UAEU كلية الهندسة College of Engineering

جامعة الإمارات العربية المتحدة United Arab Emirates University

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

For Students Admitted to the University from the Fall Semester

Total Degree Credit hours: 147

Semester	Course Code	Course Title	CH	Course type
Year 1 1 (Fall)	ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
	CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
	CHEM175	Chemistry Lab I for Engineering	1	College Requirement
	PHYS105	General Physics I	3	College Requirement
	PHYS135	General Physics Lab I	1	College Requirement
	MATH1110/130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
	ISLM100/ISLM101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
			17	
Year 2 3 (Fall)	MATH210/270	Differential Equations for Engineering	3	College Requirement
	MATH2220/145	Linear Algebra for Engineering	3	College Requirement
	ELEC305	Electric Circuits I	3	Specialization
	ELEC310	Electric Circuits I lab	1	Specialization
	ELEC335	Digital Logic Design	3	Specialization
	ELEC345	Digital Logic Design Lab	1	Specialization
	GENG230	Computer Programming	3	Specialization
			17	
Year 3 5 (Fall)	ECOM360	Fundamentals of Communication Systems	3	Specialization
	ELEC451	Microprocessors	3	Specialization
	ELEC370	Electronic Circuits	3	Specialization
	ELEC431	Control Systems	3	Specialization
	ELEC433	Instrument & Control Lab	1	Specialization
	GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
	ELEC375	Electronic Circuits Lab	1	
			17	
Year 4 7 (Fall)	ELEC495	Industrial Training	15	Training
			15	
Year 5 9 (Fall)	ELEC411	Electric Energy Conversion	3	Specialization
	ELEC481	Electric Energy Conversion Lab	1	Specialization
	ELEC590	Capstone Engineering Design Project	3	Specialization
	GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
	Elective	Student choice	3	Major Elective
			13	

Semester	Course Code	Course Title	CH	Course type
Year 1 2 (Spring)	GENG215	Engineering Ethics	2	College Requirement
	PHYS110	General Physics II	3	College Requirement
	PHYS140	General Physics Lab II	1	College Requirement
	GENG220	Engineering Thermodynamics	3	College Requirement
	STAT210	Probability and Statistics	3	College Requirement
	MATH1120/135	Calculus II for Engineering	3	College Requirement
	CHEM270/270	Materials Science	3	Specialization
			18	
Year 2 4 (Spring)	ELEC315	Fundamentals of Microelec Devices	3	Specialization
	ELEC320	Electric Circuits II	3	Specialization
	ELEC325	Engineering Electromagnetics	3	Specialization
	ELEC360	Signals & Systems	3	Specialization
	ELEC380	Analytical Methods for Electrical Engineering	3	Specialization
	GBE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
			18	
Year 3 6 (Spring)	ECOM432	Data Communications & Networks	3	Specialization
	ECOM442	Data Communications & Networks Lab	1	Specialization
	ELEC472	Power Systems	3	Specialization
	Elective	Student choice	3	Major Elective
	HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
	Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
			16	
Year 4 8 (Spring)	ELEC461	Microprocessors Lab	1	Specialization
	ELEC462	Computer Architecture & Organization	3	Specialization
	Elective	Student choice	3	Major Elective
	Elective	Student choice	3	Major Elective
	ELEC585	Design and Critical Thinking in Electrical Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
	GBT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
			16	

