

Barstow Community College Catalog Addendum
Part 2
2016 – 2017



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Certificate Programs

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Certificate Programs

Industrial Maintenance Mechanical Technology

This course of study prepares students for entry-level positions in industry and service occupations requiring skills in Industrial Maintenance Mechanics. This program is based on a national recognized industry standards.

Program Outcomes:

Upon completion of the Industrial Maintenance Mechanical Technology Certificate Program, the student will be able to do the following:

1. Students will demonstrate use of tools and equipment commonly used in the trade.
2. Students will demonstrate the ability to use scribing and quantitative skills pertaining to a basic layout on a jobsite.
3. Students will be able to work with various types of piping, valves and perform basic hydrostatic and pneumatic testing on the jobsite.

Required Core Courses (22Units)		Units
IMMT 60	Fundamental of Industrial Maintenance Mechanics	1
IMMT 62	Oxyfuel Cutting	1
IMMT 64	Craft-Related Quantitative Skills	1
IMMT 66	Construction Drawings	1
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
IMMT 71	Introduction to Piping	1
IMMT 73	Identify, Install, and Maintain Valves	1
IMMT 74	Introduction to Bearings	1
IMMT 75	Introduction to Steam Systems	2
IMMT 76	Distillation Towers and Vessels	1
IMMT 77	Heaters, Furnaces, Heat Exchangers, Cooling Towers, and Fin Fans	2
ELCT 70A	Electrical Safety and Handbending	1
ELCT 70B	Fasteners and Electrical Theory	1
ELCT 70C	Electrical Test Equipment, NEC, Raceways, Boxes, Fittings and Conductors	2
ELCT 70D	Introduction to Electrical Blueprints and Residential and Commercial Writing	1
ELCT 70E	Electrical Level One Performance Testing	1

AND

ENGL 50 or eligible for ENGL 1A	3
MATH 101 or BADM 51 or Eligible for MATH 50	3
Any one or more units in CBIS	1
Required Major Total:	23
Completion of Local Degree Requirements	7
Total Units required	30

Certificate of Career Preparation Level 1

IMMT/IME&I

(Low Unit)

This is an entry level certificate that offers the students skills to begin a pathway to either the IMMT or IME&I certificate of achievement or Associate Degrees.

Program outcomes

Upon Successful completion of the IMMT/IME&I Certificate of Career Prep Level 1, the student will be able to do the following:

1. Students will have the ability to interpret construction drawings and effectively use craft related quantitative skills in an industrial setting.
2. Students will identify, troubleshoot, and maintain a variety of gaskets, packets, pumps, drivers, valves, and lubrication used in the industry.
3. Student will safely demonstrate the use of tools and equipment commonly used in the trade.

Required courses (11 Units)		Units
IMMT 60	Fundamentals of Industrial Maintenance Mechanics	1
IMMT 62	Oxyfuel Cutting	1
IMMT 64	Crafted-Related Quantitative Skills	1
IMMT 66	Construction Drawings	1
IMMT 68	Gaskets, Packing, Pumps, Drivers, Valves, and Lubrication	1.5
IMMT 69	Material Handling, Hand Rigging, Mobile and Support Equipment	1.5
ELCT 70A	Electrical Safety and Handbending	1
ELCT 70B	Fasteners and Electrical Theory	1
ELCT 70C	Electrical Test Equipment, NEC, Raceways, Boxes, Fittings and Conductors	2
Total Units Required		11

Certificate of Career Preparation Level II Industrial Maintenance Mechanical Technology (Low Unit)

Continues and expands on the concepts learned in level 1 and introduces new concepts expanding the students' knowledge and skills in the Industrial Maintenance Mechanic Technology Pathway.

Program Outcomes

1. Students will have an understanding of piping, bearings, steam systems, distillation towers and vessels, heaters, furnaces, heat exchangers, cooling towers, and fin fans.
2. Students will have the ability to identify, install, and maintain valves.
3. Students will understand basic layout concepts.

Required Courses (10 units)		Units
ELCT 70D	Introduction to Electrical Blueprints and Residential and Commercial Writing	1
ELCT 70E	Electrical Level One Performance Testing	1
IMMT 70	Basic Layout	1
IMMT 71	Introduction to Piping	1
IMMT 73	Identify, Install, and Maintain Valves	1
IMMT 74	Introduction to Bearings	1
IMMT 75	Introduction to Steam System	2
IMMT 76	Distillations Towers and Vessels	1
IMMT 77	Heaters, Furnaces, Heat Exchangers, Cooling Towers, and Fin Fans	1
Total Units Required		10

Certificate of Career Preparation Level II

Industrial Maintenance Electrical and Instrumentation (Low Unit)

Continues to expands on concepts learned in level 1 and introduces new concepts expanding the students' knowledge and skills in the Industrial Maintenance Electrical and Instrumentation pathway.

Program Outcomes

Upon successful completion of IME&I Certificate of Career Prep Level II, the student will be able to do the following:

1. Students will learn the skills necessary to safely work with electrical installation following the National Electrical Code (NEC) guidelines.
2. Students will demonstrate the ability to work with alternating current and use the test instruments of the trade.
3. Students will be able to calculate the electrical parameters; in addition, they will be able to understand and use technical drawings and documents.

Required Courses (11 Units)		Units
ELCT 70D	Introduction of Electrical Blueprints and Residential and Commercial Writing	1
ELCT 70E	Electrical Level One Performance Testing	1
IMMT 80A	Alternating Current	2
IMMT 80B	E & I Test Equipment	2
IMMT 80C	Flow, Pressure, Level, & Temperature	1
IMMT 80D	Process Quantative Skills	2
IMMT 80E	Tubing Installation & Testing	1
IMMT 80F	Introduction to Instrument Drawings & Documents	1
Total Units Required		11

Certificate of Career Preparation Level I

Construction Skills

(Low Unit)

Upon successful completion of the Certificate of Career Preparation Constructions Skills Program, the student will be able to do the following:

1. Understand Basic Construction Safety and Rigging practices used in the construction industry and demonstrate the concepts in a safe and effective way.
2. Decide the correct tools to use on a given construction project and demonstrate the ability to safely and effectively use them.
3. Ability to understand and interpret blueprints and have the ability to effectively use construction quantitative skills related to the construction industry.

Required Courses (7.5 units)		Units
BCTT 50A	Basic Construction Safety and Rigging	2
BCTT 50B	Introduction to Hand and Power Tools	1
BCTT 50C	Introduction to Blueprint Reading	1
BCTT 50E	Construction Technology Core Performance Testing	.5
BCTT51	Construction Quantitative Skills	3
Total Units Required		7.5