



## 2018–2019 Catalog Addendum 2

December 2018

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 and modified certificates and degrees, new courses, and updated list of Faculty and Administration. This Addendum also includes corrections to the 2018-2019 Catalog. These changes replace what is printed in the current Catalog and are effective as of the Spring 2019. Instructions for understanding this addendum are as follows: underline indicates new material, ~~strikethrough~~ indicates a deletion.

# Programs of Study

## NEW CREDIT PROGRAMS

### Building & Energy Systems Professionals AS Degree

The Building & Energy Systems Professionals (BESP) Associates of Science Degree is developed to offer students a broad overview of 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. The completion of the **Building & Energy Systems Professional AS Degree** is especially advantageous for the student who has the goal to obtain leadership positions. Electives are selected to support a concentration on industry specialties. Students will have the option to focus on particular energy sectors by choosing from various depths of study: Solar Systems, Building Control Systems Building Operator, Advanced Lighting Systems, or Zero Net Energy (ZNE) Technician. The student may choose their elective based on their immediate energy other defined degrees within the ZNE industry. Students will have the technical background that can lead to multiple industry-recognized credentials and careers as an Energy Auditor, Energy Consultant, ZNE Technician, HVACR Technician, Facility Management, Construction Management, and Solar Residential Technician.

#### **Required Core Courses (17 units)**

ESYS 004	Industrial Calculations.....	3
ESYS 005	Zero Net Energy Building Science.....	4
BIT 024	California Energy Codes .....	3
ARCH 011	Architectural Blueprint Reading.....	3
AIS 012	Professional Office Procedures.....	3
ESYS 095A	Energy Systems Technology Work Experience.....	1

#### **Supporting Degree Electives.....23**

Choose a minimum of 23 units from below. Students may choose a specialty by taking selected grouped courses.

#### **Required Courses for Specialty in Building Automation Control**

ACR 060	Air Conditioning & Refrigeration I.....	3
ACR 064	Air Conditioning & Refrigeration Electricity I.....	3
ACR 065	Air Conditioning & Refrigeration Electricity II.....	3
ACR 076	Facilities Maintenance - Chillers .....	3
ACR 090	Building Automation Fundamentals .....	3
ACR 091	Advanced Building Control Networks .....	3
ACR 092	Advanced Building Automation Networks & Programming.....	3

#### **Required Courses for Specialty in Building Commissioning Technician**

ACR 075	HVACR Systems Design.....	3
ACR 084	Boiler and Hydronic Heating.....	3
ACR 090	Building Automation Fundamentals .....	3
ACR 091	Advanced Building Control Networks .....	3
BIT 020	California Mechanical Codes .....	2
BIT 040	California Electrical Codes .....	2
ESYS 002	Electricity and Electrical Theory .....	3
ESYS 006	Fundamentals of Building Commissioning.....	3
ESYS 035	Advanced Lighting Controls.....	3

#### **Required Courses for Specialty in Building Energy Consultant**

ACR 075	HVACR Systems Design.....	3
ACR 077	Energy Conservation Methods for HVACR .....	3
ARCH 011	Architectural Blueprint Reading.....	3
BIT 020	California Mechanical Codes .....	2
BIT 024	California Energy Codes .....	3
ESYS 004	Industrial Calculations.....	3
ESYS 005	Zero Net Energy Building Science.....	4
ESYS 021	Residential Energy Modeling.....	3
ESYS 022	Residential Energy Modeling Design Project (ESYS-Res2).....	2

**Required Courses for Specialty in Building Inspection Technology**

BIT 010	California Building Codes .....	4
BIT 020	Building & Mechanical Codes .....	2
BIT 024	California Energy Codes .....	3
BIT 025	California Residential Codes .....	3
BIT 026	Building II & Fire Codes .....	3
BIT 030	Building & Plumbing Codes .....	2
BIT 040	Building & Electrical Codes .....	2
ARCH 002	Materials of Construction .....	4
ARCH 011	Architectural Blueprint Reading.....	3

