

Barstow Community College Catalog Addendum  
2016 – 2017



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# COURSE OFFERINGS

**CHEM 1**      **Introductory Chemistry**  
**Units**        **4**  
**Lecture**      **3 hours**  
**Lab**            **3 hours**  
**Prerequisite** **MATH 50 with a minimum grade of "C".**

A survey of the principles of chemistry, including general, organic and biochemistry, primarily for pre-nursing, liberal arts, and home economics students. Topics covered: Atomic structure, chemical bonding, stoichiometry, periodic table, trends of elements and periodic table, states of matter, oxidation numbers and redox equations, electrochemistry, solutions, equilibrium, acids and bases, nuclear chemistry, organic nomenclature, basic organic reactions and biochemistry. Grade Options: (A-F), P/NP. Degree applicable credit. Area of Emphasis and Gen Ed Applicable. UC/CSU

**CHLD 11A**    **Principles and Practices in Early Childhood Education**  
**Units**        **3**  
**Lecture**      **3 hours**  
**Also available online**

An examination of the underlying theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for all children. This course includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and professional identity. Grade Option: (A-F). P/NP. Degree Applicable Credit. Major Applicable. CSU

**ENGL 1A**      **English Composition and Reading**  
**Units**        **3**  
**Lecture**      **3 hours**  
**Prerequisites** **English 50 with a "C" grade or better or assessment recommendation for English 1A. ENGL 50X**  
**Also available Online**

English composition and reading using descriptive, narrative, expository, argumentative, Essay and research techniques. Grades: Option (A-F), P/NP. Degree Applicable Credit. Gen Ed Applicable. UC/CSU

**ENGL 192      Bridge to College Success – English Level 2**

**Units            0**

**Lecture        1 hour**

**Prerequisite   Assessment into ENGL 102**

Course is non-credit for those who completed the assessment test and who scored below Transfer level. This course is a refresher course only. Students will be refreshed on basic English process: Grammar, Basic Paragraphing, Reading, Writing, and practicing Critical Thinking. Aimed at students who assessed into ENGL 102. Instructor will make final Determination on student level upon completion of refresher course. Grade Option: Non – Credit.

**ENGL 193      Bridge to College Success – English Level 3**

**Units            0**

**Lecture        1 hour**

**Recommend   Assessment into ENGL 50**

Course is non-credit for those who completed the assessment test and who scored below transfer level. This course is a refresher course only. Students will be refreshed on basic English processes: Reading, Writing, and Critical thinking. Aimed at students who assessed into ENGL 50. Instructor will make final determination on student’s level upon completion of refresher course. Grade Option- Non-Credit.

**ENGL 194      Bridge to College Success – English Level 4**

**Units            0**

**Lecture        1 hour**

**Lab              .5 hour**

**Recommend   Assessment into ENGL 1A or high ENGL 50**

Course is non-credit for those who completed the assessment test and who scored at transfer level but for some reason may not have full skills to adapt to college English instruction. This course is a refresher course only. Students will be refreshed on necessary English processes: Reading, Writing, and Critical thinking. Aimed at students who assessed into ENGL 1A but barely, or have not been in English or school recently and would like a brief refresher and introduction to college presentation of English. Instructor will make additional recommendations on student’s level upon completion of refresher course. Grade Option. Non-credit.

**ELCT 70C      Electrical Test Equipment, NEC**

**Units            2**

**Lecture        2 hours**

**Also available Online**

This course is designed to operate and apply various types of electrical test equipment. National electrical Code (NEC), various types of raceways, boxes, fittings and conductors including installation procedures and NEC requirements. Grade Option: (A-F). Degree Applicable. Area of Emphasis.

**IMMT 68      Gaskets, Packing, Pumps, Drivers, Valves, and Lubrication**

**Units            1.5**

**Lecture        1.25 hours**

**Lab             .75 hour**

**Also available online**

Designed to give the student the fundamental skills in gaskets, packing, pumps, drivers, valves and lubrication used for industrial maintenance mechanics. Grade Options: (A-F), P/NP, Non-credit. Degree Applicable Credit. Area of Emphasis.

