Merritt College

Chief Fire Officer

Overview

College	Merritt - Division III
Originator	Demond Simmons
Award Type	Certificate of Achievement

Description

Fire protection is a highly specialized professional field, requiring extensive knowledge and use of scientific principles. The Chief Fire Officer Certificate of Achievement program teaches successful application of the fundamental principles of fire protection including suppression of fires, rescue, emergency medical services, hazardous materials mitigation, disaster response/recovery, community risk reduction strategies, pre-planning for fire protection, and long term community preparedness. Designed for the aspiring chief fire officer, this program provides managerial and leadership knowledge for the individual charged with supervising a battalion. While units in the program are transferable to many institutions, students should consult a counselor for information.

Career Opportunities

Promotional advancement for members currently employed in the profession.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe the roles and responsibilities of a chief officer.
2. Discuss emerging issues in today's fire and EMS agencies.
3. Describe effective managerial and leadership principles for the chief fire officer.

Degree Requirements:

Required Courses **Credit Hours:** (5.5 Required)

FISCI 236	Chief Officer 3A--Human Resource Management	1.5
FISCI 237	Chief Officer 3B--Budget and Fiscal Responsibilities	1
FISCI 238	Chief Officer 3C--General Administrative Functions	1.5
FISCI 239	Chief Officer 3D--Emergency Services Delivery Responsibilities	1.5

Restricted Electives **Credit Hours:** (15 - 16 Required)

Select five (5) courses for a total of 15-16 units from the following:

BUS 052	Psychology and Human Relations	3
BUS 053	Personnel Management	3
CIS 040	Database Management	4
CIS 042	Spreadsheet Applications	4
COMM 003	Introduction to Human Communication	3
COMM 004	The Dynamics of Group Discussion	3
COMM 045	Public Speaking	3
MATH 013	Introduction to Statistics	4

Total: 20.500 - 21.500

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Merritt College

Fire Officer

Overview

College	Merritt - Division III
Originator	Demond Simmons
Award Type	Certificate of Achievement

Description

Fire protection is a highly specialized professional field, requiring extensive knowledge and use of scientific principles. The Fire Officer Certificate of Achievement program teaches successful application of the fundamental principles of fire protection including suppression of fires, rescue, emergency medical services, hazardous materials mitigation, disaster response/recovery, community risk reduction strategies, pre-planning for fire protection, and long term community preparedness. Designed for the aspiring company officer, this program provides managerial and leadership knowledge for the individual charged with supervising a fire company. While units in the program are transferable to many institutions, students should consult a counselor for information.

Career Opportunities

Promotional advancement for members currently employed in the profession. First-Line Supervisors of Firefighting and Prevention Workers

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Describe emerging trends in fire service organizations for the fire officer.
2. Describe managerial and leadership traits for success as a fire officer.

Degree Requirements:

Required Courses		**Credit Hours:** (21 Required)
FISCI 230	Company Officer 2A--Human Resource Management	2.5
FISCI 231	Company Officer 2B--General Administrative Functions	1.5
FISCI 232	Company Officer 2C--Fire Inspection and Investigation	2.5
FISCI 233	Company Officer 2D--All Risk Command Operations	2.5
FISCI 234	Company Officer 2E--Wildland Incident Operations	2.5
FISCI 235	Instructor I: Instructional Methodology	2.5
COMM 003 or	Introduction to Human Communication	3
COMM 004	The Dynamics of Group Discussion	3
COMM 045	Public Speaking	3
ENGL 208	Writing Workshop	1

Total: 21

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Merritt College

Fire Technology

Overview

College	Merritt - Division III
Originator	Demond Simmons
Award Type	A.S. Degree

Description

Fire protection is a highly specialized professional field, requiring extensive knowledge and use of scientific principles. The Fire Technology Associate of Science degree program teaches successful application of the fundamental principles of fire protection including suppression of fires, rescue, emergency medical services, hazardous materials mitigation, disaster response/recovery, community risk reduction strategies, pre-planning for fire protection, and long term community preparedness. Designed for direct job entry and promotional advancement, this program provides technical knowledge and the ability to work within an organized system at a fire or other emergency scene. While units in the program are transferable to many institutions, students should consult a counselor for information.

