Corrections

COURSES

BCT140 Introduction to Concrete Finishing
(title change – previously Concrete Finishing Fundamentals for Construction)
2 Credits (2 Lectures) (credit change)

CRP132 Concrete Forming
(title change – previously Concrete Wall Forms)
3 Credits (3 Lectures) (credit change)

WLD120 Thermal Cutting Processes
(title change – previously Oxy-Acetylene Welding)
3 Credits (2 Lectures, 3 Labs)

WLD124 Flux Cored Arc Welding I
(incorrect title – catalog shows as Shielded Metal Arc Welding II)
3 Credits (2 Lectures, 3 Labs)

CERTIFICATES AND DEGREES

ASSOCIATE OF GENERAL STUDIES DEGREE

Total Credits: 60

(Total credit change)

Electives (28)
(Reduced Elective credit requirement)
Select courses numbered 100 or above to meet 60 credit minimum requirement.

Other Requirements (3)
(Removal of 1 credit PAC/DAN requirement)
Computer Competency (3):
Select one:
AGB124 Microcomputers in Agriculture (3)
CIS110 Fundamentals of Computer Literacy (3) or higher
EGR102 Introduction to Engineering (3)
EIT151 Digital Audio Workstation (3)
MSC122 Introduction to Web Design (3)

DIESEL TECHNOLOGY CERTIFICATE

(Title change – previously Diesel and Heavy Equipment Technology Certificate)

Total Credits: 46

(Total credit change)

Core Requirements (46)
(Add 3 courses, remove Electives requirement)*
DIE116 Introduction to Diesel Technology (3)*
DIE118 Computer Systems for Equipment Technicians (3)*
DIE132 Diesel Engines and Fuel Systems (8)
DIE133 Diesel Power Trains (8)
DIE215 Diesel Electrical/Electronic Systems (8)
DIE216 Diesel Hydraulic Systems (8)
DIE222 Mobile Refrigeration (3)*
Select one:
HEO100 Introduction to Heavy Equipment Operations (5)
OR
HEO121 Heavy Equipment Operations I (5)

DIESEL TECHNOLOGY AAS

(Title change – previously Diesel and Heavy Equipment Technology AAS)

Total Credits: 68

(Total credit change)

Core Requirements (46)
(Add DIE116, DIE118, and DIE222; remove 9 credit Elective Requirement; remove "Also fulfills an elective requirement" from Computer Competency course information)

DIE116 Introduction to Diesel Technology (3)
DIE118 Computer Systems for Equipment Technicians (3)
DIE132 Diesel Engines and Fuel Systems (8)
DIE133 Diesel Power Trains (8)
DIE215 Diesel Electrical/Electronic Systems (8)
DIE216 Diesel Hydraulic Systems (8)
DIE222 Mobile Refrigeration (3)

Select one:
HEO100 Introduction to Heavy Equipment Operations (5)
OR
HEO121 Heavy Equipment Operations I (5)
Computer Competency (3):
AGB124 Microcomputers in Agriculture (3)
OR
CIS110 Fundamentals of Computer Literacy or higher (3)

FINE ARTS AA

Computer Competency (3)
(Course option change from CIS110 to CIS120)

CIS120 Survey of Computer Information Systems or higher (3)
OR
Transferable Computer Competency course (Consult the CEG)

PHARMACY TECHNICIAN CERTIFICATE (33-34)

Core Requirements (21-22)
(Increase Core Requirements credit requirement)

(Add options)
COM263 Intercultural Communication (3)
OR
HCC112 Interpersonal Skills (2)

(Remove HCC100 & HCC113; remove BIO160, replace with BIO181 & BIO201)
HCC111 Health Care Law and Ethics (2)
HCC116 Medical Terminology Accelerated (3)
HPM162 Basic Pharmacology for Health Occupations (3)
HPM173 Pathophysiology (3)
BIO181 General Biology I (4)
BIO201 Human Anatomy and Physiology I (4)

Specialty Requirements (12)
(Decrease Specialty Requirements credit requirement; add PHT150)
PHT150 Pharmacy Calculations (1)
PHT105 Pharmacy Techniques (3)
PHT105LL Pharmacy Techniques Lab (2)
PHT164 Pharmacy Certification Review (2)
PHT175 Practicum - Pharmacy Technician (4)

ADDITIONS

NEW CERTIFICATES AND DEGREES

ADVANCED CONCRETE CONSTRUCTION CERTIFICATE

Total Credits: 30

The Advanced Concrete Construction Certificate prepares individuals for an advanced entry-level position in the construction field. The program focuses on advancing knowledge attained in accordance to NCCER standards for concrete. Options within the certificate allow individuals to tailor his or her career pathway with additional skillsets. This certificate is the second in a stackable certificate in advanced concrete construction.

