2017–2018 Catalog Addendum 3

December 2017

The College of the Desert Catalog Addendum represents course and program revisions made since the last publication of the Catalog. Included in this Addendum are new courses and certificates, and course changes. These changes replace what is printed in the current Catalog and are effective as of the Spring 2018. Instructions for understanding this addendum are as follows: underline indicates new material, ~~strikethrough~~ indicates a deletion.

BOT Approved: December 15, 2017

Programs of Study

NEW CREDIT PROGRAMS effective Spring 2018

Zero Net Energy (ZNE) Certificate of Achievement

The Zero Net Energy (ZNE) Certificate offers the students a broad overview into the energy conservation industry and includes cross-disciplinary courses in Energy Systems, Heating Ventilation and Air Conditioning, Architecture, Computer Information Systems, and Building Inspection Technology. Completion of the ZNE Certificate is especially beneficial for support staff currently working in the energy sector and when combined with other defined certificates within the ZNE industry, students will have the technical background that can lead to industry recognized credentials and careers as an Energy Auditor, Energy Consultant, ZNE Technician, Green HVAC Technician, Facility Management, Construction Management and Solar Residential Technician.

Required Courses:

ESYS-004	Industrial Calculations	3
ESYS-005	Zero Net Energy Building Science	4
ARCH-011	Architectural Blueprint Reading	3
BIT-024	California Energy Codes	3
CIS-010	Computer Literacy	4
CIS-012	Professional Office Procedures	3

CERTIFICATE TOTAL 20

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Zero Net Energy (ZNE) Technology Certificate of Achievement

The Zero Net Energy (ZNE) Technology Certificate provides the general knowledge of many variations of renewable energies. The technician can serve as a liaison between building stakeholders and a specialized technician or can continue to pursue a specialized credential. Zero Net Energy Technicians (ZNET) and building stakeholders work in a team environment, coordinating maintenance schedules, mechanical and electrical breakdowns. Together they verify that the building systems are working within the design conditions. This introductory certificate focuses on key factors involving design of Zero Net Energy (ZNE) buildings and maintenance. Students will learn the fundamentals of the ZNE building design through each step of design and construction process - from predesign to occupancy and operations. Operation and proper maintenance of the energy systems including HVAC, solar, lighting and envelope are analyzed in depth.

Required Courses:

ESYS-001	Energy Generation & Distribution Industry	3
ESYS-002	Electricity and Electrical Theory	3
ARCH-002	Materials of Construction	4
ACR-075	HVACR Systems Design	3
ACR-077	Energy Conservation Methods for HVACR	3

CERTIFICATE TOTAL 16

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NEW NONCREDIT CERTIFICATES effective Spring 2018

Advanced First Aid & Safety, CPR/AED Certificate of Completion

This two-course certificate will prepare individuals with skills and knowledge in the application of advanced first aid and emergency care for infants, children, and adults. It will also prepare individuals with skills, knowledge, and application in Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED). The certificate is in alignment with the Emergency Care and Safety Institute.

Required Courses: ..... *Units*

KINE-301 Advanced First Aid & Safety 0

KINE-302 Advanced CPR & AED 0

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Air Properties & Economizer Performance Certificate of Completion

This program is designed to train HVAC technicians to understand Air properties and how it effects system performance. It is also designed to train technicians to properly install and set up economizers.

Required Courses: ..... *Units*

ACR-378A Introduction to Refrigerants Management 0

ACR-378D System Performance & Charging Procedures 0

ACR-378E Study of Air Properties & Human Comfort 0

ACR-378F Indoor Air Quality & Economizers 0

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Proper HVAC System Preparation & System Charging Certificate of Completion

This program is designed to train HVAC Technicians the proper methods of system recovery, System Evacuation, and proper system charging.

Required Courses: ..... *Units*

ACR-378B Recovery & Evacuation Practices in Refrigerant Management 0

ACR-378D System Performance & Charging Procedures 0

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Refrigerant Management & EPA-608 Preparation Certificate of Completion

This program is for the HVAC industry to learn the best methods for handling refrigerants, recovery, reclamation and evacuation. This program also prepares students for the EPA-608 Refrigerant Handling License.