Career Opportunities

Entry level firefighter and promotional advancement for members currently employed in the profession.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Demonstrate the ability to perform the required skills of an emergency medical technician (EMT)
2. Demonstrate the ability to perform skills related to fire suppression.
3. Demonstrate leadership, teamwork and decision making in the management of multiple personnel on emergency scenes.

Degree Requirements:

Required Courses **Credit Hours:** (24 Required)

EMT 211	Emergency Medical Technician–Basic	6
FISCI 201	Principles of Fire and Emergency Services	3
FISCI 202	Fire Prevention	3
FISCI 203	Building Construction for the Fire Service	3
FISCI 204	Fire Behavior and Combustion	3
FISCI 205	Fire Protection Systems	3
FISCI 206	Principles of Fire and Emergency Services Safety and Survival	3

Restricted Electives **Credit Hours:** (5.5 - 14 Required)

Select one (1) group of restricted elective courses from the following:

Group A **Credit Hours:** (0 Required)

FISCI 211	Firefighter Academy	10

Group B **Credit Hours:** (0 Required)

FISCI 230	Company Officer 2A--Human Resource Management	2.5
FISCI 231	Company Officer 2B--General Administrative Functions	1.5
FISCI 232	Company Officer 2C--Fire Inspection and Investigation	2.5

FISCI 233	Company Officer 2D--All Risk Command Operations	2.5
FISCI 234	Company Officer 2E--Wildland Incident Operations	2.5
FISCI 235	Instructor I: Instructional Methodology	2.5

Group C **Credit Hours:** (0 Required)

FISCI 236	Chief Officer 3A--Human Resource Management	1.5
FISCI 237	Chief Officer 3B--Budget and Fiscal Responsibilities	1
FISCI 238	Chief Officer 3C--General Administrative Functions	1.5
FISCI 239	Chief Officer 3D--Emergency Services Delivery Responsibilities	1.5

General Education Requirements **Credit Hours:** (19 Required)

Total: 48.500 - 57.000

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Merritt College

Fire Technology

Overview

College	Merritt - Division III
Originator	Demond Simmons
Award Type	Certificate of Achievement

Description

Fire protection is a highly specialized professional field, requiring extensive knowledge and use of scientific principles. The Fire Technology Certificate of Achievement program teaches successful application of the fundamental principles of fire protection including suppression of fires, rescue, emergency medical services, hazardous materials mitigation, disaster response/recovery, community risk reduction strategies, pre-planning for fire protection, and long term community preparedness. Designed for direct job entry and promotional advancement, this program provides technical knowledge and the ability to work within an organized system at a fire or other emergency scene. While units in the program are transferable to many institutions, students should consult a counselor for information.

Career Opportunities

Entry level firefighter and promotional advancement for members currently employed in the profession.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Demonstrate the ability to perform the required skills of an emergency medical technician (EMT)
2. Discuss the roles and responsibilities of a firefighter.
3. Discuss trends and best practices that enhance firefighter safety and well being.

Degree Requirements:

Required Course **Credit Hours:** (6 Required)

EMT 211	Emergency Medical Technician–Basic	6

Restricted Electives **Credit Hours:** (12 Required)

Select four (4) courses for a total of twelve (12) units from the following:

FISCI 201	Principles of Fire and Emergency Services	3
FISCI 202	Fire Prevention	3
FISCI 203	Building Construction for the Fire Service	3
FISCI 204	Fire Behavior and Combustion	3
FISCI 205	Fire Protection Systems	3
FISCI 206	Principles of Fire and Emergency Services Safety and Survival	3

Total: 18

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Laney College

Indigenous Languages and Cultures-Nauatl

Overview

College	Laney - Liberal Arts
Originator	Arturo Davila-Sanchez
Award Type	Certificate of Completion

Description

This certificate was created to provide students with the comprehension of contemporary Nauatl language and culture. Students will be exposed to listening, speaking, reading, and writing. Students will acquire knowledge of language structure through the study of different variants spoken today in Mexico and Central America.

