

Administration of Justice

Degree: Associate of Science:
Administration Of Justice

Certificate: College Skills Certificate:
Basic Police Academy
College Skills Certificate:
Criminal Law Specialist

For the Associate of Science Degree in Administration of Justice, complete 21 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
ADJUS 42	Introduction to Corrections	3
ADJUS 120	Introduction to the Criminal Justice System	3
ADJUS 121	Concepts of Criminal Law	3
ADJUS 122	Criminal Procedures	3
ADJUS 130	Cultural Issues in Public Safety	3
ADJUS 221	Introduction to Evidence	3

And select a minimum of 1 elective course:

ADJUS 150	Criminal Investigations	3
ADJUS 151	Basic Drug Laws and Investigation	3
ADJUS 152	Gang Theory, Practice & Suppression	3
ADJUS 222	Juvenile Laws and Procedures	3
ADJUS 260	Patrol Procedures	3
ADJUS 900*	Selected Topics	3

Total Units Required in Major Courses.....21

* ADJUS 900 courses do not necessarily transfer to four-year colleges and universities (please see a counselor regarding transfer information and degree applicability).

College Skills Certificates in Administration of Justice:

College Skills Certificate: Basic Police Academy

The Academy is certified by the California Commission on Peace Officer Standards and Training and the student will receive P.O.S.T. certification and earn Certificate of Completion from LMC.

Application and steps for acceptance into the Basic Law Enforcement Academy is completed by the Office of the Sheriff, Contra Costa County. Training is held at the Contra Costa Law Enforcement Training Center at 340 Marina Boulevard, Pittsburg.

Basic Law Enforcement Academy ADJUS 5 Total Units: 17

College Skills Certificate - Criminal Law Specialist

Intro to Criminal Justice	ADJUS 120	3 Units
Criminal Law	ADJUS 121	3 Units
Intro to Criminal Evidence	ADJUS 221	3 Units
Criminal Procedure	ADJUS 122	3 Units

Total Units: 12

Anthropology

Degree: Associate of Science: Anthropology

The Anthropology major is designed to meet the needs of a broad spectrum of students. In addition to providing valuable multicultural understanding and cultural literacy skills, the Anthropology major can be used to augment career success in Business, Mental Health, as well as Medical and Social Service occupations. The major in Anthropology also prepares students for further study at a four-year institution.

For the Associate of Science Degree in Anthropology, complete 18-19 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:

Select a minimum of 2 courses in Anthropology:		Units
ANTHR 5	General Anthropology	3
ANTHR 6	Cultural Anthropology	3
ANTHR 7	Anthropology of Culture Change	3

And select:

PSYCH 10*	Psychology: Individual and Social Processes	3
OR		
PSYCH 11*	General Psychology	3
SOCIO 15*	Introduction to Sociology	3
OR		
SOCIO 16*	Introduction to Social Problems	3

And select a minimum of 2 elective courses:

PSYCH 10*	Psychology: Individual and Social Processes	3
OR		
PSYCH 11*	General Psychology	3
PSYCH 12	Family Crisis and Growth	3
PSYCH 14	Psychology of Human Sexuality	3
SOCIO 15*	Introduction to Sociology	3
OR		
SOCIO 16*	Introduction to Social Problems	3
MATH 34	Probability and Statistics	4

*Courses cannot be used to meet both required and elective categories.

Total Units Required in Major Courses..... 18-19

Appliance Service Technology

Degree: Associate of Science – Appliance Service Technology

Certificates: Certificate of Achievement – Appliance Technician I

Certificate of Achievement – Appliance Technician II

College Skills Certificate: Heating, Ventilation & Air Conditioning Specialist

College Skills Certificate: Electrical Appliance Technician

College Skills Certificate: Refrigeration Technician

The program in Appliance Service Technology offers instruction for two career options. The Appliance Technician I option prepares students for entry-level positions as appliance installers or shop technician trainees. Students selecting the Appliance Technician II option will be prepared for entry-level positions in the appliance service field, with sufficient back-ground to support a rapid transition to the field technician level.

For the Certificate of Achievement in Appliance Service Technology, complete 21.5 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Appliance Service Technology, complete 39 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Appliance Technician I (primarily an evening program)

Required Courses:	Units	
APPLI 13	Beginning Electrical Appliances Tech I	3
APPLI 14	Advanced Electrical Appliances Tech I	3
APPLI 20	Electrical Appliances Shop Practice	1
APPLI 23	Basic Refrigeration Tech I	3
APPLI 24	Advanced Refrigeration Tech I	3
APPLI 30	Gas Appliance and Refrigeration Shop Practice	1
APPLI 35	Appliance Shop Practice-Intermediate	1
APPLI 36	Appliance Shop Practice-Advanced	1
APPLI 46	Principles and Repair of Microwave Ovens	.5
EETEC 10	Introduction to Electrical Technology	3
ACREF 45	Central Heating & Cooling Troubleshooting	2
Total Units Required in Major Courses.....		21.5

Appliance Technician II (primarily a day program)

Required Courses:	Units	
APPLI 15	Electrical Appliances I	4
APPLI 16	Electrical Appliances II	4
APPLI 20	Electrical Appliance Shop Practice	5
APPLI 25	Refrigeration I	4

APPLI 26	Refrigeration II	4
APPLI 30	Gas Appliance and Refrigeration Shop Practice	5
APPLI 35	Appliance Shop Practice-Intermediate	5
APPLI 36	Appliance Shop Practice-Advanced	5
EETEC 10	Introduction to Electrical Technology	3

Total Units Required in Major Courses.....39

With the approval of an Appliance Technology instructor, APPLI 170 can be used to satisfy the requirements of some appliance repair courses for the Appliance Technician II option.

Note: A reading/writing exam option is available for Appliance Service Technology majors to fulfill the reading/writing competency requirement.

College Skills Certificates in Appliance Service Technology:

College Skills Certificate: Heating, Ventilation & Air Conditioning Specialist

APPLI 23	Basic Refrigeration Tech I	3
or		
APPLI 24	Advanced Refrigeration Tech I	3
ACREF 45	Central Heating & Cooling Troubleshooting	2
ACREF 73	Basic Refrigeration R1A	2
ACREF 75	HVAC Tech H1A Heating Technology	2
ACREF 76	Basic HVAC H1B Air Conditioning Repair	2
REFRG 77	HVAC Tech AH1A Duct Testing & Repair	2
ACREF 78	HVAC AH1B Residential Load Calculation	1.5

Total Units 14.5

College Skills Certificate: Electrical Appliance Technician

APPLI 13 or 15	Electrical Appliances I	3
APPLI 14 or 16	Electrical Appliances II	3
APPLI 20	Electrical Appliances Shop Practice	1
APPLI 35 or 36	Electrical Appliances Adv. Shop Practice	1
Total Units		8

College Skills Certificate: Refrigeration Technician

APPLI 23	Basic Refrigeration Tech I	3
Or		
APPLI 25	Refrigeration I	4
APPLI 24	Advanced Refrigeration Tech I	3
Or		
APPLI 26	Refrigeration II	4
APPLI 30	Gas Appliance and Refrigeration Shop Practice	5
APPLI 35	Appliance Shop Practice-Intermediate	1
Or		
APPLI 36	Appliance Shop Practice-Advanced	1
Total Units		8-9

Art

Degrees: Associate of Art – Fine Arts

Associate of Art –
Graphic Communications

Certificates: Certificate of Achievement –
Graphic Communications

The Art Program offers a comprehensive and integrated series of courses that lead to an Associate of Arts degree in Art, with an emphasis in Fine Arts or Graphic Communications. We also offer a Certificate of Achievement in Graphic Communications. Students start with required core courses that address the fundamentals of art and design and proceed to advanced-level studies in their chosen emphasis. Departmental philosophy integrates discipline, creativity, art history, tools materials, safe studio practices and professionalism across the curriculum.

Associate Degree - Fine Arts OR Graphic Communications

For the Associate of Art Degree, students must complete the 30 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Art Degree.

Required Foundation Courses		18 Units
ART 5	The Visual Arts	3
ART 6, 7, 8 or 9	Western Art History I, II, III or IV	3
ART 10	Introduction to Two-Dimensional Design	3
ART 11	Introduction to Three-Dimensional Design	3
ART 20	Introduction to Drawing (Fine Arts)	3
ART 12	Design Drawing (Graphic Communications)	3
ART 72	Survey of Digital Photography	3

FINE ART ELECTIVES

Select a minimum of 12 elective units:

ART 21	Advanced Drawing	3
ART 26	Landscape Sketching on Location	.5
ART 40	Introduction to Painting	3
ART 45	Advanced Painting	3
ART 46	Landscape Painting on Location	1
ART 47	Color Dynamics in Painting	1
ART 60	Introduction to Sculpture	3
ART 63	Raku Workshop	1
ART 66	Introduction to Ceramics	1
ART 67	Intermediate Ceramics	3
ART 69	Figurative Ceramic Sculpture	3
ART 73	Location Photography	1
ART 74	Photo II: Developing a Personal Vision	3

GRAPHIC COMMUNICATIONS ELECTIVES

ART 15	Graphic Design	3
ART 25	Advertising, Marketing and Publication Design	3
ART 27	Introduction to Cartooning	3
ART 28	Intermediate Cartooning	3
ART 50	Designing with Adobe InDesign	3
ART 54	Adobe Photoshop	3
ART 57	Designing with Adobe Illustrator	3
ART 85	Introduction to Animation	3
ART 86	Animation and 3D Modeling	3

Select a minimum of 12 elective units:

Total Units Required in Major Courses30

Certificate of Achievement - Graphic Communications

For the Certificate of Achievement in Graphic Communications, complete 30 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Required Foundation Courses		18 Units
ART 5*	The Visual Arts	3
ART 10	Introduction to Two-Dimensional Design	3
ART 12	Design Drawing	3
ART 15	Graphic Design	3
ART 25	Advertising, Marketing and Publication Design	3
ART 72	Survey of Digital Photography	3

And select a minimum of 12 elective units:

ART 15	Graphic Design	3
ART 25	Advertising, Marketing and Publication Design	3
ART 27	Introduction to Cartooning	3
ART 28	Intermediate Cartooning	3
ART 50	Designing with Adobe InDesign	3
ART 54	Adobe Photoshop	3
ART 57	Designing with Adobe Illustrator	3
ART 85	Introduction to Animation	3
ART 86	Animation and 3D Modeling	3
ART 90	Digital Communications Portfolio	1.5
JOURN 10	Writing for the Media	3

Total Units Required in Major Courses30

* Also meets reading/writing competency requirement for Certificates of Achievement.

Note: Computer-based courses in graphic communications require familiarity with basic computer operations.

Automotive Technology

- Degree:** Associate of Science – Automotive Technology
- Certificates:** Certificate of Achievement – Automotive Technology
- College Skills Certificate:
Smog Technician Specialist Certificate
- College Skills Certificate:
Air Conditioning Specialist
- College Skills Certificate:
Transmission Specialist
- College Skills Certificate:
Engine Performance
- College Skills Certificate:
Engine Repair & Machining Specialist

Automotive Technology provides instruction in engine diagnosis, tune-up, emission control, brakes, front-end, and suspension systems. These courses are designed to prepare students for certification in these areas and for employment as automotive mechanics.