**Required Courses for Specialty in Applied Construction Technology**

ACT 020	Introduction to Construction Technology.....	3
ACT 021	Site Preparation and Layout.....	1
ACT 022	Concrete and Formwork .....	1
ACT 023	Framing Carpentry .....	4
ACT 024	Roofing Applications .....	2
ACT 025	Thermal and Moisture Protection .....	1
ACT 026	Drywall Installation and Finish .....	1
ACT 027	Exterior Finish .....	1
ACT 028	Finish Carpentry.....	4
ACT 029	Masonry Fundamentals.....	2
ACT 030	Plumbing Fundamentals .....	3
ACT 031	Electrical Fundamentals.....	3

**Required Courses for Specialty in Construction Management**

ARCH 001	Introduction to Architectural Professions .....	3
ARCH 002	Materials of Construction .....	4
ARCH 003A	Architectural Practice I .....	3
ARCH 011	Architectural Blueprint Reading.....	3
BIT 010	California Building Codes .....	4
BIT 026	Building II & Fire Codes .....	3
CM 001	Introduction to Construction Management .....	2
CM 002	Intro to Urban Planning .....	3
DRA 002	AutoCAD.....	4

**Required Courses for Specialty in Green HVAC Residential**

ACR 060	Air Conditioning & Refrigeration I.....	3
ACR 061	Air Conditioning & Refrigeration II.....	3
ACR 064	Air Conditioning & Refrigeration Electricity I.....	3
ACR 065	Air Conditioning & Refrigeration.....	3
ACR 075	HVACR Systems Design .....	3
ACR 077	Energy Conservation Methods for HVACR .....	3
ACR 078	Safe Refrigerant Handling & Management .....	3
ACR 080	Gas Heating .....	3
ACR 083	All Weather Heating & Cooling Systems .....	3

**Required Courses for Specialty in Green HVAC Commercial**

ACR 060	Air Conditioning & Refrigeration I .....	3
ACR 061	Air Conditioning & Refrigeration II .....	3
ACR 064	Air Conditioning & Refrigeration Electricity I .....	3
ACR 065	Air Conditioning & Refrigeration Electricity II .....	3
ACR 075	HVACR Systems Design .....	3
ACR 076	Facilities Maintenance - Chillers .....	3
ACR 077	Energy Conservation Methods for HVACR .....	3
ACR 078	Safe Refrigerant Handling & Management .....	3
ACR 083	All Weather Heating & Cooling Systems .....	3
ACR 084	Boiler & Hydronic Heating .....	3

ACR 090	Building Automation Fundamentals .....	3
BIT 020	California Mechanical Codes .....	2
<b>Required Courses for Specialty in Facilities Operations Technician</b>		
ACR 060	Air Conditioning & Refrigeration I .....	3
ACR 064	Air Conditioning & Refrigeration Electricity I .....	3
ACR 065	Air Conditioning & Refrigeration Electricity II .....	3
ACR 076	Facilities Maintenance - Chillers .....	3
ACR 078	Safe Refrigerant Handling & Management .....	3
ACR 083	All Weather Heating & Cooling Systems .....	3
ACR 084	Boiler & Hydronic Heating .....	3
ACR 090	Building Automation Fundamentals .....	3
ARCH 011	Architectural Blueprint Reading .....	3
ACT 030	Plumbing Fundamentals .....	3
<b>Required Courses for Specialty in Lighting and Controls Technology</b>		
ESYS 001	Energy Generation & Distribution Industry .....	3
ESYS 002	Electricity & Electrical Theory .....	3
ESYS 004	Industrial Calculations .....	3
ESYS 033	Residential House Electrical Wiring .....	3
ESYS 034	Lighting Efficiency Technology .....	3
ESYS 035	Advanced Lighting Controls .....	3
ESYS 095A	Energy Systems Technology Work Experience .....	1
<b>Required Courses for Specialty in Residential Solar</b>		
ACT 024	Roofing Applications .....	2
ESYS 001	Energy Generation & Distribution Industry .....	3
ESYS 002	Electricity & Electrical Theory .....	3
ESYS 011	Residential Solar Surveying and Planning .....	3
ESYS 011L	Solar Site Planning Project Lab .....	1
ESYS 012	Residential Solar Installation .....	4
ESYS 033	Residential House Electrical Wiring .....	3
ESYS 095A	Energy Systems Technology Work Experience .....	1
<b>Required Courses for Specialty in Power Generation and Distribution</b>		
ESYS 001	Energy Generation & Distribution Industry .....	3
ESYS 002	Electricity & Electrical Theory .....	3
ESYS 003	Energy Systems Technology .....	3
ESYS 004	Industrial Calculations .....	3
BUMA 032	Human Relations in the Workplace .....	3
NR 001	Conservation of Natural Resources .....	3
ACR 077	Energy Conservation Methods for HVACR .....	3
<b>Required Courses for Specialty in Zero Net Energy Technology</b>		
ACR 075	HVACR Systems Design .....	3
ACR 077	Energy Conservation Methods for HVACR .....	3
ARCH 002	Materials of Construction .....	4
ESYS 001	Energy Generation & Distribution Industry .....	3
ESYS 002	Electricity & Electrical Theory .....	3
Required Core Subtotal .....		17
Specialty Subtotal .....		23
COD General Education Pattern .....		18
Kinesiology Activities .....		2
<b>DEGREE TOTAL .....</b>		<b>60</b>

