

### For Students Admitted to the University from the Fall Semester

**Total Degree Credit hours: 147**

Year	Semester	Course Code	Course Title	Prereq	Course Type	Course Code	Course Title	Prereq	Course Type
Year 1	(Fall)	EGE101	Introduction to Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: General Communication)	EGE102	Engineering Ethics		College Requirement
		CHM111	General Chemistry I		Gen Ed Course (Chapter 1: Area 1: Natural Sciences)	CHM112	General Physics I		College Requirement
		CHM115	Chemistry Lab I/for Engineering		College Requirement	PHYS101	General Physics Lab I		College Requirement
		PHYS101	General Physics I		College Requirement	PHYS102	Experimental Thermodynamics		College Requirement
		PHYS115	General Physics Lab II		College Requirement	STAT110	Probability and Statistics		College Requirement
Year 2	(Fall)	EGE1101	Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: Quantitative Reasoning)	EGE1102	Calculus for Engineers I		College Requirement
		EGE1101.01	Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: Quantitative Reasoning)	EGE1102.01	Calculus for Engineers I		College Requirement
		EGE1101.02	Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: Quantitative Reasoning)	EGE1102.02	Calculus for Engineers I		College Requirement
		EGE1101.03	Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: Quantitative Reasoning)	EGE1102.03	Calculus for Engineers I		College Requirement
		EGE1101.04	Academic English for Engineering		Gen Ed Course (Chapter 1: Area 2: Quantitative Reasoning)	EGE1102.04	Calculus for Engineers I		College Requirement
Year 2	(Spring)	MECH202/202D	Differential Equations for the Engineer		College Requirement	ELC415	Fundamentals of Microwave Devices		Specialization
		MECH202/202D	Linear Algebra for Engineering		College Requirement	ELC415S	Electrical Circuits II		Specialization
		ELC410	Electric Circuits I		Specialization	ELC425	Engineering Electromagnetics		Specialization
		ELC435	Digital Logic Design		Specialization	ELC460	Signal & System		Specialization
		ELC430	Electric Circuits Lab		Specialization	ELC480	Advanced Methods for Electrical Engineering		Specialization
Year 3	(Fall)	EGE201	College English for Engineering		College Requirement	EGE202	Formal Logic and Logic Reasoning		Specialization
		EGE201D	College English for Engineering		College Requirement	EGE202D	Formal Logic and Logic Reasoning		Specialization
		EGE201.01	College English for Engineering		College Requirement	EGE202.01	Formal Logic and Logic Reasoning		Specialization
		EGE201.02	College English for Engineering		College Requirement	EGE202.02	Formal Logic and Logic Reasoning		Specialization
		EGE201.03	College English for Engineering		College Requirement	EGE202.03	Formal Logic and Logic Reasoning		Specialization
Year 3	(Spring)	EGE209	Fundamentals of Communications Systems		Specialization	EGE210	Data Communications & Networks		Specialization
		ELC470	Microelectronics		Specialization	EGE210D	Data Communications & Networks Lab		Specialization
		ELC475	Control Systems		Specialization	ELC477	Control Systems		Specialization
		ELC473	Microelectronics & Control Lab		Specialization	ELC477D	Control Systems		Specialization
		EGE210	Engineering Mathematics		Specialization	ELC477S	Student Choice		Major Elective
Year 4	(Fall)	EGE210S	Engineering Mathematics		Specialization	EGE210S	Student Choice		Major Elective
		EGE210S	Engineering Mathematics		Specialization	EGE210S	Student Choice		Major Elective
		EGE210S	Engineering Mathematics		Specialization	EGE210S	Student Choice		Major Elective
		EGE210S	Engineering Mathematics		Specialization	EGE210S	Student Choice		Major Elective
		EGE210S	Engineering Mathematics		Specialization	EGE210S	Student Choice		Major Elective
Year 4	(Spring)	ELC495	Industrial Training	125	Training	ELC461	Microprocessor Lab		Specialization
		ELC461	Microprocessor Lab		Specialization	ELC496	Computer Architecture & Organization		Specialization
		ELC496	Computer Architecture & Organization		Specialization	ELC497	Signal Processing		Major Elective
		ELC497	Signal Processing		Specialization	ELC498	Student Choice		Major Elective
		ELC498	Student Choice		Major Elective	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization
Year 5	(Fall)	ELC411	Electric Energy Conversion		Specialization	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization
		ELC481	Electrical Energy Conversion		Specialization	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization
		ELC499	Capstone Engineering Design Project		Specialization	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization
		ELC412	Capstone Engineering Design Project		Specialization	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization
		ELC412	Capstone Engineering Design Project		Specialization	ELC499	Design and Critical Thinking in Electrical Engineering		Specialization

