

Barstow Community College 2020-2021 CATALOG Addendum

This addendum to the 2020-2021 Barstow Community College Catalog reflects updates and offers new educational opportunities for students. These updates/revisions were approved after the 2020-2021 Catalog was finalized. Although every effort has been made to ensure accuracy of information, all students should consult with a counselor for further information.

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NEWLY APPROVED PROGRAMS OF STUDY

Business and Industry

Certificate of Achievement, Industrial Maintenance Electrical and Instrumentation, Level 2

This certificate prepares students for entry level positions in industry and service occupations requiring skills in Industrial Electrical and Instrumentation.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Perform all the duties related to installing and maintaining electrical equipment in homes, businesses, factories, and infrastructure.
- Read blueprints and technical diagrams, installing conduit and wiring, lighting and control systems, inspecting electrical components like circuit breakers and transformers, identifying electrical problems, repairing or replacing wiring and equipment using hand and power tools.

Subject	Course Title	Units
<i>Required Core Courses</i>		
IMEI 80A	Alternating Current (Formerly IMMT 80A)	2.0
IMEI 80B	Electrical and Instrumentation Test Equipment (formerly IMMT 80B)	1.0
IMEI 80C	Flow, Pressure, Level and Temperature (formerly IMMT 80C)	1.0
IMEI 80D	Process Quantitative Skills (Formerly IMMT 80D)	2.0
IMEI 80E	Process Tubing Installation and Testing (Formerly IMMT 80E)	2.0
IMEI 80F	Introduction to Instrument Drawings and Documents (Formerly IMMT 80F)	2.0
	Total Units Required	10.0

Certificate of Achievement, Industrial Maintenance Mechanic Technology, Level 2

This certificate prepares students for entry level positions in industry and service occupations requiring skills in Industrial Maintenance Mechanics. This program is based on nationally recognized industry standards.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Demonstrate use of tools and equipment commonly used in the trade.
- Demonstrate the ability to use scribing and quantitative skills pertaining to a basic layout on the jobsite.
- Work with various types of piping, valves and perform basic hydrostatic and pneumatic testing on the jobsite.

Subject	Course Title	Units
<i>Required Core Courses</i>		
IMMT 70	Basic Layout	1.0
IMMT 71	Introduction to Piping	1.0
IMMT 73	Identify, Install, and Maintain Valves	1.0
IMMT 74	Introduction to Bearings	1.0
IMMT 75	Introduction to Steam Systems	2.0
IMMT 76	Distillation Towers and Vessels	1.0
IMMT 77	Heaters, Furnaces, Heat Exchanges, Cooling	2.0
	Total Units Required	9.0

Certificate of Achievement, Warehousing and Logistics, Level 1

The Certificate of Achievement in Warehousing and Logistics is designed for people working in the fields of logistics and/or operations management with a desire to expand their knowledge of the industry. The certificate is also applicable for persons with an interest to enter the industry with knowledge that will rapidly lead to expanding responsibilities.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Develop strategic understanding of logistics and supply chain management and be able to take into account the relationships between this discipline and other areas of business to make holistic judgements when analyzing business solutions.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WARE 52	Introduction to Warehousing and Distribution	3.0
WARE 54	Material Handling	3.0
WARE 55	Principles of Logistics	3.0
	Total Units Required	9.0

Certificate of Achievement, Welding Technology-Gas Tungsten Arc Welding (GTAW)

This course of study advances student's opportunities for entry level positions in industry and service occupations requiring Welding Technology skills, specifically Gas Tungsten Arc Welding (GTAW). This Certificate of Achievement provides a focused pathway for students to obtain knowledge and skills in Gas Tungsten Arc Welding (GTAW).

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Apply the skills necessary for the Welding for the American Welding Society (AWS) guidelines.
- Demonstrate knowledge about the required materials of the trade and can operate equipment in a safe manner.
- Demonstrate skills necessary to receive industry recognized certification in the Gas Tungsten Arc Welding (GTAW) process.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WELD 50A	Introduction to Welding	3.0
WELD 55A	Gas Tungsten Arc-Ferrous	3.0
WELD 55B	Gas Tungsten Arc-NonFerrous	3.0
WELD 56	Blueprint Reading (Metal Trades)	3.0
	Total Units Required	12.0

Certificate of Achievement, Welding Technology-Shielded Metal Arc Welding (SMAW)

This course of study advances student's opportunities for entry level positions in industry and service occupations requiring Welding Technology skills, specifically Shielded Metal Arc Welding (SMAW). This Certificate of Achievement- Shielded Metal Arc Welding (SMAW) provides a focused pathway for students to obtain knowledge and skills in Shielded Metal Arc Welding (SMAW).