Career Opportunities

The recent immigration movements have come from indigenous communities from Mexico and Central America. Many people speak and indigenous language (Nauatl, Mayan, Zapotec). There is a need for translators to receive them and serve them. Many universities and colleges have integrated indigenous languages to their curricula and summer programs.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Analyze and interpret pre-colonial, colonial, contemporary testimonies, documents, and texts given verbally or written in the targeted Indigenous language (Nauatl).

Degree Requirements:

Required Core **Noncredit:** (162.225 Required)

Student must complete a minimum of 108 hours

SPAN 533A	Beginning Conversational Nauatl	54.005
SPAN 533B	Intermediate Conversational Nauatl	54.005
SPAN 533C	Advanced Conversational Nauatl	54.005

Total: 162.225

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Laney College

Music Industry Studies

Overview

College	Laney - Liberal Arts
Originator	John Reager
Award Type	Certificate of Achievement

Description

The Music Industry Studies Certificate of Achievement is designed for music students whose career goals are focused on the recording industry, concert promotions, and other commercial ventures. Students will explore aspects of the music production process including: recording, marketing, and distribution.

Career Opportunities

Audio Engineer, Digital Sound Editor, Small Business Entrepreneur, Concert Promoter, Manager, Event Producer, Arranger, Songwriter. Students who receive this degree will be Career opportunities

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Students will employ proper audio engineering and midi techniques to produce sound recording projects.
2. Students will employ proper instrumental or vocal technique to construct thoughtfully prepared musical phrasing.
3. Analyze a situation in the music industry and recommend a solution or plan for improvement.

Degree Requirements:

Group 1: Recording, Mastering, and Distribution - (9 units):		**Credit Hours:**	(9 Required)
MEDIA 150	Pro Tools: Sound Design/Aesthetics for Video, Broadcast and Digital Cinematography		3
MEDIA 155	Advanced Music Video Production: Basic Recording		3
MEDIA 156	Advanced Music Video Production III: Mixing and Mastering		3
Group 2: Electronic Music - (3 units)		**Credit Hours:**	(3 Required)
MUSIC 147	Introduction to Electronic Music and MIDI		3
Group 3: Introduction to Business and Management - (4.5 units):		**Credit Hours:**	(4.5 Required)
M/SVN 060 and	Introduction to Management		3
BUS 239	QuickBooks Pro		1.5
Group 4: Music Theory- (3 units):		**Credit Hours:**	(3 Required)
MUSIC 101	Music Theory and Culture I		3
MUSIC 102	Music Theory and Culture II		3
MUSIC 103	Music Theory and Culture III		3
MUSIC 104	Music Theory and Culture IV		3
Group 5: Music Skills - (1 unit):		**Credit Hours:**	(1 Required)
MUSIC 121	Music Skills I		1
MUSIC 122	Music Skills II		1

MUSIC 123	Music Skills III	1
MUSIC 124	Music Skills IV	1

Group 6: Applied Music and Ensemble Performance - (3 units): **Credit Hours:** (3 Required)

MUSIC 105	Classic Guitar I	1
MUSIC 109	Beginning Winds I	1
MUSIC 113	Beginning Percussion I	1
MUSIC 117	Voice I	1
MUSIC 125	Chorus	1
MUSIC 126	Jazz Orchestra	1
MUSIC 127	Jazz Combos	1
MUSIC 130	Elementary Piano Method I	1
MUSIC 134	Intermediate Piano Literature I	1
MUSIC 138	Jazz Piano I	1
MUSIC 150	Applied Music	1

Total: 23.5

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Merritt College

Radiologic Science

Overview

College	Merritt - Division III
Originator	Jennifer Yates
Award Type	A.S. Degree

Codes and Dates

Curriculum Committee Approval Date	4/26/2018
Program Control Number	1210
Top Code	1225.00* - Radiologic Technology
CIP Code	51.0911: Radiologic Technology/Science - Radiographer.

