

# WSU Tech to Wichita State: Associate of Arts (AA) to Bachelor of Science (BS) in Aerospace Engineering [E11B]

# General Education: Wichita State University Policy

	WSU Course	WSU Tech Course	CR	Grad e	Sem/YR	Notes
Foundation	ENGL 101 College English 1	ENG 101 Composition I	3			
Courses	ENGL 102 College English 2	ENG 120 Composition II	3			
Must be completed	COMM 111 Public Speaking	SPH 101 Public Speaking	3			
with a C- or better within the first 48 hours of college coursework.	MATH 111 College Algebra AA Requirement only.	MTH 112 College Algebra	3			Students who place into Trig or Calc do not need College Algebra.
Divisional Courses	Fine Arts	ART 100, MUS 110 or THR 100	3			
	Humanities – PHIL 385 Engr Ethics	No Equivalent	3			300+ level course
	Social/Behavioral Science – ECON 201	ECO 105 Principles of Macroeconomics	3			
	Math & Natural Science – MATH 242**	MTH 125 Calculus I	5			
Additional	Div. 1 – MATH 243**	MTH 150 Calculus II	5			See Tech advisor for limited availability.
Courses At least 9 hours must be numbered 300 or higher	Div. 2 – Non-M/NS		3			300+ level course
	Any Div. – CHEM 211**	CHM 125 Chemistry I	5			
	Any Div. – PHYS 313** & 315	No Equivalent	5			300+ level course

NOTE: Students who have completed an AA or AS through a Kansas Community College may choose to fulfill general education requirements by completing two 300-level courses at Wichita State University.

### **Math and Natural Science Requirements**

	WSU Course	WSU Tech Course	CR	Grade	Sem/YR	Notes
These courses	CHEM 211 Gen. Chem. I **	CHM 125 Chemistry I				
may also be	MATH 242 Calculus I**	MTH 125 Calculus I				
listed in the general	MATH 243 Calculus II**	MTH 150 Calculus II	5			See Tech advisor for limited availability.
education	MATH 344 Calculus III	No Equivalent	3			
requirements	MATH 555 Diff. Equations	No Equivalent	3			
	PHYS 313** & 315 Physics for Scientists I w/ Lab	No Equivalent 5				
	PHYS 314 Physics for	No Equivalent	4			
	Scientists II					
Choose 1 Math/N	lat Sci Elective from Below:	Transferable Options	CR	Grade	Sem/YR	Notes
BIOL <b>106/107</b> , <b>210</b> , 211, <b>223</b> , 310, <b>370</b> , 500+		BIOL 110, BIOL 130,				See Tech advisor for
		BIOL 150 or BIOL 120				limited availability.
CHEM <b>212</b> , 301 or any 500+		CHEM 135 Chemistry II	3-5			
HS 290 Foundational Human A&P		No Equivalent				
PHYS <b>195/196</b> or any 500+		PHS 115 Intro. Astrono.				



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Any upper-division MATH Gen Ed Course	No Equivalents				
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## **Engineering Core**

	WSU Course	WSU Tech Course	CR	Grade	Sem/YR	Notes
Non-AE	EE 282/L Circuits I w/ lab	No Equivalent	4			
engineering	IME 222/L Engineering	See Advisor for	3			
requirements	Graphics w/ Lab	Equivalent Sequence				
	ME 250/L Materials	No Equivalent	3			
	Engineering w/ Lab					
	ME 398 Thermodynamics I	No Equivalent	3			
	PHIL 385 Engineering Ethics*	No Equivalent	3			

<sup>\*</sup>Students will need to take PHIL 385 to complete gen eds for AA degree. This course requires jr/sr standing.