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Apply the skills necessary for the Welding for the American Welding Society (AWS) guidelines.
- Demonstrate knowledge about the required materials of the trade and can operate equipment in a safe manner.
- Demonstrate skills necessary to receive industry recognized certification in the Shielded Metal Arc Welding (SMAW) process.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WELD 50A	Introduction to Welding	3.0
WELD 51	Shielded Metal Arc Weld and Cut	3.0
WELD 52	Position Welding (Arc Welding)	3.0
WELD 56	Blueprint Reading (Metal Trades)	3.0
	Total Units Required	12.0

Certificate of Achievement, Welding Technology- Semi-Automatic Arc Welding (GMAW/FCAW)

This course of study advances student's opportunities for entry level positions in industry and service occupations requiring Welding Technology skills, specifically Semi-Automatic Arc Welding (GMAW/FCAW). This Certificate of Achievement provides a focused pathway for students to obtain knowledge and skills in Semi-Automatic Arc Welding (GMAW/FCAW).

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Apply the skills necessary for the Welding for the American Welding Society (AWS) guidelines.
- Demonstrate knowledge about the required materials of the trade and can operate equipment in a safe manner.
- Demonstrate skills necessary to receive industry recognized certification in the Semi-Automatic Arc Welding (GMAW/FCAW) process.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WELD 50A	Introduction to Welding	3.0
WELD 54A	Gas Metal Arc Welding (GMAW)	3.0
WELD 54B	Flux Cored Arc Welding (FCAW)	3.0
WELD 56	Blueprint Reading (Metal Trades)	3.0
	Total Units Required	12.0

Certificate of Achievement, Welding Technology- Welding Fabrication

This course of study advances student's opportunities for entry level positions in industry and service occupations requiring Welding Technology skills, specifically Welding Fabrication. This Certificate of Career Preparation provides a focused pathway for students to obtain knowledge and skills in Welding Fabrication.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Inspect and determine the welding process needed to perform fabrication or repair on ferrous material.
- Demonstrate fabrication of complex projects using one or more welding processes required on the welding procedure specification.
- Produce inspection qualify welds utilizing various welding processes under American Welding Society (AWS) standards.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WELD 50A	Introduction to Welding	3.0
WELD 57A	Welding Fabrication using Ferrous Metals	3.0
WELD 57B	Welding Fabrication using Non-Ferrous Metals	3.0
WELD 56	Blueprint Reading (Metal Trades)	3.0
	Total Units Required	12.0

STEM – Science, Technology, Engineering, Math

Associate of Science Degree for Transfer, Chemistry

The Chemistry Associate Degree for Transfer prepares students to think like scientists, using concept-based knowledge in chemistry.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Know the general principles of chemistry. Compare and contrast physical and chemical reactivity from molecular structure. Perform standard stoichiometric, solution, kinetic and thermodynamic calculations.
- Know the common reactions of elements and compounds. Know the common methods of functional group interconversions.
- Practice and demonstrate accurate quantitative measurements, analyze, and interpret experimental results, and draw reasonable conclusions.
- Perform chemical reactions, followed by separation, purification, and identification using modern chemical and spectroscopic analysis.

Subject	Course Title	Units
<i>Required Core Courses</i>		
CHEM 2A	General Chemistry I	5.0
CHEM 2B	General Chemistry II	5.0
CHEM 3A	Organic Chemistry I	4.0
CHEM 3B	Organic Chemistry II	4.0
PHYS 2A	General Physics I: Mechanics of Solids and Fluids	4.0
PHYS 2B	General Physics II: Electricity and Magnetism	4.0
MATH 4A	Calculus I	4.0
MATH 4B	Calculus II	4.0
	Major Units Required	34.0
	CSU GE Breadth or IGETC General Education Coursework	37.0-39.0
	Total Units Required	60.0

CORRECTIONS - PROGRAMS OF STUDY

Corrections notated below in green and underlined>.

STEM – Science, Technology, Engineering, Math

Associate of Arts Degree for Transfer, Kinesiology

The Associate in Science in Kinesiology for Transfer (AA-T), also called the Kinesiology AA-T Degree, prepares students to transfer to CSU campuses that offer a bachelor's degree in Kinesiology. Ed Code Section 66746-66749 states students earning the Kinesiology AA-T degree will be granted priority for admission as a Kinesiology major to a local CSU, as determined by the CSU campus to which the student applies. Students with a degree in Kinesiology may pursue careers in a variety of health science professions including physical training, physical therapy, fitness instruction, coaching, and athletics. The completion of this curriculum will demonstrate commitment to the field and provide comprehensive preparation for upper-division work. The Kinesiology AA-T Degree requires a total of 22-25 units in required courses and restricted Electives Required from the categories below as indicated.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Demonstrate an understanding of the scientific, functional, and mechanical processes of the human body.
- Demonstrate competencies as it relates to psychomotor, cognitive, and affective domains relating to kinesiology.
- Examine and evaluate physical activities and their relationships to wellness and fitness.

