WSU Tech to WSU: Associate of Arts (AA) to Engineering Technology – Mechatronics, Bachelor of Science (BSET)

Foundation Courses	WSU Course	WSU Tech Course	CR	Grade	Sem/YR	Notes
Foundation courses must be completed with a C- or better within the first 48 hours of college coursework.	ENGL 101 College English 1	ENG 101 Composition I	3			
	ENGL 102 College English 2	ENG 120 Composition II	3			
	COMM 111 Public Speaking	SPH 101 Public Speaking	3			
	MATH 111 College Algebra	MTH 112 College Algebra	3			*AA Requirement only. Students who place into Trig or Calc do not need College Algebra.*

WSU Gen Ed Curriculum	WSU Course	WSU Tech Course	CR	Grade	Sem/YR	Notes
Divisional Requirements: Complete one course in each division.*	Fine Arts	ART, MUS, or THR	3			
	Humanities – PHIL 125	No Equivalent	3			
	Social/Behavioral Science – ECON 201 Principles of Macroeconomics	ECO 105 Principles of Macroeconomics	3			
	Math & Natural Science – MATH 242 Calc I	MTH 125 Calculus I	5			
Additional Requirements: Complete **4** courses chosen from at least **2** divisions above*	Division I – Calculus II	No Equivalent	5			
	Division II – WSUE 102A or ID 300*	No Equivalent	3			
	Any Division – PHYS 313/315	No Equivalent	5			
	Any Division – PHYS 314/316	No Equivalent	5			

- ***At least 9 hours must be numbered 300 or above.**
- Students with an AA or AS earned through a Kansas Community College may fulfill requirements by completing two 300-level gen ed courses at WSU.

Engineering Technology – Mechatronics Major Coursework						
	WSU Course	WSU Tech Course	CR	Grade	Sem /YR	Notes
Mathematics & Natural Sciences	MATH 242 Calculus I	MTH 125 Calculus I	5			*P: College Trig*
	MATH 434 Calculus II	No Equivalent	5			*P: MTH 242*
	PHYS 313/315 Physics for Scientists I w/ Lab	No Equivalent	5			*P: P/C MATH 243*
	PHYS 314/316 Physics for Scientists II w/ Lab	No Equivalent	5			*P: PHYS 314 & MATH 243*
Engineering Core	CS 194/L Intro to Digital Design	No Equivalent	3			*P: MATH 111*
	CS 211 Introduction to Programming	No Equivalent	3			*P: MATH 111*
	IME 222/L Engineering Graphics w/ Lab	No Equivalent	3			*P: MATH 123*
	IME 258/L Manufacturing Methods I w/ Lab	No Equivalent	4			*P: MATH 123, IME 222L*
	PHIL 385 Engineering Ethics	No Equivalent	3			*P: Junior Standing*
	WSUE 102A or ID 300	No Equivalent	3			

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Major Coursework	PHIL 125 Intro to Logic	No Equivalent	3			
	ECON 201 Principles of Macroeconomics	ECO 105 Macroecon	3			
	ENGT 121 Cybersecurity Awareness	No Equivalent	3			
	ENGT 201 Fundamentals of Engineering Technology	No Equivalent	1			*P: WSUE 102A or ID 300*
	ENGT 312 Applied Statics *Spring Only*	No Equivalent	3			*C: MATH 243 P: PHYS 213*
	ENGT 320 Circuits Technology *Spring Only*	No Equivalent	4			*P: MATH 242*
	ENGT 313 Applied Dynamics *Fall only*	No Equivalent	1			*P: ENGT 312*
	ENGT 323 Intro to Fluids *Fall only*	No Equivalent	3			*P: MATH 243 and ENGT 312*
	ENGT 334 Intro to Strength & Mech. of Materials *Fall Only*	No Equivalent	3			*P: ENGT 312 & MATH 243*
	ENGT 301 Intermediate Design Project	No Equivalent	2			*P: ENGT 201*
	ENGT 354 Statistical Process Control *Spring Only*	No Equivalent	3			*P: MATH 243*
	ENGT 348 Machine Elements *Spring only*	No Equivalent	3			*P: ENGT 312, 313, 334*
	ENGT 401 Senior Design Project I	No Equivalent	3			*P: ENGT 201 or 301*
	ENGT 497 Electrical Mach. & Elect. Circ. *Fall Only*	No Equivalent	4			*P: ENGT 320*
	ENGT 361 Industrial Controls & Instrumentation *Fall Only*	No Equivalent	4			*P: ENGT 320 & MATH 243*
	ENGT 402 Senior Design Project II	No Equivalent	3			*P: ENGT 401*
	ENGT 410 Robotics Technology	No Equivalent	3			*P: ENGT 401*
	ENGT 411 Micro-based Mechanical Systems *Spring Only*	No Equivalent	3			*P: ENGT 361 & 410*
Technical Electives	Students must complete 15 hours of technical electives as selected with BSET advisor.					
Engineering+ *Students must select 3 of the 7 options listed here to meet Engineer of 2020 requirements* *Wichita.edu/engineering+*	**Cooperative Education or Internship**					
	Entrepreneurship and Innovation – University Innovation Fellow or complete an approved entrepreneurial competition					
	Global Learning or Study Abroad – Earn undergraduate certificate in Global Competency, participate in global learning project within a class at WSU, or complete a credit-bearing course in a foreign country where English is not the first language.					
	Multidisciplinary Education – Earn a minor, second major, or double degree or work on a two-semester project as part of a multidisciplinary team with student members outside of the College of Engineering.					
	Undergraduate Research – Compete in the university Undergraduate Research and Creative Activity Forum, submit your research for presentation at a conference, co-author of a journal or paper.					
	Leadership – Participate in a class or documented formal leadership training. Then, complete an activity where you successfully lead others to an established goal and submit a one-page summary/report to your department. Opportunities could also exist through the military, your place of employment or through student involvement. *Obtain preliminary approval of these activities from your department.*					
	Service Learning – Participate in a Service Learning course or complete a total of 40 hours of volunteer services.					

