

BIG BEND COMMUNITY COLLEGE

INDUSTRY, MANUFACTURING & TRADES

MANUFACTURING & PROCESS TECHNOLOGY (AAS-T) – MANUFACTURING EMPHASIS



The Manufacturing and Process Technology degree provides students a broad range of career and academic options. The emphasis in MANUFACTURING provides for direct entry into the workforce in areas such as manufacturing production, processing, 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. Students

NAME: _____

ENTRY REQUIREMENTS

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

CREDENTIAL REQUIREMENTS

Stackable Certificate of Achievement Core in Mechatronics (46 Credits)

- | | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> CMST& 210 – Interpersonal Communication (5) or
CMST& 220 – Public Speaking (5) <input type="checkbox"/> ENGL& 101 – Composition I (5) <input type="checkbox"/> FAD 150 – Industrial First Aid & CPR (2) <input type="checkbox"/> MAP 117 – Applied Math: Workforce Ed Programs (5) <input type="checkbox"/> PSYC& 100 – General Psychology (5) or
SOC& 101 – Introduction to Sociology (5) | <ul style="list-style-type: none"> <input type="checkbox"/> BIM 109 – Internet Communications (1) <input type="checkbox"/> BIM 110 – Microsoft Office Essentials (2) <input type="checkbox"/> IST 100 – Introduction to Industrial Safety & Health (3)
<i>(currently under development for five credits)</i> <input type="checkbox"/> IST 102 – Technical Drawing Interpretation (3) <input type="checkbox"/> MCT 100 – Intro to Modern Technology (5) <input type="checkbox"/> MCT 101 – Mechatronics I (5) <input type="checkbox"/> MCT 102 – Mechatronics II (5) |
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Degree Requirement Options (Minimum of 44 Credits)

Select courses as needed based on intended career or industry

Electricity and Electronics Skill Courses

- IST 107 – Industrial Electricity I (5)
- IST 170 – Intro. to Instrumentation (5)

Mechanical Skill Courses

- IST 120 – Intro. to Prevention/Predictive Maint. (3)
- IST 130 – Intro. to Refrigeration and AC (5)
- IST 136 – Intro. to Industrial Boilers (5)
- IST 180 – Machining I (5)
- IST 182 – Machining II (5)
- IST 280 – Mechanical Power Transmission (5)
- IST 282 – Fluid Power Transmission (5)
- IST 284 – Pump Hydraulics/Mechanics (4)

Fabrication Skill Courses

- WLD 111 – Welding Process I (6)
- WLD 122 – Gas Metal Arc Welding I (3)
- WLD 132 – Gas Tungsten Arc Welding I (TIG) (3)

Automation Skill Courses

- MCT 103 – Mechatronics III (5)
- MCT 120 – Robotics I (5)
- MCT 220 – Robotics II (5)

Transfer Pathway Courses

- CHEM& 105 – Chemical Concepts (5) or
CHEM& 110 – Chemical Concepts with Lab (5) or
CHEM& 121 – Introductory Chemistry (5) or
- ENGL& 235 – Technical Writing (5)
- ENGR& 111 – Engineering Graphics I (CAD) (5)
- ENGR& 112 – Engineering Graphics II (Solidworks) (5)