Subject	Course Title	Units
<i>Required Core Courses</i>		
KINL 1	Introduction to Kinesiology (formerly PELC 2)	3.0
BIOL 4	Human Anatomy	5.0
BIOL 5	Human Physiology	5.0
Subtotal		13.0
Movement Based Courses: Choose one course from three of the following Areas		
Area 2: Combatives		
KINA 30A	Beginning Self-Defense and Karate	1.0
KINA 31A	Beginning Cardio Kickboxing	1.0
Subtotal		1.0
Area 4: Fitness		
KINA 3A	Circuit Weight Training-Machines Only (formerly PEAC 3)	1.0
KINA 4A	Basic Weight Training and Conditioning (formerly PEAC 4)	1.0
KINA 5A	Cardiovascular Lab (formerly PEAC 29)	1.0
KINA 6A	Fitness Walking, Jogging and Running	1.0
Subtotal		1.0
Area 5: Individual Sports		
KINA 21A	Beginning Tennis	1.0
KINA 22A	Beginning Badminton (formerly PEAC 33)	1.0
KINA 23A	Beginning Golf	1.0
Subtotal		1.0
Area 6: Team Sports		
KINA 16A	Beginning Volleyball (formerly PEAC 11)	1.0
KINA 17A	Beginning Basketball	1.0

KINA 18A	Beginning Softball	1.0
	Subtotal	1.0
List A: Choose any 2 courses from the following		
CHEM 2A	General Chemistry I	5.0
KINL 23	First Aid and Safety	3.0
MATH 2	Introduction to Statistics	4.0
PHYS 2A	General Physics I: Mechanics of Solids and Fluids	4.0
	Subtotal	7.0-9.0
	Units Required in Major	23.0-25.0
	CSU GE Breadth or IGETC General Education Coursework	37.0-39.0
	Total Units Required	60.0

Associate of Science Degree for Transfer, Environmental Science

The Associate in Science in Environmental Science for Transfer Degree, prepares students to think like scientists, using concept-based knowledge in multiple scientific fields. The professors of BCC are dedicated to teaching environmental science in an interdisciplinary manner that prepares future scientists to discover and convey new information. As a discipline, environmental science integrates fundamental science ideas and unifying concepts with the scientific method to expand our understanding of the natural world. We endeavor to provide an academic program that supports student preparation and integration of scientific ideas.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Describe Earths' environmental systems including conditions, processes, and functions of the atmosphere, hydrosphere, lithosphere, and biosphere.
- Compare perspectives of the social sciences and humanities to critically understand human perceptions of the environment.
- Integrate scientific and humanistic approaches to address complex environmental issues.
- Apply diverse methods to collect, analyze, and communicate information about the environment.

Subject	Course Title	Units
<i>Required Core Courses</i>		
BIOL 1	Environmental Biology	3.0
BIOL 20A	Cell and Molecular Biology	4.0
CHEM 2A	General Chemistry I	5.0
CHEM 2B	General Chemistry II	5.0
ECON 2	Microeconomics	3.0
GEOL 1L	Physical Geology	4.0
MATH 2	Introduction to Statistics	4.0
MATH 4A	Calculus I	4.0
PHYS 2A	General Physics I: Mechanics of Solids and Fluids	4.0
PHYS 2B	General Physics II: Electricity and Magnetism	4.0
	Major Units Required	40.0
	CSU GE Breadth or IGETC General Education Coursework	37.0-39.0
	Total Units Required	60.0

Associate of Science Degree, Natural Science and Math

This degree encompasses a broad exposure to the major science disciplines of biology, chemistry, the earth sciences, and mathematics. The multidisciplinary and broad education in the areas of science and math obtained within this degree is a plus for applicants to programs in conservation, teaching, nursing, dentistry, veterinary, allied health, and pharmacy.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Demonstrate knowledge of natural phenomena and recognize the processes that explain them.
- Demonstrate knowledge of scientific methodologies with solving a problem.
- Apply formal systems of reasoning, critical thinking, and mathematical methods in solving or analyzing problems.

