

# BIG BEND COMMUNITY COLLEGE

## INDUSTRY, MANUFACTURING & TRADES

### MANUFACTURING & PROCESS TECHNOLOGY (AAS-T) – MISSION CRITICAL OPERATIONS EMPHASIS

NAME:



The Manufacturing and Process Technology degree provides students a broad range of career and academic options. The emphasis in MISSION CRITICAL OPERATIONS provides for direct entry into the workforce in areas such as facility management and select maintenance operations.

As students make progress toward the completion of the Associate of Applied Science – Transfer degree (AAS-T) they may also earn a certificate, which is recognized by local industry of incorporating the fundamental skills and knowledge needed for in entry-level positions. The AAS-T degree also provides students the option of transferring to Eastern Washington University to pursue a Bachelor of Science programs in Manufacturing Technology or a Bachelor of Science in Applied Technology.

#### ENTRY REQUIREMENTS

- Complete Admissions and Testing processes
- Meet with an advisor prior to enrolling

#### CREDENTIAL REQUIREMENTS

##### Stackable Certificate of Accomplishment – Facilities Support Specialist (29 Credits)

- |  |  |
|--|--|
| <input type="checkbox"/> BUS 135 – Logistics, Transp. & Supply Chain (3)   | <input type="checkbox"/> WKED 101 – Professional Preparation I (1)         |
| <input type="checkbox"/> IST 100 – Introduction to Industrial Safety & Health (3)<br><i>(currently under development for five credits)</i> | <input type="checkbox"/> WKED 102 – Professional Preparation II (1)        |
| <input type="checkbox"/> IST 102 – Technical Drawing Interpretation (3)  | <input type="checkbox"/> WKED 103 – Professional Preparation III (1)       |
| <input type="checkbox"/> IST 105 – Basic Electricity DC Circuits (5)   | <input type="checkbox"/> WKED 110 – Mission Critical Ops Management I (3)  |
| <input type="checkbox"/> IST 106 – Basic Electricity AC Circuits (5)   | <input type="checkbox"/> WKED 111 – Mission Critical Ops Management II (4) |

##### Stackable Certificate of Achievement – Manufacturing & Process Technology (24 additional credits) *(Plus all required courses from Certificate of Accomplishment listed above)*

- |  |   |
|--|---|
| <input type="checkbox"/> BIM 109 – Internet Communications (1)   | <input type="checkbox"/> MAP 117 – Applied Math: Workforce Ed Programs (5)<br>or MATH& 107, 141, 146 <i>(select only one)</i> |
| <input type="checkbox"/> BIM 110 – Microsoft Office Essentials (2)   | <input type="checkbox"/> PSYC& 100 – General Psychology (5) or<br>SOC& 101 – Introduction to Sociology (5)                    |
| <input type="checkbox"/> CMST& 210 – Interpersonal Communication (5) or<br>CMST& 220 – Public Speaking (5) | <u>IST, MCT or Advisor Approved Elective (at least 4 credits)</u>   |
| <input type="checkbox"/> ENGL& 101 – Composition I (5)   | <input type="checkbox"/>  |
| <input type="checkbox"/> FAD 150 – Industrial First Aid & CPR (2)  |   |

#### Degree Requirement Options (Minimum of 37 Credits)

- |   |  |
|---|--|
| <u>Required Degree Courses (21 credits)</u>                                   | <u>Mechanical Skill Courses (recommendations)</u>                    |
| <input type="checkbox"/> BUS 215 – Customer Services (3)                      | <input type="checkbox"/> IST 107 – Industrial Electricity I (5)      |
| <input type="checkbox"/> BUS 289 – Project Management (5)                     | <input type="checkbox"/> IST 170 – Intro. to Instrumentation (5)     |
| <input type="checkbox"/> ENGL& 235 – Technical Writing (5)                    | <input type="checkbox"/> IST 136 – Intro. to Industrial Boilers (5)  |
| <input type="checkbox"/> IST 120 – Intro. to Prevention/Predictive Maint. (3) | <input type="checkbox"/> IST 150 – Intro. to PLCs (5)                |
| <input type="checkbox"/> IST 130 – Intro. to Refrigeration and AC (5)         | <input type="checkbox"/> IST 280 – Mechanical Power Transmission (5) |
| <u>Automation Skill Courses (recommendations)</u>                             | <input type="checkbox"/> IST 282 – Fluid Power Transmission (5)      |
| <input type="checkbox"/> MCT 100 – Intro to Modern Technology (5)             | <input type="checkbox"/> IST 284 – Pump Hydraulics/Mechanics (4)     |
| <input type="checkbox"/> MCT 101 – Mechatronics I (5)                         | <u>Advisor Approved Electives or Substitutions</u>                   |
| <input type="checkbox"/> MCT 102 – Mechatronics II (5)                        | <input type="checkbox"/>   |
| <input type="checkbox"/> MCT 103 – Mechatronics III (5)                       | <input type="checkbox"/>   |
| <u>Management Development Courses (recommendations)</u>                       | <input type="checkbox"/>   |
| <input type="checkbox"/> BUS 200 – Supervision (5)                            | <input type="checkbox"/>   |

