ENGINEERING ASSOCIATE OF SCIENCE CLASS LIST

While the Associate of Pre-Engineering (https://snow-next.courseleaf.com/programs/preengineering-ape/) (APE) is the best path for transfer to a four-year program, students can also prepare for transfer with an Associate of Science by completing courses from the list below as engineering electives.

Notes

- The APE has fewer general education requirements, which students complete in years 3 and 4 as part of their bachelor's degree.
- Some students will choose to earn both an APE and an AS. See your advisor for details.

Classes

See the footnotes for guidance on which classes are best for a particular kind of engineering.

Code	Title	Hours
ENGR Classes		
ENGR 1000	Introduction to Engineering [1]	2
ENGR 1300	Engineering Graphics and Design - Mechanical [5]	3
ENGR 1400 & ENGR 1405	Programming Fundamentals and Programming Fundamentals Lab [3, 4, 5]	4
ENGR 1410 & ENGR 1415	Object-Oriented Programming and Object-Oriented Programming Lab [4]	4
ENGR 1703	Introduction to Chemical Engineering [2]	2
ENGR 1704	Introduction to Chemical Engineering Lab [2]	1
ENGR 2010 & ENGR 2165 or ENGR 2167	Statics and Materials Science Lab - Mechanical [3] Materials Science Lab - Civil	3, 5
ENGR 2030	Dynamics [3, 5]	3
ENGR 2140	Mechanics of Materials [3, 5]	3
ENGR 2160	Materials Science	3
ENGR 2240	Survey and Global Positioning [3]	3
ENGR 2250	Analog Circuits [4, 5]	3
ENGR 2255	Analog Circuits Laboratory	1
ENGR 2270	Engineering Graphics and Design - Civil [3]	3
ENGR 2290 & ENGR 2295	Analog Circuits II and Analog Circuits II Lab [4]	4
ENGR 2300	Engineering Thermodynamics [2, 3, 5]	3
ENGR 2450	Numerical Methods [2, 5]	3
ENGR 2700 & ENGR 2705	Digital Circuits and Digital Circuits Lab [4]	4
MATH Classes		
MATH 1210	Calculus I [1]	5
MATH 1220	Calculus II [1]	4
MATH 2210	Calculus III [3, 4, 5]	3
MATH 2250	Linear Algebra and Differential Equations [2, 3, 5]	4
MATH 2270	Linear Algebra [4]	3
MATH 2280	Differential Equations [4]	3
MATH 3040	Statistics for Scientists and Engineers	3
MATH 3310	Discrete Mathematics	3
Physical Science Classes		
CHEM 1210 & CHEM 1215	Principles of Chemistry I PS and Principles of Chemistry Lab I [2, 3, 5]	5
CHEM 1220 & CHEM 1225	Principles of Chemistry II PS and Principles of Chemistry Lab II [2]	5
CHEM 2310 & CHEM 2315	Organic Chemistry I and Organic Chemistry Lab I [2]	5
CHEM 2320 & CHEM 2325	Organic Chemistry II and Organic Chemistry Lab II	5
PHYS 2210 & PHYS 2215	Physics for Scientists and Engineers I and Physics for Scientists and Engineers I Lab [1]	5
PHYS 2220 & PHYS 2225	Physics for Scientists and Engineers II and Physics for Scientists and Engineers II Lab [2, 4, 5]	5
Computer Science Classes		
CS 1400 & CS 1405	Programming Fundamentals and Programming Fundamentals Lab	4
CS 1410 & CS 1415	Object-Oriented Programming and Object-Oriented Program Lab	4
CS 2420	Data Structures and Algorithms	3
CS 2450	Intro to Software Engineering	3
CS 2810	Computer Organization and Architecture	3
CS 2860	Operating Systems	3

[1] All engineering fields.
[2] Chemical engineering.
[3] Civil and environmental engineering.
[4] Electrical and computer engineering.
[5] Mechanical engineering.