For the Certificate of Achievement in Automotive Technology, complete 18 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Automotive Technology, complete 24 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Select a minimum of 18 units

AUTO 35	Automotive Fundamentals	4
AUTO 37	Automotive Engine Machining	4
AUTO 40	Automotive Engine Diagnosis I	4
AUTO 41	Automotive Tune-Up and Emission Control Diagnosis	4
AUTO 42	Automotive Brakes	3-4
AUTO 43	Automotive Suspension and Steering	3-4
AUTO 45	Automotive Laboratory Practice	3-4
AUTO 46	Automotive Electricity and Electronics	3-4
AUTO 47	Automotive Heating and Air Conditioning	4
AUTO 48	Automatic Transmission and Transaxles	4
AUTO 49	Manual Transmission and Final Drive	4
AUTO 50	Clean Air Car Course	4
AUTO 909*	Automotive Open Lab	1

Total Units Required in Major Courses.....18

* AUTO 900 courses do not necessarily transfer to four-year colleges and universities (please see a counselor regarding transfer information and degree applicability).

Note: A reading/writing exam option is available for Automotive Technology majors to fulfill the reading/writing competency requirement.

College Skills Certificates in Automotive Technology:

College Skills Certificate: Smog Technician Specialist

AUTO 40	Automotive Engine Diagnosis I	4
AUTO 41	Automotive Engine Diagnosis II	4
AUTO 46	Automotive Electricity and Electronics	4
AUTO 55	Clean Air Car Course	3
AUTO 57	Smog/Advance Training	.5

15.5 Total Units

College Skills Certificate: Air Conditioning Specialist

AUTO 47	Automotive Heating & Air Conditioning	3
---------	---------------------------------------	---

3 Total Units

College Skills Certificate: Transmission Specialist

AUTO 48	Automatic Transmission & Transaxles	4
AUTO 47	Manual Transmission & Differential	4

8 Total Units

College Skills Certificate: Engine Performance

AUTO 35	Automotive Fundamentals	4
AUTO 40	Automotive Engine Diagnosis I	4
AUTO 41	Automotive Engine Diagnosis II	4
AUTO 46	Automotive Electricity and Electronics	4

16 Total Units

College Skills Certificate: Engine Repair & Machining Specialist

AUTO 35	Automotive Fundamentals	4
AUTO 37	Automotive Engine Machining	2.5

6.5 Total Units

Biological Science

Degree: Associate of Science: Biological Science

For the Associate of Science Degree in Biological Science, complete 18 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses		Units
BIOSC 20	Principles of Biology: Cellular	5
BIOSC 21	Principles of Biology: Organismic	5
Select a minimum of 18 units		
BIOSC 7	Environmental Biology*	4
CHEM 25	General College Chemistry	5
CHEM 26	General College Chemistry	5
CHEM 28	Organic Chemistry	5
CHEM 29	Organic Chemistry*	5
MATH 50	Calculus and Analytic Geometry	4
MATH 60	Calculus and Analytic Geometry*	4
MATH 34	Probability and Statistics	4
PHYS 35	General College Physics	4
PHYS 36	General College Physics	4

Total Units Required in Major Courses..... 18

* Optional for some Biological specialties. A basic science and math core program is recommended for students majoring in Biological Sciences. However, students are advised to meet with their science advisor to draft a specific program of studies. Transfer requirements may vary depending upon which major specialty in biological science the student will be pursuing at the transfer institution.

Business

Degrees: Associate of Science – Accounting
Associate of Science –
Business Small Business Operations

Associate of Science –
Business Office Administration

Certificates: Certificate of Achievement – Accounting

Certificate of Achievement –
Business Small Business Operations

Certificate of Achievement –
Business Office Administration

Certificate of Achievement –
Business Retail Management

College Skills Certificate:
Accounting Clerk/Bookkeeper

College Skills Certificate:
Administrative Assistant

College Skills Certificate:
Basic Clerical

College Skills Certificate:
Business Computer Skills

College Skills Certificate:
Business Literacy Skills

College Skills Certificate:
Business Transfer Preparation

College Skills Certificate:
Entrepreneurship//Small Business Start-Up

College Skills Certificate: Front Office/
Medical Billing/Medical Coding

College Skills Certificate:
Fundamental Business Skills

College Skills Certificate: Basic Medical
Clerical/Medical Records Clerk

College Skills Certificate:
Medical Transcription

College Skills Certificate: Office Essentials

College Skills Certificate: Small Business
Management and Operations

Business Program curriculum is designed to accomplish several goals: 1) to prepare students for entry-level careers, 2) to prepare students for career advancement in business, industry, government, and non-profit organizations; 3) to prepare students for entrepreneurship and small business start-ups, operations, management and expansion, 4) to prepare business students to transfer to four-year colleges, and 5) to provide major prep courses for students with Bachelor of Arts degrees seeking an advanced business degree.

The Business Department offers majors in accounting, business administration, small business operations and office administration.

The Business Department provides three ways to achieve your business education and training goals: 1) Associate of Science degrees, 2) Certificates of Achievement and/or 3) College Skills Certificates.

Business—Accounting Associate of Science Degree and Certificate of Achievement

The associate degree and certificate curriculum in accounting prepare students for entry-level positions and professional advancement in public, private, and governmental accounting. Entry-level employment opportunities consist of positions such as accounts payable/receivable clerk, payroll accountant, accounting paraprofessional, and tax examiner assistant. The Business Department also offers a transfer curriculum to a four-year university (see Business Administration: Pre-Transfer).

For the Certificate of Achievement in Accounting, complete 23 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Accounting, complete 23 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult

Graduation Requirements

a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
BUS 185	Computer Assisted Accounting	3
BUS 186	Principles of Accounting I (or Bus 14)	4
BUS 187	Principles of Accounting II (or Bus 15)	4
BUS 18*	Introduction to Excel	3
BUS 109	Introduction to Business (or Bus 20)	3

And select 5 units from the following:

BUS 27	Small Business Management	3
BUS 294	Business Law (or Bus 34)	3
BUS 59**	Business Communications	3
BUS 91, 92, 93 or 95	Various one day seminars (each)	.5
BUS 170	Occupational Work Experience Education in Business	1-8
BUS 900***	Selected Topics in Business	varies

Total Units Required in Major Courses..... 20-23

*Meets college computer literacy competency requirement for the AS Degree and for the Certificate of Achievement.

**Also meets reading/writing competency requirement for Certificate of Achievement.

***BUS 900 courses do not necessarily transfer to four-year colleges and universities (please see a counselor regarding transfer information and degree applicability).

Business—Small Business Operations Associate Degree and Certificate

The Small Business Operations associate degree and certificate curriculum is designed to prepare students for success in small business management—starting, operating, and expanding a small business. It is directed to the potential or current entrepreneur and to persons who serve as employees of small business firms.

For the Certificate of Achievement in Small Business Operations, complete 23-24 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Small Business Operations, complete 23-24 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
BUS 181	Accounting: Applied Principles	3
OR		
BUS 186	Principles of Accounting I (or Bus 14)	4
BUS 27	Small Business Management	3
BUS 35*	Using Microsoft Office	3
OR		
BUS 35 A/B/C/D		
OR		

COMSC 60*	Emerging Microcomputer Technologies	4
MANGT 75A-C	Managing Human Resources	3

And select a minimum of 11 units:

BUS 285	Tax Accounting	3
BUS 18*	MS Excel for Windows	3
BUS 109	Introduction to Business (or Bus 20)	3
BUS 294	Business Law (or Bus 34)	3
BUS 35*	Using Microsoft Office	3
BUS 58**	Business English	3
OR		
BUS 35 A/B/C/D		
BUS 59**	Business Communications	3
BUS 91,92,93,95	Various One Day Business Seminars (each)	.5
BUS 900***	Selected Topics in Business	varies
ART 13	Graphic Design	2
COMSC 30	The Internet	1.5
COMSC 31	Internet - Web Site Development	1.5
COMSC 60*	Emerging Microcomputer Technologies	4
JOURN 35	Mass Communication	3
MANGT 50A-C	Introducing Supervision (each)	1
MANGT 55A-C	Communicating with Confidence (each)	1
MANGT 60A-C	Making Effective Decisions (each)	1
MANGT 65A-C	Mastering Management's Essential Tools (each)	1
MANGT 70A-E	Relating in Human Terms (each)	1

Total Units Required in Major Courses..... 23-24

* Also meets computer literacy competency requirement for Associate in Science Degree and Certificate of Achievement

**Also meets reading/writing competency requirement for Certificate of Achievement.

*** BUS 900 courses do not necessarily transfer to four-year colleges and universities (please see a counselor regarding transfer information and degree applicability).

Business—Office Administration Associate Degree and Certificate

The Office Administration Program is designed to provide instruction for those interested in professional office skills and technologies to meet the requirements of a constantly changing office environment. Emphasis is placed on state-of-the-art technology, software, office skill development, interpersonal relations, and career planning.

For the Certificate of Achievement in Office Administration, complete 23-24 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Office Administration, complete 23-24 units of coursework listed below as well as the LMC General Education and Graduation requirements.

Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
BUS 18*	Microsoft Excel for Windows	3
BUS 47	Office Procedures	3
BUS 58**	Business English (See Note)	3
BUS 59**	Business Communication	3
OR		
MANGT 55A-C	Communicating with Confidence	3
BUS 65*	Introduction to Word Processing	3
BUS 91	Diverse Workforce	.5
BUS 92	Business Ethics	.5
BUS 93	Dealing with Difficult People	.5
BUS 95	Developing Customer Service Satisfaction	.5
BUS 96	Time Management and Goal Setting	.5

Typing Proficiency of 40 WPM (Business Department faculty will evaluate students for this proficiency)

* Also meets computer literacy competency requirement for Associate in Science Degree and Certificate of Achievement

**Also meets reading/writing competency requirement for Certificate of Achievement.

Note: Students who place at the ENGL 100 level on assessment or have completed ENGL 100 are not required to complete BUS 58.

And select 9 units in area of specialization (students may elect to complete 9 units without specialization and receive a general Office Administration Certificate):

Specialization:

Bookkeeping/Account Clerk		
BUS 181	Accounting: Applied Principles	3
OR		
BUS 186	Principles of Accounting I	4
BUS 185	Computer Assisted Accounting	3
BUS 45	Office Accounting Essentials	3
BUS 80	Ten-Key / Data Entry Skills	1
BUS 81	Accounts Receivable / Accounts Payable	2
BUS 82	Payroll 1	3
Administrative Assistant		
BUS 35**	Using Microsoft Office	3
BUS 56	Database Management Using Microsoft Access	3
BUS 66**	Intermediate Word Processing	3
OR		
BUS 67**	Advanced Word Processing	3
Office Management		
MANGT 50A-C	Introducing Supervision	(each) 1
MANGT 60A-C	Making Effective Decisions	(each) 1
MANGT 65A-C	Mastering Management's Essential Tools	(each) 1
MANGT 70A-E	Relating in Human Terms	(each) 1
MANGT 75A-C	Managing Human Resources	(each) 1
Medical/Clerical		
BUS 86	Medical Terminology	3
BUS 87	Medical Transcription	3
BUS 88	Patient Billing/Accounting	3

Total Required Units in Major Courses..... 23-26

* Also meets reading/writing competency requirement for

Certificate of Achievement.