Subject	Course Title	Units
Math: Choose one course from the following		
MATH 1	Trigonometry	4.0
MATH 2	Introduction to Statistics	4.0
MATH 3	College Algebra	4.0
MATH 4A	Calculus I	4.0
MATH 4B	Calculus II	4.0
MATH 4C	Calculus III	4.0
MATH 55	Intermediate Algebra	4.0
MATH 6	Mathematical Concepts for Elementary Teachers	3.0
Subtotal		3.0-4.0
<i>Choose any one course from both Life Science and Physical and Earth Science. At least one course must be a (L)ab course.</i>		
Life Science: Choose one course from the following		
BIOL 1	Environmental Biology	3.0
BIOL 2(L)	Concepts in Biology	4.0
BIOL 4(L)	Human Anatomy	5.0
BIOL 5(L)	Human Physiology	5.0
BIOL 8(L)	Microbiology	5.0
BIOL 20A(L)	Cell and Molecular Biology	4.0
BIOL 20B(L)	Evolution and Organismal Biology	4.0
OCEA 1	Introduction to Marine Environment	3.0
Subtotal		3.0-5.0
Physical and Earth Science: Choose one course from the following		
ASTR 1	Introduction to Astronomy	3.0
CHEM 1(L)	Introductory Chemistry	4.0
CHEM 2A	General Chemistry I	5.0
CHEM 2B	General Chemistry II	5.0
CHEM 10	Survey of Chemistry and Physics	4.0
GEOL 1L	Physical Geology	4.0
GEOL 4	The Age of the Dinosaurs	3.0
OCEA 1	Introduction to the Marine Environment	3.0
PHSC 2	Introduction to Earth Science	4.0
PHYS 2A	General Physics I: Mechanics of Solids and Fluids	4.0
PHYS 2B	General Physics II: Electricity and Magnetism	4.0
Subtotal		3.0-5.0
<i>Choose any 3 additional courses from Math, Life Science or Physical and Earth Science for a total of <u>6 courses and 20 units</u></i>		
Subtotal		6.0-11.0
Major Units Required		20.0-23.0
General Education Coursework		20.0-39.0

	Electives Required	0.0-20.0
	Total Units Required	60.0

Social Science

Associate of **Arts** Degree for Transfer, Elementary Teacher Education

The Associate in Arts in Elementary Teacher Education for Transfer Degree offers students a breadth of study across disciplines. The courses are designed to inspire and prepare students, future educators, to teach in urban classrooms, to learn essential professional knowledge including professional teaching standards and ethics, to conduct fieldwork in order to learn how to meet the diverse needs of students and roles of the teacher, and to gain a broad foundation of knowledge across the disciplines that will be necessary to teach elementary students. Students also develop critical reading, writing, and thinking skills that are pertinent to working in the era of a standards-based classroom instruction.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Demonstrate introductory subject matter competency and knowledge of integrated studies found in liberal studies.
- Summarize practical knowledge of the teaching profession after completing 45 hours of fieldwork in a public elementary classroom.

Subject	Course Title	Units
<i>Required Core Courses</i>		
EDUC 1	Introduction to Teaching and Learning in K-12 Education	3.0
CHLD 4	Child Growth and Development (formerly offered as PSYC 4)	3.0
BIOL 2	Concepts in Biology	4.0
CHEM 10	Survey of Chemistry and Physics	4.0
PHSC 2	Introduction to Earth Science	4.0
MATH 6	Mathematical Concepts for Elementary Teachers	3.0
COMM 1	Elements of Public Speaking (formerly SPCH 1)	3.0
ENGL 1A	English Composition and Reading	4.0
ENGL 1B	Introduction to Literature	3.0
GEOG 3	World Regional Geography	3.0
HIST 8A	Survey of World Civilizations I: From the Dawn of Humankind to the 1300s	3.0
HIST 2A	Survey of US History I: The Colonial Period through Reconstruction	3.0
POLI 1	American Political Institutions	3.0
Subtotal		43.0
List A: Choose one course from the following		
ENGL 1C	Critical Thinking and Composition	4.0
Subtotal		4.0
List B: Choose one course from the following		
MUSI 2	Music Appreciation – Classical	3.0
TART 3	Theatre Appreciation	3.0
Subtotal		3.0
Major Units Required		50.0
CSU GE Breadth or IGETC General Education Coursework		37.0-39.0
Total Units Required		60.0

Associate of **Arts** Degree for Transfer, History

The curriculum in the History program is designed to provide the transfer student the opportunity to achieve an Associate for Transfer (AA-T) degree in History by providing the necessary breadth in the field, an introduction to the methods used, and the ability to complete both major preparatory coursework along with courses required for general education.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Demonstrate a thorough knowledge of the roots and early history of world civilizations, including political, social, economic, scientific, technological, and artistic changes and achievements.
- Distinguish between primary and secondary historical sources and use them to compose a well-researched argument.
- Effectively conduct research and write a coherent historical essay or research paper that articulates a clear argument, effectively uses and interprets multiple forms of evidence, identifies arguments in secondary historical texts, and uses appropriate citations.

