(For students admitted in 2015-16 under the 4-year degree)

BEng in Aerospace Engineering

In addition to the requirements of their major programs, students are required to complete the University requirements for graduation. For details please refer to the respective section on this website.

Some courses can be used to fulfill both Major and University Common Core Requirements. Students may reuse a maximum of 9 credits of these courses to count towards both Requirements.

Students may use no more than 6 credits earned from courses offered in pure online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

For students graduating with an additional major, they must take all the requirements specified for that major, within which they must complete at least 20 single-counted credits. These 20 credits cannot be used to fulfill any other requirements for graduation except for the 120-credit degree requirement.

Major Requirements

Engineering Fundamental Course(s)

			Credit(s) attained
COMP		Note: COMP 1021 OR COMP 1022P OR COMP 1022Q OR COMP 2011	3-4
COMP	1021	Introduction to Computer Science	3
COMP	1022P	Introduction to Computing with Java	3
COMP	1022Q	Introduction to Computing with Excel VBA	3
COMP	2011	Programming with C++	4
ENGG	1010	Academic Orientation	0
LANG	2030	Technical Communication I	3
MATH		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7
MATH	1012	Calculus IA	4
MATH	1013	Calculus IB	3
MATH	1014	Calculus II	3
MATH	1020	Accelerated Calculus	4
MATH	1023	Honors Calculus I	3
MATH	1024	Honors Calculus II	3
MATH	2011	Introduction to Multivariable Calculus	3
MATH		Note: MATH 2111 OR MATH 2350 OR MATH 2351	3
MATH	2111	Matrix Algebra and Applications	3
MATH	2350	Applied Linear Algebra and Differential Equations	3
MATH	2351	Introduction to Differential Equations	3

PHYS		Note: PHYS 1112 OR PHYS 1312	3
PHYS	1112	General Physics I with Calculus	3
PHYS	1312	Honors General Physics I	3
CHEM/LIFS/ PHYS		Science 1000-level course (Any 1 course of the subject and level as specified)	3

Required Course(s)

			Credit(s) attained
MECH	1907	Introduction to Aerospace Engineering	3
MECH	1990	Industrial Training	0
MECH	2020	Statics and Dynamics	3
MECH	2040	Solid Mechanics I	3
MECH	2210	Fluid Mechanics	3
MECH	2310	Thermodynamics	3
MECH	2410	Engineering Materials I	3
MECH	3400	Introduction to Composite Materials	3
MECH	3610	Control Principles	3
MECH	3620	Aircraft Design	3
MECH	3640	Aerodynamics	3
MECH	3650	Aircraft Structural Analysis	3
MECH	3660	Gas Turbines and Jet Propulsion	3
MECH	3670	Aircraft Performance and Stability	3
MECH	3690	Aerospace Engineering Laboratory	3
MECH	4980	Final Year Aerospace Design Project	6
ELEC	2420	Basic Electronics	3
ENGG	2010	Engineering Seminar Series	0
LANG	4034	Technical Communication II for Mechanical and Aerospace Engineering	3

Elective(s)

			Minimum credit(s) required
MECH		MECH Electives in Aerospace (3 courses from the specified elective list)	9
MECH	2520	Design and Manufacturing I	3
MECH	3310	Heat Transfer	3
MECH	3680	Avionics Systems	3
MECH	4100	Experiential Projects in Aerospace Engineering	3
MECH	4810	Unmanned Aviation Vehicle	3
MECH	4820	Flight Mechanics	3
MECH	4850	Vibration and Acoustics	3

MECH	4860	Aeroelasticity	3
MECH	4870	Computational Fluid Dynamics (CFD)	3
MECH	4880	Combustion	3
MECH	5961	Acoustics and Aeroacoustics	3

Student may opt to graduate with or without an option. Students who take an option MUST complete all requirements specified in addition to the major requirements.

Option(s)

Research Option

Required Course(s)

			Credit(s) attained
MECH	4990	Aerospace Research Project	6