**Also meets computer literacy competency requirement for Associate in Science Degree and Certificate of Achievement.

Business—Retail Management Certificate of Achievement

The Retail Management Program is designed to provide students with a retail management foundation that will enable them, as current or prospective employees, to deal with the challenges of the retail environment. This program meets the requirements of the Western Association of Food Chains (WAFC) Retail Management Certificate program.

For the Certificate of Achievement in Retail Management complete 30-31 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Required Courses:

BUS 3*	Business Math	3
OR		
MATH 1 AND 2	Applied Mathematics	3
BUS 181	Applied Accounting	3
OR		
BUS 186	Principles of Accounting I	3
BUS 26	Retailing Operations	3
BUS 33	Marketing	3
BUS 35**	Using Microsoft Office	3
OR		
COMSC 60	Emerging Microcomputer Technologies	4
BUS 59***	Business Communications	3
OR		
MANGT 55A-C	Communicating with Confidence	3
MANGT 50A-C	Introducing Supervision	3
MANGT 65A-C	Mastering Management's Essential Tools	3
OR		
MANGT 70A-E	Relating in Human Terms	3
MANGT 75A-C	Managing Human Resources	3

Total Required Units in Major Courses..... 30-31

* Also meets mathematics competency requirement for Certificate of Achievement

**Also meets computer literacy competency requirement for

Graduation Requirements

Associate in Science Degree and Certificate of Achievement
 *** Also meets reading/writing competency requirement for Certificate of Achievement.

College Skills Certificates in Business:

Certificate: Accounting Clerk/Bookkeeper

BUS 18	Microsoft Excel	3
BUS 181	Accounting Applied Principles	3
BUS 185	Computer Assisted Accounting	3

Choose 1 course from following:

BUS 45		
BUS 81		
BUS 82		3

12 Total Units

College Skills Certificate: Administrative Assistant

BUS 59		
or MANGT 55A/B/C)	Business Communications	3
	Introducing Supervision	

MANGT 50 A/B/C		3
----------------	--	---

MANGT 70D	Relating in Human Terms: Leadership Skills	.5
-----------	---	----

BUS 18	Microsoft Excel	3
BUS 35D	Microsoft Access	1.5

11 Total Units

College Skills Certificate: Basic Clerical

BUS 47	Office Procedures	3
BUS 55	Keyboarding Speed & Accuracy	1
BUS 65	Introduction to Word Processing	3
BUS 91	Managing/Working in a Diverse Workforce	.5
BUS 92	Business Ethics	.5
BUS 93	Dealing with Difficult People	.5
BUS 95	Develop. Customer Service Satisfaction	.5
BUS 96	Time Management & Goal Setting	.5

9.5 Total Units

College Skills Certificate: Business Computer Skills

BUS 35	Microsoft Office	3
BUS 51	Computer Keyboarding	1
BUS 80	2Ten Key/Data Entry Skills	2

7 Total Units

College Skills Certificate: Business Literacy Skills

BUS 109	Introduction to Business	3
BUS 160	Personal Finance	3

6 Total Units

College Skills Certificate: Business Transfer Preparation

BUS 186	Principles of Financial Accounting	3
BUS 187	Accounting: Managerial Principles	3
BUS 109	Introduction to Business	3
BUS 294	Business Law	3
BUS 18 or		

BUS 18ABC or BUS 35	MS Excel or MS Office	3
------------------------	-----------------------	---

15 Total Units

College Skills Certificate:

Entrepreneurship/Small Business Start-Up

BUS 9010	Exploring Entrepreneurship	3
BUS 18	Microsoft Excel	3
BUS 181		
(Formerly BUS 10) Acct:	Applied Principles	3
BUS 29	Quick Books	2

11 Total Units

College Skills Certificate:

Front Office/Medical Billing/Medical Coding

BUS 59	Business Communications	3
BUS 83	Basic CPT & ICD-9CM Coding	3
BUS 88	Patient Billing/Accounting	2
BUS 90	Advanced Patient Billing	2

10 Total Units

College Skills Certificate:

Fundamental Business Skills Business Math

BUS 3	Business Math	3
BUS 58	Business English	3

6 Total Units

College Skills Certificate: Basic Medical Clerical/Medical Records Clerk

BUS 84	Medical Office Procedures/Records Mangt	2
BUS 86	Medical Terminology	3
BUS 90	Medical Law & Ethics for the Med. Office	1
BUS 91	Managing/Working in a Diverse Workplace	.5
BUS 91	Dealing with Difficult People	.5

7 Total Units

College Skills Certificate: Medical Transcription

BIOSC 30	Introduction to Anatomy & Physiology	3
BUS 87	Beginning Medical Transcript	3
BUS 94	Advanced Medical Transcription	3

9 Total Units

College Skills Certificate: Office Essentials

BUS 66	Intermediate Word Processing	3
BUS 18/18ABC Or BUS 35	MS Excel or MS Office	3

BUS 47	Office Procedures	3
BUS 58	Business English	3
BUS 93	Dealing with Difficult People	
BUS 95	Developing Customer Service Satisfaction	.5

12.5 Total Units

College Skills Certificate: Small Business Management and Operations

BUS 27	Small Business Management	3
BUS 294		
(Formerly BUS 34)	Business Law	3
BUS 81 OR 82		
OR 45	Business Accounting Elective	3-6
MANGT 50 OR 55 OR 60 OR 65		
OR 70 or 75	Business Management Elective	3

12 Total Units

Chemistry

Degree: Associate of Science – Chemistry

For the Associate of Science Degree in Chemistry, complete 43-44 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
CHEM 25	General College Chemistry	5
CHEM 26	General College Chemistry	5
CHEM 28	Organic Chemistry	5
CHEM 29	Organic Chemistry	5
OR		
CHEM 27	Quantitative Analysis	4
MATH 50	Calculus and Analytic Geometry	4
MATH 60	Calculus and Analytic Geometry	4
MATH 70	Calculus and Analytic Geometry	4
PHYS 40	Physics for Scientists and Engineers	4
PHYS 41	Physics for Scientists and Engineers	4
PHYS 42	Physics for Scientists and Engineers	4

Total Units Required in Major Courses..... 43-44

Recommended elective courses:

MATH 75	Linear Algebra	3
MATH 80	Differential Equations	3

Child Development

Degree: Associate of Science – Child Development

Certificates: Certificate of Achievement – Child Development

College Skills Certificate: Assistant Teacher Permit

College Skills Certificate: Associate Teacher Permit

College Skills Certificate: Specialization Administration: Director of Private Schools

College Skills Certificate: Specialization in Art and the Creative Process

College Skills Certificate: Specialization - Curriculum in Early Childhood Education

College Skills Certificate: Specialization - Infant Toddler Care

College Skills Certificate: Specialization - School Age Care

College Skills Certificate: Specialization - Special Needs and Care & Education

College Skills Certificate: Specialization - Working with Culturally Diverse families in Early Childhood

College Skills Certificate: School-age Development and Education

College Skills Certificate: School-age Associate Teacher

For the Certificate of Achievement in Child Development, complete 24-28 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Child Development, complete 24-28 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Courses required for the major*, with suggested 2-year sequence:

First semester		Units
CHDEV 1	Introduction to the Study of Early Childhood Education	3
CHDEV 10	Child Growth and Development	3
Second semester		
CHDEV 11	Techniques and Methods of Child Observation	3
CHDEV 62	Curriculum Foundations for the Young Child	3
CHDEV 83**	Field Experience at Community Programs	3

Graduation Requirements

Third semester

CHDEV 50	Anti-bias and Multicultural Education for the Young Child	3
Elective(s)*		2-3

Fourth semester

CHDEV 20	Child Family and Community	3
CHDEV 15 or 90	Teaching Practicum	4

Total Units Required in Major Courses..... 24-28

*** Electives include:**

CHDEV 12	Parenting Seminar	2.5
CHDEV 22	Behavior Management	2
CHDEV 23	Positive Discipline for Young Child	1
CHDEV 25	Creative Arts for the Young Child	2
CHDEV 35	Science and Math for the Young Child	2
CHDEV 45	Music and Movement for the Young Child	2
CHDEV 53	Child Care Licensing Guidelines	.5
CHDEV 54	Computer Technology in ECE	1
CHDEV 58	Exploring Early Childhood Environment	1
CHDEV 60	Language and Literacy for the Young Child	2
CHDEV 64	Outdoor Games & Activities for Children Ages 3-12	1
CHDEV 65	Health, Safety and Nutrition	2
CHDEV 77	Working with Drug-Exposed Children from Birth to 5 years of Age	2
CHDEV 92	Adult Supervision/Mentor Teacher Training	2
CHDEV 100	Fall Harvest Conference	.5
CHDEV 64	Outdoor Games & Activities for Children Ages 3-12	1
CHDEV 65	Health, Safety and Nutrition	2
CHDEV 77	Working with Drug-Exposed Children from Birth to 5 years of Age	2
CHDEV 92	Adult Supervision/Mentor Teacher Training	2
CHDEV 100	Fall Harvest Conference	.5

Note: Additional college proficiencies are required for computer literacy, reading/writing, and math. Exam options are available for Child Development majors to fulfill the reading/writing and math competency requirements.

** This class requirement may be waived if you have been employed in a child care program for at least 6 months.

College Skills Certificates in Child Development:

The following College Skills Certificates are teaching certificates that meet requirements for the "Assistant Teacher" and "Associate Teacher levels of the California Child Development Permit Matrix. Upon completion, teaching permits can be applied for through the State of California Commission of Teacher Credentialing. Contact ext. 3183 for application assistance.

Child Development Certificate: Associate Teacher Permit

CHDEV 1	Introduction to Early Childhood Studies	3
CHDEV 10	Child Growth and Development	3

Total units required6

Child Development Certificate: Associate Teacher Permit Coursework

CHDEV 1	Introduction to Early Childhood Studies	3
CHDEV 10	Child Growth and Development	3
CHDEV 20	Child, Family, and Community	3

Total units required9

The following College Skills Certificates are teaching certificates that meet requirements for the "Assistant Teacher" and "Associate Teacher levels of the California Child Development Permit Matrix. Upon completion, teaching permits can be applied for through the State of California Commission of Teacher Credentialing. Contact ext. 3183 for application assistance.