## Aerospace Engineering Courses

WSU Course	WSU Tech Course	CR Grad e		Sem/YR	Notes	
AE 223 Statics**	No Equivalent	3				
AE 227 Engineering Digital Computation	No Equivalent	3				
AE 324 Fundamentals of Atmospheric Flight**	No Equivalent	3				
AE 333 Mechanics of Materials**	No Equivalent	3				
AE 373 Dynamics**	No Equivalent	3				
AE 415 Intro to Space Dynamics	No Equivalent	3			Fall Only.	
AE 424 Aerodynamics I	No Equivalent	3				
AE 502 Aerospace Propulsion I	No Equivalent	3			Spring Only.	
AE 512 Ex. Methods in Aerospace	No Equivalent	3				
AE 514 Flight Dynamics & Control	No Equivalent	3			Spring Only.	
AE 524 Aerodynamics II	No Equivalent	3				
AE 525 Flight Structures I	No Equivalent	3			Fall Only.	
AE 528 Aerospace Design I	No Equivalent	3			Fall Only.	
AE 607 Flight Control Systems	No Equivalent	3			Fall Only.	
AE 625 Flight Structures II	No Equivalent	3			Spring Only.	
AE 628 Aerospace Design II	No Equivalent	3			Spring Only.	
Technical Electives - All courses must be AE and from an approved list.						

<sup>\*\*</sup> MATH 242, MATH 243, CHEM 211, PHYS 313, AE 223, AE 324, AE 333, AE 373 require a "C or better" grade to meet prerequisite requirements. A C-minus will not meet prerequisite requirements.

# Engineering+ Program requirements

Students must select 3	Cooperative Education or Internship
of the 7 options listed	Entrepreneurship and Innovation
here to meet	Global Learning or Study Abroad
Engineering+	Multidisciplinary Education
requirements.	Undergraduate Research
	Leadership
	Service Learning



Consult the Wichita State Undergraduate Catalog for detailed information and how to satisfy each Engineering+ option. Other information found at <a href="https://www.wichita.edu/engineering+">www.wichita.edu/engineering+</a>



### Overall Degree Requirements

#### Associate of Arts (A.A.)

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.

#### **Bachelor of Science (B.S.) in Aerospace Engineering**

Earn credit for 129 cumulative hours.

Earn credit in a minimum of **60** hours at a 4-year institution.

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.

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

# Advising Resources

WSU Tech Advisor:

**Shelby Berry** 

Phone: 316.677.1727

Email:

ssmith42@wsutech.edu

**Aerospace Advising** 

Angela Blackerby

Wallace Hall, Room 317

316.978.2820

Angela.blackerby@wichita.edu

**Aerospace Department** 

Wallace Hall Room 200

316.978.3410

### Connect with Shocker Pathway Resources

www.wichita.edu/academics/adult\_learning/shocker\_pathway.php

Instagram: ShockerPathwayWSU Twitter: @ShockerPathway Facebook: @WSUShockerPathway





# Suggested Course Sequence at WSU Tech for WSU Gen Ed Policy

	WSU Tech Course	CR	Prerequisite	Notes
WSU Tech Semester 1	ENG 101 Composition I	3	Entrance Score	If not eligible for ENG 101 take first available ENG course.
Semester 1	MTH 112 College Algebra	3	Entrance Score	If student places into Trig or Calculus, student does not need to start w/ College Algebra. Math sequence should be top priority for Engineering students.
	CHM 125 Chemistry I**	5	See Tech Advisor	
	ECO 105 Principles of Macroecon	3		
WSU Tech	ENG 120 Composition II	3	Min C in ENG 101	
Semester 2	MTH 113 College Trigonometry	3	Entrance Score or Min C in MTH 112	If student places into Calculus, student does not need to take Trig. Math sequence should be top priority for Engineering students. Take math every semester.
	Fine Arts	3		
	Science Elective	5		
WSU Tech	SPH 101 Public Speaking	3		
Semester 3	MTH 125 Calculus I**	5		Take at WSU if not offered at Tech.
	Additional Gen Ed – Non-M/NS	3		300+ level course encouraged
	LAS Elective	3		
	ORI 003 Shocker Pathway Transfer	0		
Courses to Finish	MATH 243 Calculus II**	5		
AA at WSU	PHYS 313** & 315 Physics for Scientists I w/ Lab	5		
	IME 222 w/ Lab	3		
	ME 250 w/ Lab	3		
	Engineering+ or Tech. Elective	2+		
	PHIL 385 Engr. Ethics	3		

<sup>\*\*</sup> MATH 242, MATH 243, CHEM 211, PHYS 313, AE 223, AE 324, AE 333, AE 373 require a "C or better" grade to meet prerequisite requirements. A C-minus will not meet prerequisite requirements.