

**AEROSPACE ENGINEERING CHECK SHEET**

129 Hours Minimum for Graduation

**GENERAL****COMMUNICATIONS (9 hrs.)**

Grades of C- or better are required in all three of the Communications courses below

ENGL 101 (3)  
ENGL 102 (3)  
COMM 111 (3)

**GENERAL EDUCATION (18 hrs.)**

All courses must be chosen from the approved General Education Program Course listing in the WSU Undergraduate Catalog.

<b>ECON 201*</b> (required by AE program)
<b>PHIL 385</b> (required by AE program)
1 Course in <b>Fine Arts or Humanities</b> (not PHIL) and 1 Course in <b>Social &amp; Behavioral Sciences</b> (not ECON)
<b>2 Courses in any area (one FYS**)</b>

\*ECON 202 or IME 255 are acceptable in place of ECON 201 (but only ECON 201 or 202 fulfills GE requirements)

\*\*Starting fall 2021, first year students must take a First Year Seminar (FYS) during their first two semesters at WSU

**ENGINEERING+**

Students must complete **three** out of the following seven categories: (1) Undergraduate Research; (2) Cooperative Education/Internship; (3) Global Learning/Study Abroad; (4) Service Learning; (5) Leadership; (6) Multi-Disciplinary; (7) Entrepreneurship & Innovation.

**MATHEMATICS & NATURAL SCIENCES (30 hrs.)****Math**

MATH 242 (5)  
(P: See WSU Catalog)  
MATH 243 (5)  
(P: MATH 242 with a C or better)  
MATH 344 (3)  
(P: MATH 243 with a C or better)  
MATH 555 (3)  
(P: MATH 243 with a C or better)

**Natural Science**

CHEM 211/L (5)  
(P: See WSU Catalog)  
PHYS 313 (4)  
(C: MATH 243)  
PHYS 314 (4)  
(P: MATH 243 with a C or better, PHYS 313)  
PHYS 315 (1)  
(C: PHYS 313)

**MAJOR**

Major GPA based upon the courses listed below

**ENGINEERING CORE (10 hrs.)**

AE 223 (3) – Offered Fall/Spring/Summer  
(PHYS 313, C: MATH 243)  
ECE 282/L (4)  
(C: MATH 243)  
ME 398 (3)  
(P: MATH 243 with a C or better, PHYS 313 with a C or better)

**REQUIRED COURSES (53 hrs.)**

IME 222 (2)  
(P: MATH 123 or equiv., C: IME 222L or equiv.)  
IME 222L (1)  
(P: MATH 123 or equiv., C: IME 222 or equiv.)  
AE 227/L (3) – Offered Fall/Spring  
(P: MATH 242 with a C or better, C: MATH 243)  
ME 250 (3)  
(P: MATH 242 with a C or better, CHEM 211 with a C or better)  
AE 324 (3) – Offered Fall/Spring  
(P: AE 223 with a C or better, C: AE 227)  
AE 333 (3) – Offered Fall/Spring/Summer  
(P: AE 223 with a C or better, C: MATH 344 or MATH 555)  
AE 373 (3) – Offered Fall/Spring/Summer  
(P: AE 223 with a C or better, MATH 344)  
AE 415 (3) – Offered Fall Only  
(P: AE 373 with a C or better, AE 227, C: MATH 555)  
AE 424 (3) – Offered Fall/Spring  
(P: MATH 555, AE 324 with a C or better, AE 373)  
AE 502 (3) – Offered Spring Only  
(P: AE 227, AE 373, ME 398, C: AE424)  
AE 512/L (3) – Offered Fall/Spring  
(P: AE 333, AE 424, C: AE 524)  
AE 514 (3) – Offered Spring Only  
(P: AE 415, C: AE 424)  
AE 524 (3) – Offered Fall/Spring  
(P: AE 424)  
AE 525/L (3) – Offered Fall Only  
(P: AE 333 with a C or better, C: MATH 555)  
AE 528 (4) – Offered Fall Only  
(P: AE 502, AE 514, AE 525, C: PHIL 385; either ECON 201 or 202 or IME255)  
AE 607 (3) – Offered Fall Only  
(P: AE 514)  
AE 625/L (3) – Offered Spring Only  
(P: AE 333, AE 525)  
AE 628 (4) – Offered Spring Only  
(P: AE 528, PHIL 385; either ECON 201 or 202 or IME 255)

**TECHNICAL ELECTIVES (9 hrs.)** – Offered Fall/Spring

Technical elective classes allow you to either broaden or to enhance your technical knowledge. These courses must be taken from the departmentally approved list preferably during your senior year and only after carefully considering career goals and consulting with your faculty advisor. At least 6 of the 9 credit hours must be AE courses.