Subject	Course Title	Units
<i>Required Core Courses</i>		
HIST 2A	Survey of US History I: The Colonial Period through Reconstruction	3.0
HIST 2B	Survey of US History II: From the End of the Reconstruction to the 21st Century	3.0
Subtotal		6.0
List A, Area 1: Choose one course from the following		
HIST 1A	Survey of Western Civilization: The Ancient Near East to 1648	3.0
HIST 8A	Survey of World Civilizations I: From the Dawn of Humankind to the 1300s	3.0
Subtotal		3.0
List A, Area 2: Choose one course from the following		
HIST 1B	Survey of Western Civilization II: The Renaissance to the Present Day	3.0
HIST 8B	Survey of World Civilizations II: From the 1300s to the Present	3.0
Subtotal		3.0
List B, Area 1 Diversity: choose one course from the following not previously used in List A		
HIST 1A	Survey of Western Civilization: The Ancient Near East to 1648	3.0
HIST 1B	Survey of Western Civilization II: The Renaissance to the Present Day	3.0
HIST 8A	Survey of World Civilizations I: From the Dawn of Humankind to the 1300s	3.0
HIST 8B	Survey of World Civilizations II: From the 1300s to the Present	3.0
Subtotal		3.0
List B, Area 2: choose one course from the following or any one course not previously used from List A		
HIST 4	The US in the 20th Century	3.0
HIST 5	History of California	3.0
POLI 1	American Political Institutions	3.0
POLI 2	Comparative Government	3.0
PSYC 1	Introduction to Psychology	3.0
SOCI 1	Introduction to Sociology	3.0
Subtotal		3.0
Major Units Required		18.0
CSU GE Breadth or IGETC General Education Coursework		37.0-39.0
Transferable Electives Required		3.0-5.0
Total Units Required		60.0

Associate of **Arts** Degree for Transfer, Psychology

A diverse field of academic study and practical application, psychology deals with personal behaviors, such as a single individual's mental life and personal development, abstract and philosophical issues such as the nature of knowledge, and how that knowledge depends on individual and cultural experience and biological variables. Students investigate how humans adapt to everyday problems, and how maladaptive behavior creates personal, interpersonal, cultural, and species difficulties, and how these difficulties can be avoided or removed.

Subject	Course Title	Units
<i>Required Core Courses</i>		
PSYC 1	Introduction to Psychology	3.0
PSYC 12	Research in Social Sciences	3.0
MATH 2	Introduction to Statistics	4.0
Subtotal		10.0
<i>List A: Choose one course from the following</i>		
BIOL 2	Concepts in Biology	4.0
Subtotal		4.0
<i>List B: Choose one course from the following</i>		
PSYC 11	Human Sexuality	3.0
PSYC 2	Developmental Psychology	3.0
SOCI 1	Introduction to Sociology	3.0
Subtotal		3.0
<i>List C: Choose one course from the following or any course not previously used in List A or B</i>		
PSYC 14	Introduction to Drug and Alcohol Studies (formerly also offered as SOCI 14)	3.0
PSYC 15	Introduction to Guidance and Counseling (formerly also offered as SOCI 15)	3.0
Subtotal		3.0
Major Units Required		20.0
CSU GE Breadth or IGETC General Education Coursework		37.0-39.0
Transferable Electives Required		1.0-3.0
Total Units Required		60.0

Associate of **Arts** Degree for Transfer, Sociology

Sociology is the study of human social behavior, groups, and how environments influence behavior. Sociologists focus on the origins, organizations, institutions, and developments of society. Students take courses to prepare for a sociology major or to fulfill general education requirements. In addition to helping students meet general education and core requirements for transfer, sociology courses are also designed to help students understand the structure, processes, and functions of society. Further, the program seeks to foster critical and systemic thinking and increase self-knowledge and awareness of the diversity of the human condition. Career options include social work, human services, law enforcement, legal professions, business, and teaching.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Demonstrate knowledge of the three major theoretical perspectives (functionalist perspective, the conflict perspective, and the interactionist perspective) as evidenced by applying a theoretical framework to one of the social topics discussed in course, i.e. culture, gender, race, deviance, and family.
- Describe the advantages and disadvantages of various sociological methods.