Approved Electives or Substitutions

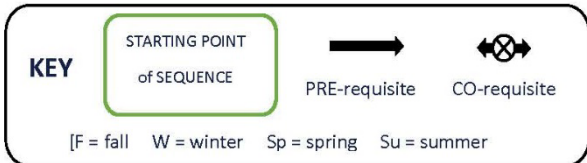
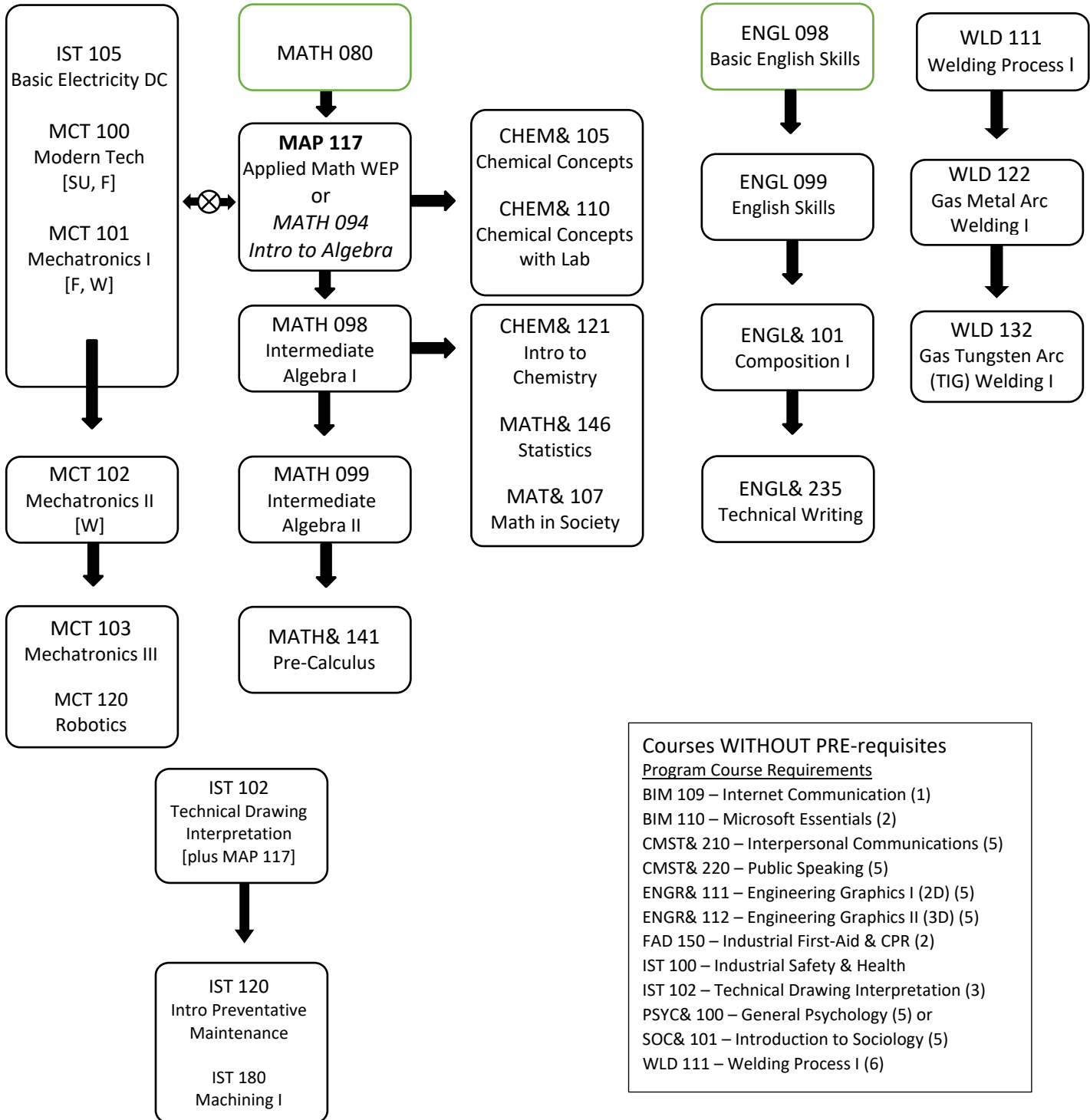
- _____
- _____
- _____
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- _____

90 TOTAL DEGREE CREDITS

SID: _____

M&PT – MANUFACTURING PRE-REQUISITE FLOW CHART

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



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 Achievement **QTR & YR Completed:** _____

Title of Certificate:

Advisor Approval:

Advisor

Date

Program Completion Approval:

Dean of Workforce Education

Date

Instructional Services Office Assistant

Date

SID: _____

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	

Student Name _____ SID # _____

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.