	<p>Computer and Networking Technology Level II 41</p> <p>Computer Graphics Design/Photography 42</p> <p>Computer Systems Technology 43</p> <p>Construction Inspection 44</p> <p>Consumer Services 45</p> <p>Correctional Sciences 46</p> <p>Digital Photographic Technician 47</p> <p>Electronic Systems Technology – Level II 48</p> <p>Electronics and Computer Engineering Technology .. 49</p> <p>Electronics Communications 50</p> <p>Electronics Technology 51</p> <p>Electronics: Industrial Systems 52</p> <p>Emergency Medical Technician – Paramedic (EMT-P) . 53</p> <p>Engineering Design Technology Level I 56</p> <p>Engineering Design Technology Level II 57</p> <p>Engineering Design Technology Level III 58</p> <p>Escrow Management 59</p> <p>Family Child Care 60</p> <p>Fashion Design Level I 61</p> <p>Fashion Design Level II 62</p> <p>Fashion Merchandising – Level I 63</p> <p>Fashion Merchandising – Level II 64</p> <p>Fire Technology 65</p> <p>Horse Ranch Management 66</p> <p>Hospitality: Catering 67</p> <p>Hospitality: Hospitality Management – Level II 68</p> <p>Hospitality: Restaurant Management – Level II 69</p> <p>Infant/Toddler Development 70</p> <p>Interior Design Level I – Merchandising 71</p> <p>Interior Design Level II – Design 72</p> <p>Interior Design Level III – Professional Designation 73</p> <p>Interior Design Kitchen and Bath Specialization 74</p> <p>Interior Landscaping 75</p> <p>Landscape and Park Maintenance 76</p> <p>Landscape Design and Construction 77</p> <p>Landscape Equipment Technology 78</p> <p>Landscape Irrigation 79</p> <p>Law Enforcement 80</p> <p>Livestock Management 81</p> <p>Manufacturing Technology 82</p> <p>Marketing Management 83</p> <p>Mental Health Technology – Psychiatric Technician 84</p>
--	---

PROGRAMS OF STUDY LEADING TO A CERTIFICATE OF ACHIEVEMENT

Microcomputer Productivity Software	86	School Age Child – Specialization	98
Nursery Management	87	Sign Language/Interpreting	99
Park Management	88	Sports Turf Management	100
Pet Science	89	Television Production	101
Photography	90	Tree Care and Maintenance	102
Programming in C++	91	Water Technology	103
Programming in Visual BASIC	92	Web Page Design	104
Public Works/Landscape Management	93	Welder: Licensed	105
Radio Broadcasting: Behind the Scenes	94	Welder: Automotive	
Radio Broadcasting: On-the-Air	95	Welding, Cutting & Modification	106
Real Estate	96	Welder: Gas Tungsten ARC Welding	107
Real Estate Appraisal	97	Welder: Semiautomatic ARC Welding	108

Accounting

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE T0502

The Accounting Certificate incorporates various accounting courses that prepare the student for entry-level positions and/or professional advancement in a wide variety of accounting jobs. These jobs include general accounting, cost accounting, payroll, inventory management, asset management, credit and collections, financial analysis, etc.

Requirements for the Certificate

Required courses:

Completion of the Accounting:

Financial Planning coursework (21 Units) or Accounting: Managerial coursework (19 Units) as follows:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSA 8	Principles of Accounting - Managerial	5.0	CSU,UC
BUSA 21	Cost Accounting, <i>or</i>	4.0	
BUSA 58	Federal Income Tax Law	3.0	
BUSA 75	Using Microcomputers in Financial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSA 76	Using Microcomputers in Managerial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSO 25	Business Communications	3.0	CSU

Plus the following courses:

BUSA 21	Cost Accounting, <i>or</i>	4.0	
BUSA 58	Federal Income Tax Law	3.0	
BUSA 52	Intermediate Accounting	3.0	
BUSA 70	Payroll and Tax Accounting	3.0	
BUSM 20	Principles of Business	3.0	CSU,UC

TOTAL UNITS 30.0 - 32.0

Option BUSA 21 or BUSA 58: Take whichever course you have not previously taken.

Accounting - Computerized

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0503

The Accounting - Computerized Certificate provides the student with basic accounting skills and knowledge together with additional training in computer applications common to the accounting industry. This certificate program prepares the student for an entry-level position as a computerized accounting clerk. Common duties performed in this field are utilization of accounting software programs for posting transactions to journals/ledgers, accounts receivable, accounts payable, inventory tracking/reporting, bank reconciliation, expense reporting, and account analysis.

Requirements for the Certificate

Required courses:

Completion of the Accounting - Bookkeeping Certificate (9-10 Units) as follows:

BUSA 7	Principles of Accounting - Financial, <i>or</i>	5.0	CSU,UC
BUSA 72	Bookkeeping - Accounting	5.0	
BUSA 53	Ten-Key Calculations, <i>or</i>	2.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSO 5	Business English, <i>or</i>	3.0	
BUSO 25	Business Communications	3.0	CSU

Plus the following courses:

BUSA 75	Using Microcomputers in Financial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSA 76	Using Microcomputers in Managerial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC

PLUS

Select 3.5 Units from:

BUSA 81	Work Experience in Accounting	1.0	
CISB 11	Computer Information Systems	3.5	CSU,UC
CISB 13	Microsoft Windows	2.0	CSU
CISB 21	Microsoft Excel	4.0	
CISW 11	Internet Technologies	4.0	CSU
COMP 11	Internet Research for Business	2.0	CSU
COMP 20	Microsoft Word	4.0	

TOTAL UNITS 18.5 - 19.5

Accounting - Financial Planning

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0599

The Accounting - Financial Planning Certificate provides the student with basic accounting skills combined with specialized training in financial planning. Students completing this certificate can assist companies within the areas of budgeting, tax, and financial planning.

Requirements for the Certificate

Required courses:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSA 8	Principles of Accounting - Managerial	5.0	CSU,UC
BUSA 58	Federal Income Tax Law	3.0	
BUSA 71	Financial Planning	3.0	
BUSA 75	Using Microcomputers in Financial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSA 76	Using Microcomputers in Managerial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSO 25	Business Communications	3.0	CSU
TOTAL UNITS		21.0	

Accounting - Managerial

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0533

The Accounting - Managerial Accounting Certificate provides basic accounting skills and knowledge concentrating in the area of managerial accounting. This prepares the student for entry-level positions within the managerial accounting segment. Common duties performed in this field include cost analysis, budget preparation, variance analysis, expense reporting, account analysis and preparation of various internal reports to help management make decisions.

Requirements for the Certificate

Required courses:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSA 8	Principles of Accounting - Managerial	5.0	CSU,UC
BUSA 21	Cost Accounting	4.0	
BUSA 75	Using Microcomputers in Financial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSA 76	Using Microcomputers in Managerial Accounting, <i>or</i>	1.0	
BUSA 81	Work Experience in Accounting	1.0	
BUSO 25	Business Communications	3.0	CSU
TOTAL UNITS		19.0	

Administrative Assistant - Level II

COMPUTER INFORMATION SYSTEMS DEPARTMENT

CERTIFICATE L0594

The Level II Certificate prepares students for clerical positions where office organization and transcription skills are needed.

Requirements for the Certificate

Required courses:

Completion of the Administrative Support - Level I coursework (13 units) as follows:

BUSO 5	Business English	3.0	
CISI 11	Computer Keyboarding, <i>or</i>	3.0	CSU
CISI 11A	Computer Keyboarding, <i>and</i>	1.5	CSU
CISI 11B	Computer Keyboarding	1.5	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC
CISI 41	Office Management Skills	3.0	

Plus the following Level II coursework as follows:

BUSO 25	Business Communications	3.0	CSU
CISI 12	Intermediate Computer Keyboarding	3.0	
CISB 31	Microsoft Word	4.0	

TOTAL UNITS 22.0

Administrative Assistant - Level III

COMPUTER INFORMATION SYSTEMS DEPARTMENT

CERTIFICATE T0517

The Level III Certificate prepares students for administrative assistant positions where a variety of skills are needed.

Requirements for the Certificate

Required courses:

Completion of the Administrative Assistant - Level I coursework (13 units) as follows:

BUSO 5	Business English	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC
CISI 11	Computer Keyboarding, <i>or</i>	3.0	CSU
CISI 11A	Computer Keyboarding, <i>and</i>	1.5	CSU
CISI 11B	Computer Keyboarding	1.5	CSU
CISI 41	Office Management Skills	3.0	

Required courses:

Completion of the Administrative Assistant - Level II coursework (13 units) as follows:

BUSO 25	Business Communications	3.0	CSU
CISB 31	Microsoft Word	3.0	
CISI 12	Intermediate Computer Keyboarding	4.0	

Plus the following courses:

Level III as follows:

BUSO 26	Oral Communications for Business	3.0	
BUSO 96A	Business Vocabulary	1.5	
CISB 51	Microsoft PowerPoint	3.0	CSU
CISB 61	Desktop Publishing Software	4.0	CSU
CISW 15	Web Site Development	4.0	CSU

TOTAL UNITS 33.5 - 35.5

Air Conditioning and Refrigeration

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE T0909

This program is designed to prepare the student for employment in the broad field of air conditioning, heating, and refrigeration. It leads to occupations in design, manufacturing, operation, sales, distribution, installation, maintenance, and repair. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2.0
AIRC 11	Welding for Air Conditioning and Refrigeration	2.0
AIRC 12	Air Conditioning Codes and Standards	3.0
AIRC 20	Refrigeration Fundamentals	4.0
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5.0
AIRC 26	Gas Heating Fundamentals	2.0
AIRC 30	Heat Load Calculations	4.0
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4.0
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Advanced Mechanical Refrigeration	4.0
TOTAL UNITS		31.5

Aircraft Powerplant Maintenance Technology - Day

AIRCRAFT MAINTENANCE TECHNICIAN & MANUFACTURING TECHNOLOGY

CERTIFICATE T0982

This program prepares students to enter employment as a certified powerplant technician in the aircraft maintenance industry. Training is given in the overhaul of various powerplants and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (part-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and 65B are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examination in General and Powerplant. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRM 65A	Aircraft Powerplant Maintenance Technology	13.0	CSU
AIRM 65B	Aircraft Powerplant Maintenance Technology	13.0	
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0	
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0	
AIRM 71	Aviation Maintenance Science	6.0	
AIRM 72	Aviation Materials and Processes	1.5	
AIRM 73	Aviation Welding	1.5	
TOTAL UNITS		41.0	

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience
AIRM 80	Lab Studies in Aircraft Maintenance Technology
AIRM 81	Lab Studies in Aircraft Maintenance Technology
EDT 12	Technical Engineering Drawing II
ELEC 90	Survey of Electronics
MFG 70	Technical Mathematics - Manufacturing Applications
PHYS 1	Physics

Aircraft Powerplant Maintenance Technology - Evening

AIRCRAFT MAINTENANCE TECHNICIAN & MANUFACTURING TECHNOLOGY

CERTIFICATE T0952

This program prepares students to enter employment as a certified powerplant technician in the aircraft maintenance industry. Training is given in the overhaul of various powerplants and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (part-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 65A and 65B are equivalent to evening program courses AIRM 95A, 95B, 96A, 96B, 97A, 97B, 98A, and 98B. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examination in General and Powerplant. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aviation Materials and Processes	1.5
AIRM 73	Aviation Welding	1.5
AIRM 95A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 95B	Aircraft Powerplant Maintenance Technology	3.0
AIRM 96A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 96B	Aircraft Powerplant Maintenance Technology	3.0
AIRM 97A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 97B	Aircraft Powerplant Maintenance Technology	3.0
AIRM 98A	Aircraft Powerplant Maintenance Technology	3.0
AIRM 98B	Aircraft Powerplant Maintenance Technology	3.0
TOTAL UNITS		39.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience
AIRM 80	Lab Studies in Aircraft Maintenance Technology
AIRM 81	Lab Studies in Aircraft Maintenance Technology
EDT 12	Technical Engineering Drawing II
ELEC 90	Survey of Electronics
MFG 70	Technical Mathematics - Manufacturing Applications
PHYS 1	Physics

Airframe Maintenance Technology - Day

AIRCRAFT MAINTENANCE TECHNICIAN & MANUFACTURING TECHNOLOGY

CERTIFICATE T0991

This program prepares students to enter employment as a certified airframe technician in the aircraft maintenance industry. Training is given in the overhaul of various airframes and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (part-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examinations in Airframe and General. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRM 66A	Airframe Maintenance Technology	13.0	CSU
AIRM 66B	Airframe Maintenance Technology	13.0	
AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0	
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0	
AIRM 71	Aviation Maintenance Science	6.0	
AIRM 72	Aviation Materials and Processes	1.5	
AIRM 73	Aviation Welding	1.5	
TOTAL UNITS		41.0	

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience
AIRM 80	Lab Studies in Aircraft Maintenance Technology
EDT 12	Technical Engineering Drawing II
ELEC 90	Survey of Electronics
MFG 70	Technical Mathematics - Manufacturing Applications
PHYS 1	Physics

Airframe Maintenance Technology - Evening

AIRCRAFT MAINTENANCE TECHNICIAN & MANUFACTURING TECHNOLOGY

CERTIFICATE T0981

This program prepares students to enter employment as a certified airframe technician in the aircraft maintenance industry. Training is given in the overhaul of various airframes and their components. Completion of this program leads to an Associate in Science Degree or a Certificate. Excellent opportunities for employment exist in this area of training. Certain administrative, quality control, and flight personnel careers require the applicant to hold a valid A & P Certificate.

This program offers a day (full-time) or evening (part-time) program option. The only difference between the two options is the course numbering and time required to complete the program. Day program courses AIRM 66A and 66B are equivalent to evening program courses AIRM 90A, 90B, 91A, 91B, 92A, 92B, 93A, and 93B.

Successful completion of this program enables students to take the FAA examinations in Airframe and General. Passing the General Exam plus the Airframe and/or Powerplant Exam provides certification as an Aircraft Maintenance Technician which is required for employment in this field. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRM 70A	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 70B	Aircraft Maintenance Electricity and Electronics	3.0
AIRM 71	Aviation Maintenance Science	6.0
AIRM 72	Aviation Materials and Processes	1.5
AIRM 73	Aviation Welding	1.5
AIRM 90A	Airframe Maintenance Technology	3.0
AIRM 90B	Airframe Maintenance Technology	3.0
AIRM 91A	Airframe Maintenance Technology	3.0
AIRM 91B	Airframe Maintenance Technology	3.0
AIRM 92A	Airframe Maintenance Technology	3.0
AIRM 92B	Airframe Maintenance Technology	3.0
AIRM 93A	Airframe Maintenance Technology	3.0
AIRM 93B	Airframe Maintenance Technology	3.0
TOTAL UNITS		39.0

Recommended Electives:

AIRM 74	Aircraft Maintenance Technology - Work Experience
AIRM 80	Lab Studies in Aircraft Maintenance Technology
EDT 12	Technical Engineering Drawing II
ELEC 90	Survey of Electronics
MFG 70	Technical Mathematics - Manufacturing Applications
PHYS 1	Physics

Alcohol/Drug Counseling

PUBLIC SERVICES DEPARTMENT

CERTIFICATE T2101

Upon completion of the required courses with a grade of "C" or better, a Certificate in Alcohol/Drug Studies will be awarded by the Technology and Health Division.

