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 – 31 / Reading – NA / Writing – NA	Cr Hr	Grade
	MFG 135 Fundamentals of Mechatronics *Prereq: ELT 110 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: ELT 110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or Consent of Instructor* **AND** **MFG 130 Fundamentals of Mechatronics B** *Prereq: MFG125 or Consent of Instructor*	(3) (3)	

CERTIFICATE –OPERATIONS MANAGEMENT: 12 Total Credit Hours

	Required Scores: Pre-Algebra–NA / 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)	
	Core:		
	BAS 160 Introduction to Business *(No prerequisite)*	3	
	BAS 287 Supervisory Management *(No prerequisite)* **OR**	3	
	BAS 288 Personal and Organizational Leadership *No prerequisite* **OR**	(3)	
	QMS 101 Introduction to Quality Systems *No prerequisite*	(3)	
	BAS 289 Operations Management (or MFG 256) *Prereq: BAS 160 or Consent of Instructor*	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
	MT 010 – KYAE Math *(Compass score 0-23 in Pre-Algebra)*	0
	MT 50 – Developmental Math Workshop **AND** **MAT 65 – Basic Algebra** *Compass score 24-41 in Pre-Algebra* (or MAT 55)	1-2 3
	MAT 65 – Basic Algebra *(Compass score 16-30 in Algebra)*	3
	MAT 85 – 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	
	EN 010 – KYAE English *(Compass score 26-38)*	0
	ENG 100 – English Workshop **AND** **ENG 101 – Writing I** *Compass score 39-73* (or ENC 91)	2 3
	Developmental Reading	
	RD 010 – KYAE Reading *(Compass score 49-69)*	0
	RDG 100 – Reading Workshop **AND** **Pre-Selected General Education Course** *Compass score 70-82* (or RDG 30)	2 3
	RDG 41 – Reading Laboratory *(Compass score 83-84)*	1

CERTIFICATE – INTEGRATED MANUFACTURING TECHNOLOGIES: 19 Total Credit Hours

	Required Scores: Algebra – 31 / Reading – 74 / Writing – 49	Cr Hr	Grade
	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: 20-22 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:		
	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)	
	CMM 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)	

College Success Courses As Needed: *It is strongly recommended that students complete a college success course. If a student is advised into two or three developmental education courses, it is strongly recommended they enroll in the 3 credit hour college success course.*

	College Success Courses	Cr Hr
	GEN 100 Introduction to College *No prerequisite*	1
	GEN 102 Foundations of Learning *No prerequisite*	3

ASSOCIATE IN APPLIED SCIENCE DEGREE – MANUFACTURING ENGINEERING TECHNOLOGY: 63-66 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)	
	ENG 101 Writing I *Prereq: Appropriate writing placement score or ENC 91*	3	
	Heritage / Humanities *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. KCTCS placement exam recommendation*	3	
	Natural Sciences *Prereq: See Compass / ACT score requirement*	3	
	PSY 110 General Psychology *Prereq: (ACT, COMPASS, or ASSET scores for college level reading) or completion of Transitional reading course(s)* **OR**	3	
	SOC 101 Introduction to Sociology *(No prerequisite)*	(3)	
	STA 220 Statistics *Prereq: MAT 150 or equivalent* **OR**	3	
	MAT 170 Brief Calculus with Applications *Prereq: Successful completion of MAT 150 or (Math ACT 27 or above)*	(3)	
	Subtotal:	24	
	Core:		
	BAS 160 Introduction to Business *(No prerequisite)*	3	
	BAS 289 Operations Management (or MFG 256) *Prereq: BAS 160 or Consent of Instructor*	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* **OR**	1	
	MFG 175 Lean Operations *(No prerequisite)*	(2)	
	Computer/Digital Literacy course or competency demonstrated by exam *Rec. CIT 105*	0-3	
	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 MAT 110) or Consent of Instructor*	4	
	MFG 135 Fundamentals of Mechatronics *Prereq: ELT 110 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:	25-28	

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: _____

*** 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**	
	BAS 287 Supervisory Management *No prerequisite*	3	
	BAS 288 Personal and Organizational Leadership *No prerequisite*	3	
	BRX 112 Blueprint Reading for Machinist (or BRX 120) *No prerequisite*	4	
	CAD 102 Drafting Fundamentals (or CAD 112) *No Prerequisite*	4	
	CMM 110 Fundamentals of Machine Tools – A (or MFG 145) *No prerequisite*	3	
	CMM 112 Fundamentals of Machine Tools – B *Prereq: CMM 110 with a grade of C or greater or Consent of Instructor*	4	
	CMM 118 Metrology/Control Charts *No prerequisite*	2	
	CMM 130 Manual Programming *No prerequisite*	3	
	CMM 132 CAD/CAM/CNC *No prerequisite*	3	
	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: ((EET 270 and EET 272 and ELT 110 and ELT 114) 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: ((EET 265 and EET 271 and EET 273 and ELT 110 and ELT 114) 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 256 Production Management *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	