

Manufacturing Engineering Technology

Student Name _____

Enrollment Date _____ Academic Year _____

Emplid _____ Scores: Math _____
 Reading _____
 Writing _____

CERTIFICATE – FUNDAMENTALS OF MECHATRONICS: 6 Total Credit Hours

Required Scores: Algebra – 25 / Reading – NA / Writing – NA	Cr Hr	Grade
MFG 135 Fundamentals of Mechatronics Prereq: ELT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or Consent of Instructor OR	6	
MFG 125 Fundamentals of Mechatronics A Prereq: ELT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or Consent of Instructor AND	(3)	
MFG 130 Fundamentals of Mechatronics B Prereq: MFG125 or Consent of Instructor	(3)	

CERTIFICATE – EXPLORATORY MACHINING: 7 Total Credit Hours

Required Scores: Algebra – None	Cr Hr	Grade
MTT 110 Fundamentals of Machine Tools – A No prerequisite AND	3	
MTT 112 Fundamentals of Machine Tools – B Prereq: (MTT 110 with a grade of C or greater) or Consent of Instructor OR	4	
MTT 114 Fundamentals of Machine Tools No prerequisite	(7)	

CERTIFICATE – OPERATIONS MANAGEMENT: 12 Total Credit Hours

Required Scores: None	Cr Hr	Grade
General Education:		
COM 181 Basic Public Speaking Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or Consent of Instructor OR	3	
COM 252 Introduction to Interpersonal Communication Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or consent of instructor	(3)	
Core:		
BA 160 Introduction to Business (No prerequisite)	3	
BA 287 Supervisory Management (No prerequisite) OR	3	
BA 288 Personal and Organizational Leadership No prerequisite OR	(3)	
QMS 101 Introduction to Quality Systems (No prerequisite)	(3)	
BA 289 Operations Management Prereq: BA 160 OR	3	
MFG 256 Production Management (No prerequisite)	(3)	

Developmental Courses: Once students complete and pass a developmental course with a grade of 'C' or higher, they have the option of retesting or moving into the next level of developmental. Once students have completed and passed ALL levels of developmentals, they can be placed into General Education courses, including College Algebra, and are not required to retest.

Developmental Math	Cr Hr
MAT 55 – Pre-Algebra (Compass score 24-41 in Pre-Algebra)	3
MAT 65 – Basic Algebra (Compass score 16-30 in Algebra)	3
MAT 120 – Intermediate Algebra (Compass score 31-35 in Algebra)	3
MAT 100 – College Algebra Workshop (Compass score 36-49 in Algebra / ACT 19-21 - enroll concurrent in College Algebra (MAT 150))	2
Developmental Writing	
ENC 90 – Foundations of College Writing I (Compass score 26-38)	3
ENC 91 – Foundations of College Writing II (Compass score 39-73)	3
Developmental Reading	
RDG 20 – Improved College Reading (Compass score 49-69)	3
RDG 30 – Reading for the College Classroom (Compass score 70-82)	3
RDG 41 – Reading Laboratory (Compass score 83-84)	1

CERTIFICATE – INTEGRATED MANUFACTURING TECHNOLOGIES: 20 Total Credit Hours

Required Scores: Algebra – 25 / Reading – 85 / Writing – 74	Cr Hr	Grade
GEN 100 Introduction to College No prerequisite	1	
EET 270 Electrical Motor Controls I Prereq: ELT 110 or Consent of Instructor Coreq: EET 271	2	
EET 271 Electrical Motor Controls I Lab Coreq: EET 270	2	
ELT 110 Circuits I Prereq: (MAT 65 or equivalent placement level) or Consent of Instructor	5	
FPX 100 Fluid Power Coreq: FPX 101 or Consent of Instructor	3	
FPX 101 Fluid Power Lab Coreq: FPX 100 or Consent of Instructor	2	
IMT 150 Maintaining Industrial Equipment I Coreq: IMT 151 or Consent of Instructor	3	
IMT 151 Maintaining Industrial Equipment I Lab Coreq: IMT 150 or Consent of Instructor	2	