College Skills Certificate: Specialization - Infant Toddler Care

CHDEV 40	Infant and Toddler Development	3
CHDEV 41	Infant and Toddler Practicum	3

Total units required6

College Skills Certificate: Specialization -Curriculum in Early Childhood Education

Select 3 courses from the following:

CHDEV 22	Discipline and Guidance for the Young Child	2
CHDEV 25	Creative Arts for the Young Child	2
CHDEV 35	Science and Math for the Young Child	2
CHDEV 45	Music and Movement for the Young Child	2
CHDEV 60	Language and Literacy for the Young Child	2
CHDEV 65	Health, Safety and Nutrition	2

Total units required6

College Skills Certificate: Specialization -Special Needs Care & Education

CHDEV 55	The Special Needs Child	3
CHDEV 57	Methods and Materials for the Special Needs Child	3

Total units required6

College Skills Certificate: Specialization -Director of Private Schools

CHDEV 95	Supervision and Administration Part 1	3
CHDEV 96	Supervision and Administration Part 11	3

Total units required6

College Skills Certificate: Specialization - School Age Child Care

CHDEV 32	The School Age Child	3
CHDEV 33	School Age Practicum	3

Total units required6

College Skills Certificate: Specialization - Art and the Creative Process

CHDEV 25	Creative Art for Children	2
	Developing Art Programs for Young Children	1
CHDEV 26	Art and Creative Process for Young Children	2
CHDEV 27	Learning Environments that Support	
CHDEV 28	Art and the Creative Process	1

Total units required6

College Skills Certificate: Specialization - Working with Culturally Diverse Families in Early Childhood

CHDEV 50	Multicultural Education for Young Child	3
Choose from any ethnic/multicultural studies course from below:		
MUSIC 12	Popular Music in American Culture	3
HIST 49	Native Americans in the 20th Century	3
HIST 52	Mexican American History 1900 – Present	3
ENGL 127	Mythology & Literature of Ethnic Americans	3
ANTHR 7	Anthropology of Cultural Change	3

Total units required6

College Skills Certificate: School-age Development and Education

CHDEV 10	Child Growth and Development	3
CHDEV 20	Child Family and Community	3
CHDEV 22	Guidance and Discipline strategies for the Young Child	2
CHDEV 32	Caring for and Education School Age Children	3
CHDEV 33	Developmentally Appropriate Practice for the School Age Child	3
CHDEV 50	Anti-bias and Multicultural Education and the Young Child	3

Total units required17

College Skills Certificate: School-Age Associate Teacher

CHDEV 10	Child Growth and Development	3
CHDEV 20	Child Family and Community	3
CHDEV 32	Caring for and Education School Age Children	3
CHDEV 33	Developmentally Appropriate Practice for the School Age Child	3

Total units required12

Computer Science

- Certificates:**
- Certificate of Achievement – Computer Science: Microcomputer Systems Specialist
 - College Skills Certificate – Computer Science: Foundation
 - College Skills Certificate: Computer Science: Core Competencies
 - College Skills Certificate: Web Design
 - College Skills Certificate: PC Repair Technician (A+ Certification)

The Los Medanos College Computer Science Department offers a curriculum leading to a Certificate of Achievement as a Microcomputer Systems Specialist. The curriculum includes courses which provide extensive hands-on experience with up-to-date microcomputer equipment and programs. Courses provide students with real world experiences, and essential job related skills will be stressed in all classes. Courses are continuously updated to reflect current technology, and current events in the microcomputer field will be routinely discussed in all courses required in this program.

For the Certificate of Achievement in Computer Science, complete 33 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Required Courses:		Units
Level One		
COMSC 40	Introduction to Computers	4
COMSC 60	Emerging Microcomputer Technologies and Applications	4
COMSC 61	Advanced Microcomputer Applications	3
Level Two (requires completion of Level One)		
COMSC 30	Web Site Development Part I	1.5
COMSC 31	Web Site Development Part II	1.5
COMSC 56	Programming Logic and Design	3
COMSC 80	A Survey of Operating Systems	3
One of the following programming courses:		
COMSC 41	Visual Basic.net	3
COMSC 44	Introduction to C++ Programming Part I	3
COMSC 51	Introduction to Java Park I	3

And select a minimum of 10 units from any of the remaining Computer Science courses.

Total units required33

Graduation Requirements

College Skills Certificate: Computer Science: Foundation

COMSC 40	Introduction to Computers	4
COMSC 60	Emerging Microcomputer Technologies and Applications	4
COMSC 61	Advanced Microcomputer Applications	3
		11 Total Units

College Skills Certificate: Computer Science: Core Competencies

COMSC 30	Web Site Development Part I	1.5
COMSC 31	Web Site Development Part II	1.5
COMSC 41	VISUALBASIC.NET	3
OR		
COMSC 44	Introduction to C++ Programming	3
OR		
COMSC 51	Introduction to Java for Programmers	3
COMSC 80	A Survey of Operating Systems	3
		12 Total Units

College Skills Certificate: Web Design

COMSC 30	Web Site Development Part I	1.5
COMSC 31	Web Site Development Part II	1.5
COMSC 40	Introduction to Computers	4
ART 80	Looking Good on the Web	1.5
ART 81	Looking Good on the Web, Part II	1.5
		10 Total Units

College Skills Certificate: PC Repair Technician (A+ Certification)

COMSC 90	PC Repair	3
COMSC 91	PC Repair – Software	3
COMSC 92	A+ Certification Exam Preparation	1.5
		7.5 Total Units

Required Courses:

COSME 10	Cosmetology –Theory, Principles, and Practice	.5-16
COSME 11	Cosmetology –Theory, Principles, and Practice	.5-16

Total Units Required in Major Courses.....32

Instruction is offered at three nearby locations:

DELTA BEAUTY COLLEGE trains Tuesday through Saturday; mornings and afternoons.

320 H Street
Antioch, CA 94509
(925) 754-4992

PARIS BEAUTY COLLEGE trains Tuesday through Saturday, with Mondays available for making up absences. Open mornings, afternoons, and evenings.

1655 Willow Pass Rd.
Concord, CA 94520
(925) 685-7600

ROBINSON'S COSMETOLOGY trains Tuesday through Saturday; mornings and afternoons.

COSME 80 has evening hours Monday-Thursday and all day Saturday. Saturdays are mandatory for that schedule.

4330 Clayton Rd. Ste E-1
Concord, CA 94521
(925) 602-1040

Students attending the Beauty Schools pay the LMC units fee*, plus the purchase cost of an appropriate training kit:

	Paris	Delta	Robinson
Cosmetologist Kit	\$895	\$437	\$1,095
Instructor Kit	\$150		\$250
Manicurist Kit	\$595	\$250	\$575
Esthetician Kit	\$895	no kit	\$1,095

* Students transferring between cosmetology schools are allowed to transfer completed hours. Unused financial credits can only be transferred with approval from the Dean.

When enrolling in another school, full enrollment fee costs will be required.

Cosmetology students may attend fulltime (40 hours per week) or part time (minimum 20 hours per week). Flexible schedules and times may be accommodated as required. Only students without major work, home or personal demands should attempt more than 25 hours weekly.

Cosmetology

Certificate: Certificate of Achievement - Cosmetology

Cosmetologist- Esthetician - Manicurist

Los Medanos College's programs in cosmetology offer an excellent way to get the basic skills and knowledge necessary to enter this business field. Courses combine theory and practice as required by the State of California and prepare the student for the examination administered by the State. Students may prepare for careers as cosmetologists, cosmeticians, manicurists or instructors.

For the Certificate of Achievement in Cosmetology, complete 32 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Electrical /Instrumentation Technology

Degrees: Associate of Science – Electrical Technology
Associate of Science – Industrial Electronics

Certificates: Certificate of Achievement – Electrical Technology

Certificate of Achievement – Industrial Electronics

LMC is in a unique position to offer an outstanding, up-to-date curriculum that has been designed by industry for industry. No other college in this area provides similar education and training needed to obtain these high-skill, high-wage and high-demand jobs.

Our ETEC program offers you the opportunity to graduate with a Certificate of Achievement in four semesters (two years). There are two areas of specialization: Electrical Technician or Instrumentation Technician. The Electrical Technician specialization is designed to train electricians to maintain complex electrical automation systems used in the manufacturing and power generation industry. The Instrumentation technician specialization is designed to train instrument technicians to maintain the process measurement and control systems used in refineries, chemical plants, biotech plants, pharmaceutical plants, water and waste treatment plants.

Certificate of Achievement

Courses in the first three semesters are common to both areas of specialization. In the fourth semester, the courses for each specialization vary, with the Electrical Technicians concentrating on the skills needed for electrical maintenance while the Instrumentation Technicians concentrate on the measurement and control of processes.

For the Certificate of Achievement complete the coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Associate of Science Degree

For the Associate of Science Degree the coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Program Entry Skills:

MATH 12	Pre-Algebra	4
ENGL 90	Integrated Reading, Writing, and Critical Thinking	5

Required Courses:

		Units
First Semester		
EETEC 10	Direct Current Circuits	4
EETEC 12	Alternating Current Circuits	4
MATH 25	Elementary Algebra	5
Second Semester		
EETEC 20	Electric Motor Control	3
EETEC 22	Semiconductor Devices	2
EETEC 24	Digital Devices	2
PHYS 15	Introduction to Physics	4
Third Semester		
EETEC 30	Programmable Logic Controllers	4
EETEC 32	Instrumentation Process Measurement	3
EETEC 34	Instrument Calibration	1
CHEM 6	Introduction to Inorganic and Physical Chemistry (for Instrumentation Specialization only)	4
Fourth Semester: Electrical Specialization		
EETEC 40	National Electrical Code	3
EETEC 42	Wiring Methods and Code Application	1
EETEC 44	Power Distribution & Transformers	3
EETEC 46	DC & AC Motors & Generators	3
Fourth Semester: Instrumentation Specialization		
EETEC 50	Instrumentation Process Control	3
EETEC 52	Applied Process Control	1
EETEC 56	Code for instrument Application	1
EETEC 58	Analytical Instrumentation	2
EETEC 59	System Integration & Troubleshooting	2

Total Units Required in Major Courses - Electrical Specialization42

Total Units Required in Major Courses - Instrumentation Specialization45

Emergency Medical Services

Certificates: *College Skills Certificate: Emergency Medical Services*

College Skills Certificate: Emergency Medical Technician I

EMS 10 Emergency Medical Technician I
6 Total Units

College Skills Certificate: Emergency Medical Technician I Recertification

EMS 11 Emergency Medical Technician I Recertification
1 Total Unit

Engineering

Degree: *Associate of Science: Engineering*

Engineers design and oversee the construction of the structures, vehicles, devices, and processes that solve the technological problems facing society. Engineering is a profession with both licensing requirements and a code of ethics.

The LMC Engineering program offers a solid foundation for upper division studies in most engineering fields, including mechanical engineering, civil engineering, electrical engineering, aerospace engineering, industrial engineering, and many other engineering disciplines.

Students who complete the program will have finished most or all of the lower division courses required for transfer to four-year engineering programs. Graduates of the Engineering Program at LMC will also be able to: identify and solve engineering problems, perform and interpret experiments, produce designs to meet various needs, demonstrate professional ethics, communicate effectively, judge how engineering projects affect society and the environment, engage in lifelong learning, and use the tools and techniques necessary for modern engineering practice.

For the Associate of Science Degree in Engineering, complete 55 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
ENGIN 10	Introduction to Engineering	3
ENGIN 20	Programming with C++ for Engineers and Scientists	4
	OR	
ENGIN 22	Programming with MATLAB for Engineers and Scientists	4
ENGIN 25	Engineering Graphics	3
ENGIN 30	Materials Science	4
ENGIN 45	Engineering Circuits	3
CHEM 25	General College Chemistry	5
PHYS 40	Physics for Scientists and Engineers I	4
PHYS 41	Physics for Scientists and Engineers II	4
PHYS 42	Physics for Scientists and Engineers III	4
MATH 50	Calculus and Analytic Geometry	4
MATH 60	Calculus and Analytic Geometry	4
MATH 70	Calculus and Analytic Geometry	4
MATH 80	Differential Equations	3

Restricted electives (Students must complete two of the following four courses):

ENGIN 36	Engineering Statics	3
ENGIN 38	Manufacturing Processes	3
ENGIN 46	Engineering Dynamics	3
MATH 75	Linear Algebra	3

Total Units Required in Major Courses55

The courses required for transfer vary depending on the transfer destination institution and the desired engineering discipline. IGETC is NOT appropriate for this major. Students interested in engineering should meet with a counselor to plan their schedules as soon as possible.