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

For Students Admitted to the University from the Spring Semester

Total Degree Credit hours: 147

Semester	Course Code	Course Title	CH	Course type
Year 1 1 (Spring)	ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
	CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
	CHEM175	Chemistry Lab I for Engineering	1	College Requirement
	PHYS105	General Physics I	3	College Requirement
	PHYS135	General Physics Lab I	1	College Requirement
	MATH1110/130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
			16	
Year 2 3 (Spring)	MATH210/270	Differential Equations for Engineering	3	College Requirement
	MATH2220/145	Linear Algebra for Engineering	3	College Requirement
	ELEC305	Electric Circuits I	3	Specialization
	ELEC310	Electric Circuits I lab	1	Specialization
	ELEC335	Digital Logic Design	3	Specialization
	ELEC345	Digital Logic Design Lab	1	Specialization
	GENG230	Computer Programming	3	Specialization
			17	
Year 3 5 (Spring)	ECOM360	Fundamentals of Communication Systems	3	Specialization
	ELEC472	Power Systems	3	Specialization
	ELEC380	Analytical Methods for Electrical Engineering	3	Specialization
	ECOM432	Data Communications & Networks	3	Specialization
	ECOM442	Data Communications & Networks Lab	1	Specialization
	ELEC370	Electronic Circuits	3	Specialization
	ELEC375	Electronic Circuits Lab	1	Specialization
			17	
Year 4 7 (Spring)	ELEC495	Industrial Training	15	Training
			15	
Year 5 9 (Spring)	ELEC461	Microprocessors Lab	1	Specialization
	ELEC462	Computer Architecture & Organization	3	Specialization
	Elective	Student choice	3	Major Elective
	ELEC590	Capstone Engineering Design Project	3	Specialization
	GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
	HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
			16	

Semester	Course Code	Course Title	CH	Course type
Year 1 2 (Fall)	GENG215	Engineering Ethics	2	College Requirement
	PHYS110	General Physics II	3	College Requirement
	PHYS140	General Physics Lab II	1	College Requirement
	GENG220	Engineering Thermodynamics	3	College Requirement
	STAT210	Probability and Statistics	3	College Requirement
	MATH1120/135	Calculus II for Engineering	3	College Requirement
	ISLM100/ISLM101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
			17	
Year 2 4 (Fall)	ELEC315	Fundamentals of Microelec Devices	3	Specialization
	ELEC320	Electric Circuits II	3	Specialization
	ELEC325	Engineering Electromagnetics	3	Specialization
	ELEC360	Signals & Systems	3	Specialization
	GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
	GBE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
			18	
Year 3 6 (Fall)	ELEC431	Control Systems	3	Specialization
	ELEC433	Instrument & Control Lab	1	Specialization
	ELEC451	Microprocessors	3	Specialization
	Elective	Student choice	3	Major Elective
	CHEM270/270	Materials Science	3	Specialization
	Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
			16	
Year 4 8 (Fall)	ELEC411	Electric Energy Conversion	3	Specialization
	ELEC481	Electric Energy Conversion Lab	1	Specialization
	Elective	Student choice	3	Major Elective
	Elective	Student choice	3	Major Elective
	ELEC585	Design and Critical Thinking in Electrical Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
	GBT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
			16	

Bachelor of Science in Electrical 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)	ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
	CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
	CHEM175	Chemistry Lab I for Engineering	1	College Requirement
	PHYS105	General Physics I	3	College Requirement
	PHYS135	General Physics Lab I	1	College Requirement
	MATH130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
	HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
			17	
Year 2 3 (Fall)	MATH275	Ordinary Differential Equations	3	College Requirement
	MATH140	Linear Algebra I	3	College Requirement
	ELEC305	Electric Circuits I	3	Specialization
	ELEC310	Electric Circuits I lab	1	Specialization
	ELEC335	Digital Logic Design	3	Specialization
	ELEC345	Digital Logic Design Lab	1	Specialization
	GENG230	Computer Programming	3	Specialization
			17	
Year 3 5 (Fall)	ECOM360	Fundamentals of Communication Systems	3	Specialization
	ELEC395	Artificial Intelligence Applications in Engineering Laborat	1	Specialization
	ELEC370	Electronic Circuits	3	Specialization
	ELEC431	Control Systems	3	Specialization
	ELEC433	Instrument & Control Lab	1	Specialization
	GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
	ELEC375	Electronic Circuits Lab	1	Specialization
			16	
Year 4 7 (Fall)	ELEC485	Internship I	1	Internship
	ELEC490	Internship II	1	Internship
			2	
Year 5 9 (Fall)	ELEC411	Electric Energy Conversion	3	Specialization
	ELEC481	Electric Energy Conversion Lab	1	Specialization
	ELEC590	Capstone Engineering Design Project	3	Specialization
	GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
	Elective	Student choice	3	Major Elective
			13	

