UAEU كلية الهندسة College of Engineering

جامعة الإمارات العربية المتحدة United Arab Emirates University

Bachelor of Science in Aerospace Engineering Model Study Plan (2022-2023 Cohort onwards)

For Students Admitted to the University from the Fall Semester

Total Degree Credit hours: 132

	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Fall)	MATH1110/130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
		PHYS105	General Physics I	3	College Requirement
		PHYS135	General Physics Lab I	1	College Requirement
		CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
		CHEM175	Chemistry Lab I for Engineering	1	College Requirement
				14	
	2 (Spring)	MATH1120/135	Calculus II for Engineering	3	College Requirement
		GENG220	Engineering Thermodynamics	3	College Requirement
		GENG230	Computer Programming	3	College Requirement
		PHYS110	General Physics II	3	College Requirement
		PHYS140	General Physics Lab II	1	College Requirement
		CIVL240	Statics	3	Specialization
				16	
Year 2	3 (Fall)	MATH2210/270	Differential Equations for Engineering	3	College Requirement
		MATH2220/145	Linear Algebra for Engineering	3	College Requirement
		STAT210	Probability and Statistics	3	College Requirement
		PHYS200	Introduction to Space Sciences	3	Specialization
		MECH305	Mechanics of Materials	3	Specialization
		GENG215	Engineering Ethics	2	College Requirement
				17	
	4 (Spring)	AERO200	Aircraft Operations and Flight Mechanics	3	Specialization
		AERO215	Thermofluids	3	Specialization
		AERO315	Aerospace Manufacturing Processes	3	Specialization
		MECH390	Engineering Materials	3	College Requirement
		MECH310	Dynamics	3	Specialization
		ELEC372	Electro-Mechanical Devices	2	Specialization
		AERO220	Aerospace Lab 1	1	Specialization
				18	
Year 3	5 (Fall)	AERO300	Aerodynamics 1	3	Specialization
		AERO305	Aircraft Propulsion	3	Specialization
		AERO310	Aircraft Structures 1	3	Specialization
		MECH350	Introduction to Mechatronics	3	Specialization
		GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
				15	
	6 (Spring)	AERO350	Aerospace Lab 2	1	Specialization
		AERO402	Aerodynamics 2	3	Specialization
		MECH409	Dynamic Systems & Control	3	Specialization
		MECH315	Geometric Modeling	2	Specialization
		GEIT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
				12	
Year 4	7 (Fall)	AERO411	Flight Dynamics, Stability and Control	3	Specialization
		AERO450	Aerospace Lab 3	1	Specialization
		HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		ISLM100/ISLM101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
				13	
	8 (Spring)	AERO496	Aircraft Design	3	Specialization
		AERO590	Capstone Engineering Design Project	3	Specialization
		PHYS270	Celestial Mechanics	3	Specialization
		PHYS310	Space Missions	3	Major Elective
		GEIE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
				15	
Year 5	9 (Fall)	Elective	Student choice	3	Major Elective
		Elective	Student choice	3	Major Elective
		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
		AERO585	Design and Critical Thinking in Aerospace Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
				12	
	10 (Spring)	AERO495	Industrial Training	0	Internship
				0	

Bachelor of Science in Aerospace Engineering Model Study Plan (2022-2023 Cohort onwards)