## Graphic Design & Marketing AA Degree

Graphic Design & Marketing (GDM) is the vehicle by which business communicates visually by infusing art and technology to communicate ideas through images and other communications media. The graphic designer is often working closely with marketing to develop and implement branding strategies, communications, market development, and presence, including many other related business activities. A graphic designer who is familiar with marketing from a marketing point-of-view is better equipped to understand the role of graphic design as a vital component in the world of business. Students working toward their Associates degree in this program study computer graphic design for print, web, and video.

This cross-discipline program is designed to prepare students for employment in the diverse fields of Web Design, Graphic Design, Motion Graphics, and Interactive Multimedia. Career paths may also lead to working in advertising, marketing or independently. Careers in the discipline that generally require graduate-level degrees include college teacher, video editor, web developer, creative director, and art director. The graphic designer is often working closely with marketing departments to develop and implement branding strategies, communications, market development, and presence, including many other related business activities. A graphic designer who is familiar with marketing from a marketing point-of-view is better equipped to understand the role of graphic design as a vital component in the world of business.

### ***Required Courses***

DDP 001A	Computer Graphics 1A.....	3
DDP 001B	Computer Graphics 1B.....	3
DDP 020	New Media I.....	3
BUAC 020A	Financial Accounting.....	4
BUMA 010	Introduction to Business.....	3
<i>or</i> ECON 001	Principles of Macroeconomics (3)	
ART 002A	History of Western Art I: Prehistoric to Medieval.....	3
<i>and</i> ART 002B	History of Western Art II: Renaissance to Contemporary.....	3
<i>and</i> ART 002C	History of Modern Art.....	3
ART 003A	Basic Design & Color.....	3
ART 012A	Survey of Asian Art.....	3
ART 012B	Art of Africa, Oceania, and Indigenous North America.....	3
ART 012C	Art of the Ancient Americas.....	3
Required Subtotal.....		37
CSU General Education or IGETC Pattern* .....		37-39
Kinesiology Activities .....		2
<b>DEGREE TOTAL.....</b>		<b>67-72</b>

\* Units for the major may be double counted for CSU GE or IGETC, confer with Counselor.

## Lighting and Controls Technology Certificate of Achievement

Lighting and Controls Technology certificate provides training and preparation for industry recognize credential to electricians, contractors, acceptance test technicians, building operators, and managers. The training helps the electrical industry increase the use of energy-saving lighting controls in commercial buildings and ensuring they are properly installed and commissioned for maximum effectiveness.

### ***Required Courses***

ESYS 001	Energy Generation & Distribution Industry.....	3
ESYS 002	Electricity & Electrical Theory.....	3
ESYS 004	Industrial Calculations.....	3
ESYS 033	Residential House Electrical Wiring.....	3
ESYS 034	Lighting Efficiency Technology.....	3
ESYS 035	Advanced Lighting Controls.....	3
ESYS 095A	Energy Systems Technology Work Experience.....	1
<b>CERTIFICATE TOTAL.....</b>		<b>19</b>

## Residential Solar Certificate of Achievement

The Residential Solar Certificate of Achievement is developed to prepare the students for careers in the field of renewable energy, focusing on solar energy technology. Graduates will be prepared for careers in design, installation, and repairing solar energy systems. Graduates will also be prepared to work with architects and engineers who consult, design, and guide solar installations, solar thermal, and battery storage projects.

