BIG BEND COMMUNITY COLLEGE

INDUSTRY, MANUFACTURING & TRADES

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



The Manufacturing and Process Technology degree provides students a broad range of career and academic options. The emphasis in MISSION CRITIAL 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)			
 □ BUS 135 – Logistics, Transp. & Supply Chain (3) □ IST 100 – Introduction to Industrial Safety & Health (3) (currently under development for five credits) □ IST 102 – Technical Drawing Interpretation (3) □ IST 105 – Basic Electricity DC Circuits (5) □ IST 106 – Basic Electricity AC Circuits (5) 	 □ WKED 101 – Professional Preparation I (1) □ WKED 102 – Professional Preparation II (1) □ WKED 103 – Professional Preparation III (1) □ WKED 110 – Mission Critical Ops Management I (3) □ WKED 111 – Mission Critical Ops Management II (4) 			
	uring & Process Technology (24 additional credits)			
	cate of Accomplishment listed above)			
 □ BIM 109 – Internet Communications (1) □ BIM 110 – Microsoft Office Essentials (2) □ CMST& 210 – Interpersonal Communication (5) or CMST& 220 – Public Speaking (5) □ ENGL& 101 – Composition I (5) 	 □ MAP 117 – Applied Math: Workforce Ed Programs (5) or MATH& 107, 141, 146 (select only one) □ PSYC& 100 – General Psychology (5) or SOC& 101 – Introduction to Sociology (5) IST, MCT or Advisor Approved Elective (at least 4 credits) 			
☐ FAD 150 – Industrial First Aid & CPR (2)				
	ons (Minimum of 37 Credits)			
Required Degree Courses (21 credits) □ BUS 215 – Customer Services (3) □ BUS 289 – Project Management (5) □ ENGL& 235 – Technical Writing (5) □ IST 120 – Intro. to Prevention/Predictive Maint. (3) □ IST 130 – Intro. to Refrigeration and AC (5) Automation Skill Courses (recommendations) □ MCT 100 – Intro to Modern Technology (5) □ MCT 101 – Mechatronics I (5) □ MCT 102 – Mechatronics II (5) □ MCT 103 – Mechatronics III (5) Management Development Courses (recommendations) □ BUS 200 – Supervision (5)	Mechanical Skill Courses (recommendations) □ IST 107 – Industrial Electricity I (5) □ IST 170 – Intro. to Instrumentation (5) □ IST 136 – Intro. to Industrial Boilers (5) □ IST 150 – Intro. to PLCs (5) □ IST 280 – Mechanical Power Transmission (5) □ IST 282 – Fluid Power Transmission (5) □ IST 284 – Pump Hydraulics/Mechanics (4) Advisor Approved Electives or Substitutions □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			

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. **IST 130 ENGL 098** Intro to **MATH 080 Basic English Skills** Refrigeration & AC **CHEM& 105 MAP 117 IST 106 IST 105 Chemical Concepts** Applied Math WEP **Basic Electricity Basic Electricity ENGL 099 AC Circuits** DC Circuits or **←⊗**⇒ **English Skills CHEM& 110 MATH 094** Chem. Concepts MCT 100 Intro to Algebra with Lab Modern Technology **IST 107** Industrial **MATH 098 MATH& 146 ENGL& 101** MCT 101 Electricity I Intermediate **Statistics** Composition I Mechatronics I Algebra I **MATH& 107** IST 170 Math in Society Intro to **MATH 099** Instrumentation MCT 102 **ENGL& 235 CHEM& 121** Intermediate Mechatronics II **Technical Writing** Intro Chemistry Algebra II [W] **IST 150** Intro to PLCs [pre-req of **MATH& 141** MCT 103 IST 170 or MCT 102] Pre-Calculus I Mechatronics III **MCT 120 IST 136** Robotics I Intro to Industrial **MATH& 148** Boiler Technology **Business Calculus** IST 102 **WKED 110 Courses WITHOUT PRE-requisites Technical Drawing** Mission Critical **Program Course Requirements** Interpretation Ops Mgmt I [plus MAP 117] BIM 109 – Internet Communication (1) BIM 110 - Microsoft Essentials (2) CMST& 210 – Interpersonal Communications (5) **WKED 111** CMST& 220 - Public Speaking (5) Mission Critical **IST 120** ENGR& 111 – Engineering Graphics I (2D) (5) Ops Mgmt II Intro Preventative ENGR& 112 – Engineering Graphics II (3D) (5) Maintenance FAD 150 - Industrial First-Aid & CPR (2) IST 100 - Industrial Safety & Health IST 180 IST 102 – Technical Drawing Interpretation (3) Machining I PSYC& 100 - General Psychology (5) or SOC& 101 – Introduction to Sociology (5) WLD 111 – Welding Process I (6) WKED 101 - Professional Preparation I (1) STARTING POINT WKED 110 - Mission Critical Ops. Mgmt. I (3) **KEY** of SEQUENCE PRE-requisite CO-requisite WKED 111 - Mission Critical Ops. Mgmt. II (4) [F = fall W = winter Su = summer] Sp = spring

M&PT N	MANUF	ACTURIN	NG/MAINTEN	IANCE	QUAR	TERLY PROG	RAM PLA	N (YEAR OI	NE)	Z
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IST 102 (3)			BUS 135 (3)				IST 106 (5)		
MAP 117 (5)			ENGL& 101	(5)			PSYC& 1	00 or SOC8	t 101 (5)	
WKED 101 (1)			IST 105 (5)				WKED 10	03 (1)		
WKED 110 (3)			WKED 102 (1)			WKED 1	11 (4)		
				ADVI	ISING					
FALL (CF	R)			WINTE	ER (CR	?)		SPRIN	IG (CR)	
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☐ Fill out FAFSA or WAF		ext year	☐ Complete	e letter o	of inter	nt for Year 2		re for Year 2		
☐ Meet with your adviso	or						☐ Apply	for Certifica	te of Achievement	
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for next year		adviso				dvisor			Career Services for	
☐ Meet with your adviso	or	☐ Comp	lete letter of ir	itent	□ Ex	kplore career an	d transfer		nce with resume,	
,		for Ye				otions			ew prep, etc.	
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QUARTERLY REGISTRATION PLANNING

Big Bend Community College WORKFORCE EDUCATION PROGRAM REQUIREMENTS

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	
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	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.

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

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.

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

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.