

Bachelor of Engineering Program in Aerospace Engineering

Program Structure

Total Number of Credits Required for Graduation is at least 145 CREDITS

1. General Education	at least	30	credits	
– Wellness		at least	3	Credits
– Entrepreneurship		at least	6	Credits
– Language and Communication		at least	13	Credits
– Thai Citizen and Global Citizen		at least	5	Credits
– Aesthetics		at least	3	Credits
2. Specific Courses	at least	109	Credits	
– Basic Courses	at least	50	Credits	
Basic Mathematics and Science			14	Credits
Basic Engineering			36	Credits
– Major Courses	at least	59	Credits	
Required Courses			50	Credits
Engineering Elective		at least	9	Credits
3. Free Electives	at least	6	Credits	
4. Internship	at least	240	Hours	

(Except students who participate in Co-operative education projects)

Course List

1. General Education	at least	30	credits
1.1 Wellness	at least	3	Credits
01175xxx Physical Education Activities			1(0-2-1)
and choose at least 2 credits from this category.			
1.2 Entrepreneurship	at least	6	Credits
Choose at least 6 credits from this category.			
1.3 Language and Communication		13	Credits
Foreign Language (1 language)			9
Thai Language			3
Information/Computer			1
1.4 Thai Citizen and Global Citizen	at least	5	Credits
01999111 Knowledge of the Land			2(2-0-4)
and choose at least 3 credits from this category.			
1.5 Aesthetics	at least	3	Credits
Choose at least 3 credits from this category.			
2. Specific Courses	at least	109	Credits
2.1 Basic Courses		50	Credits
– <u>Basic Mathematics and Science</u>	14	Credits	
01403114 Laboratory in Fundamentals of General Chemistry			1(0-3-2)
01403117 Fundamentals of General Chemistry			3(3-0-6)
01417167 Engineering Mathematics I			3(3-0-6)
01417168 Engineering Mathematics II			3(3-0-6)
01420111 General Physics I			3(3-0-6)
01420113 Laboratory in Physics I			1(0-3-2)
– <u>BasicEngineering</u>	36	Credits	
01204111 Computers and Programming			3(2-3-6)
01205201 Introduction to Electrical Engineering			3(3-0-6)
01205202 Electrical Engineering Laboratory I			1(0-3-2)
01208112 Mechanical Engineering Drawing			3(2-3-6)

01208221	Engineering Mechanics I	3(3-0-6)
01208281	Workshop Practice	1(0-3-2)
01208381	Mechanical Engineering Laboratory I	1(0-3-2)
01213201	Materials and Manufacturing Processes	3(3-0-6)
01215212	Applied Mathematics in Aerospace Engineering	3(3-0-6)
01215214	Dynamics in Aerospace Engineering	3(3-0-6)
01215221	Aircraft Structures I	3(3-0-6)
01215231	Aerothermodynamics	3(3-0-6)
01215241	Fundamentals of Fluid Dynamics	3(3-0-6)
01215353	Manufacturing Processes for Aircraft Materials	3(3-0-6)

2.2 Major Courses

59 Credits

- Required Courses

50 Credits

01215111	Introduction to Aircraft Technology	3(3-0-6)
01215215	Introduction to Unmanned Aircraft System	3(3-0-6)
01215216	Introduction to Data Analysis in Aerospace Engineering	1(1-0-2)
01215232	Aerothermodynamics of Aircraft Engines	3(3-0-6)
01215261	Aircraft Aerodynamics and Performance	3(3-0-6)
01215311	Aerospace Engineering Laboratory I	1(0-3-2)
01215312	Mechanics of Machinery in Aerospace Engineering	3(3-0-6)
01215322	Aircraft Structures II	3(3-0-6)
01215323	Aircraft Vibration	3(3-0-6)
01215331	Heat Transfer in Aerospace Engineering	3(3-0-6)
01215341	Fundamentals of Aerodynamics	3(3-0-6)
01215351	Aircraft Conceptual Design	3(3-0-6)
01215362	Aircraft Stability and Control	3(3-0-6)
01215381	Space Flight	3(3-0-6)
01215452	Aircraft Mechanical Design	3(3-0-6)
01215461	Automatic Flight Control I	3(3-0-6)
01215464	Aircraft Air Conditioning and Pressurization Systems	3(3-0-6)
01215495	Aerospace Engineering Project Preparation	1(0-3-2)
01215499	Aerospace Engineering Project	2(0-6-3)

- Engineering Electives at least 9 Credits

Choose at least 9 credits from the following subjects

01215313	Aerospace Engineering Statistics	3(3-0-6)
01215371	Management for Aerospace Engineers	3(3-0-6)
01215372	Production and Quality Engineering	3(3-0-6)
01215411	Introduction to Optimization in Aerospace Engineering	3(3-0-6)
01215412	Data Science for Aerospace Engineering	3(3-0-6)
01215413	Machine Learning for Aerospace Engineering	3(3-0-6)
01215421	Computational Structural Mechanics	3(3-0-6)
01215422	Structural Dynamics	3(3-0-6)
01215424	Nondestructive Testing in Aerospace Engineering	3(3-0-6)
01215425	Mechanics of Composite Materials	3(3-0-6)
01215433	Design of Aircraft propulsive Systems	3(3-0-6)
01215435	Aircraft Engine Technology	3(3-0-6)
01215436	Advance Aircraft Engine Combustion	3(3-0-6)
01215441	Computational Fluid Dynamics	3(2-3-6)
01215445	Introduction to Boundary Layer Aerodynamics	3(3-0-6)
01215446	Industrial and Vehicle Aerodynamics	3(3-0-6)
01215449	Experimental Aerodynamics	3(2-3-6)
01215462	Automatic Flight Control II	3(3-0-6)
01215463	Aircraft Systems	3(3-0-6)
01215465	Aircraft Instruments	3(3-0-6)
01215471	Aerospace Organization Management	3(3-0-6)
01215472	Aerospace Organization Behavior	3(3-0-6)
01215473	Aircraft Maintenance Management	3(3-0-6)
01215474	Aviation System Life Cycle Cost Analysis	3(3-0-6)
01215475	Project Management for Aircraft Design and Development	3(3-0-6)
01215481	Space Technology and Applications	3(3-0-6)
01215482	Space Mission Analysis and Design	3(3-0-6)
01215490	Co-operative Education	6
01215496	Selected Topics in Aerospace Engineering	1-3
01215497	Seminar	1
01215498	Special Problems	1-3

