

# Applied Engineering

## Concentration: Engineering Management

Catalog Term: Fall 2023

**Total credit hours: 120**



FRESHMAN			
FALL	Hr	SPRING	Hr
FYET 102A FYS: Intro to Tech & Innovation	3	ECON 201 * Principles of Macro Economics (General Education B5)	3
ENGL 101 * College English I P: See Course Catalog	3	ENGL 102 * College English II P: ENGL 101	3
COMM 111 * Public Speaking	3	BIOL 370 Intro to Environmental Science or Any BIOL or CHEM course <sup>(b)</sup>	3
MATH 242* Calculus 1 P: (MATH 111, MATH 123) or MATH 112	5	MATH 243 * College Calculus 2 P: MATH 242	5
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>14</b>

SOPHOMORE			
FALL	Hr	SPRING	Hr
APEN 201 * Introductory Design Project P: FYET 102A	1	APEN 312 Applied Statics P: PHYS 313 (or PHYS 213 + MATH 243) (Spring only) or AE 223	3
PHYS 313 + 315 Physics for Scientists I P/C: MATH 243	5	PHYS 314 + 316 Physics for Scientists II P: MATH 243 & PHYS 313 <u>OR</u> CHEM 211 + 211L	5
STAT 370 Elemen Statistics P: MATH 111 or higher or IME 254 Engr Probability & Stat P: MATH 242	3	APEN 210 Intro to Facilities Management	3
IME 222 + 222L Engineering Graphics P: MATH 123	3	APEN 354 * Statistical Process Control P/C: ECON 201, (STAT 370 or IME 254) Spring only	3
GEOL 300 Energy, Resources & Environment P: Into BIOL, CHEM or PHYS	3	BADM 162	1
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

JUNIOR (at WSU)			
FALL	Hr	SPRING	Hr
APEN 301 * Intermediate Design Project P: APEN 201 or ENGR 205	1	APEN 441 * Analysis of Decision Processes P: STAT 370 or IME 254 Spring only	3
APEN 334 Intro Strengths & Mech of Materials P: APEN 312 or AE 223 Fall only	3	BLAW 431 * Legal Environment of Business P: Junior or advanced standing	3
APEN 492 Energy Management & Sustainability P: ECON 201 or IME 255 Fall only	3	PHIL 385 * Engineering Ethics P: Junior or senior standing	3
ACCT 210 * Financial Accounting P: MATH 111, BADM 162	3	ENGR 220 App Anal & Dig Electron P: MATH 111 or ECE 282+L Circuits I P/C: MATH 243	3
MATH 451 Comput Math using MATLAB P: MATH 243 or Any MATH 300 level and above <sup>b</sup>	3	IME 258 + 258L Manufacturing Methods I P: MATH 123 & IME 222	4
Technical Elective	3	Engineering + 1 of 3 See notes	
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>

SENIOR (at WSU)			
FALL	Hr	SPRING	Hr
APEN 401 Senior Design Project I P: APEN 301, PHIL 385, (ECON 201 or IME 255) Fall only	3	APEN 402 Senior Design Project II P: APEN 401 Spring only	3
APEN 664 * Engineering Project Management P: ECON 201 or IME 255 C: PHIL 385 Fall only	3	RE 420 Real Estate Property Management P: Junior standing Spring only	3
APEN 572 Applied Machine Learning P: APEN 441	3	Technical Elective	3
DS 350 * Intro to Prod. & Oper. Management P: BADM162, APEN 354, Junior standing	3	Technical Elective	3
Technical Elective	3	General Education * In Fine Arts or Humanities (but not PHIL)	3
Engineering + 2 of 3 See notes		Engineering + 3 of 3 See notes	
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

**Notes:**

All first-time-in-college students must take FYET102A within their first two semesters.  
 Transfer students must take ENGR205 to replace FYET102A and APEN201. Extra credit hours may be required.  
 Students must submit the [Non-Business Student Request Form](#) to take business classes  
 Students must fulfill three Engineering+ requirements.  
 All prerequisites courses need to be completed with C or higher (2.0/4.0 grade point average).  
 All technical electives must be preapproved by a faculty advisor. Please refer to the Applied Engineering (APEN) website or consult with your APEN advisor for current list of technical electives.

**P: Prerequisite C: Corequisite**

\* May be available as an online or hybrid class.  
 a. General Education Courses from an approved list  
 b. Department Chair approval. CHEM only if CHEM211 not taken

Last Updated: 5/2023