Environmental Sciences

Degree: Associate of Science – Environmental Sciences

The Associate in Science degree major in Environmental Science provides interdisciplinary preparation for students wishing to pursue knowledge and employment in the fields of environmental research, consulting, and regulatory oversight. The program provides excellent lower division preparation for students transferring to Environmental Science (and related) programs at four-year colleges and universities.

The goal of LMC's new Environmental Science program is to create a signature magnet program that attracts students from all reaches of the county, involves teachers and professors from the region's many feeder schools and universities, and builds bridges to the industries, government agencies, and institutes that are seeking an increased workforce.

For the Associate of Science Degree in Environmental Science, complete 39 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:

ENVSCI 1	Freshman Seminar	2
BIOSC 26	Ecology Field Studies	1

Required Math and Science Courses:

MATH 50	Calculus I	4
BIOSC 20	Principles of Biology: Cellular	5
BIOSC 21	Principles of Biology: Organismic	5
CHEM 25	General College Chemistry I	5
CHEM 26	General College Chemistry II	5
PHYS 35	General College Physics I	4
PHYS 36	General College Physics II	4

Electives: (one course):

ENVSCI 10	Introduction to Environmental Sciences	4
GEOL 20	Physical Geology	4
GEOG 15	Physical Geography	4

Total Units Required in Major Courses.....39

Fire Technology

Degree: Associate of Science – Fire Technology
 Certificates: Certificate of Achievement – Basic Academy
 Certificate of Achievement – Fire Technology
 College Skills Certificate: Basic Academy

Los Medanos College offers certificate and degree programs, and an academy program in fire technology. The programs are designed to provide educational opportunities for persons who are seeking employment or advancement in public or private fire protection agencies as well as persons who are pursuing a higher degree in fire administration or fire protection engineering.

For the Certificate of Achievement in Fire Technology, complete 21 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Fire Technology, complete 21 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
FIRE 101	Fire Protection Organization	3
FIRE 102	Fire Behavior and Combustion	3
FIRE 103	Fire Protection Equipment & Systems	3
FIRE 104	Building Construction for Fire Protection	3
FIRE 105	Fire Prevention	3
EMS 10	Emergency Medical Technician I	6

Total Units Required in Major Courses.....21

For the Certificate of Achievement in Basic Academy, complete 15 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

The Basic Fire Academy class prepares students for the California State Firefighter certification.

Prerequisites include 9 units from the Fire Technology required course list; meets National Fire Protection Association (NFPA) 1582 medical assessment; Satisfactory score on the Candidate Physical Agility (CPAT) test or equivalent; and a current Emergency Medical Technician (EMT) certification.

College Skills Certificate in Fire Technology:

College Skills Certificate: Basic Fire Academy

FIRE 120	Basic Academy	15 Total Units
----------	---------------	-----------------------

Journalism

Degree: Associate of Art – Journalism

Journalism Associate Degree

This two year program of study leads to transfer to a four year college where students can continue their education and pursue a journalism or communication major. It can also prepare students desiring a more immediate entry into the work force for an entry level position with a community newspaper or other media organization.

For students following either pathway, the program provides practical training for careers in print and online journalism, broadcasting, advertising and public relations. The required courses for the major are listed below in a recommended sequence.

For the Associate of Art Degree in Journalism, complete 21 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Art - Degree.

REQUIREMENTS: Major and elective requirements in recommended sequence

1st Semester		
JOURN 10	Writing for the Media	3 units
ELECTIVE	Select from accompanying list	3 units
2nd semester		
JOURN 15-A	Media Writing Practicum I	1 unit
OR	OR	
JOURN 16-A	Visual Storytelling Practicum I	
JOURN 20	Publication Production I*	3 units
ELECTIVE	Select from accompanying list	3 units
3rd semester		
JOURN 15-B	Media Writing Practicum II	1 unit
OR	OR	
JOURN 16-B	Visual Storytelling Practicum II	
JOURN 30	Publication Production II	3 units
4th semester		
JOURN 15-C	Media Writing Practicum	1 unit
OR	OR	
JOURN 16-C	Visual Storytelling Practicum	
OR	OR	
The beginning journalism practicum in the other course sequence (15-A or 16-A)		
JOURN 35	Mass Communication	3 units
TOTAL FOR A.A. in JOURNALISM		21 units

- For those with previous publication experience, an additional three units of Publication Production II may be substituted for Publication Production I with the permission of the Journalism Department Chair.

APPROVED ELECTIVES FOR JOURNALISM MAJORS

- ART 15: Graphic Design, 3 units
- ART 20: Introduction to Drawing, 3 units
- ART 27: Introduction to Cartooning, 3 units
- ART 54: Adobe Photoshop, 3 units
- ART 72: Photo 1: A Survey of Digital Photography, 3 units
- ART 962: Advertising, Marketing and Publication Design, 3 units
- ART 965: Designing with Adobe InDesign, 3 units
- ART 966: Designing with Adobe Illustrator, 3 units

- BUS 51: Computer Keyboarding, 1 unit

- COMSCI 30: Web Site Development - Part I, 1.5 units
- COMSCI 31: Web Site Development - Part II, 1.5 units
- COMSCI 32: Web Site Development - Dreamweaver and Flash, 3 units
- COMSCI 986: Introduction to Digital Imaging, 1.5 units

- ENGL 111: Creative Writing, 3 units
- LIBST 14: Library Research and Information Literacy Skills, 1 unit
- LIBST 17: Introduction to Internet Information Resources, .5 units
- LIBST 18: Internet Information Resources –
Advanced Search Techniques and Strategies, .5 units

- Or other related courses approved by Journalism Department Chair

Liberal Arts

Degrees: Associate of Arts – Liberal Arts:
Arts and Humanities

Associate of Arts – Liberal Arts:
Behavioral Science and Social Science

Associate of Arts – Liberal Arts:
Math and Science

The Liberal Arts major provides a rich educational experience through coursework in a broad range of academic disciplines. Liberal Arts provides excellent preparation for university transfer and/or a wide range of careers.

Students graduating with a Liberal Arts major are able to: read critically and communicate effectively as a writer and a speaker; understand the connections among academic disciplines and apply interdisciplinary approaches to problem solving; think critically and creatively; consider the ethical implications of knowledge; and possess a worldview informed by diverse social, multicultural and global perspectives.

Therefore, the broad based interdisciplinary nature of Liberal Arts provides a knowledge base and the communication and critical thinking skills necessary for many careers and occupations. The Liberal Arts major provides solid preparation for upper division work following transfer more specifically, for university programs in teaching and prelaw and for careers such as business, government and communication. With proper course selection (see a counselor), LMC's Liberal Arts major articulates with CSU's popular upper division Liberal Studies major, which is the path to a teaching credential program.

The Liberal Arts major incorporates many General Education requirements, so students need only to pass a few additional courses in order to complete the major. The major has three emphasis options: Arts and Humanities; Behavioral Science and Social Science; Math and Science.

Liberal Arts: Arts and Humanities

At least 18 units to be chosen from:

Art 5, 6, 7, 8, 9 or any transferable Art course
Chinese 30, 40
Drama 15, 16, 30, 70, 71 or any transferable Drama course
Education 5, 40, 50
English 3, 100, 111, 127, 128, 129, 132, 133, 205, 231
200, 201, 202, 220, 221, 230
Filipino 60, 61
French 60, 61
Humanities 3, 19, 20, 21, 22, 24, 40
Italian 60, 61
Journalism 10, 35
Music 10, 12, 15 or any transferable Music course
Philosophy 2, 33, 40, 41, 42
Recording Arts 10, 15
Sign Language 65, 66, 67, 72
Spanish 50, 51, 52, 53

Liberal Arts: Behavioral Science and Social Science

At least 18 units to be chosen from:

Administration of Justice 120
Anthropology 5, 6, 7
Business 109, 294
Child Development 10, 20, 50
Economics 5, 10, 11
Education 5, 40, 50
History 31, 34, 35, 36, 37, 38, 46, 47, 48, 49, 52
Political Science 10, 20, 33, 43
Psychology 10, 11, 12, 14
Social Science 45
Sociology 15, 16

Liberal Arts: Math and Science

At least 18 units to be chosen from:

Astronomy 10, 11
Biological Science 5, 7, 10, 20, 21, 26, 30, 40, 45, 50
Chemistry 6, 7, 8, 25, 26, 27, 28, 29
Computer Science 40
Environmental Science 10
Geography 15
Geology 20
Math 31, 33, 34, 35, 37, 38, 40, 50, 60, 70, 75, 80
Nutrition 55
Physical Science 5
Physics 15, 35, 36, 40, 41, 42.

Management and Supervision

Degree: Associate of Science –
Management and Supervision Certificates:

Certificate of Achievement –
Management and Supervision

College Skills Certificate:
Communication Skills for managers

College Skills Certificate:
Decision Making Skills for Managers

College Skills Certificate:
Human Resource Management Skills

College Skills Certificate:
Leaderships Skills for Managers

College Skills Certificate:
Planning Skills for Managers

The Management and Supervision Program is designed to provide students with comprehensive knowledge of supervisory principles and applications, knowledge of human relations, and communication skills. The curriculum is designed to prepare students for entry level positions in management/supervision and to prepare current lead workers, first line supervisors, and middle managers for promotion to higher level positions in business, industry, government, and/or nonprofit organizations.

For the Certificate of Achievement in Management and Supervision, complete 24 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Management and Supervision, complete 24 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:	Units
MANGT 50 A-C Introducing Supervision	3
MANGT 55 A-C Communicating with Confidence	3
MANGT 60 A-C Making Effective Decisions	3
MANGT 65 A-C Mastering Management's Essential Tools	3
MANGT 70 A-E Relating in Human Terms	3

And select a minimum of 9 units:

BUS 18*	Microsoft Excel for Windows	3
BUS 27	Small Business Management	3
BUS 35*	Using Microsoft Office	3
BUS 35 A/B/C/D*	MS Word, Excel, PowerPoint or Access.1.5 each	3
BUS 58**	Business English	3
BUS 59**	Business Communications	3
BUS 65*	Introduction to Word Processing	3
BUS 109	Introduction to Business (or Bus 20)	3

BUS 294	Business Law (or Bus 34)	3
COMSC 40*	Introduction to Computers	4
MANGT 75 A-C	Managing Human Resources (each)	1
MANGT 170	Occupational Work Experience Education In Management	1-8
PSYCH 10	Psychology: Indiv. & Soc. Process	3
SPCH 40	Oral Communication	3

Or select other Business, Management, or Real Estate courses. Students should consult with a Business Program faculty advisor for help in selecting courses that will best suit their individual needs.