Requirements for the Certificate

Required core courses:

AD 1	Alcohol/Drug Dependency	3.0	CSU
AD 2	Physiological Effects of Alcohol/Drugs	3.0	CSU
AD 3	Chemical Dependency: Intervention, Treatment and Recovery	3.0	CSU
AD 4	Issues in Domestic Violence	3.0	
AD 5	Chemical Dependency: Prevention and Education	1.5	CSU
AD 6	Dual Diagnosis	3.0	CSU

Required skill courses:

AD 8	Group Process and Leadership	3.0	
AD 9	Family Counseling	3.0	
AD 10	Client Record and Documentation	1.5	
AD 11	Techniques of Intervention and Referral	3.0	

Required field work courses:

AD 13	Internship/Seminar	4.0	CSU
AD 14	Advanced Internship/Seminar	4.0	CSU

PLUS

Select two (2) courses from:

CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors, <i>or</i>	3.0	CSU,UC
SOC 1	Sociology	3.0	CSU,UC
PSYC 1A	Introduction to Psychology	3.0	CSU,UC
PSYC 19	Abnormal Psychology	3.0	CSU,UC
SOC 14	Marriage and the Family	3.0	CSU,UC
SOC 15	Child Development	3.0	CSU,UC

TOTAL UNITS 41.0

Selection Procedure

All classes are open to all students who meet admission requirements and course prerequisites.

Special Instructions

Restricted Electives must be taken prior to enrollment in Field Experience and can be taken in conjunction with core and skills courses.

Working Environment:

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and

physical disabilities, and under a wide variety of circumstances

- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposed to products containing latex

English Language Skills:

Although proficiency in English is not a criteria for admission, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and others.

Animation – 2D Multimedia

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE T0301

The Digital 2-D Multimedia certificate provides training for creative careers that integrate animation with video, audio, graphics and special effects for Websites, broadcast, film, presentation or mobile content.

The Animation Program offers an integrated/interdisciplinary approach to prepare students to meet current and future job market demands. The student will be given a balanced blend of art and technology-based skills which are essential for today's careers in animation. The program offers an A.S. degree and three certificates. Course content is driven by industry needs in order to provide the student with the best possible preparation for a career in animation.

Requirements for the Certificate

Required courses:

ANIM 101A	Drawing - Gesture and Figure	3.0	CSU
ANIM 104	Drawing Fundamentals	3.0	CSU
ANIM 108	Principles of Animation	3.0	CSU
ANIM 115	Storyboarding	3.0	
ANIM 116	Character Development	1.5	
ANIM 120	Script Development for Animation	3.0	
ANIM 130	Introduction to 3-D Computer Animation	3.0	
ANIM 131	Introduction to Gaming	3.0	
ANIM 172	Motion Graphics, Compositing and Visual Effects	3.0	
ANIM 175	Web Animation with Flash	3.0	
ARTC 290	Portfolio	3.0	
ARTC 100	Graphic Design 1	3.0	

TOTAL UNITS 34.5

Recommended Electives:

ANIM 109	Advanced Principles of Animation
ANIM 121	History of Animation
ANIM 137A	Work Experience in New Digital Media
ANIM 148	Demo-Reel
ARTD 16	Drawing: Perspective
ARTD 17A	Drawing: Life
ARTD 20	Design: Two Dimensional
PHOT 10	Basic Digital and Film Photography

Animation – 3D and CG Gaming

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE T0302

The Animation – 3D and CG Gaming Certificate provides training in 3-D animation including character modeling, lighting, texture, environment and special effects that lead to creative careers in film, television and the video game industry.

The Animation Program offers an integrated/interdisciplinary approach to prepare students to meet current and future job market demands. The student will be given a balanced blend of art and technology-based skills which are essential for today's careers in animation. The program offers an A.S. degree and three Certificates. Course content is driven by industry needs in order to provide the student with the best possible preparation for a career in animation.

Requirements for the Certificate

Required courses:

ANIM 101	Drawing - Gesture and Figure	3.0	CSU
ANIM 104	Drawing Fundamentals	3.0	CSU
ANIM 108	Principles of Animation	3.0	CSU
ANIM 115	Storyboarding	3.0	
ANIM 116	Character Development	1.5	
ANIM 130	Introduction to 3-D Computer Animation	3.0	
ANIM 131	Introduction to Gaming	3.0	CSU
ANIM 132	Modeling, Texture Mapping and Lighting	3.0	
ANIM 134	Visual Effects I: Dynamics	1.5	
ANIM 135	Visual Effects II: Particle Systems	1.5	
ANIM 136	Animation Environment Layout	3.0	
ANIM 148	Demo-Reel	1.5	
ANIM 172	Motion Grading, Compositing And Visual Effects	3.0	
ARTC 100	Graphic Design 1	3.0	

PLUS one of the following courses:

ANIM 145	Advanced 3-D Modeling, <i>or</i>	3.0	
ANIM 146	3-D Animation	3.0	

TOTAL UNITS 39.0

Recommended Electives:

ANIM 107	Figure in Motion
ANIM 109	Advanced Principles of Animation
ANIM 120	Script Development for Animation
ANIM 121	History of Animation
ANIM 137A	Work Experience in New Digital Media
ANIM 175	Web Animation with Flash
ARTC 66	Portfolio
ARTD 17A	Drawing: Life
ARTD 20	Design: Two Dimensional
PHOT 10	Basic Digital and Film Photography

Animation - Traditional

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE T1010

The Traditional Certificate provides training based around the principles of storytelling and animation. These skills lead to careers in television, film, Internet and gaming as an animator, character designer, storyboard artist, layout artist or director.

The Animation Program offers an integrated/interdisciplinary approach to prepare students to meet current and future job market demands. The student will be given a balanced blend of art and technology-based skills which are essential for today's careers in animation. The program offers an A.S. degree and three Certificates. Course content is driven by industry needs in order to provide the student with the best possible preparation for a career in animation.

Requirements for the Certificate

Required courses:

ANIM 101A	Drawing - Gesture and Figure	3.0	CSU
ANIM 104	Drawing Fundamentals	3.0	CSU
ANIM 108	Principles of Animation	3.0	CSU
ANIM 109	Advanced Principles of Animation	3.0	
ANIM 111A	Animal Drawing	1.5	
ANIM 115	Storyboarding	3.0	
ANIM 116	Character Development	1.5	
ANIM 117	Animation Background Layout	3.0	CSU
ANIM 120	Script Development for Animation	3.0	
ANIM 175	Web Animation with Flash	3.0	
ARTC 66	Portfolio	3.0	
ARTC 100	Graphic Design 1	3.0	
ARTD 16	Drawing: Perspective	3.0	CSU,UC
ARTD 17A	Drawing: Life	3.0	CSU,UC
ARTD 23A	Drawing: Head and Hands	1.5	CSU,UC

TOTAL UNITS **40.5**

Recommended Electives:

ANIM 107	Figure in Motion
ANIM 130	Introduction to 3-D Computer Animation
ANIM 121	History of Animation
ANIM 121	Introduction to Gaming
ANIM 137A	Work Experience in New Digital Media
ANIM 172	Motion Graphics, Compositing and Visual Effects
ARTS 22	Design: Three-Dimensional
PHOT 10	Basic Digital and Film Photography

Architectural Technology - Level I

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0291

This multi-level certificate program prepares students to enter the field of architecture and related areas. The student is provided with an option of direct employment in the field or preparation or transfer to the professional school of architecture. The Level I certificate provides a broad overview of the fundamental skills essential to the field, suitable for entry-level employment as an office assistant.

Requirements for the Certificate

Required courses:

ARCH 10	Design I - Elements of Design	3.0	CSU
ARCH 11	Architectural Drawing	3.0	CSU,UC
ARCH 12	Architectural Materials and Specifications	3.0	CSU
ARCH 16	Basic CAD and Computer Application	4.0	CSU,UC

Plus the following courses:

ENGL 68	Preparation for College Writing	4.0	
MATH 51	Elementary Algebra	4.0	

TOTAL UNITS 21.0

Architectural Technology - Technology Concentration Level II

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0203

This Level II Technology Concentration Certificate focuses upon the preparation of architectural construction documents, with emphasis on computer-aided design (CAD) applications. Regulatory requirements and an overview of construction practices are also included. The student will prepare a portfolio of CAD documentation, including 2-D and 3-D projections. The Level II Technology Concentration Certificate prepares students for employment as a beginning CAD draftsman or production specialist.

Requirements for the Certificate

Required courses:

Completion of the Architectural Technology Level I coursework (21) units.

PLUS

ARCH 14	Building and Zoning Codes	3.0	
ARCH 15	Architectural Working Drawings - I	3.0	CSU
ARCH 18	Architectural Computer Aided Design Elements	3.0	
ARCH 26	Architectural CAD Working Drawings	3.0	
EDT 20	Technical Descriptive Geometry	3.0	CSU
INSP 70	Elements of Construction	3.0	CSU

PLUS

Select one (1) course from:

PHYS 1	Physics, <i>or</i>	4.0	CSU,UC
PHYS 2AG	General Physics	4.0	CSU,UC

TOTAL UNITS 43.0

Architectural Technology - Technology Concentration Level III

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0204

The Level III Technology Concentration Certificate provides additional expertise in advanced CAD applications and professional practice. The Level III Technology Concentration Certificate prepares students for employment as an intermediate CAD operator or production specialist.

Requirements for the Certificate

Required courses:

Completion of the Architectural Technology Level I and II coursework (43) units.

PLUS

ARCH 14	Building and Zoning Codes	3.0	
ARCH 15	Architectural Working Drawings - I	3.0	CSU
ARCH 18	Architectural Computer Aided Design Elements	3.0	
ARCH 26	Architectural CAD Working Drawings	3.0	
EDT 20	Technical Descriptive Geometry	3.0	CSU
INSP 70	Elements of Construction	3.0	CSU

Plus the following courses:

ARCH 28	Architectural CAD Illustration and Animation	3.0	CSU
ARCH 29	Design IV - Advanced Project	3.0	CSU

PLUS

Select one (1) course from:

ARCH 13	Architectural Illustration	3.0	CSU,UC
ARCH 21	Design II - Architectural Design	3.0	CSU
ARCH 23	Architectural Presentations	3.0	CSU
ARCH 31	World Architecture I	3.0	CSU,UC
ARCH 32	World Architecture II	3.0	CSU,UC
ARCH 89	Architectural Work Experience	1.0 – 2.0	
EDT 26	Civil Engineering Technology and CAD	3.0	CSU
INSP 71	Construction Estimating	3.0	CSU

TOTAL UNITS 50.0 - 52.0

Architectural Technology - Design Concentration Level II

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0205

This Level II Design Concentration Certificate focuses upon studio design, drawing, and presentation skills, including model-making, sketching and computer applications. The student will prepare a portfolio of creative design assignments. The Level II Design Concentration Certificate prepares students for employment as a design assistant or presentation specialist.

Requirements for the Certificate

Required courses:

Completion of the Architectural Technology Level I coursework (21) units.

PLUS

ARCH 13	Architectural Illustration	3.0	CSU,UC
ARCH 21	Design II - Architectural Design	3.0	CSU
ARCH 23	Architectural Presentations	3.0	CSU
ARCH 31	World Architecture I	3.0	CSU,UC
ARCH 32	World Architecture II	3.0	CSU

PLUS

Select one (1) course from:

ARCH 15	Architectural Working Drawings - I, or	3.0	CSU
ARCH 18	Architectural Computer Aided Design Elements	3.0	

PLUS

Select three (3) units from:

ARTD 15A	Drawing: Beginning	3.0	CSU,UC
ARTD 20	Design: Two Dimensional	3.0	CSU,UC
ARTS 22	Design: Three-Dimensional	3.0	CSU,UC

TOTAL UNITS 42.0

Architectural Technology - Design Concentration Level III

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0206

The Level III Design Concentration Certificate provides additional expertise in portfolio development and professional practice. The Level III Design Concentration Certificate prepares students for employment as an intermediate design assistant or presentation specialist.

Requirements for the Certificate

Required courses:

Completion of the Architectural Technology Design Concentration coursework (42) units.

Plus the following courses:

ARCH 27	Design III - Environmental Design	3.0	CSU, UC
ARCH 29	Design IV - Advanced Project	3.0	CSU

PLUS

Select one (1) course from:

ARCH 14	Building and Zoning Codes	3.0	
ARCH 15	Architectural Working Drawings - I	3.0	CSU
ARCH 18	Architectural Computer Aided Design Elements	3.0	
ARCH 26	Architectural CAD Working Drawings	3.0	
ARCH 28	Architectural CAD Illustration and Animation	3.0	CSU
ARCH 89	Architectural Work Experience	1.0 – 2.0	
INSP 70	Elements of Construction	3.0	CSU

TOTAL UNITS 51.0

Building Automation

AIR CONDITIONING, WELDING AND WATER TECHNOLOGIES

CERTIFICATE T0309

This program is designed to prepare the student for a career in the fields of Building Automation, Energy Management, and Green Building Technologies. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

AIRC20	Refrigeration Fundamentals	3.0
AIRC25	Electrical Fundamentals for A/C & Refrigeration	4.0
AIRC31	Commercial Electrical for A/C & Refrigeration	4.0
AIRC34	Advanced Mechanical Refrigeration	4.0
AIRC61	Building Automation Fundamentals	2.5
AIRC63	Building Control Networks	3.0
AIRC65	Building Automation Network & Programming	3.0
AIRC67	Energy Management	4.0
CISN11	Telecommunications/Networking	4.0
CISW41	XML Secure Programming	3.0
CISW49	Service Oriented Architecture Concepts & Practice	3.0
TOTAL UNITS		37.5

Business: Human Resource Management - Level II

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0534

This certificate builds upon the Level I Certificate to provide students with specific knowledge of human resource management functions. HR law, compensations systems, and an understanding of human motivation provide the student with a solid foundation from which to build a career in human resources. Completion of the Business: Human Resource Management - Level I coursework (9 Units).

Requirements for the Certificate

Required courses:

Level I as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	

Plus the following courses:

Level II as follows:

ANTH 22	General Cultural Anthropology	3.0	CSU,UC
BUSM 60	Human Relations in Business	3.0	CSU
BUSO 25	Business Communications	3.0	CSU

TOTAL UNITS 18.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Human Resource Management - Level III

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0535

Students completing the Level III Certificate will have knowledge and practical experience in business communications and computer use. Successful completion of this certificate prepares students to handle the increasing diversity and complexity of modern human resource management. Completing the advanced certificate will help those working in the human resource field to prepare for professional certification by the Human Resource Certification Institute.

Requirements for the Certificate

Required courses:

Completion of Human Resource Management - Level I and Level II coursework (18 Units) as follows:

Level I as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	

Required courses:

Level II as follows:

ANTH 22	General Cultural Anthropology	3.0	CSU,UC
BUSM 60	Human Relations in Business	3.0	CSU
BUSO 25	Business Communications	3.0	CSU

Plus the following courses:

Level III as follows:

BUSA 70	Payroll and Tax Accounting	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC

TOTAL UNITS 25.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: International - Level II

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0597

In the Business: International - Level II Certificate student will learn methods and approaches to managing the complexities of doing business in an international environment. Students acquire both theoretical knowledge and practical skills related to managing and marketing within the global arena. Students active in the workforce will acquire new skills that are highly desirable in a fast-paced dynamic global environment, with an emphasis on the small business perspective.