CERTIFICATE – QUALITY CONTROL: 21 - 23 Total Credit Hours

Required Scores: Algebra – 36 / Reading – 85 / Writing – 74	Cr Hr	Grade
General Education:		
COM 181 Basic Public Speaking Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or Consent of Instructor OR	3	
COM 252 Introduction to Interpersonal Communication Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or consent of instructor	(3)	
MAT 150 College Algebra Prereq: 1. Math ACT score of 22 or above; 2. Math ACT score of 19-21 with concurrent MAT 100 workshop; 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent; or 4. KCTCS placement exam recommendation	3	
Core:		
GEN 100 Introduction to College No prerequisite	1	
BRX 112 Blueprint Reading for Machinist No prerequisite OR	4	
BRX 120 Basic Blueprint Reading No prerequisite OR	(3)	
CAD 102 Drafting Fundamentals No prerequisite OR	(4)	
CAD 112 Engineering Graphics Prereq: CAD 102 with a grade of C or greater or Consent of Instructor OR	(4)	
DFT 122 Introduction to Computer Aided Drafting Prereq: (CAD 102 with a grade of C or greater) or Approval of Program Coordinator	(4)	
MTT 118 Metrology/Control Charts No prerequisite	2	
QMS 101 Introduction to Quality Systems No prerequisite	3	
QMS 220 Quality Audits Prereq: QMS 101 or Consent of Instructor	3	
STA 220 Statistics Prereq: MAT 150 or equivalent OR	3	
QMS 240 Statistics for Quality I Prereq: MAT 150	(3)	

ASSOCIATE IN APPLIED SCIENCE DEGREE: 64-68 Total Credit Hours

Required Scores: Algebra – 36 / Reading – 85 / Writing – 74	Cr Hr	Grade
General Education:		
COM 181 Basic Public Speaking Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or Consent of Instructor	3	
COM 252 Introduction to Interpersonal Communication Prereq: ((Current placement scores for college level reading established by KCTCS, or completion of (DRE 30 or RDG 30 or CMS 185)) and (Current placement scores for college level writing established by KCTCS or completion of ENC 91)) or consent of instructor	(3)	
Computer Literacy course or competency demonstrated by exam Rec. CIS 100	0-3	
ENG 101 Writing I Prereq: Appropriate writing placement score or ENC 91	3	
Heritage / Humanities / Foreign Languages Prereq: See Compass / ACT score requirement	3	
MAT 150 College Algebra Prereq: 1. Math ACT score of 22 or above; 2. Math ACT score of 19-21 with concurrent MAT 100 workshop; 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent; or 4. KCTCS placement exam recommendation	3	
MAT 155 Trigonometry Prereq: 1. Math ACT score of 22 or above; 2. Math ACT score of 19-21 with concurrent MAT 150; 3. Successful completion of intermediate Algebra, MAT 126, or equivalent; or 4. Placement exam recommendation	3	
PSY 110 General Psychology Prereq: (ACT, COMPASS, or ASSET scores for college level reading) or completion of Transitional reading courses(OR	3	
SOC 101 Introduction to Sociology (No prerequisite)	(3)	
Science Prereq: See Compass / ACT score requirement	3	
STA 220 Statistics (or QMS 240) Prereq: MAT 150 or equivalent	3	OR
MAT 170 Brief Calculus with Applications Prereq: Successful completion of MAT 150 or Math ACT 27 or above	(3)	
Subtotal:	24-27	
Core:		
GEN 100 Introduction to College (No prerequisite)	1	
BA 160 Introduction to Business (No prerequisite)	3	
BA 289 Operations Management Prereq: BA 160	3	OR
MFG 256 Production Management (No prerequisite)	(3)	
COE 199 Cooperative Education Prereq: Completion of at least 12 credit hours in the Associate in Applied Science Degree, diploma or certificate program of study and/or marketable skills in the area in which the student is enrolled, and minimum cumulative grade point average (GPA) of 2.0	1	OR
MFG 175 Lean Operations (No prerequisite)	(2)	
ELT 110 Circuits I Prereq: (MAT 65 or equivalent placement level) or Consent of Instructor	5	
ELT 201 Statics and Strength of Materials Prereq: ((MAT 150 and MAT 155) or MA 110) or Consent of Instructor	4	
MFG 135 Fundamentals of Mechatronics Prereq: ENGT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or Consent of Instructor	6	
QMS 101 Introduction to Quality Systems No prerequisite	3	
Subtotal:	26-27	

* **TECHNICAL ELECTIVES:** (A minimum of 14 credit hours must be taken from the approved technical elective list. Other courses may be taken with the approval of the program coordinator.)