Total Units Required in Major Courses.....24

* Also meets computer literacy competency requirement for Associate in Science Degree and Certificate of Achievement

** Also meets reading/writing competency requirement for Certificate of Achievement.

College Skills Certificates in Management and Supervision

College Skills Certificate: Communication Skills for Managers

MANGT 50 A, B, C Introducing Supervision	3
MANGT 55 A, B, C Communicating With Confidence	3
6 Total	

College Skills Certificate: Decision Making Skills for Managers

MANGT 50 A, B, C Introducing Supervision	3
MANGT 60 A, B, C Make Effective Decisions	3
6 Total	

College Skills Certificate: Human Resource Management Skills

MANGT 50 A, B, C Introducing Supervision	3
MANGT 75 A, B, C Make Effective Decisions D, E	3
6 Total	

College Skills Certificate: Leadership Skills for Managers

MANGT 50 A, B, C Introducing Supervision	3
MANGT 70 A, B, C Relating in Human Terms D, E	3
6 Total	

College Skills Certificate: Planning Skills for Managers

MANGT 50 A, B, C Introducing Supervision	3
MANGT 65 A, B, C Mastering Management's Essential Tools	3
6 Total	

Mathematics

Degree: Associate of Science – Mathematics

For the Associate of Science Degree in Mathematics, complete 22 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
MATH 50	Calculus and Analytic Geometry	4
MATH 60	Calculus and Analytic Geometry	4
MATH 34	Probability and Statistics	4
OR		
MATH 38	Statistics for Business or Economics	4
OR		
Physics*		4
MATH 70	Calculus and Analytic Geometry	4
MATH 75	Linear Algebra	3
MATH 80	Differential Equations	3

Total Units Required in Major Courses.....22

*If the student is oriented toward mathematics, physics, chemistry, or engineering, the engineering sequence (PHYS 40, 41, and 42) is recommended. Otherwise, the general physics sequence may be appropriate (PHYS 35 and 36).

Note: A course in computer use and operations such as COMSC 60 is strongly recommended. Some transfer institutions may require a programming class for a math major. Check with the college you plan to transfer to see if you will need to take a programming class.

The basic sequence of recommended courses is for students seeking a career in mathematics or in a related mathematics field. Students are advised to consult with a counselor or math instructor relative to specific requirements for particular transfer institutions.

Music

Degree: Associate of Art – Music

Certificates:

Certificate of Achievement: Music—Commercial – Business Management

Certificate of Achievement: Music—Commercial – Pedagogy

Certificate of Achievement: Music—Commercial – Performance

Associate of Art - Music

For the Associate of Art Degree in Music, complete 27-36 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Art Degree.

Required Courses:		Units
MUSIC 5, 6, OR 7	Recital Class (2 semesters)	2
MUSIC 13	Musicianship I	2
MUSIC 14	Musicianship II	2
MUSIC 15	Basic Music (or pass theory placement exam)	3
MUSIC 16	Fundamentals of Music Theory	3
MUSIC 17	Harmony	4
MUSIC 18	Advanced Harmony	4
MUSIC 31	Piano I	1.5
MUSIC 32	Piano II	1.5
MUSIC 81	Introduction to Improvisation	1
AND		

Music Major Ensemble Requirements

Select a minimum of three semesters of the following courses for music majors (see additional option* below for Advanced Guitar and Advanced Piano emphasis):

MUSIC 33 A	Intermediate Piano	1.5
MUSIC 33 B	Advanced Piano	1.5
MUSIC 37	Advanced Guitar	1
MUSIC 40, 41, 42	Concert Band*	(each) 2
MUSIC 60, 61, 62	College Chorus*	(each) 2
MUSIC 298 E/F	Chamber Orchestra*	.5-1

And select three additional ensembles from the following:

MUSIC 34	Jazz/Rock Key Board	1.5
MUSIC 50, 51, 52, 53, 54, 55, 56	Chamber Ensembles	(each) 1
MUSIC 63	Oratorio and Cantata Chorus I	.5-1
MUSIC 64	Oratorio and Cantata Chorus II	.5-1
MUSIC 66	Gospel Choir	1
MUSIC 70, 71, 72	Jazz Ensemble	(each) 2
MUSIC 74, 75, 76	Jazz Studio	(each) 1
MUSIC 77, 78, 79	Chamber Chorale	(each) 1
MUSIC 82, 83, 84	Jazz/Funk/Latin Workshop	(each) 1
MUSIC 250	Night Jazz Band	1

Total Units Required in Major Courses..... 27-36

NOTE: Summer Ensembles will not fulfill the above requirements.

Graduation Requirements

* Students with an Advanced Guitar or Advance Piano emphasis may choose to fulfill the ensemble requirement by completing four semesters of the following:
 MUSIC 33A/B Intermediate/Advanced Piano
 OR
 MUSIC 37 Advanced Guitar
 AND

Select two additional semesters from any performance class.

NOTE: Summer ensembles will not fulfill the above requirements

Music Business Management Certificate of Achievement

Required Courses:	Units
BUS 186 Principles of Financial Accounting	3
BUS 27 Small Business Management	3
BUS 294 Business Law	3
MUSIC 12 Popular Musics in America	3
MUSIC 13 Musicianship I	2
MUSIC 15 Basic Music (or pass theory placement exam)	3
MUSIC 28 Songwriting I	1
MUSIC 30 Basic Keyboard Skills	1.5
MUSIC 81 Introduction to Improvisation	1
OR	
MUSIC 82, 83, or 84 Jazz/Funk/Latin Workshop (each)	1
MUSIC 89 Music Business Management	2
MUSIC 93 Intro to MIDI	2
RA 10 Recording Arts I	2
RA 21 Basic Session Producing	2
Any performance classes (See list of music major ensemble requirements)	4-8

And select two of the following:

MUSIC 34 Jazz/Rock Keyboard	1.5
MUSIC 65 Class Voice	1
MUSIC 67 Jazz and Popular Vocal Technique	1

Two additional group performance-oriented courses in addition to those completed for the core requirement.

Total Units Required in Major Courses..... 34.5-38.5

Music Pedagogy Certificate of Achievement

For the Certificate of Achievement in Music—Commercial – Pedagogy, complete 35.5-39.5 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Required Courses:	Units
MUSIC 57 Private Lessons (2 semesters)	2
MUSIC 10 Music Literature	3
MUSIC 12 Popular Musics in America	3
MUSIC 13 Musicianship I	2
MUSIC 14 Musicianship II	2
MUSIC 15 Basic Music (or pass theory placement exam)	3
MUSIC 16 Fundamentals of Music Theory	3
MUSIC 17 Fundamentals of Music Harmony	4
MUSIC 28 Songwriting I	1

MUSIC 81 Introduction to Improvisation	1
OR	
MUSIC 82, 83, or 84 Jazz/Funk/Latin Workshop (each)	1
MUSIC 89 Music Business Management	2
MUSIC 93 Intro to MIDI	2
Any performance classes (See list of music major ensemble requirements)	4-8

Select a minimum of two semesters of level appropriate piano classes (total 3 units) MUSIC 30, 31, 32, 33a, 33b.

And select two of the following:

MUSIC 34 Jazz/Rock Keyboard	1.5
MUSIC 65 Class Voice	1
MUSIC 67 Jazz and Popular Vocal Technique	1

Two additional group performance-oriented courses in addition to those completed for the core requirement.

Total Units Required in Major Courses..... 35.5-39.5

Music Performance Certificate of Achievement

For the Certificate of Achievement in Music—Commercial – Music Performance, complete 32.5-36.5 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

Required Courses:

	Units
MUSIC 10 Music Literature	3
MUSIC 12 Popular Musics in America	3
MUSIC 13 Musicianship I	2
MUSIC 15 Basic Music (or pass theory placement exam)	3
MUSIC 16 Fundamentals of Music Theory	3
MUSIC 28 Songwriting I	1
MUSIC 30 Basic Keyboard Skills	1.5
MUSIC 38 Studio Musicianship	1
MUSIC 81 Introduction to Improvisation	1
OR	
MUSIC 82, 83, or 84 Jazz/Funk/Latin Workshop (each)	1
MUSIC 89 Music Business Management	2
MUSIC 93 Intro to MIDI	2
MUSIC 94 Composition/MIDI/Synthesizer Workshop I	2
OR	
MUSIC 95 Composition/MIDI Workshop II	2
RA 10 Recording Arts I	2
Any performance classes (See list of music major ensemble requirements)	4-8

And select two of the following:

MUSIC 34 Jazz/Rock Keyboard	1.5
MUSIC 65 Class Voice	1
MUSIC 67 Jazz and Popular Vocal Techniques	1

Two additional group performance-oriented courses in addition to those completed for the core requirement.

Total Units Required in Major Courses..... 32.5-36.5

Music career possibilities include:

- 1) **Professional Musician** — conductor, concert artist, studio musician, symphony orchestra member, opera singer, composer, accompanist, arranger;
- 2) **Teaching music** — band director, orchestra director, choir director, private instructor, music teacher (elementary through college in public or private schools);
- 3) **Commercial** — instrument sales, instrument repair, pop singer, orchestrator, arranger, music publisher, music activities producer, agent-manager, songwriter;
- 4) **Radio, TV, recording industry** — disc jockey, recording artist, recording engineer, movie, TV, radio music director (see also Recording Arts section);
- 5) **Church-related** — minister of music, organist, choir director;
- 6) **Other** — music therapist, music librarian, piano tuner, acoustical engineer, music personnel manager, accompanist, music critic, music software writer/technician.

Students pursuing an associate degree will find it difficult to complete all of the general education requirements and the program requirements in two years. Students should budget time and plan carefully. Instructors in the music area will assist students in determining the proper sequence of classes.

Nursing

Degrees: *ADN – Registered Nursing*
ADN – LVN to RN

Certificate: *Certificate of Achievement – Vocational Nursing*

All students who meet admissions requirements are eligible to apply to the nursing programs. Criteria and complete information on the selection process as well as the philosophy and objectives of each program are described in the Nursing Applicant Handbook, which is available in the LMC Bookstore. This information is available on the LMC web site (www.losmedanos.edu) – See Nursing Department, under classes and departments.

The handbook also contains complete information on all options for advanced placement. The handbook is more extensive and may contain updates to the following brief program outline.

Registered Nursing

The registered nursing program requires two academic years beyond completion of the prerequisite courses and general education requirements.

Completion of prerequisite courses is required for admission eligibility to the program. **Only those students formally admitted to the program may enroll in registered nursing courses.** Students may, however, enroll in other non-nursing courses designated as part of the registered nursing curriculum while awaiting admission to the program.

Completion of the registered nursing program at Los Medanos College qualifies students to take the state board examination (NCLEX-RN) for licensure as a registered nurse (RN).

ADN Program Curriculum

Prerequisite Courses:

ENGL 100	College Composition	3
----------	---------------------	---

MATH 15 or 18, 25 or 30	See LMC catalog for descriptions and current graduation requirements	3-4
-------------------------	--	-----

BIOSC 40	Human Anatomy	5
BIOSC 45	Human Physiology	5
BIOSC 50	Intro to Microbiology	4
PSYCH 10 or 11	General Psychology	3

Graduation Requirements

COMSC 49	Computer Literacy	1.5
POLSC 10 or 20	American Institution & Ideals or Intro to Politics	3
SPEECH 40	Oral Communication	3
	Social Science GE Course	3
	Creative Arts GE Course	3
	Ethnic Multicultural Course	3
PE	(required for graduation)	2

Registered Nursing Curriculum

First Semester

RNURS 22	Foundations of Nursing Practice	9.5
RNURS 23	Nursing Skills Simulation I	1
RNURS 24	Pharmacology for RN Program I	1

Second Semester

RNURS 26	Nursing in Health and Illness I	9.5
RNURS 27	Nursing Skills Simulation II	1
RNURS 28	Pharmacology for RN Program II	1

Third Semester

RNURS 31	Nursing in Health & Illness II	9.5
RNURS 33	Nursing Skills Simulation III	1
RNURS 34	Pharmacology for RN Program III	1

Fourth Semester

RNURS 30	Leadership/Management/Professionalism	1
RNURS 36	Nursing in Health & Illness III	9.5
RNURS 38	Nursing Skills Simulation IV	1
RNURS 39	Pharmacology for RN Program IV	1

LVN to RN Program

The program for California Licensed Vocational Nurses requires successful completion of all prerequisites, the second-year RN curriculum, and general education requirements.

