

# ENGINEERING PHYSICS (AEROSPACE ENGINEERING) - BACHELOR OF SCIENCE IN ENGINEERING PHYSICS

## A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change. Full-time students are usually required to take at least 15 credits per semester. This requirement could be satisfied for example by taking a one-credit supplemental instruction course.

First Year			
Semester 1			Credits
ENGL 1110G or ENGL 1110H	Composition I <sup>1</sup> or Composition I Honors		4
MATH 1511G or MATH 1511H	Calculus and Analytic Geometry I <sup>1</sup> or Calculus and Analytic Geometry I Honors		4
PHYS 2110 & 2110L	Mechanics and Experimental Mechanics <sup>1,2</sup>		4
Area IV: Social and Behavioral Science Course <sup>3</sup>			3
<b>Credits</b>			<b>15</b>
Semester 2			
MATH 1521G or MATH 1521H	Calculus and Analytic Geometry II <sup>1</sup> or Calculus and Analytic Geometry II Honors		4
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors <sup>1</sup>		4
PHYS 2140 & 2140L	Electricity and Magnetism and Electricity & Magnetism Laboratory <sup>1,2</sup>		4
M E 240	Thermodynamics <sup>1</sup>		3
<b>Credits</b>			<b>15</b>
Second Year			
Semester 1			
MATH 2530G	Calculus III <sup>1</sup>		3
PHYS 2120 & 2120L	Heat, Light, and Sound and Heat, Light, and Sound Laboratory <sup>1</sup>		4
ENGR 233	Engineering Mechanics I		3
M E 261	Numerical Methods <sup>1</sup>		3
ENGL 2210G or ENGL 2210H	Professional and Technical Communication <sup>1</sup> or Professional and Technical Communication		3
<b>Credits</b>			<b>16</b>
Semester 2			
MATH 3160	Introduction to Ordinary Differential Equations <sup>1</sup>		3
PHYS 315	Modern Physics <sup>1</sup>		3
PHYS 325	Intermediate Experimental Physics		3
ENGR 234	Engineering Mechanics II		3
C E 301	Mechanics of Materials <sup>1</sup>		3
<b>Credits</b>			<b>15</b>

Third Year			
Semester 1			
PHYS 395	Intermediate Mathematical Methods of Physics <sup>1</sup>		3
PHYS 454	Intermediate Modern Physics I		3
A E 339	Aerodynamics I <sup>1</sup>		3
A E 362	Orbital Mechanics <sup>1</sup>		3
A E 364	Flight Dynamics and Controls <sup>1</sup>		3
<b>Credits</b>			<b>15</b>
Semester 2			
PHYS 455	Intermediate Modern Physics II		3
A E 363	Aerospace Structures <sup>1</sup>		3
A E 424	Aerospace Systems Engineering		3
A E 439	Aerodynamics II <sup>1</sup>		3
COMM 1115G or HNRS 2175G	Introduction to Communication or Introduction to Communication Honors		3
<b>Credits</b>			<b>15</b>
Fourth Year			
Semester 1			
PHYS 461	Intermediate Electricity and Magnetism I		3
A E 419	Propulsion <sup>1</sup>		3
A E 447	Aerofluids Laboratory <sup>1</sup>		3
ENGR 401	Engineering Capstone I		3
Area V: Humanities Course <sup>3</sup>			3
<b>Credits</b>			<b>15</b>
Semester 2			
PHYS 462	Intermediate Electricity and Magnetism II		3
ENGR 402	Engineering Capstone II <sup>1</sup>		3
VWW: Viewing a Wider World Course <sup>4</sup>			3
VWW: Viewing a Wider World Course <sup>4</sup>			3
Area VI: Creative and Fine Arts Course <sup>3</sup>			3
<b>Credits</b>			<b>15</b>
<b>Total Credits</b>			<b>121</b>

<sup>1</sup> These courses may have prerequisites and/or co-requisites, and it is the students responsibility for checking and fulfilling all those requirements.

<sup>2</sup> PHYS 2110 Mechanics/PHYS 2110L Experimental Mechanics and PHYS 2140 Electricity and Magnetism/PHYS 2140L Electricity & Magnetism Laboratory will not automatically count towards the Area III: Laboratory Science requirement, an exception will be made if students elect to take these courses.

<sup>3</sup> See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

<sup>4</sup> See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a full list of courses.