**MATH 191     Bridge to College Success – Math Level 1**

**Units            0**

**Lecture        1 hour**

**Lab             .5 hour**

**Recommend   Assessment into ACSK 150, 151, 152, or MATH 101**

Course in non-credit for those who completed the assessment test and who scored below transfer level. This course is a refresher course only. Students will be refreshed on basic math processes and problems. Aimed at students who assessed into ACSK 150, 151, 152, or MATH 101. Instructor will make final determination on student's level upon completion of refresher course. Grade Option: Non-Credit.

**MATH 192     Bridge to College Success – MATH Level 2**

**Units            0**

**Lecture        1 hour**

**Lab             .5 hour**

**Recommend   Assessment into MATH 50**

Course is non-credit for those who completed the assessment test and who scored below transfer level. This course is a refresher course only. Students will be refreshed on basic math processes and problems. Aimed at students who assessed into MATH 50. Instructor will make

final determination on student's level upon completion of refresher course. Grade Option: Non-Credit.

**MATH 193 Bridge to College Success – MATH Level 3**

**Units 0**

**Lecture 1 hour**

**Lab .5 hour**

**Recommend Assessment into MATH 55**

Course is non-credit for those who completed the assessment test and who scored below transfer level. This course is a refresher course only. Students will be refreshed on basic math processes and problems. Aimed at students who assessed into MATH 55. Instructor will make final determination on student's level upon completion of refresher course. Grade Option: Non-Credit.

**MATH 194 Bridge to College Success – MATH Level 4**

**Units 0**

**Lecture 1 hour**

**Lab .5 hour**

**Recommend Assessment into MATH 3 or higher MATH 55**

Course is a non-credit for those who completed the assessment test and who scored below transfer level. This course is a refresher course only. Students will be refreshed on basic math processes and problems MATH 3 but barely, or have not been in math or school recently and would like a brief refresher and introduction to college presentation of math. Instructor will make additional recommendation on student's level upon completion of refresher course. Grade Option: Non-credit.

**MUSI 8B Intermediate Chamber Singers**

**Units .5 - 1**

**Lecture 0**

**Lab 1.5 – 3 hours**

**Recommend Concurrent enrollment in MUSI 4 B, C, D (College Choir)**

Continued performance of choral music from various periods and styles of the choral repertoire by a select group of singers. Admission with the consent of the instructor based on an audition (student must contact instructor for audition appointment). Must be concurrently enrolled in College Choir (MUSI 4, B, C, D). Grade Option: (A-F). P/NP. Degree Applicable Credit. Area of emphasis and Gen Ed applicable. UC/CSU.

**MUSI 8C      Advanced Chamber Singers**  
**Units**        .5 – 1  
**Lecture**      0  
**Lab**            1.5 – 3 hours  
**Recommend** **Concurrent enrollment in MUSI4 B, C, D (College Choir)**

Continued performance of choral music from various periods and styles of the choral repertoire by a select group of singers. Admission with the consent of the instructor based on an audition (student must contact instructor for audition appointment). Must be concurrently enrolled in College Choir (MUSI 4, B, C, D). Grade Option: (A-F). P/NP. Degree Applicable Credit. Area of emphasis and Gen Ed applicable. UC/CSU

**MUSI 8D      Masters Chamber Singers**  
**Units**        .5 – 1  
**Lecture**      0  
**Lab**            1.5 – 3 hours  
**Recommend** **Concurrent enrollment in MUSI 4 B, C, D (College Choir)**

Performance of choral music from various periods and styles of the choral repertoire by a select group of singers at a mastery level. Admission with the consent of the instructor based on an audition (student must contact instructor for audition appointment). Must be concurrently enrolled in College Choir (MUSI 4 B, C, D). Grade Option: (A-F). P/NP. Degree Applicable Credit. Area of Emphasis and Gen Ed applicable. UC/CSU

**WARE 54      Material Handling**  
**Units**        3  
**Lecture**      3 hours

**Also available online and hybrid**

Study various applications of automated material handling systems in the warehousing and distribution industry. Applications studies explore the dynamics of inventory movement as it pertains to the functionality and infrastructure of mechanized warehousing and distribution facilities. Grade Options: (A-F). Degree Applicable credit. Area of Emphasis.