Admission eligibility to the LVN to RN program requires the completion of prerequisite courses. **Only those students formally admitted to the program may enroll in the registered nursing courses.** Students may, however, enroll in those non-nursing courses designated below as part of the registered nursing curriculum, while awaiting admission to the program.

Completion of the LVN to RN Program at Los Medanos College qualifies students to take the state board examination (NCLEX-RN) for licensure as Registered Nurse.

Graduation Requirements

LVN to RN Program Curriculum

Prerequisite Courses:		Units
ENGL 100	College Composition	3
MATH 15 or 18, 25 or 30	See LMC catalog for descriptions and current graduation requirements	3-4

BIOSC 40	Human Anatomy	5
BIOSC 45	Human Physiology	5
BIOSC 50	Intro to Microbiology	4
PSYCH 10 or 11	General Psychology	3

Graduation Requirements **Units**

COMSC 49	Computer Literacy	1.5
POLSC 10 or 20	American Institution & Ideals	3
SPEECH 40	Oral Communication	3
Social Science GE Course		3
Creative Arts GE Course		3
Ethnic Multicultural Course		3
PE		2

Registered Nursing Curriculum

RNURS 20	Bridge for Transition Students (1 week)	1
----------	---	---

Third Semester **Units**

RNURS 31	Nursing in Health & Illness II	9.5
RNURS 33	Nursing Skills Simulation III	1
RNURS 34	Pharmacology for RN Program III	1

Fourth Semester **Units**

RNURS 30	Leadership/Management/Professionalism	1
RNURS 36	Nursing in Health & Illness III	9.5
RNURS 38	Nursing Skills Simulation IV	1
RNURS 39	Pharmacology for RN Program IV	1

Vocational Nursing

The Vocational Nursing Program is three semesters in length. A grade of "C" or better must be earned in all courses to remain in the program. The Certificate of Achievement is awarded upon successful completion of the program and the competency requirements* (see Competency Requirements). Completion of prerequisite courses is required for admission eligibility to the program. **Only those students formally admitted to the program may enroll in vocational nursing courses.**

Completion of the vocational nursing program qualifies students to take the state board examination (NCLEX-PN) for licensure as a vocational nurse (LVN).

Vocational Nursing Certificate

Prerequisite Courses: **Units**

RNURS 1	Nursing Careers Seminar	0.3
BIOSC 30	Intro to Anatomy and Physiology	3
COMSC 49	Computer Literacy	1.5
ENGL 90	Integrated Reading, Writing, and Critical Thinking	5

MATH 15 or 18, 25 or 30	See LMC catalog for descriptions and current graduation requirements	3-4
NUTRI 55	Introduction to Nutrition	3
VONUR 8	Medical Terminology	1

First Semester **Units**

VONUR 4	Introduction to Clinical Pharmacology	1
VONUR 5	Fundamentals of Vocational Nursing	6
VONUR 6	Fundamentals of Vocational Nursing Practice	5.5
VONUR 7	Vocational Nursing Role Relationships	1

Second Semester **Units**

VONUR 10	Intermediate Core Concepts in Clinical Pharmacology	1
VONUR 11	Medical Surgical Nursing	5
VONUR 12	Medical Surgical Nursing Practice	5.5

Third Semester **Units**

VONUR 15	Advanced Core Concepts in Clinical Pharmacology	1
VONUR 16	Family Centered Nursing	6
VONUR 17	Family Centered Nursing Practice	5.5
VONUR 18	Professional Issues in Vocational Nursing	1

Process Technology

Degree: Associate of Science – Process Technology

Certificate: Certificate of Achievement – Process Technology

The Process Technology Program is designed to provide students with skills necessary to succeed in the chemical and refining industries. "Process Technicians" are skilled plant operators who safely run the refineries and chemical plants on a 24 hours per day / 365 days per year basis. The curriculum is a combination of hands-on laboratory experiences, classroom lectures, and industrial site visits.

For the Certificate of Achievement in Process Technology, complete 33 units of coursework and the Graduation Requirements in English, Math and Computer Competency listed below. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Process Technology, complete 33 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Program entry skills:		Units
MATH 25	Elementary algebra	5
ENGL 90	Integrated Reading, Writing, and Critical Thinking	5

Required Courses:		Units
PTEC 10	Introduction to Process Technology	3
PTEC 12	Petrochemical Safety, Health and Environment	1
PTEC 24	Process Instrumentation	3
PTEC 25	Process Technology I – Equipment	3
PTEC 27	Applied Instrumentation	1
PTEC 35	Process Technology II – Systems	3
PTEC 44	Petrochemical Simulation Laboratory	1
PTEC 45	Process Technology III – Operations	3
PTEC 48	Process Trouble Shooting	3
MATH 30*	Intermediate Algebra	4
CHEM 6	Introduction to Inorganic and Physical Chemistry	4
OR		
CHEM 7	Introduction General, Organic and Biochemistry	4
PHYS 15**	Introduction to Physics	4

Total Units Required in Major Courses.....33

* Math 30 also satisfies the Math requirement for the AS Degree.

** Physics 15 also satisfies the Physical Science requirement for the AS Degree.

English and Computer Literacy Graduation Requirements for the Certificate:

ENGL 90 5

Complete any one of these courses: Units

COMSC 40	Introduction to Computers	4
COMSC 49	Computer Literacy	1.5
COMSC 60	Emerging Microcomputer Technologies and Applications	4
BUS 18	Microsoft EXCEL for Windows	3
BUS 65	Introduction to Word Processing	3
BUS 66	Intermediate Word Processing	3
BUS 67	Advanced Word Processing	2
BUS 68	Intro to Desktop Publishing on the PC	3

Psychology

Degree: Associate of Arts – Psychology

The Psychology major is designed to meet the wide variety of needs of students interested in the field of Psychology. This major can be used for the purpose of enhancing job success or as preparation for further study at a four-year institution. It particularly provides background education for students wishing to qualify for jobs in Mental Health or Social Science agencies as a paraprofessional.

For the Associate of Art Degree in Psychology, complete 18-19 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Art Degree.

Required Courses:		Units
ANTHR 5*	General Anthropology	3
OR		
ANTHR 6*	Cultural Anthropology	3
PSYCH 10	Psychology: Individual and Social Processes	3
PSYCH 11	General Psychology	3
SOCIO 15*	Introduction to Sociology	3
OR		
SOCIO 16*	Introduction to Social Problems	3

And select a minimum of 2 elective courses:

ANTHR 5*	General Anthropology	3
OR		
ANTHR 6*	Cultural Anthropology	3
ANTHR 7	Anthropology of Cultural Changes	3
MATH 34	Probability and Statistics	4
PSYCH 12	Family Crisis and Growth	3
PSYCH 14	Psychology of Human Sexuality	3
SOCIO 16*	Introduction to Social Problems	3
OR		
SOCIO 15*	Introduction to Sociology	3

* Courses cannot be used to meet both required and elective categories.

Total Units Required in Major Courses..... 18-19

Real Estate

Degree: Associate of Science – Real Estate
Certificates: Certificate of Achievement – Real Estate
College Skills Certificate: Real Estate Broker
College Skills Certificate: Real Estate Sales

Required Courses:		Units
REAL 5	Real Estate Principles***	3
REAL 10	Legal Aspects of Real Estate*	3
REAL 15	Real Estate Appraising*	3
REAL 20	Real Estate Practice*	3
REAL 25	Principles of Real Estate Finance*	3

And select 15 units of elective courses:

BUS 18****	Microsoft Excel for Windows	3
BUS 109	Introduction to Business	3
BUS 181	Accounting: Applied Principles**	3
BUS 186	Principles of Accounting I	2
BUS 294	Business Law**	3

Total Units Required in Major Courses.....27

* Required for California Real Estate Broker's License
 ** Electives for California Real Estate Sales and Broker's License
 *** Required for California Real Estate Sales License
 The Real Estate courses prepare the student to complete the California State Broker's License Examination.

College Skills Certificate in Real Estate:

These career certificates are designed to help students develop employment skills and provide them with recognition in the short-term while they work towards achieving their long-term goals.

College Skills Certificate: Real Estate Broker

REAL 10	Legal Aspects of Real Estate	3
REAL 15	Real Estate Appraising	3
REAL 20	Real Estate Practice	3
REAL 25	Real Estate Finance	3
Elective choose from:		
BUS 181 or 186 or 45 or 294		3
		15 Total Units

College Skills Certificate: Real Estate Sales

REAL 5	Real Estate Principles	3
REAL 20	Real Estate Practice	3
Elective choose from:		
REAL10/15/25/45 or BUS 18/181/186/45 or 294		3
		9 Total Units

Recording Arts

Degree: Associate of Arts – Recording Arts
Certificate: Certificate of Achievement – Recording Arts

The Recording Arts Program at LMC is the finest of its kind in the U.S.A. Curriculum is designed in cooperation with audio engineers, producers, and other recording arts professionals. The interdisciplinary program includes courses in music, audio engineering, and business. Faculty, comprised of recording engineers and other prominent professionals from the audio industry, prepare students technically and intellectually to compete in the recording industry job market.

For the Certificate of Achievement in Recording Arts, complete 32 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Art Degree in Recording Arts, complete 32 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Art Degree.

Required Courses:		Units
RA 10	Recording Arts I	3
RA 12	Basic Sound Reinforcement	3
RA 15	Music Fundamentals for Audio Professionals	3
RA 20	Applied Recording Theory	3
RA 21	Basic Session Producing	2
RA 25	Basic Tracking Sessions	3
RA 30	Advanced Studio Procedure	3
RA 32	Recording Arts Workshop	(min) 1
RA 35	Protocols Production & Editing	3
RA 40	Audio for Video Post	3

And select a minimum of 2 electives:

EETEC 10	Basic Electricity	3
MUSIC 15	Basic Music	3
MUSIC 89	Music Business Management	2
MUSIC 93	Introduction to MIDI/Synthesizers	2
MUSIC 94	Composition/MIDI Workshop I	2
MUSIC 95	Composition/MIDI Workshop II	2
RA 16	Recording Studio Management	2
RA 17	Recording Industry Employment Strategies	2
RA 18	Introduction to Video Production	2.5
RA 33	Summer Recording Arts Workshop	3
OR	Electives approved by Recording Arts Department Chair	

Total Units Required in Major Courses..... 29-32

Sign Language

Certificates: *College Skills Certificate – American Sign Language*

College Skills Certificate: American Sign Language

SIGN 65	American Sign Language I	3
SIGN 66	American Sign Language II	3
SIGN 67	American Sign Language III	3
SIGN 68	American Sign Language IV	3
SIGN 70	Finger spelling I	.5
SIGN 71	Finger spelling II	.5

13 Total Units

Sociology

Degree: *Associate Degree – Sociology*

Sociology is the study of society — the forms, institutions and functions of human groups. Specifically, sociology examines society, culture, social institutions, collective behavior and social interaction. LMC's approach to Sociology emphasizes the basic concepts, techniques and ethical issues of sociological investigation and includes generation of solutions to identified problems. Sociology courses offer excellent preparation for transfer or for enhancement of existing job skills. The program also provides the background education for students entering jobs in the human services professions — such as education, mental health and social services agencies — at the sub-professional level as aides working with those with professional degrees.