Requirements for the Certificate

Required courses:

Completion of the Business: International - Level I coursework (9 units) as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 51	Principles of International Business	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Plus the following courses:

Level II as follows:

BUSM 61	Business Organization and Management	3.0	CSU
BUSM 66	Small Business Management	3.0	CSU

PLUS

Select one (1) course from:

BUSS 70	International Marketing Concepts	3.0	
CHIN 1	Beginning Chinese	4.0	CSU,UC
FRCH 1	Elementary French	4.0	CSU,UC
GERM 1	Elementary German	4.0	CSU,UC
ITAL 1	Elementary Italian	4.0	CSU,UC
JAPN 1	Elementary Japanese	4.0	CSU,UC
SPAN 1	Elementary Spanish	4.0	CSU,UC

TOTAL UNITS 18.0 - 19.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: International - Level III

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0528

Upon completion of the Business: International Level III Certificate, students will have acquired the specific skills needed to successfully complete international business transactions. Students will gain a practical, hands-on perspective of how to compete in a global system of conflicting laws, regulations, and requirements.

Completion of the Business: International - Level I and II coursework (18 Units) as follows:

Requirements for the Certificate

Required courses:

Level I as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 51	Principles of International Business	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Required courses:

Level II as follows:

BUSM 61	Business Organization and Management	3.0	CSU
BUSM 66	Small Business Management	3.0	CSU

PLUS

Select one (1) course from:

BUSS 70	International Marketing Concepts	3.0	
CHIN 1	Beginning Chinese	4.0	CSU,UC
FRCH 1	Elementary French	4.0	CSU,UC
GERM 1	Elementary German	4.0	CSU,UC
ITAL 1	Elementary Italian	4.0	CSU,UC
JAPN 1	Elementary Japanese	4.0	CSU,UC
SPAN 1	Elementary Spanish	4.0	CSU,UC

PLUS

Additional required courses:

Level III as follows:

BUSL 20	International Business Law	3.0	
BUSM 50	World Culture: A Business Perspective, <i>or</i>	3.0	CSU
ANTH 22	General Cultural Anthropology	3.0	CSU,UC
BUSM 52	Principles of Exporting and Importing	3.0	CSU

TOTAL UNITS 27.0 - 28.0

Recommended Electives:

BUSM 81	Work Experience in Business
BUSM 85	Special Issues in Business
BUSS 85	Special Issues in Marketing

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Management - Level II

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0586

This certificate builds upon the Level I Certificate to provide students with proven business tools that will enhance their management careers. Students will be exposed to projects and business simulations that will lead to measurable successes. Business presentations, business planning, team building, conflict resolution, and computer use are core skills developed in this certificate.

Requirements for the Certificate

Required courses:

Completion of Business: Management Level I coursework (9 units) as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 61	Business Organization and Management	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Plus the following courses:

Level II as follows:

BUSM 60	Human Relations in Business	3.0	CSU
BUSM 62	Human Resource Management	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC

TOTAL UNITS 19.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Management - Level III

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE T0526

Upon completion of the Business: Business Management - Level III Certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever-changing business environment. Students will have a strategic perspective of production, marketing, accounting, international business and human resources. Completion of the Business: Management - Level III Certificate will lead to new opportunities and provide students with a solid foundation upon which to build a management career.

Requirements for the Certificate

Required courses:

Completion of the Business: Management - Level I and Level II coursework (18.5 Units) as follows:

Level I as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 61	Business Organization and Management	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Required courses:

Level II as follows:

BUSM 60	Human Relations in Business	3.0	CSU
BUSM 62	Human Resource Management	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC

Plus the following courses:

Level III as follows:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSM 10	Principles of Continuous Quality Improvement	3.0	
BUSM 51	Principles of International Business	3.0	CSU

TOTAL UNITS 30.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Retail Management - Level II

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0591

This intermediate certificate builds upon the Level I Certificate to expose students to the various functions of managers in retail positions. Fundamentals of business organization, retail marketing and staffing provides the student a solid foundation from which to build a career in retail management.

Requirements for the Certificate

Required courses:

Completion of the Retail Management - Level I coursework (9.5 Units) as follows:

BUSO 25	Business Communications	3.0	CSU
BUSS 50	Retail Store Management and Merchandising, <i>or</i>	3.0	
FASH 62	Retail Store Management and Merchandising	3.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC

Plus the following courses:

Level II as follows:

BUSA 11	Fundamentals of Accounting	3.0	
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	
BUSS 36	Principles of Marketing	3.0	CSU

TOTAL UNITS 22.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Retail Management - Level III

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE T0521

Introductory statement: Students completing the advanced Level III Certificate will have knowledge and practical experience in business communication, leadership and financial controls. Successful completion of this certificate prepares students to handle the increasing diversity and complexity of modern retail management.

Requirements for the Certificate

Required courses:

Completion of the Retail Management - Level I coursework (9.5 Units) as follows:

BUSO 25	Business Communications	3.0	CSU
BUSS 50	Retail Store Management and Merchandising, <i>or</i>	3.0	
FASH 62	Retail Store Management and Merchandising	3.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC

Required courses:

Completion of the Retail Management - Level II coursework (21.5 Units) as follows:

BUSA 11	Fundamentals of Accounting	3.0	
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	
BUSS 36	Principles of Marketing	3.0	CSU

Plus the following courses:

Level III as follows:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSM 60	Human Relations in Business	3.0	CSU
BUSO 26	Oral Communications for Business	3.0	

TOTAL UNITS 33.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Small Business Management - Level II

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE L0588

The Business: Small Business Management - Level II Certificate provides students with practical small business tools. This certificate focuses on issues such as motivation, teamwork, and leadership skills that lead to enhanced productivity through the development of people. Completion of this certificate will lead to new career opportunities for those currently employed in the small business arena.

Requirements for the Certificate

Required courses:

Completion of Business: Small Business Management - Level I coursework (9 Units) as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 66	Small Business Management	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Plus the following courses:

Level II as follows:

BUSM 60	Human Relations in Business	3.0	CSU
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	

TOTAL UNITS 18.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Business: Small Business Management - Level III

ACCOUNTING AND MANAGEMENT DEPARTMENT

CERTIFICATE T0590

Upon completion of the Business: Small Business Management - Level III Certificate, students will have built a foundation of management strategies and practices which will enable them to prosper in an ever- changing small business environment. Computer skills applicable to small business will be developed. Students will have a strategic perspective across all small business functions. Students will acquire the skills and abilities necessary to build a successful small business career.

Requirements for the Certificate

Required courses:

Completion of Business: Small Business Management Level I and II coursework (18.5 Units) as follows:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 66	Small Business Management	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

Required courses:

BUSM 60	Human Relations in Business	3.0	CSU
BUSM 61	Business Organization and Management	3.0	CSU
BUSM 62	Human Resource Management	3.0	

Plus the following courses:

Level III as follows:

BUSA 7	Principles of Accounting - Financial	5.0	CSU,UC
BUSM 10	Principles of Continuous Quality Improvement	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC

TOTAL UNITS 30.0

Special Information:

Students receiving financial aid need to declare the Level III Certificate as their goal to meet Financial Aid requirements.

Children's Program Certificate: Administration

CHILD DEVELOPMENT

CERTIFICATE T1313

The Children's Program Certificate: Administration Specialization is designed for the student who desires general knowledge about Early Childhood Development and skills in administering programs for young children. This certificate meets or exceeds Title 22 education requirements for Center Director. Direct experience with children is highly recommended to complete preparation to be an effective administrator.

Requirements for the Certificate

Required courses:

Completion of the Children's Program Certificate:

General as follows:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 68	Children with Special Needs	3.0	CSU
CHLD 84	Guidance and Discipline in Child Development Settings	1.0	CSU

PLUS

Select three (3) courses from:

CHLD 61	Language Arts & Art Media for Young Children	3.0	
CHLD 62	Music and Motor Development for Young Children	3.0	CSU
CHLD 63	Creative Sciencing and Math for Young Children	3.0	
CHLD 73	Infant/Toddler Care and Development	3.0	CSU

PLUS

Additional required courses:

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 71A	Administration of Child Development Programs	3.0	CSU
CHLD 71B	Management/Marketing/Personnel for ECD Programs	3.0	
CHLD 75	Supervising Adults in Early Childhood Settings	2.0	

PLUS

Select four (4) units from:

Note: Your four (4) unit selection should not include any course you have previously taken.

BUSM 66	Small Business Management	3.0	CSU
CHLD 72	Teacher, Parent and Child Relationships	3.0	
CHLD 73	Infant/Toddler Care and Development	3.0	CSU
CHLD 82	Advocacy in Early Childhood Development	1.0	
CHLD 83	Current Issues in Child Development	1.0	

TOTAL UNITS 43.0

Children's Program Certificate: General - Level II

CHILD DEVELOPMENT

CERTIFICATE L1328

This certificate enhances the student's knowledge beyond Level I, providing additional skills in working with your children.

Requirements for the Certificate

Required courses:

Completion of the Children's Program work:

General - Level I, as follows:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC

Plus the following courses:

Level II as follows:

CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 68	Children with Special Needs	3.0	CSU
CHLD 84	Guidance & Discipline in Early Childhood Settings	1.0	CSU

TOTAL UNITS 19.0

Children's Program Certificate: General - Level III

CHILD DEVELOPMENT

CERTIFICATE L1327

This third level of the Children's Program Certificate: General is expected to meet or exceed Title 5 education requirements for Assistant Teacher, Associate Teacher, and Teacher (with 16 units of G.E.)

Requirements for the Certificate

Required courses:

Completion of the Children's Program coursework: General - Level I, as follows:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC

Plus the following courses:

Level II as follows:

CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 68	Children with Special Needs	3.0	CSU
CHLD 84	Guidance & Discipline in Early Childhood Settings	1.0	CSU

PLUS

Select three (3) courses from:

Level III as follows:

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 61	Language Arts & Art Media for Young Children	3.0	
CHLD 62	Music and Motor Development for Young Children	3.0	CSU
CHLD 63	Creative Sciencing and Math for Young Children	3.0	
CHLD 73	Infant/Toddler Care and Development	3.0	CSU

TOTAL UNITS 28.0

Children's Program Certificate: Small Business Management

CHILD DEVELOPMENT

CERTIFICATE T1311

The Children's Programs Small Business Management Certificate provides information for operating or owning a preschool.

Requirements for the Certificate

Required courses:

BUSM 60	Human Relations in Business	3.0	CSU
BUSM 66	Small Business Management	3.0	CSU
BUSO 5	Business English	3.0	
CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 71A	Administration of Child Development Programs	3.0	CSU
CHLD 71B	Management/Marketing/Personnel for ECD Programs	3.0	
FCS 41	Life Management	3.0	CSU

TOTAL UNITS 33.0

Recommended Electives:

BUSA 70	Payroll and Tax Accounting, <i>or</i>
BUSA 71	Financial Planning
BUSL 18	Business Law, <i>or</i>
BUSL 18H	Business Law - Honors
BUSM 20	Principles of Business
BUSM 61	Business Organization and Management
BUSO 25	Business Communications
BUSS 33	Advertising and Promotion
BUSS 36	Principles of Marketing
CISB 11	Computer Information Systems

Children's Program Certificate: Teaching

CHILD DEVELOPMENT

CERTIFICATE T1312

The Children's Program Certificate: Teaching Specialization is designed for the student who desires knowledge about Early Childhood Development and skills for teaching young children. This certificate meets or exceeds Title 22 education requirements for fully qualified teachers and is expected to meet or exceed Title 5 education requirements for Teacher Level (with 16 units of G.E. English, math or Science, Social Science and Humanities).

Requirements for the Certificate

Required courses:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 68	Children with Special Needs	3.0	CSU
CHLD 84	Guidance and Discipline in Child Development Settings	1.0	CSU

Plus the following courses:

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 66	Early Childhood Development Observation	2.0	CSU
CHLD 66L	Early Childhood Development Observation Laboratory	1.0	CSU
CHLD 67	Early Childhood Development Participation	2.0	CSU
CHLD 67L	Early Childhood Development Participation Laboratory	1.0	CSU
CHLD 69	Early Childhood Development Field Work Seminar	2.0	CSU
CHLD 75	Supervising Adults in Early Childhood Settings	2.0	
CHLD 91	Early Childhood Development Field Work	1.0	CSU

PLUS

Select two (2) courses from:

CHLD 51	Early Literacy in Child Development	3.0	
CHLD 61	Language Arts & Art Media for Young Children	3.0	
CHLD 62	Music and Motor Development for Young Children	3.0	CSU
CHLD 63	Creative Sciencing and Math for Young Children	3.0	

TOTAL UNITS 39.0

Computer and Networking Technology - Level I

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE L0795

The Computer and Networking Technology Level I and II certificate programs prepare students to become computer and networking service technicians. Courses required for the Level I certificate provide foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and preparation for the A+ certification examination sponsored by CompTIA and offered at testing centers throughout the country. Level I certificate students learn to install, configure, maintain, troubleshoot, and repair computers and networks. With further preparation leading to the Level II certificate, students will ready themselves for the CompTIA Network+, Server+, and Security+ certification tests. These industry certifications are recognized worldwide as benchmarks for the computer and networking technician. Further, students will have requisite skills upon which to seek additional I.T. certifications available for the computer and networking fields.

Requirements for the Certificate

Required courses:

CNET 50	PC Servicing	4.0	
CNET 52	PC Operating Systems	4.0	
CNET 54	PC Troubleshooting	4.0	
CNET 60	A+ Certification Preparation	2.0	
ELEC 11	Technical Applications in Microcomputers, <i>or</i>	3.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 56	Digital Electronics	4.0	CSU

TOTAL UNITS 29.0 -30.0

Computer and Networking Technology - Level II

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE T0726

The Computer and Networking Technology Level I and II certificate programs prepare students to become computer and networking service technicians. Courses required for the Level I certificate provide foundations in basic electricity and electronics, operating systems, computer service and troubleshooting, and preparation for the A+ certification examination sponsored by CompTIA and offered at testing centers throughout the country. In addition to the Level I certificate requirements, students seeking the Level II certificate cover computer networks, servers, and customer relations, and will take preparatory courses for the CompTIA Network+, Server+, and Security+ certification exams. These industry certifications are recognized worldwide as benchmarks for the computer and networking technician. Further, students will have requisite skills upon which to seek additional I.T. certifications available for the computer and networking fields.

Requirements for the Certificate

Required courses:

Completion of the Computer and Networking Technology - Level I coursework, as follows:

CNET 50	PC Servicing	4.0	
CNET 52	PC Operating Systems	4.0	
CNET 54	PC Troubleshooting	4.0	
CNET 60	A+ Certification Preparation	2.0	
ELEC 11	Technical Applications in Microcomputers, or	3.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 56	Digital Electronics	4.0	CSU

Plus the following courses:

Level II as follows:

CNET 56	Computer Networks	4.0	
CNET 62	Network+ Certification Preparation	2.0	
CNET 64	Server Certification Preparation	2.0	
CNET 66	Security Certification Preparation	2.0	
TECH 60	Customer Relations for the Technician	1.0	

TOTAL UNITS 43.0 - 44.0

Recommended Electives:

ELEC 51	Electronic Devices
ELEC 74	Microprocessor Systems
EST 54	Cabling and Wiring Standards

Computer Graphic Design/Photography

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE L1005

The Computer Graphics Certificate will enable the student to develop specific computer skills needed for employment subsequent to completion of the required courses. The Computer Graphics Certificate is an option under the existing Photography program. Those anticipating a Baccalaureate Degree should be guided in their selection of lower-division courses by an advisor of the catalog of the institution they expect to enter.

