UAEU كلية تقنية المعلومات College of Information Technology

جامعة الإمارات العربية المتحدة United Arab Emirates University

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

For Students Admitted to the University from the Fall Semester

Total Degree Credit hours: 144

	Semester	Course Code	Course Title	CH	Course type	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Fall)	ESPU10B1	Introduction to Academic English for Information Technology I	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	2 (Spring)	CENG202	Discrete Mathematics	3	College Requirement
		MATH105	Calculus I	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		MATH110	Calculus II	3	College Requirement
		CSBP119	Algorithms and Problem Solving	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)		CSBP219	Object Oriented Programming	3	College Requirement
		PHYS105	General Physics I	3	Gen Ed Course (Cluster 1: Area 1: Natural Sciences)		CENG205	Digital Design & Computer Organization	3	College Requirement
		GBTI112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)		CSBP221	Programming Lab II	1	Specialization
		CSBP121	Programming Lab I	1	Specialization		HIS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Phys135	General Physics Lab I	1	Specialization					
				18					16	
Year 2	3 (Fall)	MATH140	Linear Algebra I	3	Specialization	4 (Spring)	MATH275	Ordinary Differential Equations	3	Specialization
		CENG201	Circuits Fundamentals	3	Specialization		CENG221	Computer Architecture	3	Specialization
		CENG231	Circuits Lab	1	Specialization		PHYS231	Electronics Fundamentals	3	Specialization
		PHYS110	General Physics II	3	Specialization		CENG210	Communication & Networks Fundamentals	3	Specialization
		PHYS140	General Physics Lab II	1	Specialization		BIOC100/CHEM111	Basic Biology I /General Chemistry I Choose ONE	3	College Requirement
		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)
		CSBP319	Data Structures	3	College Requirement					
				17					18	
Year 3	5 (Fall)	ELEC370	Electronic Circuits	3	Specialization	6 (Spring)	CENG320	Signals and Systems I	3	Specialization
		ELEC375	Electronic Circuits Lab	1	Specialization		CENG324	Digital System Design	3	Specialization
		CENG328	Introduction to Embedded Systems	3	Specialization		CENG325	Digital Design lab	1	Specialization
		CENG329	Introduction to Embedded Systems Lab	1	Specialization		CSBP315	Operating Systems Fundamentals	3	College Requirement
		STAT210	Probability and Statistics	3	College Requirement		CENG529	Networking Lab	1	Major Elective Lab
		ITBP301	Security Principles & Practice	3	Specialization		Elective	Student choice	3	Major Elective
		CENG530	Computer Network Protocols	3	Major Elective		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
				17					16	
Year 4	7 (Fall)	SWEB300	Software Engineering Fundamentals	3	Specialization	8 (Spring)	ITBP481	Senior Graduation Project II	3	College Requirement
		ITBP418	Entrepreneurship in Information Technology	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)		ITBP370	Professional Responsibility in Information Technology	3	College Requirement
		ITBP480	Senior Graduation Project I	3	College Requirement		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
				15					15	
Year 5	9 (Fall)	ITBP495	Internship	12						
				12						