Description

The purpose of the Radiologic Science program at Merritt College is to prepare qualified practitioners in the art science of diagnostic medical imaging. Radiologic Technologists manipulate sophisticated technical equipment and computers to obtain detailed images of the human body. These images assist physicians in the diagnosis of injury and disease in the clinical environment.

Students participate in classroom instruction and clinical education in our affiliated hospitals throughout the East Bay. The Associate Degree will be awarded upon satisfactory completion of the General Education requirements, prerequisite requirements and the Associate Degree major requirements. Program graduates must take the American Registry of Radiologic Technologists' examination and obtain the California Department of Public Health Radiologic Technologist Certificate to qualify for employment in California.

Career Opportunities

Career opportunities in Radiologic Technology include Radiologic Technologist (RT), Computed Tomography Technologist (CT Technologist), Mammography Technologist, Applications Specialist.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Produce diagnostic quality medical images in a competent, safe, and compassionate manner for all basic radiography examinations in a hospital work environment.
2. Communicate effectively with patients by taking appropriate histories, giving clear instructions, and providing information as needed.
3. Exercise critical thinking and problem solving skills by adapting radiologic procedures to individual patient needs and conditions
4. Establish and maintain satisfactory professional relationships with other members of the health care team.
5. Function as an effective health care team member by providing services in a manner that complements those performed by other team members.

Degree Requirements:

Required Courses: **Credit Hours:** (0 Required)

RADSC 001B	Introduction to Medical Imaging	2
RADSC 001C	Introduction to Medical Imaging Clinic	2.5
RADSC 002A	Radiographic Physics I	2

RADSC 002B	Radiographic Physics II	4
RADSC 002C	Digital Applications in Medical Imaging	4
RADSC 003A	Positioning I	4
RADSC 003B	Positioning II	4
RADSC 004A	Radiation Protection	2
RADSC 004B	Radiobiology	2
RADSC 005A	Patient Care I	3
RADSC 005B	Patient Care II	3
RADSC 006	Quality Management/Fluoroscopy	2.5
RADSC 007	Advanced Imaging Procedures	3
RADSC 008	Sectional Anatomy and Radiographic Pathology	4
RADSC 009A	Clinical Experience I	4
RADSC 009B	Clinical Experience II	4
RADSC 009C	Clinical Experience III	6
RADSC 009D	Clinical Experience IV	6
RADSC 009E	Clinical Experience V	6
RADSC 010A	Seminar	1.5
RADSC 010B	Seminar	1.5

Total Units for the Major: **Credit Hours:** (71 Required)

71

General Education (PCCD GE Pattern): **Credit Hours:** (19 Required)

19

SEQUENCE OF COURSES FOR SIX SEMESTERS: **Credit Hours:**

FIRST YEAR, FIRST SEMESTER (FALL) **Credit Hours:** (0 Required)

RADSC 001B	Introduction to Medical Imaging	2
RADSC 001C	Introduction to Medical Imaging Clinic	2.5
RADSC 002A	Radiographic Physics I	2
RADSC 003A	Positioning I	4
RADSC 005A	Patient Care I	3

FIRST YEAR, SECOND SEMESTER (SPRING) **Credit Hours:** (0 Required)

RADSC 002B	Radiographic Physics II	4
RADSC 003B	Positioning II	4
RADSC 009A	Clinical Experience I	4

(16 hours per week)

FIRST YEAR, THIRD SEMESTER (SUMMER) **Credit Hours:** (0 Required)

RADSC 004A	Radiation Protection	2
RADSC 004B	Radiobiology	2
RADSC 009B	Clinical Experience II	4

(24 hours per week)

RADSC 010A	Seminar	1.5

SECOND YEAR, FOURTH SEMESTER (FALL) **Credit Hours:** (0 Required)

RADSC 002C	Digital Applications in Medical Imaging	4
RADSC 005B	Patient Care II	3
RADSC 009C	Clinical Experience III	6