Requirements for the Certificate

Required courses:

GRAP 1	Computer Graphics Lab	1.0	
GRAP 10	Photo Editing with Photoshop	3.0	
GRAP 12	Advanced Photo Editing with Photoshop	3.0	
GRAP 14	Digital Color Management	3.0	
GRAP 16	Digital Image Design with Illustrator & Freehand	3.0	
GRAP 20	Applying Photos and Images in Multimedia	3.0	
GRAP 28	Digital Portfolio	2.0	
PHOT 10	Beginning Photography	3.0	CSU,UC
PHOT 17	Photocommunication	3.0	
TOTAL UNITS		24.0	

Recommended Electives:

AHIS 1	Understanding the Visual Arts, <i>or</i>
ARTB 1	Understanding the Visual Arts
COMP 10	Operating the Macintosh Computer
GRAP 18	Advanced Image Design - 3D Modeling Techniques
GRAP 24	Work Experience in Computer Graphics
PHOT 1	Laboratory Studies: Black and White Photography
PHOT 2	Laboratory Studies: Color Photography
PHOT 4	Digital Cameras and Composition

Computer Systems Technology

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE L0924

In addition to courses in electronics fundamentals, the Computer Systems Technology certificate encompasses advanced coursework in computer systems circuitry, including microcontrollers and microprocessors. This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. Two other certificate programs are also available: a one-year certificate in Electronics Technology, and a two-year certificate having the same title as the A.S. degree. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician license.

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers	3.0	CSU
ELEC 12	Computer Simulation and Troubleshooting	2.0	
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 51	Electronic Devices	4.0	CSU
ELEC 56	Digital Electronics	4.0	CSU
ELEC 61	Electronic Assembly and Fabrication	3.0	CSU
ELEC 74	Microprocessor Systems	4.0	CSU
TECH 60	Customer Relations for the Technician	1.0	
TOTAL UNITS		29.0	

Construction Inspection

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE L0920

This program is intended to prepare students for employment following completion of courses. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses

Requirements for the Certificate

Required courses:

ARCH 12	Architectural Materials and Specifications	3.0	CSU
ARCH 14	Building and Zoning Codes	3.0	
INSP 17	Legal Aspects of Construction	3.0	CSU
INSP 70	Elements of Construction	3.0	CSU
INSP 71	Construction Estimating	3.0	CSU
INSP 87	Fundamentals of Construction Inspection	3.0	
MATH 51	Elementary Algebra	4.0	

TOTAL UNITS **22.0**

Recommended Electives:

ARCH 11	Architectural Drawing
ARCH 15	Architectural Working Drawings - I
EDT 26	Civil Engineering Technology and CAD
INSP 67	Reading Construction Drawings

Consumer Services

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1321

This program provides semi-professional training for those who seek immediate employment with the public sector or business establishments such as finance, retail, utilities and telecommunications. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

The possession of a certificate of proficiency is favorably recognized by government, business, and industry and is frequently a requirement for professional advancement. Additional courses beyond those required will enhance student's knowledge in a specialty area. Consult with a professor of Family and Consumer Sciences for further information.

Certificate requirements state that at least half of the required number of units be taken at Mt. San Antonio College and that in each course taken toward a certificate, a grade of "C" or better must be earned. Students who are in the last semester of a certificate program must complete an Application for Certificate form, available at the Admissions and Records Office, in order to be awarded the Certificate.

Requirements for the Certificate

Required courses:

BUSL 18	Business Law, <i>or</i>	3.0	CSU,UC
BUSL 18H	Business Law - Honors	3.0	CSU,UC
BUSM 60	Human Relations in Business	3.0	CSU
FCS 41	Life Management	3.0	CSU
FCS 80	Financial Planning, <i>or</i>	3.0	CSU
BUSA 71	Financial Planning	3.0	CSU
FCS 91	Work Experience in Family and Consumer Sciences, <i>or</i>	1.0	
BUSL 36	Paralegal Internship	1.0	

PLUS

Select two (2) courses from:

BUSO 5	Business English	3.0	
BUSO 25	Business Communications	3.0	CSU
COMP 12	Office Computer Applications, <i>or</i>	4.0	CSU,UC
CISB 15	Microcomputer Applications	4.0	CSU,UC

TOTAL UNITS 19.0 - 20.0

Correctional Sciences

PUBLIC SERVICES DEPARTMENT

CERTIFICATE T2103

Correctional Sciences is the application of law, social, and natural sciences to the social phenomenon of crime and delinquency. The discipline addresses definitions, causation, prevention, discovery, procedures, treatment and rehabilitation, quantification, and research in both criminal and civil aspects. This program is intended to prepare students for employment following graduation. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

ADJU 68	Administration of Justice Report Writing	3.0	
CORS 10	Introduction to Correctional Sciences	3.0	CSU
CORS 15	Control and Supervision of the Offender	3.0	
CORS 20	Correctional Law	3.0	
CORS 25	Probation and Parole	3.0	
CORS 30	Ethnic Relations in Corrections	3.0	

PLUS

Select four (4) courses from:

ADJU 1	The Administration of the Justice System	3.0	CSU,UC
ADJU 2	Principles and Procedures of the Justice System	3.0	CSU
ADJU 20	Principles of Investigation	3.0	CSU
ADJU 38	Narcotics Investigation	3.0	
ADJU 59	Gangs and Corrections	3.0	CSU
CORS 35	Interviewing and Counseling in Corrections	3.0	
CORS 40	Crime and Delinquency	3.0	
CORS 45	The Violent Offender	3.0	

TOTAL UNITS 30.0

Recommended Electives:

PE-F 50	Physical Skills Preparation for Law Enforcement and Fire Science
PE-F 51	Agility Testing Preparation for Law Enforcement and Fire Science
PE-F 52	Fitness and Conditioning for Law Enforcement, Fire Science and Forestry
SPAN 66	Spanish for Fire and Police Personnel

Digital Photographic Technician

COMMERCIAL AND ENTERTAINMENT ARTS DEPARTMENT

CERTIFICATE L0300

This certificate program is designed to give students specific skills to prepare them for employment in the commercial photographic industry as a digital technician, digital assistant, digital imaging specialist, or photography assistant.

Requirements for the Certificate

GRAP 9	Digital Color Management	3.0
GRAP 10	Photo Editing with Photoshop	3.0
PHOT 10	Basic Digital and Film Photography	3.0
PHOT 11	Professional Photography	4.0
PHOT 14	Commercial Lighting	3.0
PHOT 20	Color Photography	3.0
PHOT 30	Commercial/Illustrative Photography	3.0
TOTAL UNITS		25.0

Recommended Electives:

CISB 16
GRAP 12
PHOT 1
PHOT 29

Electronic Systems Technology - Level II

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE L0928

The Level II certification (12-13 units) adds customer relations skills and the installation, calibration, setup maintenance and troubleshooting of home theater, home automation, and home security systems. Either a course on preparing for the C-7 license or troubleshooting digital TV with LCD, plasma and DLP video displays is included.

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers, or	3.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC
EST 50	Electrical Fundamentals for Cable Installations	4.0	
EST 52	Fabrication Techniques for Cable Installations	4.0	
EST 54	Cabling and Wiring Standards	4.0	

Plus the following courses:

EST 56	Home Theater, Home Integration, & Home Security Systems	4.0	
EST 62	Electronic Troubleshooting - I	4.0	
TECH 60	Customer Relations for the Technician	1.0	

PLUS

Select one (1) course from:

EST 64	Electronic Troubleshooting - II	4.0	
EST 70	C-7 Low Voltage Systems License Preparation	2.0	

TOTAL UNITS 26.0 - 29.0

Recommended Electives:

ELEC 61	Electronic Assembly and Fabrication		
ELEC 62	Advanced Surface Mount Assembly and Rework		

Electronics and Computer - Engineering Technology

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE T0906

The Electronics and Computer Engineering Technology (ECET) certificate program prepares individuals either for initial employment or for enhancement of existing skills in the electronics field, or for transfer into B.S. programs in Electronics Technology or Industrial Technology offered in the CSU system. Required courses for the certificate — many of which articulate directly to their equivalents at the CSUs — are the same as for the ECET A.S. degree program except for the college General Education requirement. In addition to exposing students to core topics such as components and circuits, the program includes coursework in advanced areas including microcontrollers and interfacing, communications, and industrial electronic controls. Nearly all laboratories have new, state-of-the-art equipment to provide students with quality, hands-on learning experiences.

Students completing the ECET certificate program possess ample skills to make them versatile employees. Typical technician-level job classifications include field service technician, field engineer, computer service technician, customer service technician, communications technician, maintenance technician, and electronics technician. All students completing the certificate program are automatically eligible to receive, without further examination, the 4th class technician license from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.).

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers	3.0	CSU
ELEC 12	Computer Simulation and Troubleshooting	2.0	
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 51	Electronic Devices	4.0	CSU
ELEC 53	Communications Circuits	4.0	
ELEC 54A	Industrial Electronics	4.0	CSU
ELEC 54B	Industrial Electronic Systems	3.0	CSU
ELEC 55	Microwave Communications	4.0	
ELEC 56	Digital Electronics	4.0	CSU
ELEC 61	Electronic Assembly and Fabrication	3.0	CSU
ELEC 74	Microprocessor Systems	4.0	CSU
TECH 60	Customer Relations for the Technician	1.0	
TOTAL UNITS		44.0	

Recommended Electives:

CISP 11	Programming in Visual Basic
EDT 11	Technical Engineering Drawing I
ELEC 62	Advanced Surface Mount Assembly and Rework
ELEC 76	Radio Telephone Communications
PHYS 2AG	General Physics

Electronics Communications

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE T0904

In addition to courses in electronics fundamentals, the Electronics Communications certificate program encompasses the study of both wire-based and wireless forms of analog and digital communications systems. Among the topics covered are amplitude and frequency modulation, multiplexing, antennas, transmission lines, and radio-wave propagation, as well as microwave systems, including radar and satellite operations.

This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. Two other certificate programs are also available: a one-year certificate in Electronics Technology, and a two-year certificate having the same title as the A.S. degree. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician license.

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers	3.0	CSU
ELEC 12	Computer Simulation and Troubleshooting	2.0	
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 51	Electronic Devices	4.0	CSU
ELEC 53	Communications Circuits	4.0	
ELEC 55	Microwave Communications	4.0	
ELEC 56	Digital Electronics	4.0	CSU
ELEC 61	Electronic Assembly and Fabrication	3.0	CSU
TECH 60	Customer Relations for the Technician	1.0	
TOTAL UNITS		33.0	

Electronics Technology

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE L0905

This one-year program covers the fundamentals of electronics technology. These core courses provide the necessary skills for those seeking entry-level employment as electronics technicians without areas of specialization. Also included is a course in customer-relations training.

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers	3.0	CSU
ELEC 12	Computer Simulation and Troubleshooting	2.0	
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 51	Electronic Devices	4.0	CSU
ELEC 56	Digital Electronics	4.0	CSU
ELEC 61	Electronic Assembly and Fabrication	3.0	CSU
TECH 60	Customer Relations for the Technician	1.0	
TOTAL UNITS		25.0	

Electronics: Industrial Systems

ELECTRONICS AND COMPUTER TECHNOLOGY DEPARTMENT

CERTIFICATE T0908

In addition to courses in electronics fundamentals, the Industrial Systems curriculum encompasses advanced coursework in industrial electronics, including electronic devices for industrial and motor controls. The curriculum culminates in the study of programmable logic controls (PLCs) using the Allen-Bradley series of PLCs running Windows ladder logic software.

This advanced certificate is one of three available for students who do not complete all second-year systems courses at once, or who complete them one at a time. Two other certificate programs are also available: a one-year certificate in Electronics Technology, and a two-year certificate having the same title as the A.S. degree. A.S. degree recipients are automatically eligible to receive, without further examination, a 3rd class Technician License from the National Association of Radio and Telecommunications Engineers (N.A.R.T.E.), while students completing certificate programs are automatically eligible for the N.A.R.T.E. 4th Class Technician license.

Requirements for the Certificate

Required courses:

ELEC 11	Technical Applications in Microcomputers	3.0	CSU
ELEC 12	Computer Simulation and Troubleshooting	2.0	
ELEC 50A	Electronic Circuits (DC)	4.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
ELEC 51	Electronic Devices	4.0	CSU
ELEC 54A	Industrial Electronics	4.0	CSU
ELEC 54B	Industrial Electronic Systems	3.0	CSU
ELEC 56	Digital Electronics	4.0	CSU
ELEC 61	Electronic Assembly and Fabrication	3.0	CSU
TECH 60	Customer Relations for the Technician	1.0	
TOTAL UNITS		32.0	

Emergency Medical Technician - Paramedic (EMT-P)

MEDICAL SERVICES DEPARTMENT

CERTIFICATE T1281

This Paramedic Program is accredited by CAAHEP (Committee on Accreditation of Allied Health Education Programs) and approved by the Los Angeles County Department of Health Services as meeting and exceeding the minimum standards as specified in Title 22 of the California Code of Regulations and the federal Department of Transportation national standard curriculum. It is designed to train paramedics to work on ambulances and in the fire service.

The Emergency Medical Technician-Paramedic (EMT-P) is an individual who is educated and trained during an intensive (32-hours per week) didactic program lasting 16 weeks. This is followed by five (5) weeks of Clinical Internship in a hospital (40-hours per week), and then eight (8) weeks of Field Externship as a practicing Paramedic under the guidance and supervision of a Paramedic Field Preceptor.

Requirements for the Certificate

Required courses:

EMS 1	Fundamentals for Paramedics	4.0
EMS 10	Anatomy and Physiology for Paramedics	2.0
EMS 20	Emergency Cardiac Care for Paramedics	1.0
EMS 30	Pharmacology for Paramedics	2.0
EMS 40	Cardiology for Paramedics	5.0
EMS 50	Paramedic Skills Competency	5.0
EMS 60	EMS Theory for Paramedics	8.5
EMS 70	Paramedic Clinical Internship	4.0
EMS 80	Paramedic Field Externship	9.5
TOTAL UNITS		41.00

Recommended Electives:

ADJU 1	The Administration of Justice System
FIRE 1	Fire Protection Organization
PSYC 1A	Introduction to Psychology
SOC 1	Sociology

The Emergency Medical Services faculty recommend that you complement your studies with selected elective courses chosen from the list above. You should meet with a professor of Emergency Medical Services to help you determine which of those electives would best suit your career plans.

Special Information:

To remain in the program, students must maintain a grade of "C" (80 percent) or better in all courses and receive a grade of "C" (80 percent) or better on all final exams, per state regulations. Before starting in clinical rotations, students must pass a criminal background check.

Upon successful completion of the required courses, students are given a certificate documenting completion of the Emergency Medical Technician - Paramedic (EMT-P) program. Students are then eligible for licensure by taking and passing both the National Registry Exam and County Paramedic accreditation exam.

EMT Program Readmission Policy

If the student fails any of the co-requisite courses, EMS 10 - EMS 60, he/she will be dropped from the programs. If the student wishes to repeat the program, a Success Plan and Contract will be developed with the faculty to increase the student's chances of success prior to re-entry. If the student withdraws or is dismissed from the program a second time, he/she will not be allowed to re-enter the Paramedic Program at Mt. SAC.