For Students Admitted to the University from the Spring Semester

Total Degree Credit hours: 132

	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Spring)	MATH1110/130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
		PHYS105	General Physics I	3	College Requirement
		PHYS135	General Physics Lab I	1	College Requirement
		CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
		CHEM175	Chemistry Lab I for Engineering	1	College Requirement
				14	
	2 (Fall)	MATH1120/135	Calculus II for Engineering	3	College Requirement
		GENG220	Engineering Thermodynamics	3	College Requirement
		GENG230	Computer Programming	3	College Requirement
		PHYS110	General Physics II	3	College Requirement
		PHYS140	General Physics Lab II	1	College Requirement
		CIVL240	Statics	3	Specialization
				16	
Year 2	3 (Spring)	MATH2210/270	Differential Equations for Engineering	3	College Requirement
		MATH2220/145	Linear Algebra for Engineering	3	College Requirement
		STAT210	Probability and Statistics	3	College Requirement
		PHYS200	Introduction to Space Sciences	3	Specialization
		MECH305	Mechanics of Materials	3	Specialization
		GENG215	Engineering Ethics	2	College Requirement
				17	
	4 (Fall)	AERO200	Aircraft Operations and Flight Mechanics	3	Specialization
		AERO215	Thermofluids	3	Specialization
		AERO315	Aerospace Manufacturing Processes	3	Specialization
		MECH390	Engineering Materials	3	College Requirement
		MECH310	Dynamics	3	Specialization
		ELEC372	Electro-Mechanical Devices	2	Specialization
		AERO220	Aerospace Lab 1	1	Specialization
				18	
Year 3	5 (Spring)	AERO300	Aerodynamics 1	3	Specialization
		AERO305	Aircraft Propulsion	3	Specialization
		AERO310	Aircraft Structures 1	3	Specialization
		MECH350	Introduction to Mechatronics	3	Specialization
		GEIE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
				15	
	6 (Fall)	HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		AERO411	Flight Dynamics, Stability and Control	3	Specialization
		MECH409	Dynamic Systems & Control	3	Specialization
		GEIT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
		MECH315	Geometric Modeling	2	Specialization
				14	
Year 4	7 (Spring)	AERO402	Aerodynamics 2	3	Specialization
		AERO350	Aerospace Lab 2	1	Specialization
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
		ISLM100/ISLM101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
				13	
	8 (Fall)	Elective	Student choice	3	Major Elective
		AERO590	Capstone Engineering Design Project	3	Specialization
		PHYS270	Celestial Mechanics	3	Specialization
		AERO506	Spacecraft Engineering Design	3	Major Elective
		AERO450	Aerospace Lab 3	1	Specialization
				13	
Year 5	9 (Spring)	Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
		AERO496	Aircraft Design	3	Specialization
		AERO501	Selected Topics in Aerospace Engineering	3	Major Elective
		AERO585	Design and Critical Thinking in Aerospace Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
				12	
	10 (Fall)	AERO495	Industrial Training	0	
				0	

Bachelor of Science in Aerospace Engineering Model Study Plan (2023-2024 Cohort onwards)

For Students Admitted to the University from the Fall Semester

Total Degree Credit hours: 132

	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Fall)	MATH130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
		ISLM101	Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		PHYS105	General Physics I	3	College Requirement
		PHYS135	General Physics Lab I	1	College Requirement
		CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
		CHEM175	Chemistry Lab I for Engineering	1	College Requirement
				17	
	2 (Spring)	MATH135	Calculus II for Engineering	3	College Requirement
		MECH200	Introduction to Engineering Drawing and Workshop	1	Specialization
		GENG215	Engineering Ethics	2	College Requirement
		PHYS110	General Physics II	3	College Requirement
		PHYS140	General Physics Lab II	1	College Requirement
		STAT210	Probability and Statistics	3	College Requirement
		GENG230	Computer Programming	3	Specialization
				16	
Year 2	3 (Fall)	MATH275	Ordinary Differential Equations	3	College Requirement
		MATH140	Linear Algebra I	3	College Requirement
		GENG220	Engineering Thermodynamics	3	Specialization
		CIVL240	Statics	3	Specialization
		AERO220	Aerospace Lab 1	1	Specialization
		AERO215	Thermofluids	3	Specialization
				16	
	4 (Spring)	AERO200	Aircraft Operations and Flight Mechanics	3	Specialization
		AERO315	Aerospace Manufacturing Processes	3	Specialization
		MECH390	Engineering Materials	3	College Requirement
		MECH310	Dynamics	3	Specialization
		ELEC372	Electro-Mechanical Devices	2	Specialization
		MECH305	Mechanics of Materials	3	Specialization
				17	
	Summer	AERO485	Internship I	1	Internship
				1	
Year 3	5 (Fall)	AERO300	Aerodynamics 1	3	Specialization
		AERO305	Aircraft Propulsion	3	Specialization
		AERO310	Aircraft Structures 1	3	Specialization
		MECH350	Introduction to Mechatronics	3	Specialization
		PHYS200	Introduction to Space Sciences	3	Specialization
		MECH315	Geometric Modeling	2	Specialization
				17	
	6 (Spring)	AERO350	Aerospace Lab 2	1	Specialization
		AERO402	Aerodynamics 2	3	Specialization
		MECH409	Dynamic Systems & Control	3	Specialization
		GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		PHYS270	Celestial Mechanics	3	Specialization
		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
				16	
	Summer	AERO490	Internship II	1	Internship
				1	
Year 4	7 (Fall)	AERO411	Flight Dynamics, Stability and Control	3	Specialization
		AERO585	Design and Critical Thinking in Aerospace Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
		HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Elective	Student choice	3	Major Elective
		Elective	Student choice	3	Major Elective
				15	
	8 (Spring)	AERO496	Aircraft Design	3	Specialization
		AERO590	Capstone Engineering Design Project	3	Specialization
		AERO450	Aerospace Lab 3	1	Specialization
		GEIE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
		GEIT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
				16	