Subject	Course Title	Units
<i>Required Core Courses</i>		
SOCI 1	Introduction to Sociology	3.0
Subtotal		3.0

Required Core Courses: <i>Choose any 2 courses from the following</i>		
SOCI 2	American Social Problems	3.0
SOCI 12	Research in Social Sciences	3.0
MATH 2	Introduction to Statistics	4.0
Subtotal		6.0-7.0
List A: <i>Choose any 2 courses from the following or any course not previously used in Required Core</i>		
SOCI 3	Sociology of Modern Family Life (formerly also offered as PSYC 33)	3.0
SOCI 7	Introduction to Race and Ethnicity	3.0
SOCI 9	Sociology of Gender	3.0
SOCI 10	Introduction to Criminology	3.0
Subtotal		6.0
List B: <i>Choose one course not previously used in Required Core or List A</i>		
Subtotal		3.0
Major Units Required		18.0-19.0
CSU GE Breadth or IGETC General Education Coursework		37.0-39.0
<u>Transferable Electives Required</u>		2.0-5.0
Total Units Required		60.0

Business and Industry

Associate of Science Degree, Industrial Maintenance Electrical and Instrumentation

This degree prepares students for entry-level positions in industry and service occupations requiring skills in Industrial Maintenance Electrical and Instrumentation. This program is based on nationally recognized industry standards.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Apply the skills necessary to implement electrical circuits following the National Electrical Code (NEC) guidelines.
- Recognize the required materials of the trade and have the ability to install them properly.
- Have the skills to potentially receive industry-recognized certifications in a variety of crafts.

Subject	Course Title	Units
<i>Required Core Courses</i>		
BCTT 54	Safety Orientation	1.0
ELCT 70A	Electrical Safety and Hand Bending	1.0
ELCT 70B	Fasteners and Electrical Theory	1.0
ELCT 70C	Electrical Test Equipment, National Electrical Code (NEC)	2.0
ELCT 70D	Introduction to Electrical Blueprints	1.0
ELCT 70E	Electrical Level 1 Performance Testing	1.0
IMEI 80A	Alternating Current (Formerly IMMT 80A)	2.0
IMEI 80B	Electrical and Instrumentation Test Equipment (formerly IMMT 80B)	1.0
IMEI 80C	Flow, Pressure, Level and Temperature (formerly IMMT 80C)	1.0
IMEI 80D	Process Quantitative Skills (Formerly IMMT 80D)	2.0
IMEI 80E	Process Tubing Installation and Testing (Formerly IMMT 80E)	2.0
IMEI 80F	Introduction to Instrument Drawings and Documents (Formerly IMMT 80F)	2.0
WELD 50A	Introduction to Welding	3.0
Major Units Required		20.0
General Education Coursework		20.0-39.0
Electives Required		1.0-20.0
Total Units Required		60.0

Certificate of Achievement, Industrial Maintenance Mechanic Technology, Level 3

This certificate prepares students for entry level positions in industry and service occupations requiring skills in Industrial Maintenance Mechanics. This program is based on nationally recognized industry standards.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Demonstrate use of tools and equipment commonly used in the trade.
- Demonstrate the ability to use scribing and quantitative skills pertaining to a basic layout on the jobsite.
- Work with various types of piping, valves and perform basic hydrostatic and pneumatic testing on the jobsite.

Subject	Course Title	Units
<i>Required Core Courses</i>		
IMMT 60	Fundamentals of Industrial Maintenance Mechanics	1.0
IMMT 62	Oxyfuel Cutting	1.0
IMMT 64	Craft-Related Quantitative Skills	1.0
IMMT 66	Construction Drawings	1.0
IMMT 68	Gaskets, Packing, Pumps, Drivers, Valves and Lubrication	1.5
IMMT 69	Material Handling, Hand Rigging, Mobile and Support Equipment	1.5
IMMT 70	Basic Layout	1.0
IMMT 71	Introduction to Piping	1.0
IMMT 73	Identify, Install, and Maintain Valves	1.0
IMMT 74	Introduction to Bearings	1.0
IMMT 75	Introduction to Steam Systems	2.0
IMMT 76	Distillation Towers and Vessels	1.0
IMMT 77	Heaters, Furnaces, Heat Exchanges, Cooling	2.0
	Total Units Required	16.0

Certificate of Career Preparation, Industrial Maintenance Mechanic Technology, Level 1

This certificate offers students the skills to begin a pathway to either the Industrial Maintenance Electrical & Instrumentation or Industrial Maintenance Mechanic Technology Certificate of Achievement or Associate of Science Degree.

Program Level Outcomes

Upon successful completion, the student will be able to:

- Interpret construction drawings and effectively use craft related quantitative skills in an industrial setting.
- Identify, troubleshoot, and maintain a variety of gaskets, packets, pumps, drivers, valves, and lubrication used in the industry.
- Safely demonstrate the use of tools and equipment commonly used in the trade.