Application Requirements and Selection Procedures

Application Requirements:

In addition to meeting the Mt. San Antonio College's academic standards for admission, applicants must be in

good standing and satisfy the following requirements:

- 1) Be an EMT-I, currently certified in California.
- 2) Submit a letter on official stationery from a recognized EMS agency verifying completion of six (6) months of pre-hospital field experience as an EMT-I (approximately 1,200 hours) within the last 2 years.
- 3) File a College application and be accepted as a student at Mt. San Antonio College.
- 4) Submit an application for the Paramedic Program to the Health Science Programs Office (909) 594-5611, Ext. 4750. All applications are dated upon receipt in the Health Science Programs Office. The Paramedic Program begins three (3) times per year, in August, January, and May and runs for 29 weeks.
- 5) Take the AWE (Assessment of Written English), the Mt. SAC Math Placement Test, and the Degrees of Reading Power reading test at least 10 working days before the start of the pre-course (EMS 1). Placement examinations will be individually assessed to determine eligibility. The placement test is administered by the Assessment Center, located in the Student Services Center. If required, arrange with the Center a day and time to take the examination. The Assessment Center (909) 594-5611, Ext. 4265 is open Monday through Friday.
- 6) Successful completion of EMS 1 - Fundamentals for Paramedics.
- 7) Forward two (2) official transcripts of all coursework completed (high school, EMT-I, Fire Science, and college work other than Mt. San Antonio College courses). One transcript must be sent to the Health Science Programs Office; the other to the Admissions and Records Office.

For students who possess a college degree, the English placement examination is not required. However, it will be necessary for students to obtain two (2) official copies of the college transcript showing the degree issued. One official transcript must be sent to the Health Science Programs Office; the other to the Admissions and Records Office.

NOTE: If the course(s) were taken and/or the degree obtained at Mt. San Antonio College, it is not necessary to request transcripts.

EXAMPLE: Mt. San Antonio College Technology and Health Division 1100 North Grand Avenue, Walnut CA 91789-1399

8) A physical examination, proof of certain immunizations, and a criminal background check are required of all candidates after acceptance to the program and before entrance into the clinical setting. Forms and information will be provided upon acceptance into the program. In addition, drug testing may be required as part of the physical examination and/or requested by the college or one of its agents.

Entrance Procedure:

In determining eligibility, consideration will be given to the following:

- 1) Completion of all application requirements
- 2) EMS-related experience
- 3) Scores on the English assessment and math placement tests
- 4) Performance in the pre-course, EMS 1—Fundamentals for Paramedics. This course tests prerequisite knowledge base in medical terminology, anatomy and physiology, EMT basic knowledge and basic math skills in preparation for drug calculations.

All Applicants are required to meet the Essential Functions for Success in the Paramedic Program: anatomy and physiology, EMT basic knowledge and basic math skills in preparation for drug calculations.

Physical Demands:

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift and carry at least 125 pounds)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands:

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more *Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment:

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Handle emergency or crisis situations
- Subject to many interruptions
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Requires decisions/actions related to end of life issues
- Exposure to products containing latex

English Language Skills:

Although proficiency in English is not a criteria for admission into the nursing program, students are encouraged to be able to speak, write and read English to complete classes successfully and to ensure safety for themselves and for others.

Engineering Design Technology - Level I

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE L0900

The Engineering Design Technology Level I Certificate is designed to prepare students for entry-level employment in the technical and computer-aided drafting design fields. Upon completion of the Level I Certificate, students will be prepared in fundamental working practices related to the technical design field.

Requirements for the Certificate

Required courses:

EDT 11	Technical Engineering Drawing I	3.0	CSU
EDT 12	Technical Engineering Drawing II	3.0	CSU
EDT 14	Mechanical Design - Geometric Dimensioning and Tolerancing	3.0	CSU
EDT 16	Basic CAD and Computer Applications	4.0	CSU
EDT 18	Engineering CAD Applications	4.0	CSU

PLUS

Select one (1) course from:

ELEC 50A	Electronic Circuits (DC)	4.0	CSU
MFG 11	Manufacturing Processes I	2.0	CSU

TOTAL UNITS 19.0 - 21.0

Special Information:

Students interested in pursuing transfer and a Bachelor's Degree in Engineering or Engineering Technology are advised to verify with each transfer institution specific requirements for transfer and appropriate courses. Requirements vary depending on specialty and institution and may include areas such as math at the levels of calculus or trigonometry at a minimum. See the Mt. SAC catalog under either Engineering or Surveying for a list of transferable engineering courses.

Engineering Design Technology - Level II

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0915

The Engineering Design Technology Level II Certificate is designed to provide focused technical grounding and exposes students to parametric design technology. This certificate enables students to pursue competitive employment in the technical design field, beyond entry level.

Requirements for the Certificate

Required courses:

Level I as follows:

EDT 11	Technical Engineering Drawing I	3.0	CSU
EDT 12	Technical Engineering Drawing II	3.0	CSU
EDT 14	Mechanical Design - Geometric Dimensioning and Tolerancing	3.0	CSU
EDT 16	Basic CAD and Computer Applications	4.0	CSU
EDT 18	Engineering CAD Applications	4.0	CSU
MFG 11	Manufacturing Processes I, <i>or</i>	2.0	CSU
ELEC 50A	Electronic Circuits (DC)	4.0	CSU

Plus the following courses:

EDT 20	Technical Descriptive Geometry	3.0	CSU
EDT 24	Engineering CAD 3-D Solids and Surfaces	3.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
MFG 11	Manufacturing Processes I, <i>or</i>	2.0	CSU
ELEC 50A	Electronic Circuits (DC)	4.0	CSU

TOTAL UNITS 31.0 - 35.0

Engineering Design Technology - Level III

ARCHITECTURE AND ENGINEERING DESIGN DEPARTMENT

CERTIFICATE T0916

The Engineering Design Technology Level III Certificate focuses on the civil and structural design fields, emphasizing three-dimensional illustration and animation. This certificate allows students to pursue employment in the civil design fields.

Requirements for the Certificate

Required courses:

Level I as follows:

EDT 11	Technical Engineering Drawing I	3.0	CSU
EDT 12	Technical Engineering Drawing II	3.0	CSU
EDT 14	Mechanical Design - Geometric Dimensioning and Tolerancing	3.0	CSU
EDT 16	Basic CAD and Computer Applications	4.0	CSU
EDT 18	Engineering CAD Applications	4.0	CSU
MFG 11	Manufacturing Processes I, <i>or</i>	2.0	CSU
ELEC 50A	Electronic Circuits (DC)	4.0	CSU

Required courses:

Level II as follows:

EDT 20	Technical Descriptive Geometry	3.0	CSU
EDT 24	Engineering CAD 3-D Solids and Surfaces	3.0	CSU
ELEC 50B	Electronic Circuits (AC)	4.0	CSU
MFG 11	Manufacturing Processes I, <i>or</i>	2.0	CSU
ELEC 50A	Electronic Circuits (DC)	4.0	CSU

Plus the following courses:

EDT 26	Civil Engineering Technology and CAD	3.0	CSU
EDT 28	Engineering CAD 3-D Illustration/Animation	3.0	CSU

TOTAL UNITS 37.0 - 41.0

Escrow Management

BUSINESS ADMINISTRATION DEPARTMENT

CERTIFICATE L0511

Requirements for the Certificate

Required courses:

BUSA 11	Fundamentals of Accounting	3.0	
BUSR 50	Real Estate Principles	3.0	CSU
BUSR 51	Legal Aspects of Real Estate	3.0	
BUSR 76	Escrow Procedures I	3.0	
BUSR 77	Escrow Procedures II	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC
TOTAL UNITS		19.0	

Family Child Care

CHILD DEVELOPMENT

CERTIFICATE L1316

The Family Child Care Certificate provides the information necessary for operating or owning a family child care business in the home.

Requirements for the Certificate

Required courses:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 92	Family Child Care	3.0	

Plus the following courses:

CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 68	Children with Special Needs	3.0	CSU
CHLD 84	Guidance and Discipline in Child Development Settings	1.0	CSU

PLUS

Select one (1) course from:

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 66	Early Childhood Development Observation	2.0	CSU
CHLD 66L	Early Childhood Development Observation Laboratory	1.0	CSU
CHLD 72	Teacher, Parent and Child Relationships	3.0	
CHLD 73	Infant/Toddler Care and Development	3.0	CSU

TOTAL UNITS 25.0

Fashion Design - Level I

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1397

The Fashion Design: Level I Certificate is designed to introduce the student to the employment opportunities available in both fashion design and costume design. Upon completion of the Fashion Design: Level I Certificate, students may qualify for an entry-level design and pattern making positions in Southern California's diverse apparel industry and the entertainment industry that support the largest number of employees and contributes significantly to the economy of the region.

Requirements for the Certificate

Required courses:

FASH 8	Introduction to Fashion	3.0	CSU
FASH 10	Clothing Construction I	3.0	CSU
FASH 15	Fashion and Identity	3.0	CSU
FASH 17	Textiles	3.0	
FASH 25	Fashion Computer -Assisted Drawing	3.0	
FASH 30	Fashion Design and Product Development I	3.0	

TOTAL UNITS 18.0

Recommended Electives:

FASH 24	Fashion Patternmaking by Computer
FASH 26	Fashion Computer-Assisted Design
FASH 35	Topics in Fashion
FASH 81	Work Experience
FASH 90	Field Studies
FASH 91	Field Studies - New York
FASH 92	Field Studies - Fashion Capitals

Fashion Design - Level II

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE T1389

The Fashion Design: Level II Certificate builds upon the Level I Certificate to provide students with intermediate skills that will enhance their Fashion Design careers. Students will have a strategic view of historic costume research, and textile attributes and characteristics. Students will be exposed to additional categories and classifications of apparel and will further research and design products for divergent target markets. Students will prepare professional portfolios to strengthen career perspectives. Completion of the Fashion Design: Level II Certificate will lead to new opportunities and provide students with a solid foundation upon which to build a career.

Requirements for the Certificate

Required courses:

Level I as follows:

FASH 8	Introduction to Fashion	3.0	CSU
FASH 10	Clothing Construction I	3.0	CSU
FASH 15	Fashion and Identity	3.0	CSU
FASH 17	Textiles	3.0	
FASH 25	Fashion Computer -Assisted Drawing	3.0	
FASH 30	Fashion Design and Product Development I	3.0	

Plus the following courses:

FASH 9	History of Costume and Design	3.0	CSU
FASH 12	Clothing Construction II	3.0	
FASH 20	Illustration for Fashion and Costume Design	3.0	
FASH 21	Patternmaking I	3.0	
FASH 22	Fashion Design by Draping	3.0	
FASH 23	Patternmaking II	3.0	
FASH 24	Fashion Patternmaking by Computer	3.0	
FASH 31	Fashion Design and Product Development II	3.0	
FASH 32	Fashion Design and Product Development III	3.0	

TOTAL UNITS 45.0

Recommended Electives:

FASH 26	Fashion Computer-Assisted Design
FASH 35	Topics in Fashion
FASH 81	Work Experience
FASH 90	Field Studies
FASH 91	Field Studies - New York
FASH 92	Field Studies - Fashion Capitals

Fashion Merchandising - Level I

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L0314

The Fashion Merchandising Level I Certificate prepares the holder for entry-level positions in a variety of retail merchandising, manufacturing, and promotion businesses.

Requirements for the Certificate

Required courses:

FASH 8	Introduction to Fashion	3.0	CSU
FASH 10	Clothing Construction I	3.0	CSU
FASH 15	Fashion and Identity	3.0	CSU
FASH 17	Textiles	3.0	CSU,UC
FASH 25	Fashion Computer-Assisted Drawing	3.0	
FASH 30	Fashion Design and Product Development I	3.0	

TOTAL UNITS 18.0

Recommended Electives:

FASH 81	Work Experience in Fashion
FASH 90	Field Studies
FASH 91	Field Studies - New York
FASH 92	Field Studies - Fashion Capitals

Fashion Merchandising - Level II

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1303

The Fashion Merchandising Level II Certificate is designated to build upon the Fashion Merchandising - Level I Certificate to provide students with proven business and management tools that will increase their practical understanding of merchandising and marketing. Students will be exposed to projects and visual display simulations that will enhance their merchandising and management career potential.

Completion of the Fashion Merchandising - Level I coursework (18 units) as follows:

Requirements for the Certificate

Required courses:

Level I as follows:

FASH 8	Introduction to Fashion	3.0	CSU
FASH 10	Clothing Construction I	3.0	CSU
FASH 15	Fashion and Identity	3.0	CSU
FASH 17	Textiles	3.0	CSU,UC
FASH 25	Fashion Computer-Assisted Drawing	3.0	
FASH 30	Fashion Design and Product Development I	3.0	

Plus the following courses:

Level II as follows:

FASH 9	History of Costume and Design	3.0	CSU
FASH 62	Retail Store Management and Merchandising, <i>or</i>	3.0	CSU
BUSS 50	Retail Store Management and Merchandising	3.0	CSU
FASH 63	Advertising and Promotion, <i>or</i>	3.0	CSU
BUSS 33	Advertising and Promotion	3.0	CSU
FASH 66	Visual Merchandising Display	3.0	CSU

TOTAL UNITS 30.0

Recommended Electives:

FASH 81	Work Experience in Fashion
FASH 90	Field Studies
FASH 91	Field Studies - New York
FASH 92	Field Studies - Fashion Capitals

Fire Technology

FIRE TECHNOLOGY DEPARTMENT

CERTIFICATE L2105

The Fire Science Certificate has been developed to offer pre-employment education for the undergraduate who desires to enter the field of fire science. It also provides the employed firefighter an opportunity for a professional education. Students intending to pursue a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

FIRE 1	Fire Protection Organization	3.0	CSU
FIRE 2	Fire Prevention Technology	3.0	CSU
FIRE 3	Fire Protection Equipment and Systems	3.0	CSU
FIRE 4	Building Construction for Fire Protection	3.0	CSU
FIRE 5	Fire Behavior and Combustion	3.0	CSU
FIRE 6	Hazardous Materials/ICS	3.0	

PLUS

Select two (2) courses from:

FIRE 7	Fire Fighting Tactics and Strategy	3.0	CSU
FIRE 8	Fire Company Organization and Management	3.0	CSU
FIRE 9	Fire Hydraulics	3.0	CSU
FIRE 10	Arson and Fire Investigation	3.0	CSU
FIRE 11	Fire Apparatus and Equipment	3.0	CSU
FIRE 12	Wildland Fire Control	4.5	CSU
FIRE 86	Basic Fire Academy	14.5	
PE-F 53	Physical Training for the Basic Fire Academy	2.5	CSU

TOTAL UNITS 27.5 - 38.0

Recommended Electives:

PE-F 50	Physical Skills Preparation for Administration of Justice and Fire Technology
PE-F 51	Agility Testing Preparation for Administration of Justice and Fire Technology
PE-F 52	Fitness and Conditioning for Administration of Justice, Fire Technology, and Forestry

Horse Ranch Management

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0102

This certificate program is designed to give students basic skills on horse ranches and agriculture sales and services. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGAB 20	Microcomputer Applications in Agriculture	3.0	CSU,UC
AGAG 59	Work Experience in Agriculture	1.0 – 4.0	
AGAN 2	Animal Nutrition	3.0	CSU
AGAN 94	Animal Breeding	3.0	
AGLI 16	Horse Production, <i>or</i>	4.0	CSU,UC
AGLI 18	Horse Ranch Management	4.0	CSU
AGLI 19	Horse Hoof Care	2.0	CSU
AGLI 96	Animal Sanitation and Disease Control	3.0	CSU
AGLI 97	Artificial Insemination of Livestock	2.0	

TOTAL UNITS 21.0 - 24.0

Hospitality: Catering

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1395

The Hospitality: Catering Certificate will prepare students for catering and banquet job opportunities in the hospitality industry. The program emphasizes menu planning, food preparation, service and catering management.