Semester	Course Code	Course Title	CH	Course type
Year 1 2 (Spring)	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
	MATH135	Calculus II for Engineering	3	College Requirement
	ISLM101	Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
	Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
			17	
Year 2 4 (Spring)	ELEC315	Fundamentals of Microelec Devices	3	Specialization
	ELEC320	Electric Circuits II	3	Specialization
	ELEC325	Engineering Electromagnetics	3	Specialization
	ELEC360	Signals & Systems	3	Specialization
	ELEC380	Analytical Methods for Electrical Engineering	3	Specialization
	CHEM270	Material Science	3	Specialization
			18	
Year 3 6 (Spring)	ECOM432	Data Communications & Networks	3	Specialization
	ECOM442	Data Communications & Networks Lab	1	Specialization
	ELEC472	Power Systems	3	Specialization
	Elective	Student choice	3	Major Elective
	GBE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
	ELEC451	Microprocessors	3	Specialization
			16	
Year 4 8 (Spring)	ELEC461	Microprocessors Lab	1	Specialization
	ELEC462	Computer Architecture & Organization	3	Specialization
	Elective	Student choice	3	Major Elective
	Elective	Student choice	3	Major Elective
	ELEC585	Design and Critical Thinking in Electrical Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
	GBT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
			16	

Bachelor of Science in Electrical Engineering Model Study Plan (2023-2024 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)	ESPU107	Introduction to Academic English For Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)
	CHEM111	General Chemistry I	3	Gen Ed Course (Cluster 3: Area 1: Natural Sciences)
	CHEM175	Chemistry Lab I for Engineering	1	College Requirement
	PHYS105	General Physics I	3	College Requirement
	PHYS135	General Physics Lab I	1	College Requirement
	MATH130	Calculus I for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
	HSS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
			17	
Year 2 3 (Spring)	MATH140	Linear Algebra I	3	College Requirement
	ELEC305	Electric Circuits I	3	Specialization
	ELEC310	Electric Circuits I lab	1	Specialization
	ELEC335	Digital Logic Design	3	Specialization
	ELEC345	Digital Logic Design Lab	1	Specialization
	GENG230	Computer Programming	3	Specialization
	CHEM270	Materials Science	3	College Requirement
			17	
Year 3 5 (Spring)	ELEC360	Signals & Systems	3	Specialization
	ELEC370	Electronic Circuits	3	Specialization
	ELEC375	Electronic Circuits Lab	1	Specialization
	ELEC461	Microprocessors Lab	1	Specialization
	ELEC472	Power Systems	3	Specialization
	ELEC380	Analytical Methods for Electrical Engineering	3	Specialization
	ELEC395	Artificial Intelligence Applications in Engineering Laborat	1	Specialization
			16	
Year 4 7 (Spring)	ELEC485	Internship I	1	Internship
	ELEC490	Internship II	1	Internship
			2	
Year 5 9 (Spring)	ECOM432	Data Communications & Networks	3	Specialization
	ECOM442	Data Communications & Networks Lab	1	Specialization
	ELEC462	Computer Architecture & Organization	3	Specialization
	ELEC590	Capstone Engineering Design Project	3	Specialization
	Elective	Student choice	3	Major Elective
			13	

Semester	Course Code	Course Title	CH	Course type
Year 1 2 (Fall)	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
	MATH135	Calculus II for Engineering	3	College Requirement
	ISLM101	Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
	Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
			17	
Year 2 4 (Fall)	ELEC315	Fundamentals of Microelec Devices	3	Specialization
	ELEC320	Electric Circuits II	3	Specialization
	ELEC325	Engineering Electromagnetics	3	Specialization
	GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
	ELEC451	Microprocessors	3	Specialization
	MATH275	Ordinary Differential Equations	3	College Requirement
			18	
Year 3 6 (Fall)	ELEC431	Control Systems	3	Specialization
	ELEC433	Instrument & Control Lab	1	Specialization
	ELEC411	Electric Energy Conversion	3	Specialization
	Elective	Student choice	3	Major Elective
	ELEC481	Electric Energy Conversion Lab	1	Specialization
	GBE222	Fundamentals of Innovation and Entrepreneurship	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
	ECOM360	Fundamentals of Communication Systems	3	Specialization
			17	
Year 4 8 (Fall)	ELEC585	Design and Critical Thinking in Electrical Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
	GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
	GBT112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)
	Elective	Student choice	3	Major Elective
	Elective	Student choice	3	Major Elective
			15	