	Cr Hr	Grade
Technical Electives * minimum 14		
BA 287 Supervisory Management (No prerequisite)	3	
BA 288 Personal and Organizational Leadership No prerequisite	3	
BRX 112 Blueprint Reading for Machinist No prerequisite	4	
BRX 120 Basic Blueprint Reading (No Prerequisite)	(3)	OR
DFT 122 Introduction to Computer Aided Drafting Prereq: (CAD 102 with a grade of C or greater) or Approval of Program Coordinator	4	OR
CAD 102 Drafting Fundamentals (No Prerequisite)	(4)	OR
CAD 112 Engineering Graphics Prereq: CAD 102 with a grade of C or greater or Consent of Instructor	(4)	
DFT 152 Intermediate Computer Aided Drafting Prereq: ((DFT 122 or CAD 100) with a grade of C or greater) or Approval of Program Coordinator	4	
EET 154 Electrical Construction I Coreq: EET 155	2	
EET 155 Electrical Construction I Lab Coreq: EET 154	2	
EET 264 Rotating Machinery Prereq: ((ELT 110 and ELT 114) with a grade of C or greater) or consent of Electrical Technology program advisor(s) Coreq: EET 265	2	
EET 265 Rotating Machinery Lab Prereq: ((ELT 110 and ELT 114) with a grade of C or greater) or consent of Electrical Technology program advisor(s) Coreq: EET 264	2	
EET 270 Electrical Motor Controls I Prereq: ELT 110 or Consent of Instructor Coreq: EET 271	2	
EET 271 Electrical Motor Controls I Lab Coreq: EET 270	2	
EET 272 Electrical Motor Controls II Prereq: EET 270 Coreq: EET 273	2	
EET 273 Electrical Motor Controls II Lab Prereq: EET 270 Coreq: EET 272	2	
EET 276 Programmable Logic Controllers Prereq: ((ELT 110 and ELT 114 and EET 270 and EET 272) or (EET 274) with a grade of C or greater) or consent of Electrical Technology program advisor(s) Coreq: EET 277	2	
EET 277 Programmable Logic Controllers Lab Prereq: ((ELT 110 and ELT 114 and EET 265 and EET 271 and EET 273) with a grade of C or greater) or consent of Electrical Technology program advisor(s) Coreq: EET 276	2	
ELT 114 Circuits II Prereq: (ELT 110 with a grade of C or greater) or Consent of Instructor	5	
ELT 260 Robotic and Industrial Automation Prereq: Consent of Instructor	5	
ETT 110 Voice & Data Installer Level I (Prereq: Basic physics/electricity courses are recommended but not required)	4	
FPX 100 Fluid Power Coreq: FPX 101 or Consent of Instructor	3	
FPX 101 Fluid Power Lab Coreq: FPX 100 or Consent of Instructor	2	
IMT 150 Maintaining Industrial Equipment I Coreq: IMT 151 or Consent of Instructor	3	
IMT 151 Maintaining Industrial Equipment I Lab Coreq: IMT 150 or Consent of Instructor	2	
MFG 145 Manufacturing Process (No prerequisite)	3	OR
MTT 110 Fundamentals of Machine Tools – A No prerequisite	(3)	
MTT 112 Fundamentals of Machine Tools – B Prereq: (MTT 110 with a grade of C or greater) or Consent of Instructor	4	
MTT 118 Metrology / Control Charts (No prerequisite)	2	
MTT 130 Manual Programming (No prerequisite)	3	
MTT 132 CAD/CAM/CNC (No prerequisite)	3	
QMS 220 Quality Audits Prereq: QMS 101 or Consent of Instructor	3	
QMS 240 Statistics for Quality I (if STA 220 is not taken in the core) Prereq: MAT 150	3	

I have reviewed this advising sheet with my advisor and understand course requirements and preferred sequence of courses necessary to complete a credential. Also, I do understand that there may be course changes with future curriculum revisions that may affect a change in course requirements listed on this sheet

Student: _____ Date: _____

Advisor: _____ Date: _____