Subject	Course Title	Units
<i>Required Core Courses</i>		
IMMT 60	Fundamentals of Industrial Maintenance Mechanics	1.0
IMMT 62	Oxyfuel Cutting	1.0
IMMT 64	Craft Related Quantitative Skills	1.0
IMMT 66	Construction Drawings	1.0
IMMT 68	Diesel Steering, Suspension, and Brakes	1.5
IMMT 69	Material, Handling, Hand Rigging, Mobile & Support Equipment	1.5
	Total Units Required	7.0

Associate of Science Degree, Management

This degree prepares students with entry-level knowledge in management concepts and procedures. Student will gain understanding of management terms, functional applications, and communication skills.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Apply a comprehensive understanding of 21st century workforce skills as they relate to success in the modern business environment.
- Collaborate successfully and develop successful group or team relationships that support organizational goals in both the public and private sectors.
- Implement emotional intelligence/soft skills for managing themselves and others in the work environment.

Subject	Course Title	Units
<i>Required Core Courses</i>		
MGMT 1	Introduction to Management	3.0
MGMT 3	Human Resource Management	3.0
MGMT 5	Organization and Management	3.0
CBIS 13	Management Information Systems	3.0
	Subtotal	12.0
<i>Choose any 2 courses from the following</i>		
ACCT 1	Financial Accounting	3.0
ACCT 4	Managerial Accounting	3.0
BADM 2	Business Law II	3.0
BADM 19	Marketing	3.0
CBIS 40	Spreadsheet Applications	4.0
CBIS 41	Beginning Word Processing	4.0
CBIS 42	Advanced Word Processing	4.0
CBIS 43	Presentation Applications and Media	3.0
ENTR 1	Entrepreneurship (formerly BADM 3)	3.0
	Subtotal	6.0-8.0
	Major Units Required	18.0-20.0
	General Education Coursework	20.0-39.0
	Electives Required	1.0-22.0
	Total Units Required	60.0

Associate of Science Degree, Warehousing and Logistics

The Associate of Science Degree in Warehousing & Logistics is designed for people working in the fields of logistics and/or operations management with a desire to expand their knowledge of the industry. The degree is also applicable for persons with an interest to enter the industry with knowledge that will rapidly lead to expanding responsibilities.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Develop strategic understanding of logistics and supply chain management and be able to take into account the relationships between this discipline and other areas of business to make holistic judgements when analyzing business solutions.
- Demonstrate critical thinking skills, making the intellectual connection between quantitative and qualitative tools, theories and context to properly and effectively solve problems and make decisions, as well as develop new and innovative business opportunities to strategically navigate the complex demands of the current and dynamic national and international business environments.

- Read, interpret, comprehend and apply the theories of warehousing and logistics and how they relate to the supply chain management.
- Ability to address logistical supply chain management (LCSM) problems in a holistic approach by taking into account general management concepts, human resources, environmental concerns, and qualify, technological and economic aspects.

Subject	Course Title	Units
<i>Required Core Courses</i>		
WARE 51	Introduction to Operations and Supply Chain Management	3.0
WARE 52	Introduction to Warehousing and Distribution	3.0
WARE 54	Material Handling	3.0
WARE 55	Principles of Logistics	3.0
WARE 59	Introduction to Purchasing	3.0
CBIS 40	Spreadsheet Applications	4.0
	Major Units Required	19.0
	General Education Coursework	20.0-39.0
	Electives Required	2.0-21.0
	Total Units Required	60.0

Humanities

Associate of [Arts](#) Degree for Transfer, Studio Arts

This program offers academic and career preparation that provides students with the skills and knowledge needed to transfer to a four-year college or to establish a career as a studio artist—or to achieve both opportunities. In addition to preparing students to enter the professions or acquire jobs that require a bachelor's degree or higher, the program offers courses of study that enhance the creativity of students who choose different careers.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Employ technical skills, creativity, critical thinking, and conceptual problem-solving in completing independent projects in the Visual Arts, Design, and Studio Arts.
- Demonstrate expert and safe use of a variety of equipment, materials, software, and tools, when performing, writing about, and/or creating works of art.
- Participate in a variety of visual arts, demonstrate accomplishment of skills, techniques and processes involved in their creation through a portfolio of work.