# Certificate Programs

## Industrial Maintenance Electrical and Instrumentation Certificate

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

### Program Outcomes:

Upon completion of the Industrial Maintenance Electrical & Instrumental Certificate Program, the student will be able to do the following.

1. Students will be able to apply the skills necessary to implement electrical circuits following the National Electrical Code (NEC) guidelines.
2. Students will knowledgeable about the required materials of the trade and have the ability to install them properly.
3. Students will have the skills necessary to potentially receive industry recognized certifications in a variety of crafts.

<b>Required Core Courses (23 Units)</b>		<b>Units</b>
IMMT 60	Fundamentals 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 80A	Alternating Current	2
IMMT 80B	E & I Test Equipment	1
IMMT 80C	Flow, Pressure, Level, & Temperatures	1
IMMT 80D	Process Quantitative Skills	2
IMMT 80E	Tubing Installation and Testing	2
IMMT 80F	Introduction to Instrument Drawings and Documents	1
BCTT 54	Safety Orientation	1
ELCT 70A	Electrical Safety and Hand-bending	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
<b>Required Major Total:</b>		<b>23</b>
<b>Completion of Local Degree Requirements</b>		<b>7</b>
<b>Total Units required</b>		<b>30</b>

## WAREHOUSE/LOGISTICS CERTIFICATE OF ACHIEVEMENT

The Logistics/Warehousing Certificate is designed for people working 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.

<b>Required courses (21.5 units)</b>		<b>Units</b>
WARE 50	Fork Lift Operations	.5
WARE 51	Intro. to Operations & Supply Chain Management	3
WARE 53	International Logistics	3
WARE 55	Principles of Logistics	3
WARE 57	Materials Management	
3		
WARE 59	Introduction to Purchasing	3
WARE 61	Project Management	3
BADM 51	Business Math	3
<b>Total Units Required:</b>		<b>21.5</b>

# Associate Degree (Occupational)

## Associate of Science, Industrial Maintenance Electrical & Instrumentation

This case of study prepares students for entry-level positions in industry and service occupations requiring skills in Industrial Maintenance Electrical & Instrumentation.

### Program Level Outcomes

1. Students will be able to apply the skills necessary to implement electrical circuits following the National Electrical Code (NEC) guidelines.
2. Students will be knowledgeable about the required materials of trade and have the ability to install them properly.
3. Students will have the skills necessary to potentially receive industry recognized certifications in a variety of crafts.

<b>Major core requirements (34 total Units)</b>		<b>Units</b>
IMMT 60	Fundamentals 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 80A	Alternating Current	2
IMMT 80B	E & I Test Equipment	1
IMMT 80C	Flow, Pressure, Level, & Temperatures	1
IMMT 80D	Process Quantitative Skills	2
IMMT 80E	Tubing Installation and Testing	2
IMMT 80F	Introduction to Instrument Drawings and Documents	1
BCTT 54	Safety Orientation	1
ELCT 70A	Electrical Safety and Hand-bending	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**