(24 hours per week)

SECOND YEAR, FIFTH SEMESTER (SPRING) **Credit Hours:** (0 Required)

RADSC 006	Quality Management/Fluoroscopy	2.5
RADSC 007	Advanced Imaging Procedures	3
RADSC 008	Sectional Anatomy and Radiographic Pathology	4
RADSC 009D	Clinical Experience IV	6

(24 hours per week)

SECOND YEAR, SIXTH SEMESTER (SUMMER) **Credit Hours:** (0 Required)

RADSC 009E	Clinical Experience V	6

(36 hours per week)

RADSC 010B	Seminar	1.5

Total: 90

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Merritt College

Radiologic Science

Overview

College	Merritt - Division III
Originator	Jennifer Yates
Award Type	Certificate of Achievement

Description

The Radiologic Science Certificate of Achievement is available to those who have already earned an Associate Degree or higher upon application to the program.The purpose of the Radiologic Science Program at Merritt College is to prepare qualified practitioners for competency in the art science of diagnostic medical imaging. Radiologic Technologists manipulate sophisticated technical equipment and computers to obtain detailed images of the human body. These images assist physicians in the diagnosis of injury and disease in the clinical environment.

Students participate in classroom instruction and clinical education in our affiliated hospitals throughout the East Bay. The Certificate will be awarded upon satisfactory completion of the prerequisite requirements and the certificate major requirements. Program graduates must take the American Registry of Radiologic Technologists' examination and obtain the California Department of Public Health Radiologic Technologist Certificate to qualify for employment in California.

Career Opportunities

Career opportunities in Radiologic Technology include Radiologic Technologist (RT), Computed Tomography Technologist (CT Technologist), Mammography Technologist, and Applications Specialist.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Produce diagnostic quality medical images in a competent, safe, and compassionate manner for all basic radiography examinations in a hospital work environment.
2. Communicate effectively with patients by taking appropriate histories, giving clear instructions, and providing information as needed.
3. Exercise critical thinking and problem solving skills by adapting radiologic procedures to individual patient needs and conditions
4. Establish and maintain satisfactory professional relationships with other members of the health care team.
5. Function as an effective health care team member by providing services in a manner that complements those performed by other team members.

Degree Requirements:

Required Courses: **Credit Hours:** (71 Required)

RADSC 001B	Introduction to Medical Imaging	2
RADSC 001C	Introduction to Medical Imaging Clinic	2.5
RADSC 002A	Radiographic Physics I	2
RADSC 002B	Radiographic Physics II	4
RADSC 002C	Digital Applications in Medical Imaging	4
RADSC 003A	Positioning I	4
RADSC 003B	Positioning II	4

RADSC 004A	Radiation Protection	2
RADSC 004B	Radiobiology	2
RADSC 005A	Patient Care I	3
RADSC 005B	Patient Care II	3
RADSC 006	Quality Management/Fluoroscopy	2.5
RADSC 007	Advanced Imaging Procedures	3
RADSC 008	Sectional Anatomy and Radiographic Pathology	4
RADSC 009A	Clinical Experience I	4
RADSC 009B	Clinical Experience II	4
RADSC 009C	Clinical Experience III	6
RADSC 009D	Clinical Experience IV	6
RADSC 009E	Clinical Experience V	6
RADSC 010A	Seminar	1.5
RADSC 010B	Seminar	1.5

SEQUENCE OF COURSES FOR SIX SEMESTERS: **Credit Hours:**

FIRST YEAR, FIRST SEMESTER (FALL) **Credit Hours:** (0 Required)

RADSC 001B	Introduction to Medical Imaging	2
RADSC 001C	Introduction to Medical Imaging Clinic	2.5
RADSC 002A	Radiographic Physics I	2
RADSC 003A	Positioning I	4
RADSC 005A	Patient Care I	3

FIRST YEAR, SECOND SEMESTER (SPRING) **Credit Hours:** (0 Required)

RADSC 002B	Radiographic Physics II	4
RADSC 003B	Positioning II	4
RADSC 009A	Clinical Experience I	4