Subject	Course Title	Units
<i>Required Core Courses</i>		
ARTS 2	Art History and Appreciation: Early Renaissance to Post Modern	3.0
ARTS 3	Two-Dimensional Design	3.0
ARTS 5	Three-Dimensional Design	3.0
ARTS 7	Drawing and Composition	3.0
	Subtotal	12.0
List A: Choose one course from the following		
ARTS 1	Art History and Appreciation: Prehistory Through the Middle Ages	3.0
ARTS 13A	Asian Art History: Early Cultures	3.0
	Subtotal	3.0
List B: Choose any 3 courses from the following		
ARTS 10A	Beginning Painting (formerly ARTS 10)	3.0
ARTS 18A	Beginning Ceramics	3.0
ARTS 19	Beginning Sculpture	3.0
PHOT 1C	Introduction to Digital Photography	4.0

	Subtotal	9.0-10.0
	Major Units Required	24.0-25.0
	CSU GE Breadth or IGETC General Education Coursework	37.0-39.0
	Total Units Required	60.0

Associate of Arts Degree for Transfer, Communication Studies

The Associates in Arts in Communication Studies for Transfer Degree focuses on concepts such as public communication, argument, rhetoric, and theories of human communication. The core courses are designed to provide students with a background and foundation to explore any of the various fields in communication in depth. The curriculum will provide students with knowledge and understanding of how to apply effective communication in their daily lives. The program is designed for students who intend on transferring to a four-year institution to pursue a bachelor's degree in preparation for a career in government, social service, industry, and/or further education in areas such as teaching, announcing, public relations, and law.

Program Learning Outcomes

Upon successful completion, the student will be able to:

- Demonstrate an ability of effective communication in its many forms, as well as develop research skills and understand and critically analyze the theories as they relate to various contexts.
- Take foundational courses that will allow them to understand and apply concepts in communication and that will support transfer to an institution that provides upper level courses to ultimately receive their Bachelors, as well as help prepare them for careers in the field of communication.

Subject	Course Title	Units
<i>Required Core Courses</i>		
COMM 1	Elements of Public Speaking (formerly SPCH 1)	3.0
	Subtotal	3.0
List A: Choose 2 courses from the following		
COMM 3	Interpersonal Communications (formerly SPCH 3)	3.0
COMM 4	Argumentation and Debate	3.0
	Subtotal	6.0
List B: Choose 2 courses from the following		
COMM 2	Oral Interpretation of Literature	3.0
COMM 5	Introduction to Communication Theory	3.0
COMM 6	Intercultural Communication	3.0
	Subtotal	6.0
List C: Choose one course from the following or any course not previously used from List A or B		
ANTH 1	Introduction to Cultural Anthropology	3.0
PSYC 1	Introduction to Psychology	3.0
SOCI 1	Introduction to Sociology	3.0
	Subtotal	3.0
	Major Units Required	18.0
	CSU GE Breadth or IGETC General Education Coursework	37.0-39.0
	Transferable Electives Required	3.0-5.0
	Total Units Required	60.0

CORRECTIONS – DEGREE REQUIREMENTS

Corrections notated below in green and underlined.

The following requirements apply to all Associate of Art or Associate of Science degrees offered by Barstow Community College:

Unit Requirements

A minimum of 60 semester units to include 18 units (Humanities/Social Science/Physical Education) or 18 units (Natural Science/Math) in the chosen program of study, specified units in general education, competency requirements, and any remaining units in elective course work.

Competency Requirements

Must complete one course from each of the following areas with a grade of "C" or better.

- Written Communication: ENGL 1A
- Oral Communication: COMM 1 (formerly SPCH 1) or COMM 3 (formerly SPCH 3)
- Mathematics: MATH 55, 1, 2, 3, 4A, 4B, 4C, 5, 6
- ~~Humanities: Any one class from HUMA~~

History

HIST 2A

3 Unit

Survey of US History I: The Colonial Period through Reconstruction

Course Hours: 54 hours lecture

Students examine the development of the United States from the European colonization of North America and the United States through the Reconstruction Period. This course includes an in-depth study of the U.S. Constitution. There is a focus on major historical personages and important historical problems.

Grading: Audit, Normal, Pass/No Pass

Repeatability: Course not repeatable

Credit: Degree Applicable

C-ID: HIST 130

CSU: CSU GE Area D

IGETC: IGETC Area 4

Modality: Traditional, Online, Interactive Video/Audio

Philosophy

PHIL 7

3 Unit

Ancient and Medieval Philosophy

Course Hours: 54 hours lecture

This course offers a chronological examination of Western philosophical thought developed between 600 B.C.E. and 1300 C.E., including the principle ancient and medieval philosophies of this time period. Topics include Greek and Roman thought, and the rise and development of Christianity. Recommended Preparation: ENGL 1A.

Grading: Audit, Normal, Pass/No Pass

Repeatability: Course not repeatable

Credit: Degree Applicable

C-ID: PHIL 130

CSU: CSU GE Area C2

IGETC: IGETC Area 3B

Modality: Traditional, Online, Interactive Video/Audio
