



DEPARTMENT OF  
HIGHER EDUCATION &  
WORKFORCE DEVELOPMENT

**New Program Report**

**Date Submitted:**

05/27/2021

**Institution**

East Central College

**Site Information**

**Implementation Date:**

7/1/2021 12:00:00 AM

**Added Site(s):**

**Selected Site(s):**

Business and Industry Center (BIC), 42 Prairie Dell Plaza Drive, Union, MO, 63084

East Central College, 1964 Prairie Dell Road, Union, MO, 63084

Four Rivers Career Center, 1978 Image Dr., Washington, MO, 63090

**CIP Information**

**CIP Code:**

470303

**CIP Description:**

A program that prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

**CIP Program Title:**

Industrial Mechanics and Maintenance Technology

**Institution Program Title:**

Applied Technology

**Degree Level/Type**

**Degree Level:**

Associate Degree

**Degree Type:**

Associate of Applied Arts

**Options Added:**

Certificate of Achievement

Certificate of Specialization

**Collaborative Program:**

N

**Mode of Delivery**

Current Mode of Delivery

Classroom



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## New Program Report

Hybrid

Online

### Student Preparation

Special Admissions Procedure or Student Qualifications required:

This program is for students interested in cross disciplinary skilled trade programs and earning an Applied Technology AAS. Students will also have the opportunity to earn credit for prior learning and associate that with course work that may align and have the ability to test out of certain courses.

Specific Population Characteristics to be served:

This degree and its certificate options may be for a student seeking to explore career tech/manufacturing options yet are unsure of a commitment to a specific field. It will also be an option for individuals who have years of experience in a technical field looking to hone their foundation skills through formalized education career technical training.

### Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

Our current faculty/adjunct faculty are qualified and credentialed to teach all course work related to this degree.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

This degree will not affect our current full time faculty loads. They are already teaching these courses as outlined in our master schedule. Full time faculty are 85 to 90 percent responsible for teaching these courses. There is a limited amount of adjunct work available in these areas.

Expectations for professional activities, special student contact, teaching/learning innovation:

None

### Student Enrollment Projections Year One-Five

Year 1	Full Time: 10	Part Time: 6	
Year 2	Full Time: 16	Part Time: 8	
Year 3	Full Time: 20	Part Time: 5	Number of Graduates: 30
Year 4	Full Time: 20	Part Time: 10	
Year 1	Full Time: 10	Part Time: 6	
Year 2	Full Time: 16	Part Time: 8	
Year 3	Full Time: 20	Part Time: 5	Number of Graduates: 30
Year 4	Full Time: 20	Part Time: 10	
Year 1	Full Time: 10	Part Time: 6	
Year 2	Full Time: 16	Part Time: 8	



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Year 3	Full Time: 20	Part Time: 5	Number of Graduates: 30
Year 4	Full Time: 20	Part Time: 10	
Year 5	Full Time: 20	Part Time: 10	Number of Graduates: 20

**Percentage Statement:**  
n/a

**Program Accreditation**

**Institutional Plans for Accreditation:**

Currently there are no plans for seeking accreditation. Rationale: The AAS Applied Technology is a compilation of skill-trade courses offered at East Central College which have some type of accreditation or field test. The core courses required of the degree draw from the following programs: Auto Tech, Bldg. Const, HVAC, Industrial Engineering Technology (IET), Precision Machining, and Welding. 2 programs enjoy an active status with special program accreditations, IET and Precision Machining.