Industrial Construction Core Requirements (15)
CRP103 Carpentry Orientation (2)
OR
BCT140 Introduction to Concrete Finishing (2)
BCT100 NCCER Core (5)
BCT133 Concrete (3)
BCT150 OSHA 30 (2)
CRP132 Concrete Forming (3)

Advanced Concrete Construction Core Requirements (15)
HEO118 Forklifts, Rigging, and Hoisting Training (2)
MAT106 Technical Math (3)
BCT141 Concrete Finishing II (5)
BCT180 Communication for the Trades (3)
BCT296 Construction Apprenticeship (2)

Other Requirements
- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

INDUSTRIAL CONSTRUCTION CERTIFICATE

Total Credits: 15

The Industrial Construction Certificate prepares individuals for an entry-level position in the construction field. The program focuses on fundamental knowledge attained in accordance to NCCER standards. Options within the certificate allow individuals to tailor his or her career pathway with additional skillsets. This certificate is upward compatible with a stackable certificate in advanced industrial construction or advanced concrete.

Core Requirements (15)

CRP103 Carpentry Orientation (2)
OR
BCT140 Introduction to Concrete Finishing (2)
BCT100 NCCER Core (5)
BCT133 Concrete (3)
BCT150 OSHA 30 (2)
CRP132 Concrete Forming (3)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

ADVANCED INDUSTRIAL CONSTRUCTION CERTIFICATE

Total Credits: 28

The Advanced Industrial Construction Certificate prepares individuals for an advanced entry position in the construction field. The program focuses on advancing knowledge attained in accordance to NCCER standards. Options within the certificate allow individuals to tailor his or her career pathway with additional skillsets. This certificate is the second stackable certificate in industrial construction.

Industrial Construction Core Requirements (15)

CRP103 Carpentry Orientation (2)
OR
BCT140 Introduction to Concrete Finishing (2)
BCT100 NCCER Core (5)
BCT133 Concrete (3)
BCT150 OSHA 30 (2)
CRP132 Concrete Forming (3)

Advanced Industrial Construction Core Requirements (13)

HEO118 Forklifts, Rigging, and Hoisting Training (2)
HEO130 Trenching and Foundations (3)
MAT106 Technical Math (3)
BCT180 Communication for the Trades (3)
BCT296 Construction Apprenticeship (2)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

INDUSTRIAL MAINTENANCE CERTIFICATE

Total Credits: 18

The Industrial Maintenance Certificate provides students the opportunity to gain knowledge, skills, and an understanding of the concepts and applications of industrial maintenance. Upon completion of the certificate, students will have the abilities and skills needed to support employment in the manufacturing industry. The certificate was developed in cooperation with automated manufacturing industries.

Core Requirements (18)

ELC122 Direct Current and Alternating Current Circuit Analysis (3)
ELC128 Introduction to Programmable Logic Controllers (3)
ELC220 Active Circuits (3)
MET132 Fluid Power - Hydraulics/Pneumatics (3)
MET245 Variable Frequency Drives (3)
MET125 Principles of Fabrication (3)
OR
WLD110 Survey of Welding (3)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

ADVANCED INDUSTRIAL MAINTENANCE TECHNICIAN CERTIFICATE

Total Credits: 35

The Advanced Industrial Maintenance Technician Certificate provides students the opportunity to gain knowledge, skills, and an understanding of the concepts and applications of industrial maintenance. Upon completion of the certificate, students will have the abilities and skills needed to support employment in the manufacturing industry. The certificate was developed in cooperation with automated manufacturing industries.

Core Requirements (35)

ELC122 Direct Current and Alternating Current Circuit Analysis (3)
ELC128 Introduction to Programmable Logic Controllers (3)
ELC220 Active Circuits (3)
ELC228 Advanced Programmable Logic Controllers (3)
HEO118 Forklifts, Hoists, and Rigging (2)
MET125 Principles of Fabrication (3)
MET132 Fluid Power - Hydraulics/Pneumatics (3)
MET221 Electro-Mechanical Technology (3)
MET226 Electro-Mechanical Systems (3)
MET245 Variable Frequency Drives (3)
MET289 Advanced Technology Capstone (3)
WLD110 Survey of Welding (3)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

PRODUCTION TECHNICIAN CERTIFICATE

Total Credits: 19

The Production Technician Certificate prepares individuals in the core competencies of front-line production employment for the manufacturing industry. It complies with nationally recognized industry standards and emphasizes basic skills in workplace safety, quality practices and measurement, manufacturing processes and production, and maintenance awareness.

Core Requirements (19)

MET102 Machine Processing, Theory and Application (5)
MET106 Industrial Safety (2)
MET110 Introduction to Quality Assurance (3)
MET127 Manufacturing Process and Materials (3)
MET131 Lean Manufacturing (3)
MET245 Variable Frequency Drives (3)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

ADVANCED PRODUCTION TECHNICIAN CERTIFICATE

Total Credits: 37

The Advanced Production Technician Certificate prepares individuals in the advanced competencies of front-line production employment for the advanced manufacturing industry. It complies with nationally recognized industry standards and emphasizes advanced manufacturing workplace skills.