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

For Students Admitted to the University from the Spring Semester

Total Degree Credit hours: 144

	Semester	Course Code	Course Title	CH	Course type	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Spring)	ESPU10B1	Introduction to Academic English for Information Technology I	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	2 (Fall)	CENG202	Discrete Mathematics	3	College Requirement
		MATH105	Calculus I	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		MATH110	Calculus II	3	College Requirement
		CSBP119	Algorithms and Problem Solving	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)		CSBP219	Object Oriented Programming	3	College Requirement
		PHYS105	General Physics I	3	Gen Ed Course (Cluster 1: Area 1: Natural Sciences)		CENG205	Digital Design & Computer Organization	3	College Requirement
		GBTI112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)		CSBP221	Programming Lab II	1	Specialization
		CSBP121	Programming Lab I	1	Specialization		HIS105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Phys135	General Physics Lab I	1	Specialization					
				17					16	
Year 2	3 (Spring)	MATH140	Linear Algebra I	3	Specialization	4 (Fall)	Math275	Ordinary Differential Equations	3	Specialization
		CENG201	Circuits Fundamentals	3	Specialization		CENG221	Computer Architecture	3	Specialization
		CENG231	Circuits Lab	1	Specialization		PHYS231	Electronics Fundamentals	3	Specialization
		PHYS110	General Physics II	3	Specialization		CENG210	Communication & Networks Fundamentals	3	Specialization
		PHYS140	General Physics Lab II	1	Specialization		BIOC100/CHEM111	Basic Biology I /General Chemistry I Choose ONE	3	College Requirement
		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)
		CSBP319	Data Structures	3	College Requirement					
				17					18	
Year 3	5 (Spring)	CENG320	Signals and Systems I	3	Specialization	6 (Fall)	ELEC370	Electronic Circuits	3	Specialization
		CENG324	Digital System Design	3	Specialization		ELEC375	Electronic Circuits Lab	1	Specialization
		CENG325	Digital Design lab	1	Specialization		CENG328	Introduction to Embedded Systems	3	Specialization
		CSBP315	Operating Systems Fundamentals	3	College Requirement		CENG329	Introduction to Embedded Systems Lab	1	Specialization
		CENG529	Networking Lab	1	Major Elective Lab		STAT210	Probability and Statistics	3	College Requirement
		CENG530	Computer Network Protocols	3	Major Elective		ITBP301	Security Principles & Practice	3	Specialization
		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)		Elective	Student choice	3	Major Elective
				16					17	
Year 4	7 (Spring)	SWEB300	Software Engineering Fundamentals	3	Specialization	8 (Fall)	ITBP481	Senior Graduation Project II	3	College Requirement
		ITBP418	Entrepreneurship in Information Technology	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)		ITBP370	Professional Responsibility in Information Technology	3	College Requirement
		ITBP480	Senior Graduation Project I	3	College Requirement		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
				15					15	
Year 5	9 (Spring)	ITBP495	Internship	12						
				12					0	

Bachelor of Science in Computer Engineering Model Study Plan (2024-2025 Cohort onwards)

For Students Admitted to the University from the Fall Semester

Total Degree Credit hours: 144

	Semester	Course Code	Course Title	CH	Course type	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Fall)	ESPU10B1	Introduction to Academic English for Information Technology I	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	2 (Spring)	CENG202	Discrete Mathematics	3	College Requirement
		MATH105	Calculus I	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		MATH110	Calculus II	3	College Requirement
		CSBP119	Algorithms and Problem Solving	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)		CSBP219	Object Oriented Programming	3	College Requirement
		PHYS105	General Physics I	3	Gen Ed Course (Cluster 1: Area 1: Natural Sciences)		CENG205	Digital Design & Computer Organization	3	College Requirement
		GBTI112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)		CSBP221	Programming Lab II	1	Specialization
		CSBP121	Programming Lab I	1	Specialization		GEEM105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Phys135	General Physics Lab I	1	Specialization					
				17					16	
Year 2	3 (Fall)	MATH140	Linear Algebra I	3	Specialization	4 (Spring)	MATH275	Ordinary Differential Equations	3	Specialization
		CENG201	Circuits Fundamentals	3	Specialization		CENG221	Computer Architecture	3	Specialization
		CENG231	Circuits Lab	1	Specialization		PHYS231	Electronics Fundamentals	3	Specialization
		PHYS110	General Physics II	3	Specialization		CENG210	Communication & Networks Fundamentals	3	Specialization
		PHYS140	General Physics Lab II	1	Specialization		BIOC100/CHEM111	Basic Biology I /General Chemistry I Choose ONE	3	College Requirement
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)		GEIS100/GEIS101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		CSBP319	Data Structures	3	College Requirement					
				17					18	
Year 3	5 (Fall)	CENG340	Autonomous Systems: Fundamentals and Applications	3	Specialization	6 (Spring)	CENG320	Signals and Systems I	3	Specialization
		CENG341	Autonomous Systems Lab	1	Specialization		CENG324	Digital System Design	3	Specialization
		CENG328	Introduction to Embedded Systems	3	Specialization		CENG325	Digital Design lab	1	Specialization
		CENG329	Introduction to Embedded Systems Lab	1	Specialization		CSBP315	Operating Systems Fundamentals	3	College Requirement
		STAT210	Probability and Statistics	3	College Requirement		CENG529	Networking Lab	1	Major Elective Lab
		ITBP301	Security Principles & Practice	3	Specialization		Elective	Student choice	3	Major Elective
		CENG530	Computer Network Protocols	3	Major Elective		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)
				17					16	
Year 4	7 (Fall)	SWEB300	Software Engineering Fundamentals	3	Specialization	8 (Spring)	ITBP481	Senior Graduation Project II	3	College Requirement
		ITBP418	Entrepreneurship in Information Technology	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)		ITBP370	Professional Responsibility in Information Technology	3	College Requirement
		ITBP480	Senior Graduation Project I	3	College Requirement		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
		Elective	FALSE	3	Major Elective		Elective	Student choice	3	Free Elective
				15					15	
Year 5	9 (Fall)	ITBP495	Internship	12						
				12						