**Program Structure**

**Total Credits:**  
60

**Residency Requirements:**  
n/a

**General Education Total Credits:**  
16

**Major Requirements Total Credits:**  
35

**Course(s) Added**

COURSE NUMBER	CREDITS	COURSE TITLE
IND173	1	Process & Control Systems Lab
AUT211	3	Collision Repair III
IND103	3	Introduction to Manufacturing Processes
PRS131	1	Computer Aided Manufacturing Lec
PRS242	2	Machining Capstone Lab
AUT102	4	ASE Brakes
IND111	2	Industrial Power Systems Lec
IND213	3	Maintenance Practices
BDC110	9	Building Construction I
HVC107	2	Intro to Heating and Cooling I
PRS216	2	Geometric Dim Tolerance & SPC Lab
AUT152	4	ASE Engine Repair



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PRS121	2	Machine Tool I Lec
WLD121	1	Welding III Lec (Advanced SMAW)
IND163	3	Indus & Control Sys Wiring
AUT112	3	Collision Repair II
PRS201	1	Machine Tool 3 Lec
PRS215	1	Geometric Dim Tolerance & SPC Lec
IND265	3	IET Internship
WLD133	3	Welding IV (Blueprint Reading)
IND133	3	Industrial Robotics
AUT142	3	ASE Manual Drive
HVC165	1	Internship
BDC130	9	Building Construction III
AUT111	3	Collision Repair I
WLD102	4	Welding I Lab (Intro)
HVC126	3	Applied Sheet Metal I
PRS202	3	Machine Tool 3 Lab
HVC106	4	Heating and Equip Install I
PRS112	2	Intro CNC Mill & Lathe Lab
PRS231	2	Machine Tool 4 Lec
WLD132	4	Welding IV Lab (GMAW)
IND152	1	Industrial Electricity Lab
AUT222	7	ASE Engine Performance
PRS122	2	Machine Tool I Lab
HVC108	2	Intro to Heating and Cooling II
PRS123	1	Machine Tool 2 Lec
WLD211	1	Welding VII Lec (Pipe Welding)
IND174	3	Maintenance Welding
IND215	3	Motor Controls
IND112	1	Industrial Power Systems Lab
HVC151	3	Energy Audit and Green Tech
HVC103	1	Refrig Recov/EPA Cert
WLD112	4	Wldg II Lab (All position SMAW)
WLD265	5	Welding Internship
PRS211	2	CNC 2 Mill Lec
WLD212	4	Welding VII Lab (Pipe Welding)



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BDC140	9	Building Construction IV
WLD201	1	Welding V Lec (GTAW)
IND221	3	PLC-Programmable Logic Controllers
PRS241	1	Machining Capstone Lec
IND212	3	Materials and Metallurgy
HVC205	4	Forced Air Heating II
PRS124	3	Machine Tool 2 Lab
AUT212	3	Collision Repair IV
IND151	2	Industrial Electricity Lec
AUT101	1	Intro to Auto Tech
HVC251	3	Commercial Chilled Water Appl
WLD131	1	Welding IV Lec (GMAW)
HVC206	4	Heating and Equip Install II
AUT151	2	Auto Transmission/Transaxle
HVC104	4	Refrigerant A/C Install I
PRS132	2	Computer Aided Manufacturing Lab
AUT141	3	ASE Suspension/Steering
IND217	3	Industrial Systems Troubleshooting
HVC105	4	Forced Air Heating I
WLD122	4	Welding III Lab (Advanced SMAW)
BDC120	9	Building Construction II
WLD202	4	Welding V Lab (GTAW)
PRS142	2	CNC Lathe Lab
WLD101	1	Welding I Lec (Intro)
HVC295	3	HVAC Capstone
PRS212	2	CNC 2 Mill Lab
WLD111	1	Wldg II Lec (All position SMAW)
PRS111	1	Intro CNC Mill & Lathe Lec
PRS103	3	Print Reading and Design
HVC204	4	Refrigerant A/C Install II
IND231	3	Advanced PLC
AUT223	1	Heating & Air Conditioning
AUT221	8	ASE Electrical Systems
PRS232	2	Machine Tool 4 Lab
PRS141	1	CNC Lathe Lec
PRS218	3	Solidworks



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IND172	2 Process & Control Systems Lec
WLD213	1 Welding VIII (Advanced Grad Project)

**Free Elective Credits:**

9

**Internship or other Capstone Experience:**

Not applicable

**Assurances**

I certify that the program is clearly within the institution's CBHE-approved mission. The proposed new program must be consistent with the institutional mission, as well as the principal planning priorities of the public institution, as set forth in the public institution's approved plan or plan update.