Required Courses: ..... *Units*

ACR-378A Introduction to Refrigerants Management 0

ACR-378B Recovery & Evacuation Practices in Refrigerant Management 0

ACR-378C EPA-608 Preparation for Refrigerant Management 0

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NEW NONCREDIT COURSES effective Spring 2018

ACR-378A Introduction to Refrigerants Management **Units: 0**

This course is module 1 of 3. This course is designed for both the novice and existing workforce to understand the basic terms as they apply to Environmental Protection Agency (EPA) laws. This course also covers the basic refrigeration process and how to apply these principles to a refrigeration system.

Lecture Hours: 18 | Lab Hours: 0 | Repeatable: Yes | Grading: Pass/No Pass
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

ACR-378B Recovery and Evacuation Practices in Refrigerant Management **Units: 0**

This course is module 2 of 3. This course is designed for both the novice and existing workforce to understand the proper recovery and evacuation processes necessary to meet EPA 608 standards.

Lecture Hours: 6 | Lab Hours: 12 | Repeatable: Yes | Grading: Pass/No Pass
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

ACR-378C EPA-608 Preparation for Refrigerant Management **Units: 0**

This course is the final module (3 of 3) necessary for the EPA 608 Certificate of Completion and for the proper system preparation and system charging Certificate of Completion. The course is designed for both the novice and existing workforce to prepare for the EPA-608 refrigerant handling license, which is a proctored exam. EPA-608 exam and materials fees are required of each student that successfully completes this course for the EPA-608 industry certification.

Lecture Hours: 9 | Lab Hours: 9 | Repeatable: Yes | Grading: Pass/No Pass
Prerequisite: ACR-378A and ACR-378B
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

ACR-378D System Performance and Charging Procedures **Units: 0**

This course is designed for both the novice and existing workforce to understand how to properly prepare and charge an air conditioning system to meet or exceed industry standards and Environmental Protection Agency (EPA) laws.

Lecture Hours: 6 | Lab Hours: 12 | Repeatable: Yes | Grading: Pass/No Pass
Prerequisite: ACR-378B and ACR-378C or EPA-608 Universal License.
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

ACR-378E Study of Air Properties and Human Comfort **Units: 0**

This course is module 3 of 4. The course is designed for both the novice and existing workforce to understand air properties and how they affect human comfort. Students will learn how to work with, and understand the process of plotting a psychrometric diagram and use it in system charging and economizer setup.

Lecture Hours: 9 | Lab Hours: 9 | Repeatable: Yes | Grading: Pass/No Pass
Prerequisite: ACR-378A
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

ACR-378F Indoor Air Quality and Economizers **Units: 0**

This course is module 4 of 4. The course is designed for both the novice and existing workforce to understand how to properly diagnose and repair economizers. This course will also cover replacement, installation and setup of economizers.

Lecture Hours: 9 | Lab Hours: 9 | Repeatable: Yes | Grading: Pass/No Pass
Prerequisite: ACR-378A and ACR-378E
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

KINE-301 Advanced First Aid and Safety **Units: 0**

This advanced course involves the theory and detailed demonstration of the first aid care of the injured or suddenly ill. Students will learn to assess a victim's condition and develop the skills and knowledge in Advanced First Aid and Emergency care for infants, children and adults. The course content is in alignment with the Emergency Care and Safety Institute. This course is the first part of a two-course certificate to provide valuable retraining for employment opportunities. Students receive a Pass/No Pass grade mark.