### AEROSPACE ENGINEERING CHECK SHEET

Freshman		Sophomore		Junior		Senior	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
<b>ENGL 101</b> (3) College English I	<b>ENGL 102</b> (3) College English 2  ENGL 101	<b>COMM 111</b> (3) Public Speaking	<b>GE - ECON 201</b> (3) Principles of Macroeconomics (counts as Gen Ed in Social & Behavior Sciences)	<b>GE - PHIL 385</b> (3) Engineering Ethics (counts as Gen Ed in Humanities) Junior or senior standing		<b>GE Core</b> (3) In Social & Behavior Sciences (not ECON)	<b>GE or Open Elective</b> (3) (Open elective if GE is complete)
<b>GE Elective</b> (3) In Any Area* <small>*1<sup>st</sup> year students must take FYS</small>		<b>IME 222/L</b> (3) Engineering Graphics & Lab  Math 123	<b>ME 398</b> (3) Thermodynamics I  MATH 243 w/C or better, PHYS 313 w/C or better	<b>ECE 282/L</b> (4) Circuits I  C: Math 243	<b>AE 502</b> (3) Aero Propulsion I ( <i>Spring only</i> )  AE 227, 373, ME 398 C: AE 424	<b>GE Core</b> (3) In Arts or Humanities (not PHIL)	
<b>MATH 242</b> (5) Calculus I  See catalog	<b>MATH 243</b> (5) Calculus II  MATH 242 w/C or better	<b>MATH 344</b> (3) Calculus III  MATH 243 w/C or better	<b>MATH 555</b> (3) Differential Equations  MATH 243 w/C or better		<b>AE 512/L</b> (3) Exper. Methods in Aerospace (Fall/Spring)  AE 333, 424 C: AE 524		
<b>CHEM 211/L</b> (5) General Chemistry I  See catalog	<b>PHYS 313</b> (4) Physics for Scientist I  C: MATH 243	<b>PHYS 314</b> (4) Physics for Scientist II  MATH 243 w/C or better, PHYS 313	<b>AE 373</b> (3) Dynamics (Fall/Spring/Summer)  MATH 344, AE 223 w/C or better	<b>AE 415</b> (3) Intro. to Space Dyn ( <i>Fall only</i> )  AE 373 w/C or better, AE 227 C: MATH 555	<b>AE 514</b> (3) Flight Dynamics & Control ( <i>Spring only</i> )  AE 415 C: AE 424	<b>AE 607</b> (3) Flight Control Systems ( <i>Fall only</i> )  AE 514	<b>Tech Elect</b> (3) (Fall/Spring)
	<b>PHYS 315</b> (1) University Physics Lab I  C: PHYS 313	<b>AE 223</b> (3) Statics (Fall/Spring/Summer)  PHYS 313 C: MATH 243	<b>AE 324</b> (3) Fundamentals of Atmospheric Flight (Fall/Spring)  AE 223 w/C or better C: AE 227	<b>AE 424</b> (3) Aerodynamics I (Fall/Spring)  AE 324 w/C or better, AE 373, MATH 555	<b>AE 524</b> (3) Aerodynamics II (Fall/Spring)  AE 424	<b>Tech Elect</b> (3) (Fall/Spring)	<b>Tech Elect</b> (3) (Fall/Spring)
	<b>AE 227/L</b> (3) Engr. Digital Computations (Fall/Spring) MATH 242 w/C or better; C: MATH 243	<b>ME 250</b> (3) Materials Engineering  MATH 242 w/C or better, CHEM 211 w/C or better	<b>AE 333</b> (3) Mech. of Materials (Fall/Spring/Summer) AE 223 w/C or better C: MATH 344 OR MATH 555	<b>AE 525/L</b> (3) Flight Structures I ( <i>Fall only</i> )  AE 333 w/C or better C: MATH 555	<b>AE 625/L</b> (3) Flight Structures II ( <i>Spring only</i> )  AE 525	<b>AE 528</b> (4) Aerospace Design I ( <i>Fall only</i> ) AE 424, 502, 514, 525, C: PHIL 385; ECON 201 or 202 or IME 255	<b>AE 628</b> (4) Aerospace Design II ( <i>Spring only</i> ) AE 528, PHIL 385; ECON 201 or 202 or IME 255
16 hrs.	16 hrs.	19 hrs.	18 hrs.	16 hrs.	15 hrs.	16 hrs.	13 hrs.

Notes: 1) AE 415, 525, 528, and 607 are only offered during the Fall and AE 502, 514, 625, and 628 are only offered during the Spring 2) A C-minus grade does **not** meet AE or ME department "C or better" prerequisite requirements 3) ECON 202/IME 255 also meet co/pre-req for AE 528 & 628 4) See departmentally approved list for Tech Elect

**Aerospace Engineering Curriculum Flow Chart** (Including pre- & co-requisites)