**Major Elective Requirements (11 Units from any of the below)** **Units**

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WELD 50	Oxyacetylene Welding & Cutting	3
WELD 51	Shielded Metal Arc Weld & Cut	3
WELD 52	Position Welding (Arc Welding)	3
WELD 53	Soldering, Razing and Braze Welding	3
WELD 54	Gas Metal-ARC Welding	3
WELD 55	Gas Tungsten-Arc Welding	3
WELD 56	Blueprint Reading-Metal Trades	3
WELD 57	Weld, Fab, & Projects	3
ELCT 72A	Alternating Current, Motors, and Grounding	2
ELCT 72D	Circuit Breakers, Fuses, Contactors, Relays, and Electrical Lighting	1
IMMT 70	Basic Layout	1
IMMT 71	Introduction of 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
BCTT 50A	Basic Constructions Safety and Rigging	2
BCTT 50B	Introduction to hand and Power Tools	1
BCTT 50C	Introduction to Blueprint Reading	1
BCTT 60A	Materials and Tools Used in the Trade	2
BCTT 60B	Floor Systems, Wall and Ceiling Framing	1
BCTT 60C	Roof Framing and Window and Exterior Doors	1
CBIS 17	Database Design and Management: Microsoft Access	3
CBIS 40	Spreadsheet Applications	4
CBIS 41	Beginning Word Processing	4
CBIS 42	Advanced Word Processing	4
CBIS 43	Presentation Applications and Media	3
CBIS 60	Data Entry 1	1.5
CBIS 65	Electronic Calculations	1.5
CSIS 1	Computer Concepts	4
<b>Major core units required</b>		<b>23</b>
<b>Elective Units Required</b>		<b>11</b>
<b>General Education Units Required</b>		<b>27</b>
<b>Total Units Required</b>		<b>61</b>

# Associate Degree (Occupational)

## Associate of Science, Industrial Maintenance Mechanic 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 nationally recognized industry standards.

### Program Outcomes

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 the jobsite.
3. Students will be able to work with various types of piping, valves and perform basic hydrostatic and pneumatic testing on the jobsite.

<b>Major core requirements (33 total Units)</b>		<b>Units</b>
IMMT 60	Fundamentals 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 of 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 Hand-bending	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**

<b>Major Elective Requirement (11 Units from any of the below)</b>		<b>Units</b>
WELD 50	Oxyacetylene Welding & Cutting	3
WELD 51	Shielded Metal Arc Weld & Cut	3
WELD 52	Position Welding (Arc Welding)	3
WELD 53	Soldering, Razing and Braze Welding	3
WELD 54	Gas Metal-ARC Welding	3
WELD 55	Gas Tungsten-Arc Welding	3
WELD 56	Blueprint Reading-Metal Trades	3
WELD 57	Weld, Fab, & Projects	3
IMMT 80A	Alternating Current	2
IMMT 80B	E & I Test Equipment	1
IMMT 80C	Flow, Pressure, Level, & Temperatures	1
IMMT 80D	Process Quantitative Skills	2
IMMT 80E	Tubing Installation and Testing	2
IMMT 80F	Introduction to Instrument Drawings and Documents	1
BCTT 50A	Basic Constructions Safety and Rigging	2
BCTT 50B	Introduction to hand and Power Tools	1
BCTT 50C	Introduction to Blueprint Reading	1
BCTT 60A	Materials and Tools Used in the Trade	2
BCTT 60B	Floor Systems, Wall and Ceiling Framing	1
BCTT 60C	Roof Framing and Window and Exterior Doors	1
CBIS 17	Database Design and Management: Microsoft Access	3
CBIS 40	Spreadsheet Applications	4
CBIS 41	Beginning Word Processing	4
CBIS 42	Advanced Word Processing	4
CBIS 43	Presentation Applications and Media	3
CBIS 60	Data Entry 1	1.5
CBIS 64	Business and Legal Transcription	3
CBIS 65	Electronic Calculations	1.5
CBIS 74	Information Management Applications	3
CBIS 77	Medical Transcription	3
CSIS 1	Computer Concepts	4
<b>Major core units required</b>		<b>22</b>
<b>Elective Units Required</b>		<b>11</b>
<b>General Education Units Required</b>		<b>27</b>
<b>Total Units Required</b>		<b>60</b>