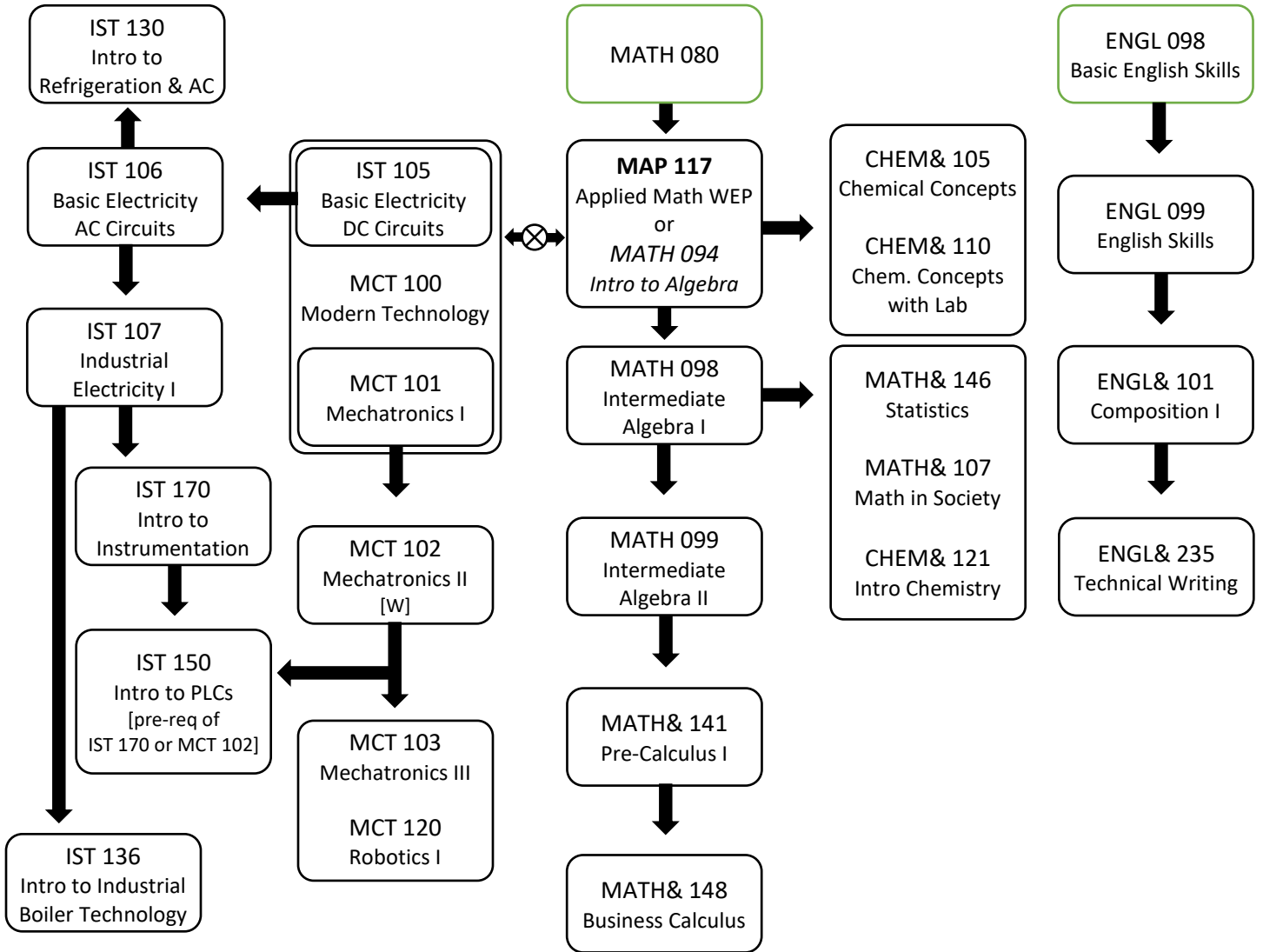
90 TOTAL DEGREE CREDITS

SID:

## M&PT – MANUFACTURING/MAINTENANCE PRE-REQUISITE FLOW CHART

Start by talking with your assigned advisor to determine which courses to take first based on your placement scores.