Requirements for the Certificate

Required courses:

HRM 51	Introduction to Hospitality	3.0	CSU
HRM 52	Food Safety and Sanitation	1.5	CSU
HRM 53	Dining Room Service Management	3.0	CSU
HRM 54	Basic Cooking Techniques	3.0	CSU
HRM 61	Menu Planning	3.0	CSU
HRM 62	Catering	3.0	CSU
HRM 91	Work Experience in Restaurant/Hospitality	1.0	CSU
NF 20	Principles of Foods with Lab	3.0	CSU

TOTAL UNITS 20.5

Hospitality: Hospitality Management - Level II

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1325

This certificate prepares the holder to enter the hospitality field as a manager-trainee in a hotel or restaurant.

Requirements for the Certificate

Required courses:

HRM 51	Introduction to Hospitality	3.0	CSU
HRM 53	Dining Room Service Management	3.0	CSU
HRM 56	Management of Hospitality Personnel and Operations	3.0	CSU
HRM 64	Hospitality Financial Accounting I	3.0	CSU
HRM 66	Hospitality Law	3.0	CSU
HRM 70	Introduction to Lodging	3.0	CSU
HRM 91	Work Experience in Restaurant/Hospitality	1.0	CSU

TOTAL UNITS 19.0

Hospitality: Restaurant Management - Level II

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE L1319

The Hospitality: Restaurant Management - Level II Certificate prepares the holder to enter the restaurant field as a manager-trainee in a food service establishment.

Requirements for the Certificate

Required courses:

HRM 51	Introduction to Hospitality	3.0	CSU
HRM 52	Food Safety and Sanitation	1.5	CSU
HRM 53	Dining Room Service Management	3.0	CSU
HRM 54	Basic Cooking Techniques	3.0	CSU
HRM 57	Restaurant Cost Control	3.0	CSU
HRM 61	Menu Planning	3.0	CSU
NF 28	Cultural and Ethnic Foods	3.0	CSU,UC

TOTAL UNITS 19.5

Infant/Toddler Development

CHILD DEVELOPMENT

CERTIFICATE T1318

The Infant/Toddler Certificate (30 units) provides the holder with specialized skills for working with children of that age. This certificate meets or exceeds Title 22 requirements and Title 5 Master Teacher - Infant/Toddler Specialization (with 16 units of general education).

Requirements for the Certificate

Required courses:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 73	Infant/Toddler Care and Development	3.0	CSU
CHLD 85	Infants At Risk	3.0	

PLUS

Select four (4) courses from:

CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 61	Language Arts & Art Media for Young Children	3.0	
CHLD 62	Music and Motor Development for Young Children	3.0	CSU
CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 72	Teacher, Parent and Child Relationships	3.0	

TOTAL UNITS 30.0

Interior Design: Level I

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE B0303

Interior Design: Level I Certificate is designed to prepare students with a broad overview and solid foundation in the area of interior design and related fields. This certificate may lead to new opportunities and provide students with the groundwork upon which to build a career.

Requirements for the Certificate

Required courses:

ID 10	Introduction to Interior Design	3.0	CSU
ID 12	Interior Materials and Products	3.0	CSU
ID 14	History of Furniture and Decorative Arts	3.0	CSU

TOTAL UNITS 9.0

Interior Design: Level II

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE T0304

The Interior Design: Level II Certificate builds upon the Level I coursework to provide students with intermediate skills that will lead to a career in interior design. There is a focus on design process including drawing and presentations skills, model-making, sketching, computer applications, the planning of space and studio design. Students will prepare professional portfolios to strengthen career perspectives. This certificate may aid in the student's search for an entry-level position as an assistant to a designer, library coordinator, or sales personnel for interior design products.

Requirements for the Certificate

Required courses:

Completion of the Interior Design: Level I coursework as follows:

ID 10	Introduction to Interior Design	3.0	CSU
ID 12	Interior Materials and Products	3.0	CSU
ID 14	History of Furniture and Decorative Arts	3.0	CSU

Required courses for Level II as follows:

ID 20	Color and Design Theory I	3.0	
ID 21	Color and Design Theory II	3.0	
ID 22	Design Drawing for Interior Design	3.0	
ID 23	Computer Aided Drawing for Interior Design I	3.0	
ID 25	Codes and Specifications for Interior Design	3.0	
ID 26	Space Planning for Interior Design	3.0	
ID 27	Rapid Visualization	3.0	
ID 29	Interior Design Studio I	3.0	

TOTAL UNITS 33.0

Elective courses:

ID 50	Interior Design Specialized Studio
ID 52	Interior Design Laboratory Studies

Interior Design: Level III

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE T0305

The Interior Design: Level III Certificate builds upon the Level II coursework to provide students with advanced skills that will enhance their Interior Design careers. There is a focus on building systems, lighting, advanced computer applications, business practices and studio design. Students will prepare professional portfolios to strengthen career perspectives. This certificate may aid in the student's search for an intermediate position as an assistant to a designer, library coordinator, or a specialization in the field of interior design.

Requirements for the Certificate

Required courses:

Completion of the Interior Design: Level I coursework as follows:

ID 10	Introduction to Interior Design	3.0	CSU
ID 12	Interior Materials and Products	3.0	CSU
ID 14	History of Furniture and Decorative Arts	3.0	CSU

And completion of the Interior Design: Level II coursework as follows:

ID 20	Color and Design Theory I	3.0	
ID 21	Color and Design Theory II	3.0	
ID 22	Design Drawing for Interior Design	3.0	
ID 23	Computer Aided Drawing for Interior Design I	3.0	
ID 25	Codes and Specifications for Interior Design	3.0	
ID 26	Space Planning for Interior Design	3.0	
ID 27	Rapid Visualization	3.0	
ID 29	Interior Design Studio I	3.0	

And completion of the required Interior Design: Level III coursework as follows:

ID 31	Building Systems for Interior Design	3.0	CSU
ID 32	Lighting Design	3.0	CSU
ID 34	Computer Aided Drawing for Interior Design II	3.0	CSU
ID 36	Professional Practices for Interior Design, <i>or</i>	3.0	CSU
ID 37	Business Practices for Interior Design	3.0	CSU
ID 38	Internship in Interior Design (<i>1 – 3 unit course, 2 units required</i>)	2.0	CSU
ID 39	Interior Design Studio II	3.0	CSU

Elective courses:

ID 50	Interior Design Specialized Studio
ID 52	Independent Studies in Interior Design

TOTAL UNITS 50.0

Interior Design Kitchen and Bath Specialization

CONSUMER SCIENCE AND DESIGN TECHNOLOGIES

CERTIFICATE T0306

The Kitchen and Bath Specialization coursework builds upon the Level III Certificate to provide students with specialized skills in the area of Kitchen and Bath Design and is accredited by the national Kitchen and Bath Association. Students will strengthen career perspectives and develop work to incorporate into a professional portfolio. This certificate may aid in the student's search for an intermediate position as an assistant to a Kitchen and Bath Designer. Students completing this certificate and meeting the eligibility requirements will qualify to sit for the academic portion of the Certified Kitchen Designer (CKD) and Certified Bath Designer (CBD) upon graduation to earn the Associate Kitchen and Bath Designer (AKBD) designation.

Requirements for the Certificate

Completion of the Interior Design: Level I coursework as follows:

ID 10	Introduction to Interior Design	3.0	CSU
ID 12	Interior Materials and Products	3.0	CSU
ID 14	History of Furniture and Decorative Arts	3.0	CSU

And completion of the Interior Design: Level II coursework as follows:

ID 20	Color and Design Theory I	3.0	
ID 21	Color and Design Theory II	3.0	
ID 22	Design Drawing for Interior Design	3.0	
ID 23	Computer Aided Drawing for Interior Design I	3.0	
ID 25	Codes and Specifications for Interior Design	3.0	
ID 26	Space Planning for Interior Design	3.0	
ID 27	Rapid Visualization	3.0	
ID 29	Interior Design Studio	3.0	

And completion of the required Interior Design: Level III coursework as follows:

ID 31	Building Systems for Interior Design	3.0	CSU
ID 32	Lighting Design	3.0	CSU
ID 34	Computer Aided Drawing for Interior Design II	3.0	CSU
ID 36	Professional Practices for Interior Design	3.0	CSU
ID 37	Business Practice for Interior Design	3.0	CSU
ID 38	Internship in Interior Design (1 – 3 unit course, 2 units required)	2.0	CSU
ID 39	Interior Design Studio II	3.0	CSU

Required courses for Kitchen and Bath Specialization:

ID 40	Kitchen and Bath Studio I	3.0	CSU
ID 41	Kitchen and Bath Studio II	3.0	CSU
ID 48	Internship in Kitchen and Bath (1-3 unit course, 2 units required)	2.0	

TOTAL UNITS: 58.0

Elective courses:

ID 50	Interior Design Specialized Studio
ID 52	Independent Studies in Interior Design

Interior Landscaping

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0106

This certificate program is designed to give students basic skills in the design, installation, and maintenance of interior plants that are used in residences, offices, hotels, malls, restaurants, and other locations. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 13	Landscape Design	3.0	CSU
AGOR 15	Interior Landscaping	3.0	
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 29	Ornamental Plants - Herbaceous	3.0	CSU,UC
AGOR 32	Landscaping and Nursery Management	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0	

TOTAL UNITS 24.0

Landscape and Park Maintenance

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE T0108

This certificate program is designed to give students basic skills in the maintenance of landscape of parks. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 29	Ornamental Plants - Herbaceous	3.0	CSU,UC
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 39	Turf Grass Production and Management	3.0	CSU
AGOR 40	Sports Turf Management	3.0	
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 63	Landscape Irrigation Systems Management	3.0	
AGOR 71	Landscape Construction Fundamentals	3.0	CSU

TOTAL UNITS 30.0

Landscape Design and Construction

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0109

This certificate program is designed to give students basic skills needed in employment for a landscape contractor. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 13	Landscape Design	3.0	CSU
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 29	Ornamental Plants - Herbaceous	3.0	CSU,UC
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 50	Soil Science and Management	3.0	CSU,UC
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 71	Landscape Construction Fundamentals	3.0	CSU
AGOR 72	Landscape Hardscape Applications	3.0	CSU
AGOR 73	Landscaping Laws, Contracting And Estimating	3.0	CSU

TOTAL UNITS 33.0

Landscape Equipment Technology

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE T0117

This certificate program is designed to give students basic skills to seek employment in equipment repair, golf courses, rental yards, and small equipment repair shops. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 52	Hydraulics	3.0	CSU
AGOR 53	Small Engine Repair I	3.0	CSU
AGOR 54	Small Engine Repair II	3.0	CSU
AGOR 55	Diesel Engine Repair	3.0	CSU
AGOR 56	Engine Diagnostics	3.0	CSU
AGOR 57	Power Train Repair	3.0	
AGOR 71	Landscape Construction Fundamentals	3.0	CSU
AGOR 72	Landscape Hardscape Applications	3.0	CSU
AGOR 91	Work Experience in Nursery Operations	1.0 – 4.0	

TOTAL UNITS 31.0 - 34.0

Landscape Irrigation

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0110

This certificate program is designed to give students basic skills in irrigation design, repair, installation, water management, and troubleshooting. A student could seek employment with a landscape contractor, schools, parks, and cities. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 13	Landscape Design	3.0	CSU
AGOR 39	Turf Grass Production and Management	3.0	CSU
AGOR 50	Soil Science and Management	3.0	CSU,UC
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 63	Landscape Irrigation Systems Management	3.0	
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0	
AGOR 71	Landscape Construction Fundamentals	3.0	CSU

TOTAL UNITS 27.0

Law Enforcement

PUBLIC SERVICES DEPARTMENT

CERTIFICATE T2102

This program is intended to prepare students for employment following graduation. Students desiring a Bachelor's Degree (transfer program) should consult with a counselor or advisor to discuss transferability of courses.

Requirements for the Certificate

Required courses:

ADJU 1	The Administration of the Justice System	3.0	CSU,UC
ADJU 2	Principles and Procedures of the Justice System	3.0	CSU
ADJU 3	Concepts of Criminal Law	3.0	CSU,UC
ADJU 4	Legal Aspects of Evidence	3.0	CSU
ADJU 5	Community Relations	3.0	CSU,UC
ADJU 68	Administration of Justice Report Writing	3.0	

PLUS

Select four (4) courses from:

ADJU 6	Concepts of Enforcement Services	3.0	
ADJU 13	Concepts of Traffic Services	3.0	
ADJU 20	Principles of Investigation	3.0	CSU
ADJU 38	Narcotics Investigation	3.0	
ADJU 59	Gangs and Corrections	3.0	CSU
ADJU 74	Vice Control	3.0	
CORS 30	Ethnic Relations in Corrections	3.0	
CORS 40	Crime and Delinquency	3.0	
CORS 45	The Violent Offender	3.0	

TOTAL UNITS 30.0

Recommended Electives:

PE-F 50	Physical Skills Preparation for Law Enforcement and Fire Science
PE-F 51	Agility Testing Preparation for Law Enforcement and Fire Science
PE-F 52	Fitness and Conditioning for Law Enforcement, Fire Science and Forestry
SPAN 66	Spanish for Fire and Police Personnel

Livestock Management

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE T0103

This certificate program is designed to give students basic skills in livestock management for employment opportunities on farms, ranches, and agriculture sales and services. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGAB 20	Microcomputer Applications in Agriculture	3.0	CSU,UC
AGAG 1	Food Production, Land Use and Politics - A Global Perspective	3.0	CSU,UC
AGAG 91	Agricultural Calculations	3.0	
AGAN 1	Animal Science	3.0	CSU,UC
AGAN 2	Animal Nutrition	3.0	CSU
AGAN 94	Animal Breeding	3.0	
AGLI 14	Swine Production	3.0	CSU
AGLI 16	Horse Production	4.0	CSU,UC
AGLI 17	Sheep Production	3.0	CSU
AGLI 30	Beef Production	3.0	CSU
AGLI 34	Livestock Judging and Selection	2.0	CSU,UC
AGLI 96	Animal Sanitation and Disease Control	3.0	CSU

PLUS

Select six (6) units from:

AGOR 71	Landscape Construction Fundamentals	3.0	CSU
BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 66	Small Business Management	3.0	CSU
BUSS 35	Professional Selling	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU

TOTAL UNITS 42.0

Manufacturing Technology

AIRCRAFT MAINTENANCE TECH & MANUFACTURING DEPT.

CERTIFICATE T0918

The primary purpose of this program is to emphasize the manipulative skills required to enter the field of machine metal worker, machine operator, production machinist, mechanical technician, or machinist.