### ***Required Courses***

ACT 024	Roofing Applications .....	2
ESYS 001	Energy Generation & Distribution Industry.....	3
ESYS 002	Electricity & Electrical Theory .....	3
ESYS 011	Residential Solar Surveying and Planning.....	3
ESYS 011L	Solar Site Planning Project Lab.....	1
ESYS 012	Residential Solar Installation .....	4
ESYS 033	Residential House Electrical Wiring.....	3
ESYS 095A	Energy Systems Technology Work Experience.....	1
<b>CERTIFICATE TOTAL</b> .....		<b>20</b>

## NEW NONCREDIT PROGRAMS

### **Bread Baker Certificate of Completion**

This certificate prepares the student for employment as a bread baker focused on yeast breads.

### ***Required Courses***

CART-310	Bakery Sanitation & Organization .....	0
CART-311	Lean Dough .....	0
CART-312	Rich Dough .....	0

### **Baker Certificate of Completion**

This certificate prepares the student for employment as a baker focused on quick breads, cakes, cookies and breakfast breads.

### ***Required Courses***

CART-320	Baking Fundamentals .....	0
CART-321	Quick Breads .....	0
CART-322	Breakfast Breads & Pastry Dough.....	0
CART-323	Cakes .....	0

### **Prep Cook Certificate of Completion**

This certificate is a study of the basic core components in culinary arts and food production. Introduction to culinary terminology and ingredients will be presented. Areas of study include: tools, equipment, knife skills, food evaluation, basic cooking principles to include moist and dry heat methods, seasonings, flavorings and aromatics, fats, dairy products, stocks, thickeners, mother sauces and small sauces, meats, poultry, vegetables, and starches. Students achieve basic competency in theories, cooking techniques, and applications of working with food. Students are exposed to techniques of the professional kitchen.

### ***Required Courses***

CART-330	Introduction to the Kitchen .....	0
CART-331	Meat & Potato Preparation .....	0
CART-332	Fish & Shellfish.....	0
CART-333	Grains, Legumes & Vegetables .....	0
CART-334	Poultry.....	0

# Courses of Instruction

## NEW CREDIT COURSES

### **ESYS-011 Residential Solar Surveying and Planning Units: 3**

This course is for students engaged or interested in a solar-related field who need to expand their knowledge and skills of solar function and design of solar photovoltaics (PV). The coordination between trades, design limitations, and workflow processes will be explained. The fundamental principles and functions of the photovoltaic industry will be introduced. Students will be prepared to work as site planning technicians or solar sales advisers.

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	

### **ESYS-011L Solar Site Planning Project Lab Units: 1**

This course provides training in applying the principles and techniques of solar surveying and planning to residential building projects. This project-based workshop supports lectures from ESYS-011 by providing students a hands-on approach surveying multiple buildings and making energy recommendations based on current California's energy code.

Lecture Hours: None	Lab Hours: 54	Repeatable: No	Grading: Letter
Advisory: ESYS-011			
Transfer Status: None	Degree Applicable: AA/AS		
COD GE: None	CSU GE: None	IGETC: None	

### **ESYS-012 Residential Solar Installation Units: 4**

This entry-level course is for students interested in installing and maintaining photovoltaic (PV) systems and obtain or furthering a career in the solar industry. The installation principles, techniques, and functions of the PV systems will be presented along with installation and maintenance of all necessary components. Discussion and instruction will also serve current solar installers wanting to earn an industry-recognized credential. Installation practices will be aligned to help students prepare for the North American Board of Certified Energy Practitioners (NABCEP). Per NABCEP website, "The NABCEP PV Installation Professional certification is a voluntary certification that provides a set of national standards by which PV Installation Professionals with skills and experience can distinguish themselves from their competition." Certification provides a measure of protection to the public by giving them a credential for judging the competency of practitioners.

Lecture Hours: 54	Lab Hours: 54	Repeatable: No	Grading: Letter
Transfer Status: None	Degree Applicable: AA/AS		
COD GE: None	CSU GE: None	IGETC: None	

### **ESYS-034 Lighting Efficiency Technology Units: 3**

This course will review the current technology in energy efficient lighting controls and systems; the latest advances in lamp, ballast, luminaire and control technologies, as well as recent developments in energy legislation.

Lecture Hours: 54	Lab Hours: None	Repeatable: No	Grading: Letter
Advisory: ESYS-005			
Transfer Status: None	Degree Applicable: AA/AS		
COD GE: None	CSU GE: None	IGETC: None	

## NEW NONCREDIT COURSES

### **CART-310 Bakery Sanitation & Organization Units: 0**

Short term vocational training leading to jobs in bread baking.

Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	

### **CART-311 Lean Dough Units: 0**

This course prepares the student for employment as a bread baker focused on yeast breads and rolls.

**Prerequisite:** CART-310

Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	

### **CART-312 Rich Dough Units: 0**

This course prepares the student for employment as a bread baker focused on yeast breads, rich doughs and rolls.

**Prerequisite:** CART-310

Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	

### **CART-320 Baking Fundamentals Units: 0**

This course prepares the student for employment as a baker focused on quick breads and cakes.

**Prerequisite:** CART-310

Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	

<b>CART-321</b>	<b>Quick Breads</b>		<b>Units: 0</b>
This course prepares the student for employment as a baker focused on quick breads.			
<b>Prerequisite:</b> CART-320			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-322</b>	<b>Breakfast Breads &amp; Pastry Dough</b>		<b>Units: 0</b>
This course prepares the student for employment as a baker focused on breakfast breads and pastry dough.			
<b>Prerequisite:</b> CART-320			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-323</b>	<b>Cakes</b>		<b>Units: 0</b>
This course prepares the student for employment as a baker focused on cakes.			
<b>Prerequisite:</b> CART-320			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-330</b>	<b>Introduction to the Kitchen</b>		<b>Units: 0</b>
This course prepares the student for employment as a prep cook.			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-331</b>	<b>Meat &amp; Potato Preparation</b>		<b>Units: 0</b>
This course prepares the student for employment as a prep cook.			
<b>Prerequisite:</b> CART-330			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-332</b>	<b>Fish &amp; Shellfish</b>		<b>Units: 0</b>
This course prepares the student for employment as a prep cook.			
<b>Prerequisite:</b> CART-330			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-333</b>	<b>Grains, Legumes &amp; Vegetables</b>		<b>Units: 0</b>
This course prepares the student for employment as a prep cook.			
<b>Prerequisite:</b> CART-330			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	
<b>CART-334</b>	<b>Poultry</b>		<b>Units: 0</b>
This course prepares the student for employment as a prep cook.			
<b>Prerequisite:</b> CART-330			
Lecture Hours: 4	Lab Hours: 12	Repeatable: Yes	Grading: Pass/No Pass
Transfer Status: None	Degree Applicable: NONC		
COD GE: None	CSU GE: None	IGETC: None	



### COURSE MODIFICATIONS (effective Spring 2019)

#### **CART-001 Sanitation & Safety Units: 3**

This course is a study of the principles of hygiene and sanitation and their application to food service operations. Emphasis is placed on the implementation of proper methods and procedures, and the food handler's responsibility in maintaining high sanitation and safety standards. [An exam fee of \\$48 is required for students to get certified.](#)

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

**Prerequisite:** None

Advisory: MATH-060 and [ENG-061](#)

Transfer Status: CSU

Degree Applicable: AA/AS

COD GE: None

CSU GE: None

IGETC: None

#### **KINE-004 Advanced Care and Prevention of Athletic Injuries Units: 3**

This course provides an overview of the principles and scientific foundation of athletic training for students considering a career in Sports or Health Sciences. Topics include injury prevention techniques, injury evaluation techniques, treatment and rehabilitation techniques for common athletic injuries.

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

**Prerequisite:** KINE-003

Advisory: None

Transfer Status: CSU/UC\*

Degree Applicable: AA/AS

COD GE: None

CSU GE: None

IGETC: None

### New Courses Approved as UC Transferable (effective Fall 2018)

ART 034, Introduction to Digital Art, 3 Units

COLL-001, First Year Seminar, 3 Units

ENG-018, Poetry CIS, 3 Units

\*KINE-092, Yoga for Dancers, 1 Unit

\*KINE-098A, Yoga I-Fundamentals of Yoga, 1 Unit

\*KINE-098B, Yoga II-Beginning Yoga, 1 Unit

\*KINE-098C, Yoga III-Intermediate Yoga, 1 Unit

\*KINE-098D, Yoga IV- Advanced Yoga, 1 Unit

PH-017L, Introduction to Meteorology Lab, 1 Unit

PSY-030, Social Psychology, 3 Units

*\*UC will accept course but with some unit limitations or other stipulations. Please consult with a counselor.*