NAME:



SID:

- Courses WITHOUT PRE-requisites**

Program Course Requirements

  - BIM 109 – Internet Communication (1)
  - BIM 110 – Microsoft Essentials (2)
  - CMST& 210 – Interpersonal Communications (5)
  - CMST& 220 – Public Speaking (5)
  - ENGR& 111 – Engineering Graphics I (2D) (5)
  - ENGR& 112 – Engineering Graphics II (3D) (5)
  - FAD 150 – Industrial First-Aid & CPR (2)
  - IST 100 – Industrial Safety & Health
  - IST 102 – Technical Drawing Interpretation (3)
  - PSYC& 100 – General Psychology (5) or
  - SOC& 101 – Introduction to Sociology (5)
  - WLD 111 – Welding Process I (6)
  - WKED 101 – Professional Preparation I (1)
  - WKED 110 – Mission Critical Ops. Mgmt. I (3)
  - WKED 111 – Mission Critical Ops. Mgmt. II (4)

**KEY**

STARTING POINT  
of SEQUENCE

→

PRE-requisite

↔⊗↔

CO-requisite

[F = fall   W = winter   Sp = spring   Su = summer]





**Big Bend Community College**  
**WORKFORCE EDUCATION PROGRAM REQUIREMENTS**

NAME:

**Certificate of Achievement**

Students working toward a Certificate of Achievement need to develop a program plan with the faculty advisor in their Workforce Education area of interest. The plan must include all related instruction components. The Certificate of Achievement is designed to provide recognition for the student who has not completed an Associate in Applied Science degree program.

**Certificate of Accomplishment**

Students working toward a Certificate of Accomplishment need to develop a program plan with the faculty advisor in their Workforce Education area of interest. The Certificate of Achievement is designed to provide recognition for the student who does not complete a Certificate of Achievement or an Associate in Applied Science degree program.

**Changes or substitutions for course work in the college catalog must be listed and approved by the advisor.** It is essential that students meet quarterly with their advisor before registration to review progress and plan their program.

Each program plan must be approved by the Workforce Education program advisor and Dean of Workforce Education. Certificates will be issued out of the Dean of Workforce Education Instructional Services office.

**Certificate of Achievement**                      **QTR & YR Completed** \_\_\_\_\_

**Certificate of Accomplishment**                      **QTR & YR Completed** \_\_\_\_\_

SID:

*Title of Certificate:*

\_\_\_\_\_

*Advisor Approval:*

\_\_\_\_\_  
Advisor

\_\_\_\_\_  
Date

*Program Completion Approval:*

\_\_\_\_\_  
Dean of Workforce Education

\_\_\_\_\_  
Date

\_\_\_\_\_  
Instructional Services Office Assistant

\_\_\_\_\_  
Date

NAME:

SID:

**Big Bend Community College**  
**WORKFORCE EDUCATION PROGRAM REQUIREMENTS**  
**Associate in Applied Science Degree**

**Credit Requirement:** Completion of the total credit requirements of the approved Workforce Education Program Plan. Minimum of 90 quarter hours. It is the student's responsibility to insure that he/she meets all of the technical and general education degree requirements.

**MATHEMATICS REQUIREMENT:** 3-5 credits\* in mathematics courses as stated in the approved Professional/Technical Program Plan.

BUS 102	Business Mathematics
MAP 100	Applied Mathematics (AMT)*
MAP 101	Applied Mathematics (AUT/WLD)
MAP 103	Applied Mathematics (MMT/IET)
MAP 117	Applied Mathematics for Workforce I
MAP 119	Applied Mathematics for Workforce II
MATH& 107	Math in Society
MATH& 141	Pre-Calculus I
MATH& 146	Intro to Statistics
MATH 147	Finite Mathematics
*AMT program requires two MAP 100 credits	

**WRITTEN COMMUNICATIONS REQUIREMENT:** 3-5 credits in written communications courses as stated in the approved Professional/Technical Program Plan.

BUS 121	Business English
ENGL& 101	English Composition I
ENGL 109	Applied Technical Writing

**ORAL COMMUNICATIONS REQUIREMENT:** 3-5 credits in oral communications courses as stated in the approved Professional/Technical Program Plan.

AVF 225	Effective Communications in Flight Instruction
CMST 100	Human communications
CMST& 210	Interpersonal Communications
CMST& 220	Public Speaking

**HUMAN RELATIONS REQUIREMENT:** 3-5 credits in human relations courses as stated in the approved Professional/Technical Program Plan.

BUS 120	Human Relations on the Job
EDUC& 115	Child Development
PSYC& 100	General Psychology
SOC& 101	Intro to Sociology

**INDUSTRIAL FIRST AID REQUIREMENT:** 2 credits in Industrial First Aid or equivalent or higher certification as stated in the approved Professional/Technical Program Plan.

FAD 150	Industrial First Aid and CPR plus Bloodborne Pathogens
Current First Aid/CPR, First Responder, or EMT card	

\_\_\_\_\_

Approval: \_\_\_\_\_

Advisor \_\_\_\_\_

Date \_\_\_\_\_

Program Completion Approval: \_\_\_\_\_

Dean of Workforce Education \_\_\_\_\_

Date \_\_\_\_\_

Each program must be approved by the Workforce Education program advisor. Program changes and substitutions must be approved by the program advisor prior to application for degree.