

Bachelor of Science in Aerospace Engineering

Required 128 credits (36 of which must be numbered 300 or above) including:

I. Essential Studies Requirements (see University ES listing).

II. Aerospace/Mechanical Engineering required courses*:

Code	Title	Credits
ME 101	Introduction to Mechanical Engineering ^{1,2}	3
ME 201	Student Design ^{1,2}	2
or ME 201C & ME 201L	Student Design Lecture and Student Design Lab	
ME 301	Materials Science	3
ME 306	Fluid Mechanics	3
ME 323 & 323L	Machine Component Design and Machine Component Design Laboratory	4
ME 341	Thermodynamics ¹	3
ME 480	Mechanical Engineering Seminar ³	3
ME 483	Mechanical Measurements Laboratory ³	3
ME 487	Engineering Design ³	2
ME 488	Engineering Design ³	3
AE 490 MECHANICS OF FLIGHT		3
AE 491 AEROSPA(3
AE 492 AEROMECHANICS LABORATORY		4
AE 493 AEROSPA(3
AE 494 FLIGHT DYNAMICS AND CONTROL		3
SPST 490 ORBITAL		3
ME 466	Aerodynamics	3
Total Credits		51

III. Program Required Electives

Code	Title	Credits
Technical Electives - see details below ³		9
Total Credits		9

IV. College of Engineering and Mines requirements

Code	Title	Credits
ENGR 200	Computer Applications in Engineering ^{1,2}	2
ENGR 201	Statics ¹	3
ENGR 202	Dynamics ¹	3
ENGR 203	Mechanics of Materials ¹	3
ENGR 206	Fundamentals of Electrical Engineering	3
ENGR 340	Professional Integrity in Engineering ²	3
ENGR 460	Engineering Economy	3
Total Credits		20

V. Requirements outside of the College of Engineering and Mines

Code	Title	Credits
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory ¹	4
MATH 165	Calculus I ¹	4
MATH 166	Calculus II ¹	4
MATH 265	Calculus III ¹	4
MATH 266	Elementary Differential Equations	3
MATH 321	Applied Statistical Methods ⁴	3
PHYS 251	University Physics I ¹	4

PHYS 252	University Physics II ¹	4
Total Credits		30

Technical Electives

A minimum of three technical electives are chosen, one from each of the three categories.

Simulation Elective

Code	Title	Credits
ME 429	Introduction to Finite Element Analysis	3
ME 485	Multiphysics Modeling	3
ME 464	Computational Fluid Dynamics	3

Thermal Sciences Elective

Code	Title	Credits
ME 474	Fundamentals of Heat and Mass Transfer	3
ME 477	Compressible Fluid Flow	3
ME 446	Gas Turbines	3

Astronautics Elective

Code	Title	Credits
SPST 405	Space Mission Design	3
SPST 470	Special Topics in Space Studies	3
SPST 505	Spacecraft Systems Engineering	3
SPST 570	Advanced Topics in Space Studies (Hypersonic Aerodynamics)	3

¹ Students must achieve a grade of "C" or better.

² ME 101 Introduction to Mechanical Engineering, ME 201 Student Design, ENGR 200 Computer Applications in Engineering and ME 397 Cooperative Education may be waived by successful completion of ME 102 Professional Assessment and Evaluation. The ethics requirement as represented by ENGR 340 Professional Integrity in Engineering may also be waived, but not the University's Essential Studies Requirements.

³ Course must be completed from UND.

⁴ ChE 315 of an alternative calculus-based statistics course may be substituted for MATH 321 with approval of the ME Department.

* All transfer courses must be completed with a "C" or better.

** Students must ensure all appropriate pre-requisites are met prior to registering for all courses in the curriculum.