For the Associate of Science Degree in Sociology, complete 18-19 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:	Units
ANTHR 5* General Anthropology	3
OR	
ANTHR 6* Cultural Anthropology	3
PSYCH 10* Psychology: Individual and Social Processes	3
OR	
PSYCH 11* General Psychology	3
SOCIO 15 Introduction to Sociology	3
SOCIO 16 Introduction to Social Problems	3

And select a minimum of 2 elective courses:

ADJUS 120 Introduction to the Criminal Justice System	3
ANTHR 5* General Anthropology	3
OR	
ANTHR 6* Cultural Anthropology	3

ANTHR 7 Anthropology of Culture Change	3
MATH 34 Probability and Statistics	4
PSYCH 10* Psychology: Individual and Social Processes	3
OR	
PSYCH 11* General Psychology	3
PSYCH 14 Psychology of Human Sexuality	3

*Courses cannot be used to meet both required and elective categories.

Total Units Required in Major Courses..... 18-19

Spanish

Certificates: *College Skills Certificate - Spanish*

College Skills Certificate: Spanish

SPAN 52 Intermediate Spanish I	5
SPAN 53 Intermediate Spanish III	5

10 Total Units

Travel Marketing

Degree: *Associate of Science – Travel Marketing*
 Certificate: *Certificate of Achievement – Travel Marketing*
 College Skills Certificate: *Travel Marketing*
 College Skills Certificate: *Home-Based Travel Specialist*
 College Skills Certificate: *Cruise Specialist*

Travel Marketing Associate Degree and Certificate of Achievement

This 21-unit certificate provides a well-rounded education and includes a selection of courses designed to prepare students for placement in a position as a travel professional in the travel industry. Opportunities include employment as a full-service travel consultant in a travel agency or a travel specialist in the selected area of specialization. This certificate can be completed in two semesters. Note: Proficiency in English, Math, and Computer Science also required for Certificate of Achievement (see below for details).

In addition to the 21 units of courses in the Travel Marketing Certificate of Achievement, complete the Los Medanos College General Education requirements for an Associate of Science Degree in Travel Marketing. This degree can lead to placement in positions of greater responsibility in the travel industry. Consult a Los Medanos College counselor to develop your personal education plan for the A.S. Degree.

Required Courses (11 units):	Units
TRAVL 72 Introduction to Travel	3
TRAVL 76 Travel Sales and Marketing	3
TRAVL 77 Customized Vacation Planning	2
TRAVL 95 Advanced Travel Concepts	3

Graduation Requirements

Select 3 units of Destination Specialist Geography courses:

TRAVL 74	North American Destination Specialist	3
TRAVL 75	Western Europe Destination Specialist	3
TRAVL 83	Hawaii Destination Specialist	1.5
TRAVL 84	Caribbean Destination Specialist	1.5
TRAVL 85	South Pacific Destination Specialist	1.5
TRAVL 86	East Asia Destination Specialist	1.5
TRAVL 97	Mexico Destination Specialist	1.5

And select a minimum of 7 elective units:

TRAVL 74	North American Destination Specialist	3
TRAVL 75	Western Europe Destination Specialist	3
TRAVL 82	All About Cruising	3
TRAVL 83	Hawaii Destination Specialist	1.5
TRAVL 84	Caribbean Destination Specialist	1.5
TRAVL 85	South Pacific Destination Specialist	1.5
TRAVL 86	East Asia Destination Specialist	1.5
TRAVL 97	Mexico Destination Specialist	1.5
TRAVL 170A	Internship in Travel	1-8
TRAVL 101	Home-Based Travel – Is it for You?	.5
TRAVL 102	Establishing a Home-Based Travel Business	.5
TRAVL 103	Marketing and Promoting a Home Based Travel Business	.5
TRAVL 104	Resources for the Home-Based Travel Professional	.5
TRAVL 105	Business and Financial Plans for Home-Based Travel	.5
TRAVL 106	Home-Based Travel and the Law	.5
TRAVL 120	Certified Travel Associate (CTA)	3
TRAVL 900*	Selected Topics in Travel	.3 –3

Total Units Required in Major Courses.....21

*TRAVL 900 courses do not necessarily transfer to four-year colleges and universities (please see counselor regarding transfer information and degree applicability).

Proficiency Requirements

Los Medanos College requires the Certificate of Achievement candidate to complete 3 proficiency requirements:

1. English – This can be achieved by completing English 90 or a higher level English course or by taking the Assessment Test and achieving a high score.
2. Math – See the requirements on page 36.
3. Computer literacy – This can be achieved by completing Computer Science 40 or 49 or by taking the Assessment Test and achieving a high score.

It is highly recommended that you take the Assessment Test for these three subject areas in your first semester to determine if you can “test out” or if you need to take the course.

College Skills Certificate Options in Travel Marketing

College Skills Certificate in Travel Marketing

This 12-unit certificate provides a good foundation for placement in an entry-level position in the travel industry, such as a travel assistant in a travel agency. This certificate can be completed in one semester.

Required Courses (9 units):	Units	
TRAVL 72	Introduction to Travel	3
TRAVL 76	Travel Sales and Marketing	3
TRAVL 95	Advanced Travel Concepts	3

And select a minimum of 3 elective units:

TRAVL 74	North American Destination Specialist	3
TRAVL 75	Western Europe Destination Specialist	3
TRAVL 77	Customized Vacation Planning	2
TRAVL 82	All About Cruising	3
TRAVL 83	Hawaii Destination Specialist	1.5
TRAVL 84	Caribbean Destination Specialist	1.5
TRAVL 85	South Pacific Destination Specialist	1.5
TRAVL 86	East Asia Destination Specialist	1.5
TRAVL 97	Mexico Destination Specialist	1.5
TRAVL 170A	Internship in Travel	1-8
TRAVL 101	Home-Based Travel – Is it for You?	.5
TRAVL 102	Establishing a Home-Based Travel Business	.5
TRAVL 103	Marketing and Promoting a Home Based Travel Business	.5
TRAVL 104	Resources for the Home-Based Travel Professional	.5
TRAVL 105	Business and Financial Plans for Home-Based Travel	.5
TRAVL 106	Home-Based Travel and the Law	.5
TRAVL 120	Certified Travel Associate (CTA)	3
TRAVL 900*	Selected Topics in Travel	.3-3

Total Units Required in Major Courses.....12

College Skills Certificate Home-Based Travel Specialist

This 17-unit certificate is the first of its kind in the country. As the number of home-based travel professionals grows, the demand for education also grows. Required courses for this certificate will address critical issues and considerations for students who are planning to establish a home-based travel business. This certificate can be completed in two semesters.

Required Courses (9 units):	Units	
TRAVL 72	Introduction to Travel	3
TRAVL 76	Travel Sales and Marketing	3
TRAVL 101	Home-Based Travel – Is it for You?	.5
TRAVL 102	Establishing a Home-Based Travel Business	.5
TRAVL 103	Marketing and Promoting a Home Based Travel Business	.5
TRAVL 104	Resources for the Home-Based Travel Professional	.5
TRAVL 105	Business and Financial Plans for Home-Based Travel	.5
TRAVL 106	Home-Based Travel and the Law	.5

Select 3 units of Destination Specialist Geography courses:

TRAVL 74	North American Destination Specialist	3
TRAVL 75	Western Europe Destination Specialist	3
TRAVL 83	Hawaii Destination Specialist	1.5
TRAVL 84	Caribbean Destination Specialist	1.5
TRAVL 85	South Pacific Destination Specialist	1.5
TRAVL 86	East Asia Destination Specialist	1.5
TRAVL 97	Mexico Destination Specialist	1.5

And select a minimum of 5 elective units:

TRAVL 74	North American Destination Specialist	3
TRAVL 75	Western Europe Destination Specialist	3
TRAVL 77	Customized Vacation Planning	2
TRAVL 82	All About Cruising	3
TRAVL 83	Hawaii Destination Specialist	1.5
TRAVL 84	Caribbean Destination Specialist	1.5
TRAVL 85	South Pacific Destination Specialist	1.5
TRAVL 86	East Asia Destination Specialist	1.5
TRAVL 95	Advanced Travel Concepts	3
TRAVL 97	Mexico Destination Specialist	1.5
TRAVL 120	Certified Travel Associate (CTA)	3
TRAVL 900*	Selected Topics in Travel	.3 -3

Total Units Required in Major Courses.....17

College Skills Certificate Cruise Specialist Certificate

This 8-unit certificate prepares the student to specialize in selling cruises. Employment possibilities include working for a full-service or a cruise-only travel agency, or operating a home-based travel business. Required courses are not offered every semester, so careful planning will minimize the amount of time to complete this certificate.

Required Courses (8 units):		Units
TRAVL 82	All About Cruising	3
TRAVL 76	Travel Sales and Marketing	3
TRAVL 77	Customized Vacation Planning	2

Total Units Required in Major Courses.....8

Note that it is practical to work toward multiple certificates at the same time. This will allow students to personalize their education and tailor it to meet their individual goals.

For information regarding specific course requirements, contact the Travel Department chair or inquire in the Counseling Center. You may also check online at www.losmedanos.edu/centram/index.html.

Welding Technology

Degree: Associate of Science –
Welding Technology

Certificate: Certificate of Achievement –
Welding Technology

The program in Welding Technology offers instruction in the principles and practices of welding processes. Successful completion of the program provides sufficient training for entry level into the field of production type welding. Students have access to the latest instructional and practical experiences in a spacious, modern shop facility.

For the Certificate of Achievement in Welding Technology, complete 24 units of coursework listed below as well as the Graduation Requirements in English, Math and Computer Competency. Consult a Los Medanos College counselor to develop your education plan for the Certificate of Achievement.

For the Associate of Science Degree in Welding Technology, complete 24 units of coursework listed below as well as the LMC General Education and Graduation requirements. Consult a Los Medanos College counselor to develop your education plan for the Associate of Science Degree.

Required Courses:		Units
WELD 10	Basic Arc Welding Theory	3
WELD 11	Basic Arc Welding Practice	3
WELD 15	Basic Oxyacetylene Welding	2
WELD 16	Advanced Oxyacetylene Welding	1
WELD 21	Advanced Arc Welding Practice	3
WELD 31	TIG, MIG and FCA Welding Practice	3
WELD 35	Blueprint Reading for Welders	3
WELD 40	TIG, MIG and FCA Welding Theory	3
WELD 41	Pipe Welding Practice	3

Total Units Required in Major Courses.....24

Note: A reading/writing exam option is available for Welding Technology majors to fulfill the reading/writing competency requirement.