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For Students Admitted to the University from the Spring Semester

Total Degree Credit hours: 132

	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Spring)	MATH130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
		ISLM101	Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		PHYS105	General Physics I	3	College Requirement
		PHYS135	General Physics Lab I	1	College Requirement
		CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
		CHEM175	Chemistry Lab I for Engineering	1	College Requirement
				17	
	2 (Fall)	MATH135	Calculus II for Engineering	3	College Requirement
		PHYS110	General Physics II	3	College Requirement
		PHYS140	General Physics Lab II	1	College Requirement
		STAT210	Probability and Statistics	3	College Requirement
		GENG215	Engineering Ethics	2	College Requirement
		MECH200	Introduction to Engineering Drawing and Workshop	1	Specialization
		GENG230	Computer Programming	3	Specialization
				16	
Year 2	3 (Spring)	MATH275	Ordinary Differential Equations	3	College Requirement
		MATH140	Linear Algebra I	3	College Requirement
		GENG220	Engineering Thermodynamics	3	Specialization
		PHYS200	Introduction to Space Sciences	3	Specialization
		CIVL240	Statics	3	Specialization
		ELEC372	Electro-Mechanical Devices	2	Specialization
		AERO220	Aerospace Lab 1	1	Specialization
				18	
	4 (Fall)	AERO215	Thermofluids	3	Specialization
		MECH390	Engineering Materials	3	Specialization
		AERO315	Aerospace Manufacturing Processes	3	Specialization
		MECH305	Mechanics of Materials	3	Specialization
		MECH310	Dynamics	3	Specialization
		MECH350	Introduction to Mechatronics	3	Specialization
				18	
Year 3	5 (Spring)	MECH315	Geometric Modeling	2	Specialization
		AERO200	Aircraft Operations and Flight Mechanics	3	Specialization
		AERO310	Aircraft Structures 1	3	Specialization
		AERO300	Aerodynamics 1	3	Specialization
		AERO305	Aircraft Propulsion	3	Specialization
		MECH409	Dynamic Systems & Control	3	Specialization
				17	
	Summer	AERO485	Internship I	1	Internship
				1	
Year 4	6 (Fall)	AERO411	Flight Dynamics, Stability and Control	3	Specialization
		AERO350	Aerospace Lab 2	1	Specialization
		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
		GENG315	Engineering Economics	3	Specialization
		PHYS270	Celestial Mechanics	3	Specialization
				13	
	7 (Spring)	AERO585	Design and Critical Thinking in Aerospace Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
		AERO402	Aerodynamics 2	3	Specialization
		AERO450	Aerospace Lab 3	1	Specialization
		HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Elective	Student choice	3	Major Elective
		Elective	Student choice	3	Major Elective
				16	
	Summer	AERO490	Internship II	1	Internship
				1	
Year 5	8 (Fall)	AERO590	Capstone Engineering Design Project	3	Specialization
		AERO496	Aircraft Design	3	Specialization
		GEIE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
		GEIT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
				15	