Requirements for the Certificate

Required courses:

MFG 10	Mathematics and Blueprint Reading for Manufacturing	3.0	
MFG 11	Manufacturing Processes I	2.0	CSU
MFG 12	Manufacturing Processes II	2.0	CSU
MFG 15	AutoCAD 2D	2.0	
MFG 17	3-D CAD - Mechanical Modeling	2.0	
MFG 19	Parametric Solid Modeling for Manufacturing	2.0	
MFG 38	MasterCAM I	2.0	CSU
MFG 38B	MasterCAM II	2.0	CSU
MFG 39	SurfCAM I	2.0	CSU
MFG 39B	SurfCAM II	2.0	CSU
MFG 85	Manual Computerized Numerical Control (CNC) Programming	2.0	CSU

PLUS

Select two (2) courses from:

MFG 25	Advanced Parametric Solid Modeling for Manufacturing	2.0	
MFG 27	Autodesk Inventor	2.0	
WELD 40	Introduction to Welding	2.0	CSU

TOTAL UNITS 27.0

Marketing Management

BUSINESS ADMINISTRATION DEPARTMENT

CERTIFICATE L0510

Requirements for the Certificate

Required courses:

BUSM 20	Principles of Business	3.0	CSU,UC
BUSM 61	Business Organization and Management	3.0	CSU
BUSS 35	Professional Selling	3.0	CSU
BUSS 36	Principles of Marketing	3.0	CSU
BUSS 50	Retail Store Management and Merchandising	3.0	
BUSS 70	International Marketing Concepts	3.0	
BUSS 79	Work Experience in Marketing Management	1.0	
BUSS 85	Special Issues in Marketing	2.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC
TOTAL UNITS		25.0	

Mental Health Technology - Psychiatric Technician

PSYCHIATRIC TECHNICIAN DEPARTMENT

CERTIFICATE T1279

Upon completion of the required courses, a Certificate in Psychiatric Technician will be awarded. In addition, it prepares the student to take the California State Board Examination for Psychiatric Technicians.

Requirements for the Certificate

Required courses:

MENT 40	Interviewing and Counseling	3.0	
MENT 56	Medical-Surgical Nursing for Psychiatric Technicians	9.0	
MENT 56L	Clinical Experience	4.0	
MENT 58D	Advanced Medical-Surgical Nursing and Pharmacology for PT	4.0	
MENT 58L	Advanced Medical-Surgical Nursing for Psychiatric Technicians Clinical	1.5	
MENT 70	Introduction to Psychiatric Technology	1.5	
MENT 70L	Introduction to Psychiatric Technology Clinical Technicians	2.0	
MENT 72	Nursing Care of the Developmentally Disabled Person	7.0	
MENT 72L	Nursing Care of the Developmentally Disabled Person - Clinical	5.5	
MENT 73L	Psychiatric Nursing for Psychiatric Technicians Clinical	5.5	
MENT 73T	Psychiatric Nursing for Psychiatric Technicians	6.0	
PSYC 1A	Introduction to Psychology	3.0	CSU,UC
TOTAL UNITS		51.0	

Special Information:

To remain in the program, students must maintain a "C" or better grade in all courses.

The student will qualify to take the California State Board Examination upon completion of all the above courses.

Entrance Requirements:

In addition to meeting Mt. San Antonio College's academic standards for admission, applicants must be in good standing and satisfy the following requirements:

- a) Be a high school graduate or equivalent. (All students who have taken coursework outside of the United States must have their transcript evaluated. Foreign transcripts will not be accepted without the evaluation.)
- b) Be 18 years of age.
- c) File a college application and be accepted as a student at Mt. San Antonio College.
- d) Submit an application for the Mental Health/Psychiatric Technician Program to the Technology and Health Division Office (909) 594-5611, ext. 4750. All applications are dated upon receipt in the Technology and Health Division Office. A program begins each fall and spring semester.
- e) Take the required English Placement Test (AWE). Eligibility for ENGL 68 is advised.

If you have already taken a college placement exam within the past two years at another school, arrange to have your test scores forwarded to the Technology and Health Division Office. (If you were tested at Mt. San Antonio College, the office will obtain the test scores as long as an "Application for Admission" is on file with the Admissions and Records Office.)

Testing is administered by the Assessment Center, located in the Student Services Center. Arrangements should be made with them to schedule a day and time to take the English Placement Test, if required. The Assessment Center is open Monday through Friday. You may contact them at (909) 594-5611, Ext. 4265.

f) Forward two official transcripts of all coursework completed (high school, nursing school, and other than Mt. San Antonio College courses.) One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office.

g) For students who possess a college degree, the English Placement Test is not required. However, it will be necessary for a student to obtain two official copies of the college transcript showing the degree issued. One transcript must be sent to the Technology and Health Division Office and the other to the Admissions and Records Office.

NOTE: Concerning Entrance Requirements 'e' and 'f', if the course(s) were taken and/or the degree obtained at Mt.

San Antonio College, it is not necessary to request transcripts.

Indicate in the mailing address the program for which your transcript is being sent to the Technology and Health Division Office.

EXAMPLE: Mt. San Antonio College Technology and Health Division Psychiatric Technician Program 1100 North Grand Avenue Walnut, CA 91789-1399

h) A physical examination, including specific immunizations, and consent/ disclaimer for Hepatitis A/B vaccine is required of all candidates prior to beginning classes. Students must provide proof that he/she does not have Tuberculosis. These requirements are in accordance with the healthcare agency policy that insures that students are in good health and free from communicable disease and able to perform their training functions. Drug testing may also be required as part of this physical examination. Proof of high school graduation and malpractice insurance are required of all candidates upon acceptance.

i) Certain convictions may prevent a candidate from being licensed as a Psychiatric Technician.

j) All students will be required to pass a background check prior to entering the clinical education phase.

Selection Procedure:

In determining eligibility of an applicant, consideration will be given to satisfactory scores on the English Placement Test.

The College will make every effort to notify the applicant of acceptance by mail no less than two months prior to the beginning of a program. All Applicants are required to meet the Essential Functions for Success in the Mental Health Technology - Psychiatric Technician Program.

Physical Demands:

- Perform prolonged, extensive, or considerable standing/walking, lifting positioning, pushing, and/or transferring patients
- Possess the ability to perform fine motor movements with hands and fingers
- Possess the ability for extremely heavy effort (lift and carry at least 125 pounds)
- Perform considerable reaching, stooping, bending, kneeling, and crouching

Sensory Demands:

- Color vision: ability to distinguish and identify colors (may be corrected with adaptive devices)
- Distance vision: ability to see clearly 20 feet or more
- Depth perception: ability to judge distance and space relationships
- Near vision: ability to see clearly 20 inches or less
- Hearing: able to recognize a full range of tones

Working Environment:

- May be exposed to infectious and contagious disease, without prior notification
- Regularly exposed to the risk of blood borne diseases
- Exposed to hazardous agents, body fluids and wastes
- Exposed to odorous chemicals and specimens
- Subject to hazards of flammable, explosive gases
- Subject to burns and cuts
- Contact with patients having different religious, culture, ethnicity, race, sexual orientation, psychological and physical disabilities, and under a wide variety of circumstances
- Handle emergency or crisis situations
- Subject to many interruptions
- Requires decisions/actions related to end of life issues
- Exposure to products containing latex

English Language Skills:

Although proficiency in English is not a criteria for admission into the nursing program, students must be able to speak, write and read English to complete classes successfully and to ensure patient safety.

Microcomputer Productivity Software

COMPUTER INFORMATION SYSTEMS DEPARTMENT

CERTIFICATE L0702

This certificate program is intended to prepare students to use the most popular microcomputer productivity software packages and operating systems: DOS, Microsoft Windows, Microsoft Word, Corel WordPerfect, Microsoft Excel or Lotus 1-2-3, and Microsoft Access.

Requirements for the Certificate

Required courses:

CISB 13	Microsoft Windows, <i>or</i>	2.0	CSU
CISN 21	Windows Operating System	4.0	CSU
CISB 15	Microcomputer Applications	4.0	CSU,UC
CISB 21	Microsoft Excel	4.0	
CISD 11	Database Management - Microsoft Access	4.0	CSU
CISW 11	Internet Technologies	4.0	CSU
CISB 51	Microsoft PowerPoint	3.0	

TOTAL UNITS 21.0 - 23.0

Nursery Management

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0107

This certificate program is designed to give students basic skills in production and marketing of plants and dry goods in the wholesale and retail nursery industry. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 2	Plant Propagation/Greenhouse Management	3.0	CSU
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 29	Ornamental Plants - Herbaceous	3.0	CSU,UC
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 32	Landscaping and Nursery Management	3.0	CSU
AGOR 39	Turf Grass Production and Management	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 64	Landscape Irrigation - Drip and Low Volume	3.0	
TOTAL UNITS		27.0	

Park Management

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE T0186

This certificate program is designed to give students skills required for entry level positions in park management. Emphasis is placed on positions that are at the city and county level. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 4	Park Management	3.0	
AGOR 5	Park Facilities	3.0	
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 39	Turf Grass Production and Management	3.0	CSU
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 63	Landscape Irrigation Systems Management	3.0	
AGOR 75	Urban Arboriculture	3.0	
TOTAL UNITS		30.0	

Pet Science

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE T0104

This certificate program is designed to give students basic skills in production and marketing of pets at the wholesale and retail level. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGAB 20	Microcomputer Applications in Agriculture	3.0	CSU,UC
AGAN 1	Animal Science	3.0	CSU,UC
AGAN 2	Animal Nutrition	3.0	CSU,UC
AGAN 51	Animal Handling and Restraint	3.0	CSU
AGAN 94	Animal Breeding	3.0	
AGLI 96	Animal Sanitation and Disease Control	3.0	CSU
AGPE 70	Pet Shop Management	3.0	
AGPE 71	Canine Management	3.0	
AGPE 72	Feline Management	3.0	
AGPE 73	Tropical and Coldwater Fish Management	2.0	
AGPE 74	Reptile Management	2.0	
AGPE 76	Aviculture - Cage and Aviary Birds	3.0	
BUSM 66	Small Business Management	3.0	CSU
TOTAL UNITS		37.0	

Photography

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE L1002

This certificate program is designed to prepare students to develop specific skills needed for employment in photography, art, cinema/animation, communications, industrial arts, graphics, and journalism.

Requirements for the Certificate

Required courses:

GRAP 10	Photoshop Imagery	3.0	
PHOT 10	Basic Digital and Film Photography	3.0	CSU,UC
PHOT 11	Professional Photography	4.0	
PHOT 12	Photographic Alternatives, <i>or</i>	3.0	CSU,UC
PHOT 21	Exploring Color Photography	3.0	
PHOT 14	Commercial Lighting	3.0	
PHOT 16	Fashion Photography, <i>or</i>	3.0	
PHOT 18	Portraiture and Wedding Photography	3.0	
PHOT 17	Photocommunication	3.0	
PHOT 20	Color Photography	3.0	
PHOT 28	Photography Portfolio Development	3.0	
PHOT 29	Studio Business Practices for Commercial Artists	3.0	
PHOT 30	Commercial and Illustrative Photography	3.0	
TOTAL UNITS		34.0	

Recommended Electives:

AHIS 1	Understanding the Visual Arts, <i>or</i>
ARTB 1	Understanding the Visual Arts
PHOT 1	Laboratory Studies: Black and White Photography
PHOT 15	History of Photography

Programming In C++

COMPUTER INFORMATION SYSTEMS DEPARTMENT

CERTIFICATE L0794

This certificate program is intended to prepare students to use the C++ programming language in a business environment.

Requirements for the Certificate

Required courses:

CISB 11	Computer Information Systems	3.5	CSU,UC
CISD 11	Database Management - Microsoft Access	4.0	CSU
CISM 11	Systems Analysis and Design	3.5	CSU,UC
CISN 21	Windows Operating System	4.0	CSU
CISP 31	Programming in C++	4.0	CSU,UC
CISP 34	Advanced C++ Programming	4.0	CSU,UC

TOTAL UNITS 23.0

Programming In Visual Basic

COMPUTER INFORMATION SYSTEMS DEPARTMENT

CERTIFICATE L0789

This certificate is intended to prepare students to work in Visual Basic which is used to develop graphical user interfaces and client/server applications.

Requirements for the Certificate

Required courses:

CISB 11	Computer Information Systems	3.5	CSU,UC
CISD 11	Database Management - Microsoft Access	4.0	CSU
CISM 11	Systems Analysis and Design	3.5	CSU,UC
CISP 11	Programming in Visual Basic	4.0	CSU,UC
CISP 14	Advanced Visual Basic Programming	4.0	CSU,UC
TOTAL UNITS		19.0	

Public Works/Landscape Management

AGRICULTURAL SCIENCES

CERTIFICATE B0120

This program is a partnership between Mt. San Antonio College and Citrus College, with course requirements that must be taken at each college (courses in Public Works are offered through Citrus, while horticulture/landscape courses are offered at Mt. SAC). Upon completion of the requirements, students may apply for and receive a Certificate of Achievement from either of the two colleges.

Requirements for the Certificate

Required courses:

PUB 150	Public Works I (<i>Citrus College</i>)	3.0
PUB 158	Municipal and Urban Tree Care (<i>Citrus College</i>)	3.0
AGOR 1	Horticultural Science	3.0
AGOR 39	Turf Grass Production and Management	3.0
TOTAL UNITS		12.00

Radio Broadcasting: Behind-the-Scenes

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE T0606

The Behind-the-Scenes Radio Broadcasting Certificate is designed for students who are interested in the non-performance side of the industry. Students will receive instruction in the various functions of a radio station as they exist independently and in conjunction with the on-the-air product.

Requirements for the Certificate

Required courses:

R-TV 01	Introduction to Broadcasting	3.0	CSU
R-TV 09	Broadcast Sales and Promotion	3.0	
R-TV 10	Radio Management and Programming	3.0	
R-TV 11A	Beginning Radio Production	3.0	CSU
R-TV 11B	Advanced Radio Production	3.0	CSU
R-TV 15	Broadcast Business Practices	3.0	
R-TV 96	Campus Radio Station Lab	1.0 - 2.0	
R-TV 97A	Radio/Entertainment Industry Seminar, <i>and</i>	1.0	
R-TV 97B	Radio/Entertainment Industry Internship	1.0	

PLUS

Select six (6) units from:

R-TV 12	Commercial Copywriting	3.0	
R-TV 26	Legal Issues in Entertainment Law	3.0	
R-TV 31	History of Radio DJ's	3.0	
R-TV 32	R-TV Internet Applications	3.0	
R-TV 33	Radio Show Producer Techniques and Procedures	3.0	

TOTAL UNITS 27.0 - 28.0

Radio Broadcasting: On-the-Air

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE T0605

This On-the-Air Radio Broadcasting Certificate is designed for students who are interested in working in the performance side of the industry. Students receive instruction in developing skills needed to work as disc jockeys, newscasters, voice-over artists and in other performance areas of the industry.