UAEU كلية الهندسة College of Engineering

جامعة الإمارات العربية المتحدة United Arab Emirates University

Bachelor of Science in Electrical Engineering Model Study Plan (2025-2026 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)	GEAE101	Academic English for Humanities and STEM	3	Gen. Ed. Theme 2 : Academic Language Proficiency
		CHEM111	General Chemistry I	3	College Requirement
		CHEM175	Chemistry Lab I for Engineering	1	College Requirement
		PHYS105	General Physics I	3	College Requirement
		PHYS135	General Physics Lab I	1	College Requirement
		MATH130	Calculus I for Engineering	3	College Requirement
		GEEM110	Contemporary Emirati Studies	3	Gen. Ed. Theme 1: UAE National Identity
				17	
	2 (Spring)	GENG215	Engineering Ethics	2	College Requirement
		PHYS110	General Physics II	3	College Requirement
		PHYS140	General Physics Lab II	1	College Requirement
		GBE222	Fundamentals of Innovation and Entrepreneurship	3	Gen. Ed. Theme 4 : Entrepreneurship
		MATH135	Calculus II for Engineering	3	College Requirement
		Elective	Student choice	3	Gen. Ed. Theme 7 or 8 or 9 or 10
		MATH140	Linear Algebra I	3	College Requirement
				15	
Year 2	3 (Fall)	MATH275	Ordinary Differential Equations	3	College Requirement
		STAT210	Probability and Statistics	3	College Requirement
		ELEC305	Electric Circuits I	3	Specialization
		ELEC310	Electric Circuits I lab	1	Specialization
		ELEC335	Digital Logic Design	3	Specialization
		ELEC345	Digital Logic Design Lab	1	Specialization
		GENG230	Computer Programming	3	Specialization
				17	
	4 (Spring)	ELEC315	Fundamentals of Microelec Devices	3	Specialization
		ELEC320	Electric Circuits II	3	Specialization
		ELEC325	Engineering Electromagnetics	3	Specialization
		ELEC360	Signals & Systems	3	Specialization
		ELEC380	Analytical Methods for Electrical Engineering	3	Specialization
		CHEM270	Material Science	3	Specialization
				18	
Year 3	5 (Fall)	ECOM360	Fundamentals of Communication Systems	3	Specialization
		ELEC290	Artificial Intelligence for Engineering	3	Gen. Ed. Theme 3 : Innovation
		ELEC370	Electronic Circuits	3	Specialization
		ELEC431	Control Systems	3	Specialization
		ELEC433	Instrument & Control Lab	1	Specialization
		GENG315	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		ELEC375	Electronic Circuits Lab	1	Specialization
				17	
	6 (Spring)	ECOM432	Data Communications & Networks	3	Specialization
		ECOM442	Data Communications & Networks Lab	1	Specialization
		ELEC472	Power Systems	3	Specialization
		Elective	Student choice	3	Major Elective
		ELEC395	Artificial Intelligence Applications in Engineering Laboratory	1	Specialization
		ELEC451	Microprocessors	3	Specialization
				14	
Year 4	7 (Fall)	ELEC485	Internship I	1	Internship
		ELEC490	Internship II	1	Internship
				2	
	8 (Spring)	ELEC461	Microprocessors Lab	1	Specialization
		ELEC462	Computer Architecture & Organization	3	Specialization
		Elective	Student choice	3	Major Elective
		Elective	Student choice	3	Major Elective
		ELEC585	Design and Critical Thinking in Electrical Engineering	3	Specialization
		Elective	Student choice	3	Gen. Ed. Theme 5: Sustainability
				16	
Year 5	9 (Fall)	ELEC411	Electric Energy Conversion	3	Specialization
		ELEC481	Electric Energy Conversion Lab	1	Specialization
		ELEC590	Capstone Engineering Design Project	3	Specialization
		Elective	Student choice	3	Gen. Ed. Theme 7 or 8 or 9 or 10
		Elective	Student choice	3	Major Elective
				13	