I certify that the program will be offered within the proposing institution's main campus, CBHE-approved service region or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program within the geographically applicable area.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the program can be launched with minimal expense and falls within the institution's current operating budget.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

**Contact Information**

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WELSH

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# Applied Technology Associate Applied Science

## Guided Pathway to Success

**Pathway Narrative:** East Central College Applied Technology degree/certificate's allows students an entry level competencies in a variety of technical skills based on student interest and workforce demand. The Applied Technology will allow flexibility in course selection to match the student's Advanced Manufacturing interest.

**Extra-Curricular/Co-curricular Opportunities at ECC:** Collaborative Fabrication Project

### 1<sup>st</sup> Year Fall

Course Number	Course Title	Credit Hour	Pre-requisite/Co-requisites with Minimum Grade	Term Offered:	Milestone Notes: (If applicable)
COL 000 & COL 101	Campus Orientation & Falcon Seminar	1		Fall and Spring	
Program Core Requirements	Select 9 hours from any combination of areas below: AUT, BLD, HVC, IND, PRS and WLD	9		Fall and Spring	
IND 103	Introduction to Manufacturing Process	3		Fall and Spring *	Complete Intro to Manufacturing Process
Total Credit Hours: 13					

\*offered upon course demand

### 1<sup>st</sup> Year Spring

Course Number	Course Title	Credit Hour	Pre-requisite/Co-requisites with Minimum Grade	Term Offered:	Milestone Notes: (If applicable)
Program Core Requirements	Select 14 hours from any combination of areas below: AUT, BLD, HVAC, IND, PRS and WLD	14		Fall and Spring	
100 level or Higher	3 credit hours from any combination of the Technical Electives areas below: AUT, BLD, BUS, CIS, HVC, IND, PRS, WLD	3		Fall and Spring	
Total Credit Hours: 17					

## Applied Technology Associate Applied Science

### Guided Pathway to Success

**Pathway Narrative:** East Central College Applied Technology degree/certificates allows students to tailor a degree to match their current employment requirements or prepare for the future employment. The Applied Technology degree will allow flexibility in course selection to match the student's Advanced Manufacturing interest.

**Extra-Curricular/Co-curricular Opportunities at ECC:** none

2<sup>nd</sup> Year Fall

Course Number	Course Title	Credit Hour	Pre-requisite/Co-requisites with Minimum Grade	Term Offered:	Milestone Notes: (If applicable)
Core 42	Math or Natural Science	3		Fall and Spring	
Core 42	Humanities and Fine Arts	3		Fall and Spring	
Core 42	Written and/or Oral Communications	3		Fall and Spring	Complete Core 42 Written/Oral Requirement
Program Core Requirements	Select 4 hours from any combination of areas below: AUT, BLD, HVC, IND, PRS and WLD	4		Fall and Spring	
100 level or Higher	3 credit hours from any combination of the Technical Electives areas below: AUT, BLD, BUS, CIS, HVC, IND, PRS, WLD	3		Fall and Spring	
<b>Total Credit Hours: 16</b>					

2<sup>nd</sup> Year Spring

Course Number	Course Title	Credit Hour	Pre-requisite/Co-requisites with Minimum Grade	Term Offered:	Milestone Notes: (If applicable)
Core 42	Social/Behavioral Sciences	3		Fall and Spring	
HST 101, HST 102, PSC 102	US Hist. to 1877, US Hist. Since 1877, US Government	3		Fall and Spring	
Program Core Requirements	Select 5 hours from any combination of areas below: AUT, BLD, HVC, IND, PRS and WLD	5		Fall and Spring	



100 level or Higher	3 credit hours from any combination of the Technical Electives areas below: AUT, BLD, BUS, CIS, HVC, IND, PRS, WLD	3		Fall and Spring	
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Total Credit Hours: 14