(16 hours per week)

FIRST YEAR, THIRD SEMESTER (SUMMER) **Credit Hours:** (0 Required)

RADSC 004A	Radiation Protection	2
RADSC 004B	Radiobiology	2
RADSC 009B	Clinical Experience II	4

(24 hours per week)

RADSC 010A	Seminar	1.5

SECOND YEAR, FOURTH SEMESTER (FALL) **Credit Hours:** (0 Required)

RADSC 002C	Digital Applications in Medical Imaging	4
RADSC 005B	Patient Care II	3
RADSC 009C	Clinical Experience III	6

(24 hours per week)

SECOND YEAR, FIFTH SEMESTER (SPRING) **Credit Hours:** (0 Required)

RADSC 006	Quality Management/Fluoroscopy	2.5
RADSC 007	Advanced Imaging Procedures	3

RADSC 008	Sectional Anatomy and Radiographic Pathology	4
RADSC 009D	Clinical Experience IV	6
(24 hours per week)		

SECOND YEAR, SIXTH SEMESTER (SUMMER) **Credit Hours:** (0 Required)

RADSC 009E	Clinical Experience V	6
36 hours per week)		
RADSC 010B	Seminar	1.5

Total: 71

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Laney College
Welding Technology

Overview

College	Laney - Career and Technical Education
Originator	Richard Hashimoto
Award Type	A.S. Degree

Description

Laney College currently offers a wide range of courses in Welding. The Associate of Science degree in Welding Technology prepares students for a career in the welding industry where individuals can be employed as a welder, welding equipment sales associate, or as a welding inspector. Our students are trained in basic welding and advanced practices in Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), Oxygen Acetylene Welding (OAW), Oxygen Fuel Cutting (OFC), Plasma Arc Cutting (PAC), brazing and soldering in addition to subject areas such as blueprint reading, metallurgy, and weld inspection. We offer an array of courses in specific processes, skill development, and subject areas through lectures and hands-on skill development in laboratory.

Career Opportunities

Welding is a lead skill in many construction and manufacturing industries, including industrial maintenance, petroleum, cross country gas transmission, fabrication of goods, and equipment, aerospace, food manufacturing, and biotechnology. Job titles include both manual and semi automatic and automated welders and welding support personnel, including ironworkers, pile drivers, mill wrights, fabricators, welding supplies and equipment sales, weld inspection, and weld engineers.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Determine and properly implement personal protective equipment (PPE) to safely conduct welding and associated activities.
2. Identify a concentration in a specified welding field and develop skills in alignment with their career goal.
3. Analyze weldment situations and apply proper techniques, material selection, and/or inspection protocols (quality assurance).

Degree Requirements:

Core Courses (15 units) **Credit Hours:** (0 Required)

MACH 205	Engineering Drawings for Machinists, Welders, and Industrial Maintenance Technicians	3
WELD 203A	Beginning Gas Tungsten Arc Welding (TIG)	3
WELD 204A	Wire Feed Welding I (GMAW/MIG)	3
WELD 205	Introduction to Welding	3
WELD 211A	Shielded Metal Arc Welding I (Stick/E7018)	3

Select a minimum of 9 units from the following (9 units): **Credit Hours:** (0 Required)

WELD 203B	Intermediate Gas Tungsten Arc Welding (TIG)	3
WELD 203C	Advanced Gas Tungsten Arc Welding (TIG)	3
WELD 204B	Wire Feed Welding II (FCAW w/gas)	3
WELD 211B	Shielded Metal Arc Welding II (Stick/E6010)	3
WELD 221A	Beginning Oxygen-Acetylene Welding (OAW)	3
WELD 230	Introduction to Welding Metallurgy	2

WELD 231A	Pipe Welding with SMAW	3
WELD 240	Introduction to Weld Inspection	2

Select 4 units from the following (4 units): **Credit Hours:** (0 Required)