All courses with an ENGT prefix require that any prerequisite course is passed with a *C-* or better grade (1.700/4.000 grade point average).

ASSOCIATE OF ARTS DEGREE REQUIREMENTS

Earn credit for **60** cumulative hours.
Earn a minimum of **15** hours at WSU.
Earn a minimum of **48** hours in Liberal Arts and Sciences coursework.
Complete all general education requirements.
Maintain an overall, WSU and cumulative GPA of 2.00 or higher.

GRADUATION REQUIREMENTS FOR THE BS IN ENGINEERING TECHNOLOGY – MECHATRONICS:

Earn credit for **120** cumulative hours.
Earn credit in a minimum of **60** hours at a 4-year institution (30 must be at WSU).
Earn credit in a minimum of **45** hours of upper-division coursework.
Complete all general education requirements.
Maintain an overall, WSU, and program GPA of 2.00 or higher.

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At least 24 of last 30 or 50 of last 60 credit hours must be completed at WSU.

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Suggested Course Sequence for WSU Tech Coursework – For WSU Gen Ed Policy				
	WSU Tech Course	CR	Prerequisite	Notes
WSU Tech Semester 1	ENG 101 Composition I	3	Placement score	
	MTH 112 College Algebra	3	Placement score	*See math note below*
	SPH 101 Public Speaking	3		
	Fine Arts	3		
	ECO 105 Principles of Macroecon	3		
	Shocker Pathway Transition Course	0		
WSU Semester 2 or Dual Enroll	ENGL 102 Composition II	3	Comp I w/ C or better	Or ENG 120 at WSU Tech
	MATH 123 Trigonometry	3	College Alg w/ C or better	Or MTH 113 at WSU Tech
	WSUE102A or ID 300*	3		
	PHIL 125 Introduction to Logic	3		
	CS 194 Intro to Digital to Design/Lab	4		
WSU Semester 3	MATH 242 Calculus I	5	Trig w/ C or better	
	ENGT 201 Introductory Design Project	1	WSUE 102A or ID 300	
	ENGT 121 Cybersecurity Awareness	3		
	Technical Elective	3		
	IME 222/L Engineering Graphics/Lab	3		
WSU Semester 4	MATH 243 Calculus II	5		
	PHYS 313/315 Physics for Scientists I w/ Lab	5		
	ENGT 320 or CS 211	4		*Both courses required for BS.*

* Math placement based on entrance score. Take math course as determined by score and continue with math until math options at WSU Tech have been completed. Math sequence must be top priority for engineering majors. College Algebra and College Trigonometry not required if scores let students place out of those two courses.

Visit our Shocker Pathway website at: www.wichita.edu/academics/adult_learning/shocker_pathway.php

Students following this plan will need 9 hours of LAS courses to complete AA degree. These courses should include

- **PHYS 314/316 5 hours**
- **PHIL 385 3 hours**

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