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

For Students Admitted to the University from the Spring Semester

Total Degree Credit hours: 144

	Semester	Course Code	Course Title	CH	Course type	Semester	Course Code	Course Title	CH	Course type
Year 1	1 (Spring)	ESPU10B1	Introduction to Academic English for Information Technology I	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	2 (Fall)	CENG202	Discrete Mathematics	3	College Requirement
		MATH105	Calculus I	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		MATH110	Calculus II	3	College Requirement
		CSBP119	Algorithms and Problem Solving	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)		CSBP219	Object Oriented Programming	3	College Requirement
		PHYS105	General Physics I	3	Gen Ed Course (Cluster 1: Area 1: Natural Sciences)		CENG205	Digital Design & Computer Organization	3	College Requirement
		GBTI112	Fourth Industrial Revolution	3	Gen Ed Course (Cluster 1: Area 3: Fourth Industrial Revolution)		CSBP221	Programming Lab II	1	Specialization
		CSBP121	Programming Lab I	1	Specialization		GEEM105	Emirates Studies	3	Gen Ed Course (Cluster 2: Area 3: Emirates Society)
		Phys135	General Physics Lab I	1	Specialization					
				17					16	
Year 2	3 (Spring)	MATH140	Linear Algebra I	3	Specialization	4 (Fall)	Math275	Ordinary Differential Equations	3	Specialization
		CENG201	Circuits Fundamentals	3	Specialization		CENG221	Computer Architecture	3	Specialization
		CENG231	Circuits Lab	1	Specialization		PHYS231	Electronics Fundamentals	3	Specialization
		PHYS110	General Physics II	3	Specialization		CENG210	Communication & Networks Fundamentals	3	Specialization
		PHYS140	General Physics Lab II	1	Specialization		BIOC100/CHEM111	Basic Biology I /General Chemistry I Choose ONE	3	College Requirement
		GESU121	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)		GEIS100/GEIS101	Islamic Culture/Biography of the Prophet "Sira"	3	Gen Ed Course (Cluster 2: Area 4: Islamic Culture)
		CSBP319	Data Structures	3	College Requirement					
				17					18	
Year 3	5 (Spring)	CENG320	Signals and Systems I	3	Specialization	6 (Fall)	CENG340	Autonomous Systems: Fundamentals and Applications	3	Specialization
		CENG324	Digital System Design	3	Specialization		CENG341	Autonomous Systems Lab	1	Specialization
		CENG325	Digital Design lab	1	Specialization		CENG328	Introduction to Embedded Systems	3	Specialization
		CSBP315	Operating Systems Fundamentals	3	College Requirement		CENG329	Introduction to Embedded Systems Lab	1	Specialization
		CENG529	Networking Lab	1	Major Elective Lab		STAT210	Probability and Statistics	3	College Requirement
		CENG530	Computer Network Protocols	3	Major Elective		ITBP301	Security Principles & Practice	3	Specialization
		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 1: Humanities and Fine Arts)		Elective	Student choice	3	Major Elective
				16					16	
Year 4	7 (Spring)	SWEB300	Software Engineering Fundamentals	3	Specialization	8 (Fall)	ITBP481	Senior Graduation Project II	3	College Requirement
		ITBP418	Entrepreneurship in Information Technology	3	Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)		ITBP370	Professional Responsibility in Information Technology	3	College Requirement
		ITBP480	Senior Graduation Project I	3	College Requirement		Elective	Student choice	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
		Elective	Student choice	3	Major Elective		Elective	Student choice	3	Free Elective
				15					15	
Year 5	9 (Spring)	ITBP495	Linear Algebra I	3						
				3					0	