MATH 220A and	Technical Mathematics with Algebra - Part 1 (Lab)	0.5
MATH 220B and	Technical Mathematics with Algebra - Part 2 (Lab)	0.5
MATH 220C and	Technical Mathematics with Algebra - Part 3 (Lab)	0.5
MATH 220D and	Technical Mathematics with Algebra - Part 4 (Lab)	0.5
MATH 220E and	Technical Mathematics with Geometry - Part 1 (Lab)	0.5
MATH 220F and	Technical Mathematics with Geometry - Part 2 (Lab)	0.5
MATH 220G or	Technical Mathematics with Trigonometry (Lab)	1
MATH 221	Technical Mathematics	4

Credit Hours: (0 Required)

Total Major Units: 28

Credit Hours: (0 Required)

General Education Courses 19

Credit Hours: (0 Required)

Electives to meet 60 units

Credit Hours: (60 Required)

Total Units: 60

Total: 60

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Laney College
Welding Technology

Overview

College	Laney - Career and Technical Education
Originator	Liisa Pine Schoonmaker
Award Type	Certificate of Achievement

Description

Laney College currently offers a wide range of courses in Welding. The Associate of Science degree in Welding Technology prepares students for a career in the welding industry where individuals can be employed as a welder, welding equipment sales associate, or as a welding inspector. Our students are trained in basic welding and advanced practices in Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), Oxygen Acetylene Welding (OAW), Oxygen Fuel Cutting (OFC), Plasma Arc Cutting (PAC), brazing and soldering in addition to subject areas such as blueprint reading, metallurgy, and weld inspection. We offer an array of courses in specific processes, skill development, and subject areas through lectures and hands-on skill development in laboratory.

Career Opportunities

Welding is a lead skill in many construction and manufacturing industries, including industrial maintenance, petroleum, cross country gas transmission, fabrication of goods, and equipment, aerospace, food manufacturing, and biotechnology. Job titles include both manual and welders and welding support personnel, including ironworkers, pile drivers, mill wrights, fabricators, welding supplies and equipment sales, weld inspection, and weld engineers.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Determine and properly implement personal protective equipment (PPE) to safely conduct welding and associated activities.
2. Identify a concentration in a specified welding field and develop skills in alignment with their career goal.
3. Critically think and analyze weldment situations and apply proper techniques, material selection, or inspection protocols (quality assurance).

Degree Requirements:

Group A: Core Requirements: **Credit Hours:** (15 Required)

MACH 205	Engineering Drawings for Machinists, Welders, and Industrial Maintenance Technicians	3
WELD 203A	Beginning Gas Tungsten Arc Welding (TIG)	3
WELD 204A	Wire Feed Welding I (GMAW/MIG)	3
WELD 205	Introduction to Welding	3
WELD 211A	Shielded Metal Arc Welding I (Stick/E7018)	3

Group B: Select 9 units from the following: **Credit Hours:** (9 Required)

WELD 203B	Intermediate Gas Tungsten Arc Welding (TIG)	3
WELD 203C	Advanced Gas Tungsten Arc Welding (TIG)	3
WELD 204B	Wire Feed Welding II (FCAW w/gas)	3
WELD 230	Introduction to Welding Metallurgy	2
WELD 231A	Pipe Welding with SMAW	3
WELD 240	Introduction to Weld Inspection	2

Group C: Select 4 units from the following:			**Credit Hours:** (4 Required)
MATH 220A	and	Technical Mathematics with Algebra - Part 1 (Lab)	0.5
MATH 220B	and	Technical Mathematics with Algebra - Part 2 (Lab)	0.5
MATH 220C	and	Technical Mathematics with Algebra - Part 3 (Lab)	0.5
MATH 220D	and	Technical Mathematics with Algebra - Part 4 (Lab)	0.5
MATH 220E	and	Technical Mathematics with Geometry - Part 1 (Lab)	0.5
MATH 220F	and	Technical Mathematics with Geometry - Part 2 (Lab)	0.5
MATH 220G	or	Technical Mathematics with Trigonometry (Lab)	1
MATH 221		Technical Mathematics	4

Total: 28

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