Lecture Hours: 4 | Lab Hours: 0 | Repeatable: Yes | Grading: Pass/No Pass
Limitation on Enrollment: The student should come into the class with past knowledge, skills, certification in first aid.
Transfer Status: None | Degree Applicable: NONC
COD GE: None | CSU GE: None | IGETC: None

KINE-302 **Advanced CPR and AED** **Units: 0**

This course is designed to prepare students with retraining opportunities in advanced skills and knowledge necessary to apply Cardiopulmonary Resuscitation (CPR) in emergency settings for infants, children and adults as well as being skilled in the application and procedure of an Automatic External Defibrillator (AED). The course content is in alignment with the Emergency Care and Safety Institute. This course is the second course of a two-course certificate providing valuable retraining for job opportunities. The Emergency Care and Safety Institute certificate fees are required of each student that successfully completes this two course certificate for Advanced First Aid and Safety, CPR/AED. Students receive a Pass/No Pass grade mark.

Lecture Hours: 4 | Lab Hours: 0 | Repeatable: Yes | Grading: Pass/No Pass

Prerequisite: KINE-301

Transfer Status: None | Degree Applicable: NONC

COD GE: None | CSU GE: None | IGETC: None

COURSE MODIFICATIONS effective Spring 2018

AUTO-043A **Intro to Hybrid, Electric & Fuel-Cell ~~& Electric~~ Vehicle Technology** **Units: 3**

This course explores the use of Hybrid and Electric battery power for vehicle transportation. Topics will include safety when using high voltage, maintenance, drivability, inverter, DC/DC power transfer, and battery technology. Physics of battery storage, Hybrid generation systems, Electric vehicle applications and their integrated systems from many manufacturers will be discussed. Hybrid and high voltage service and maintenance procedures. This course could be a preparation for the student to successfully complete the L-3 ASE exam.

Prerequisite: AUTO-010 or concurrent enrollment

Lecture Hours: 36 | Lab Hours: 54 | Repeatable: No | Grading: Letter

Transfer Status: CSU | Degree Applicable: AA/AS

COD GE: None | CSU GE: None | IGETC: None

COUN-060 **College Success Skills** **Units: 1**

This course helps college students learn the information and develop the skills necessary for success in college. Course topics include an overview of higher education, student support services (including financial aid), study skills (including time management, note taking and test preparation), and an introduction to transfer and career development. Students are helped to develop realistic educational plans consistent with their educational goals.

Lecture Hours: 18 | Lab Hours: None | Repeatable: No | Grading: Student Option

Prerequisite: None

Advisory: None

Transfer Status: ~~None~~ CSU | Degree Applicable: ~~NAA~~ AA/AS

COD GE: None | CSU GE: None | IGETC: None

EDUC-001 **Introduction to Elementary Classroom Teaching** **Units: 3**

This course introduces students to the concepts and issues related to teaching diverse learners in today's contemporary schools, Kindergarten through grade 12 (K-12). Topics include teaching as a profession and career, historical and philosophical foundations of the American education system, contemporary educational issues, California's content standards and frameworks, and teacher performance standards. In addition to class time, the course requires a minimum of 45 hours of structured fieldwork in public elementary classrooms that represent California's diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher. (C-ID EDUC 200)

Advisory: ECE-010 and ENG-001A

Lecture Hours: ~~36~~ 54 | Lab Hours: ~~54~~ None | Repeatable: No | Grading: Letter

Transfer Status: CSU/UC* | Degree Applicable: AA/AS

COD GE: None | CSU GE: E | IGETC: None

ESYS-001 **~~Introduction to the Power~~ Energy Generation & Distribution Industry** **Units: 3**

An overview of our current power generation infrastructure, methods of power generation and potential employment opportunities will be examined in this course. These areas will be supported by the fundamentals of the power industry including; safety practices, power industry economics and the future of the power industry. An introduction to ~~construction math, hand~~ electrical and construction calculation will be applied to electricity. Hand tools, power tools, construction drawings, material handling and basic rigging will form the basis of knowledge for entering into the power industry. ~~Communication and employability skills will be introduced to provide the student with additional "soft skill" workforce training.~~

Prerequisite: None

Advisory: MATH-060 or ESYS-004 & ENG-070

Lecture Hours: 54 | Lab Hours: None | Repeatable: No | Grading: Letter

Transfer Status: None | Degree Applicable: AA/AS

COD GE: None | CSU GE: None | IGETC: None