Requirements for the Certificate

Required courses:

R-TV 01	Introduction to Broadcasting	3.0	CSU
R-TV 02	On-Air Personality Development, <i>or</i>	3.0	CSU
R-TV 02A	On-Air Personality Development - Spanish Market	3.0	
R-TV 05	Radio-TV Newswriting	3.0	
R-TV 07A	Beginning Commercial Voice-Overs	3.0	
R-TV 11A	Beginning Radio Production	3.0	CSU
R-TV 11B	Advanced Radio Production	3.0	CSU
R-TV 15	Broadcast Business Practices	3.0	
R-TV 96	Campus Radio Station Lab	1.0 - 2.0	
R-TV 97A	Radio/Entertainment Industry Seminar	1.0	
R-TV 97B	Radio/Entertainment Industry Internship	1.0	

PLUS

Select six (6) units from:

R-TV 03	Sportscasting and Reporting	1.5	
R-TV 04	Broadcast News Field Reporting	3.0	
R-TV 06	Broadcast Traffic Reporting	1.5	
R-TV 07B	Advanced Commercial Voice-Overs	3.0	
R-TV 09	Broadcast Sales and Promotion	3.0	
R-TV 10	Radio Management and Programming	3.0	
R-TV 12	Commercial Copywriting	3.0	
R-TV 17	Internet Radio and Podcasting	3.0	
R-TV 26	Legal Issues in Entertainment Law	3.0	
R-TV 31	History of Radio DJ's	3.0	
R-TV 32	R-TV Internet Applications	3.0	
R-TV 33	Radio Show Producer Techniques and Procedures	3.0	

TOTAL UNITS 30.0 - 31.0

Real Estate

BUSINESS ADMINISTRATION DEPARTMENT

CERTIFICATE L0512

Prior to applying to take the California Real Estate Salesperson License Exam the applicant must have completed Real Estate Principles (BUSR 50), Real Estate Practice (BUSR 52), and a third elective course in real estate. The certificate in real estate includes these three courses and three additional courses for a total of six of the eight classes needed to satisfy the educational requirements to take the California Real Estate Broker Exam.

Requirements for the Certificate

Required courses:

BUSR 50	Real Estate Principles	3.0	CSU
BUSR 51	Legal Aspects of Real Estate	3.0	
BUSR 52	Real Estate Practice, <i>or</i>	3.0	
BUSR 52D	Real Estate Practice Work Experience	3.0	
BUSR 53	Real Estate Finance	3.0	
BUSR 81	Appraisal: Principles and Procedures	3.5	

PLUS

Select one (1) course from:

BUSA 11	Fundamentals of Accounting	3.0	
BUSL 18	Business Law	3.0	CSU,UC
BUSR 55	Real Estate Economics	3.0	
BUSR 57	Income Tax Aspects of Real Estate Investments	3.0	
BUSR 59	Real Estate Property Management	3.0	
BUSR 76	Escrow Procedures I	3.0	

TOTAL UNITS 18.5

Real Estate Appraisal

BUSINESS ADMINISTRATION DEPARTMENT

CERTIFICATE L0513

The certificate in Real Estate Appraisal meets all of the educational requirements for Appraiser Trainee, Licensed Appraiser, and depending on the choice of electives may meet the educational requirements for Certified Residential Appraiser.

Requirements for the Certificate

Required courses:

BUSR 81	Appraisal: Principles and Procedures	3.5
BUSR 82	Uniform Standards of Professional Appraisal Practice	1.0
BUSR 83	Residential Appraisal	3.5
BUSR 84	Residential Appraisal: Case Studies	2.5

PLUS

Select three (3) courses from:

BUSA 11	Fundamentals of Accounting	3.0	
BUSR 50	Real Estate Principles	3.0	CSU
BUSR 51	Legal Aspects of Real Estate	3.0	
BUSR 53	Real Estate Finance	3.0	
BUSR 55	Real Estate Economics	3.0	
BUSR 57	Income Tax Aspects of Real Estate Investments	3.0	
BUSR 59	Real Estate Property Management	3.0	
BUSR 76	Escrow Procedures I	3.0	
CISB 15	Microcomputer Applications	4.0	CSU,UC
INSP 70	Elements of Construction	3.0	CSU

TOTAL UNITS 22.5 - 23.5

School Age Child - Specialization

CHILD DEVELOPMENT

CERTIFICATE T1314

The School Age Child Specialization Certificate (31-33 units) provides the holder with specialized skills for working with children of that age. This certificate meets or exceeds Title 5 Master Teacher - School Age Child Permit Level (with 16 units of general education).

Requirements for the Certificate

Required courses:

CHLD 1	Child, Family and Community	3.0	CSU,UC
CHLD 5	Principles/Practices in Child Development Programs	3.0	CSU
CHLD 6	Survey of Child Development Curriculum	3.0	CSU
CHLD 10	Child Growth and Development, <i>or</i>	3.0	CSU,UC
CHLD 10H	Child Growth and Development - Honors	3.0	CSU,UC
CHLD 50	Multicultural Education: Anti-Bias Perspective	3.0	
CHLD 51	Early Literacy in Child Development	3.0	
CHLD 62	Music and Motor Development for Young Children	3.0	CSU
CHLD 64	Health, Safety and Nutrition of Young Children	3.0	CSU
CHLD 74	Program Planning for the School Age Child	3.0	

PLUS

Select one (1) course from:

ENGL 64	Writing Effective Sentences	1.0	
ENGL 65	Grammar Review	1.0	
LIT 40	Children's Literature	3.0	CSU

PLUS

Select three (3) units from:

LERN 49	Math Skills Review	3.0	
MATH 50	Pre-Algebra	3.0	

TOTAL UNITS 31.0 - 33.0

Sign Language/Interpreting

SIGN LANGUAGE DEPARTMENT

CERTIFICATE T0801

The Mt. San Antonio College Interpreter Training Program is designed to prepare individuals for careers as Sign Language Interpreters. Interpreters are needed wherever communication happens between the hearing community and the Deaf and hard-of-hearing community. There are an endless number of settings in which this communication takes place. Interpreters are employed by school districts, cruiseship companies, corporations, government agencies, hospitals, colleges and universities, and a vast number of other organizations and private businesses.

Program Preparation: Preparation for the program includes fluency in American Sign Language demonstrated by the completion of SIGN 104, American Sign Language 4, (or the equivalent skill) and English fluency demonstrated by the completion of ENGL 1A.

National Certification: There are many specialties within the field of Sign Language Interpreting, but the focus of this program is on preparing the interpreter generalist. Although requiring some type of certification is becoming more common in California, there are still many job opportunities for the precertified interpreter.

Completing the certificate in Sign Language/Interpreting does not make one a "Certified Interpreter"; however, graduates of this program are encouraged to apply for National Interpreting Certification (NIC) through the Registry of Interpreters for the Deaf (RID) at www.rid.org.

Requirements for the Certificate

Required courses:

SIGN 105	American Sign Language 5	4.0	
SIGN 108	Fingerspelling	2.0	
SIGN 201	Deaf Perspectives	3.0	
SIGN 202	American Deaf Culture	3.0	CSU,UC
SIGN 210	American Sign Language Structure	3.0	CSU,UC
SIGN 220	Translation: American Sign Language/English	3.0	CSU
SIGN 223	Principles of Interpreting	3.0	CSU
SIGN 225	Ethical Decision Making for Interpreters	2.0	
SIGN 227	Cognitive Processing for Interpreters	4.0	
SIGN 231	Interpreting	4.0	
SIGN 232	Advanced Interpreting	4.0	
SIGN 239	Practicum	1.0	

PLUS

Select three (3) courses from:

SIGN 99	Special Projects in Sign Language/Interpreting	2.0	
SIGN 238	Oral Transliteration	3.0	
SIGN 240	Vocabulary Building for Interpreters	2.0	CSU
SIGN 250	Interpreting with Classifiers	1.5	
SIGN 260	Video Interpreting	1.5	
SL 2	Linked Service Learning	1.0	CSU

TOTAL UNITS 40.0 - 43.0

Sports Turf Management

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0112

This certificate program is designed to provide skills required for students interested in employment at golf courses, race tracks, athletic fields and stadiums, and other high use turf areas. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 39	Turf Grass Production and Management	3.0	CSU
AGOR 40	Sports Turf Management	3.0	
AGOR 50	Soil Science and Management	3.0	CSU,UC
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 62	Landscape Irrigation - Design and Installation	3.0	CSU
AGOR 63	Landscape Irrigation Systems Management	3.0	

TOTAL UNITS **27.0**

Television Production

COMMERCIAL AND ENTERTAINMENT ARTS

CERTIFICATE L0602

Students will gain experience in film-style production, remote and studio production. This course of study qualifies the student for a certificate in television production, and is designed to prepare a student for an entry-level job in the industry in a variety of areas. This includes not only skills used in production, but also preproduction, and editing.

Requirements for the Certificate

Required courses:

R-TV 01	Introduction to Broadcasting	3.0	CSU
R-TV 14	Media Aesthetics	3.0	
R-TV 19A	Beginning Television Production	3.0	CSU
R-TV 19B	Advanced Television Production	3.0	CSU
R-TV 22	Editing for Film and Television	3.0	
R-TV 100	Work Experience in Film and TV	2.0	

PLUS

Select nine (9) units from:

R-TV 18	Writing for Television/Film	3.0	CSU
R-TV 20	Television News Production	3.0	
R-TV 21	Remote Television Production and Engineering	3.0	
R-TV 23	Reality Show Production	3.0	

TOTAL UNITS 26.0

Recommended Electives:

ANIM 115	Storyboarding
R-TV 26	Current Issues in Entertainment Law
THTR 17	Acting for the Camera
PHOT 10	Black and White Photography

Tree Care and Maintenance

AGRICULTURAL SCIENCES DEPARTMENT

CERTIFICATE L0111

This certificate program is designed to give students basic skills in the repair and maintenance of trees. All courses are applicable for degree requirements.

Requirements for the Certificate

Required courses:

AGOR 1	Horticultural Science	3.0	CSU
AGOR 24	Integrated Pest Management	3.0	CSU
AGOR 30	Ornamental Plants - Trees and Woody Shrubs	3.0	CSU,UC
AGOR 32	Landscaping and Nursery Management	3.0	CSU
AGOR 50	Soil Science and Management	3.0	CSU,UC
AGOR 51	Tractor and Landscape Equipment Operations	3.0	CSU
AGOR 53	Small Engine Repair I	3.0	CSU
AGOR 75	Urban Arboriculture	3.0	

TOTAL UNITS 24.0

Water Technology

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE L0921

This program is designed to train students who wish to: (1) seek employment in the water treatment industry, or (2) qualify for a specialized position within the water treatment industry. Material covered in the courses will be helpful to students who wish to prepare for Grade I, Grade II, or Grade III Water Treatment Operator certification examinations given by the State of California, Department of Health, and the AWWA Distribution Operation Certification. It also covers the responsibilities of water supply, State Health Department Title 17 Cross-Connections, and Title 22 Water Quality Standards.

Requirements for the Certificate

Required courses:

WATR 60	Introduction to Water Systems	3.0
WATR 61	Water Treatment	3.0
WATR 62	Water Distribution	3.0
WATR 63	Cross Connection Control - Certified Tester	3.0
WATR 64	Cross Connection Control - Certified Specialist	3.0
WATR 65	Water Hydraulics and Instrumentation	3.0
TOTAL UNITS		18.0

Web Design

COMMERCIAL AND ENTERTAINMENT ARTS DEPARTMENT

CERTIFICATE L0618

This program is designed to provide students with a combination of design and technical skills necessary for entry-level employment as a Web page designer.

Requirements for the Certificate

Required courses:

ANIM 172	Motion Graphics	3.0
ARTC 100	Graphic Design I	3.0
ARTC 120	Graphic Design II	3.0
ARTC 160	Typography	3.0
ARTC 200	Web Design	3.0
ARTC 220	Graphic Design IV	3.0
ARTC 240	Multimedia Design	3.0
ARTD 20	Design: Two Dimensional	3.0
PHOT 4	Digital Cameras and Composition	1.0
TOTAL UNITS		25.0

Welder - Licensed

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE L0930

This program is designed to prepare students for entry-level employment in the broad field of welding, including manufacturing construction, fabrication and repair. Through theoretical and hands-on skills coursework students prepare for industry licensing with an understanding of current guidelines and standards. Particular emphasis is placed on those competencies required for certification in structural steel welding. Course sequences can be modified to reflect industry experience or other individual needs.

Requirements for the Certificate

Required courses:

WELD 40	Introduction to Welding	2.0	CSU
WELD 50	Oxyacetylene Welding	2.0	
WELD 51	Basic Electric Arc Welding	2.0	
WELD 53A	Welding Metallurgy	3.0	CSU
WELD 60	Print Reading and Computations for Welders	3.0	
WELD 70A	Beginning Arc Welding	3.0	
WELD 70B	Intermediate Arc Welding	3.0	
WELD 70C	Certification for Welders	3.0	
WELD 80	Construction Fabrication and Welding	3.0	
WELD 81	Pipe and Tube Welding	3.0	
TOTAL UNITS		27.0	

Note: Any higher level welding courses may be substituted for WELD 40.

Welder - Automotive Welding, Cutting & Modification

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE T0931

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in automotive welding, cutting and modification. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in automotive welding.

Requirements for the Certificate

Required courses:

WELD 40	Introduction to Welding	2.0	CSU
WELD 50	Oxyacetylene Welding	2.0	
WELD 51	Basic Electric Arc Welding	2.0	
WELD 53A	Welding Metallurgy	3.0	CSU
WELD 60	Print Reading and Computations for Welders	3.0	
WELD 70A	Beginning Arc Welding	3.0	
WELD 70B	Intermediate Arc Welding	3.0	
WELD 70C	Certification for Welders	3.0	
WELD 80	Construction Fabrication and Welding	3.0	
WELD 81	Pipe and Tube Welding	3.0	
WELD 91	Automotive Welding, Cutting and Modification	3.0	
TOTAL UNITS		30.0	

Note: Any higher level welding courses may be substituted for WELD 40.

Welder - Gas Tungsten Arc Welding

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE T0932

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in gas tungsten ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in aluminum, CRES, mild steel and selected exotic metals with specialty skills in gas tungsten ARC welding.

Requirements for the Certificate

Required courses:

WELD 40	Introduction to Welding	2.0	CSU
WELD 50	Oxyacetylene Welding	2.0	
WELD 51	Basic Electric Arc Welding	2.0	
WELD 53A	Welding Metallurgy	3.0	CSU
WELD 60	Print Reading and Computations for Welders	3.0	
WELD 70A	Beginning Arc Welding	3.0	
WELD 70B	Intermediate Arc Welding	3.0	
WELD 70C	Certification for Welders	3.0	
WELD 80	Construction Fabrication and Welding	3.0	
WELD 81	Pipe and Tube Welding	3.0	
WELD 90A	Gas Tungsten Arc Welding	3.0	

TOTAL UNITS 30.0

Note: Any higher level welding courses may be substituted for WELD 40.

Welding - Semiautomatic Arc Welding

AIR CONDITIONING, WATER & WELDING TECHNOLOGIES

CERTIFICATE T0933

Prepares students for entry-level employment as a licensed welder with additional skills development and theory in semiautomatic ARC welding. Coursework prepares students for industry licensing with emphasis on competencies required for certification in structural steel welding and specialty skills in semiautomatic ARC welding.

Requirements for the Certificate

Required courses:

WELD 40	Introduction to Welding	2.0	CSU
WELD 50	Oxyacetylene Welding	2.0	
WELD 51	Basic Electric Arc Welding	2.0	
WELD 53A	Welding Metallurgy	3.0	CSU
WELD 60	Print Reading and Computations for Welders	3.0	
WELD 70A	Beginning Arc Welding	3.0	
WELD 70B	Intermediate Arc Welding	3.0	
WELD 70C	Certification for Welders	3.0	
WELD 80	Construction Fabrication and Welding	3.0	
WELD 81	Pipe and Tube Welding	3.0	
WELD 90B	Semiautomatic Arc Welding Process	3.0	

TOTAL UNITS 30.0

Note: Any higher level welding courses may be substituted for WELD 40.