Core Requirements (37)

MET102 Machine Processing, Theory and Application (5)
MET106 Industrial Safety (2)
MET110 Introduction to Quality Assurance (3)
MET127 Manufacturing Process and Materials (3)
MET131 Lean Manufacturing (3)
MET216 Properties of Materials (3)
MET219 Advanced Manufacturing Processes (3)
MET227 Advanced Machine Tools (3)
MET245 Variable Frequency Drives (3)
MET289 Advanced Technology Capstone (3)
MET290 Materials, Safety, and Equipment (3)

MET236 Lathe Operations (3)
OR
MET125 Principles of Fabrication (3)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

SUNDT CONSTRUCTION OPERATOR'S APPRENTICESHIP CERTIFICATE

Total Credits: 29

The SUNDT Construction Operator's Apprenticeship Certificate is a heavy equipment operator's apprenticeship training sponsored by SUNDT Construction for operation of heavy equipment to journeyman standards and certified plus training. The student must be sponsored by SUNDT Construction to enroll in this program.

Core Requirements (29)

HEO121 Heavy Equipment Operations Core (5)
HEO122 Heavy Equipment Operations I (5)
HEO221 Heavy Equipment Operations II (5)
HEO222 Heavy Equipment Operations III (5)
HEO225 Preventive Maintenance (2)
CET125 Introduction to Earthmoving Methods and Operations (3)
CET221 Basic Surveying and Grade Staking (4)

Other Requirements

- Students must earn:
  - a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
  - at least one-third of the certificate credits from CAC.

NEW COURSES

BCT100 NCCER Core
5 Credits (3 Lectures, 6 Labs)
Introduction to the NCCER core curriculum. Topics include knowledge of all safety rules, pre- and post-operating equipment inspections, builder's level readings, identifying needed repairs or routine maintenance jobs, and maintaining records of maintenance.

BCT133 Concrete
3 Credits (3 Lectures)
Basics of concrete construction are covered, including slump, composition, and aggregate concrete.

BCT141 Concrete Finishing II
5 Credits (3 Lectures, 6 Labs)
Application of advanced concrete finishing construction, including finishes, mix composition, and quality practices.

BCT150 OSHA 30
2 Credits (2 Lectures)
A 30 hour course in construction industry safety. Using OSHA standards as a guide, students will receive instruction in construction safety and health principles to help prevent injury. Special emphasis is placed on those areas that are the most hazardous. Topics Include but are not limited to: OSH Act, safety programs, fall protection, personal protective equipment, stairways and ladders, excavations and confined space entry.

BCT180 Communication for the Trades
3 Credits (3 Lectures)
Develop a working vocabulary of Spanish or English, which includes words to facilitate communication with coworkers about construction trade issues. Also included is discussion of cultural issues that are crucial for effectively bridging communication gaps in the building industry.

BCT296 Construction Apprenticeship
2 Credits (2 Internships)
Construction industry placement tailored to the students' academic program pathway, skill set, and abilities.

CNA125A Nursing Assistant Advanced Placement
8 Credits (7 Lectures, 3 Labs)
Entry-level nursing skills, supervised clinical experience, and basic anatomy, physiology, nutrition, and medical terminology pertinent to nursing assistants in nursing homes or hospitals. This course is specifically for qualified healthcare workers who want to earn the additional certification and gain entry into a nursing program. A certificate of completion will be issued when all requirements have been met. The student is then eligible to sit for the nursing assistant certification examination and to take the practical examination. Prerequisites: HS diploma or GED, Registration Packet completed, Healthcare Provider Level CPR, MAT082 or appropriate test score, and RDG100.

Specific admission criteria include:
1. At least one (1) year full-time employment in the direct provision of health care within five (5) years OR successful completion of course work that includes direct patient care experiences in allied health, medicine, or nursing in the past five (5) years.

2. Meeting the same course outcomes as the traditional course by taking all examinations and completing all skills demonstrations.
3. Successful completion of all clinical objectives during a 16-hour clinical rotation, under direct supervision and observation of a qualified RN instructor, in a long-term care facility.

HEO130 Trenching and Foundations
3 Credits (2 Lectures, 3 Labs)
Introduction to basic heavy equipment operation knowledge and experience, including working with heavy equipment in a safe and responsible manner, operating various types of forklifts used in the industry, and demonstration of rigging & hoisting safety techniques. Hands-on experiences include lifting, transporting, and placing various types of loads.

MET201 Electric Motors and Drives
3 Credits (2 Lectures, 3 Labs)
Construction and operating principles of single and poly phase motors, motor control using relay and timing circuits, and variable speed drives applications. Additional emphasis is placed on maintenance and troubleshooting of electric motors and control circuitry. *Prerequisite: ELC122.*

MET219 Advanced Manufacturing Processes
3 Credits (3 Lectures)
Introduction to the concepts of production systems management and control. Topics stressed include materials resource planning and basic production line controls, as well as robotics, conveyors, machine tools, and quality integration. *Prerequisite: MET 127.*

MET289 Advanced Technology Capstone
3 Credits (2 Lectures, 3 Labs)
The capstone brings together skills acquired in previous coursework in manufacturing processes, concept, design, engineering, and robotics into a suitable project with special emphasis on planning, problem solving, and machine processing.

PHT150 Pharmacy Calculations
1 Credit (1 Lecture)
Mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings are covered. Includes complete coverage of ASHP curriculum standard 12 and business-related calculations for insurance processing, inventory management, and depreciation.