### For Students Admitted to the University from the Spring Semester

**Total Degree Credit hours: 147**

Year	Term	Course Code	Course Title	CR	Course Type	Course Code	Course Title	CR	Course Type
Year 1	(Spring)	ENGR102	Introduction to Academic English for Engineering	3	Gen Ed Course (Cluster 2: Area 2: English Communication)	ENGR215	Engineering Ethics	2	College Requirement
		ENGR103	General Physics I	3	Gen Ed Course (Cluster 2: Area 1: Natural Sciences)	ENGR216	Applied Physics I	3	College Requirement
		ENGR104	General Chemistry I	3	College Requirement	ENGR217	General Physics Lab	1	College Requirement
		ENGR105	General Physics II	3	College Requirement	ENGR218	Engineering Thermodynamics	3	College Requirement
		ENGR106	General Chemistry II	3	College Requirement	ENGR219	Probability and Statistics	3	College Requirement
Year 2	(Spring)	ENGR107	Calculus for Engineering	3	Gen Ed Course (Cluster 2: Area 3: Quantitative Reasoning)	ENGR220	Calculus for Engineering	3	College Requirement
		ENGR108	Calculus for Engineering	3	Gen Ed Course (Cluster 2: Area 3: Quantitative Reasoning)	ENGR221	Computer Fundamentals of the "Black Box" "Op"	1	College Requirement
		MATH21007	Differential Equations for Engineering	3	College Requirement	ENGR222	Computer Fundamentals of the "Black Box" "Op"	1	College Requirement
		MATH21008	Linear Algebra for Engineering	3	College Requirement	ENGR223	Computer Fundamentals of the "Black Box" "Op"	1	College Requirement
		ENGR109	Electric Circuits I	3	Specialization	ENGR224	Computer Fundamentals of the "Black Box" "Op"	1	College Requirement
Year 3	(Spring)	ENGR110	Electric Circuits II	3	Specialization	ENGR225	Engineering Electromagnetics	3	Specialization
		ENGR111	Electric Circuits Lab	1	Specialization	ENGR226	Signals and Systems	3	Specialization
		ENGR112	Electric Circuits Lab	1	Specialization	ENGR227	Engineering Electromagnetics	3	Specialization
		ENGR113	Digital Logic Design Lab	1	Specialization	ENGR228	Signals and Systems	3	Specialization
		ENGR114	Digital Logic Design Lab	1	Specialization	ENGR229	Engineering Electromagnetics	3	Specialization
Year 4	(Spring)	ENGR115	Computer Programming	3	Specialization	ENGR230	Engineering Electromagnetics	3	Specialization
		ENGR116	Computer Programming	3	Specialization	ENGR231	Signals and Systems	3	Specialization
		ENGR117	Computer Programming	3	Specialization	ENGR232	Engineering Electromagnetics	3	Specialization
		ENGR118	Computer Programming	3	Specialization	ENGR233	Signals and Systems	3	Specialization
		ENGR119	Computer Programming	3	Specialization	ENGR234	Engineering Electromagnetics	3	Specialization
Year 5	(Spring)	ENGR120	Foundations of Communications Systems	3	Specialization	ENGR235	Signals and Systems	3	Specialization
		ENGR121	Foundations of Communications Systems	3	Specialization	ENGR236	Engineering Electromagnetics	3	Specialization
		ENGR122	Foundations of Communications Systems	3	Specialization	ENGR237	Signals and Systems	3	Specialization
		ENGR123	Foundations of Communications Systems	3	Specialization	ENGR238	Engineering Electromagnetics	3	Specialization
		ENGR124	Foundations of Communications Systems	3	Specialization	ENGR239	Signals and Systems	3	Specialization
Year 6	(Spring)	ENGR125	Foundations of Communications Systems	3	Specialization	ENGR240	Engineering Electromagnetics	3	Specialization
		ENGR126	Foundations of Communications Systems	3	Specialization	ENGR241	Signals and Systems	3	Specialization
		ENGR127	Foundations of Communications Systems	3	Specialization	ENGR242	Engineering Electromagnetics	3	Specialization
		ENGR128	Foundations of Communications Systems	3	Specialization	ENGR243	Signals and Systems	3	Specialization
		ENGR129	Foundations of Communications Systems	3	Specialization	ENGR244	Engineering Electromagnetics	3	Specialization
Year 7	(Spring)	ENGR130	Foundations of Communications Systems	3	Specialization	ENGR245	Signals and Systems	3	Specialization
		ENGR131	Foundations of Communications Systems	3	Specialization	ENGR246	Engineering Electromagnetics	3	Specialization
		ENGR132	Foundations of Communications Systems	3	Specialization	ENGR247	Signals and Systems	3	Specialization
		ENGR133	Foundations of Communications Systems	3	Specialization	ENGR248	Engineering Electromagnetics	3	Specialization
		ENGR134	Foundations of Communications Systems	3	Specialization	ENGR249	Signals and Systems	3	Specialization
Year 8	(Spring)	ENGR135	Foundations of Communications Systems	3	Specialization	ENGR250	Engineering Electromagnetics	3	Specialization
		ENGR136	Foundations of Communications Systems	3	Specialization	ENGR251	Signals and Systems	3	Specialization
		ENGR137	Foundations of Communications Systems	3	Specialization	ENGR252	Engineering Electromagnetics	3	Specialization
		ENGR138	Foundations of Communications Systems	3	Specialization	ENGR253	Signals and Systems	3	Specialization
		ENGR139	Foundations of Communications Systems	3	Specialization	ENGR254	Engineering Electromagnetics	3	Specialization
Year 9	(Spring)	ENGR140	Foundations of Communications Systems	3	Specialization	ENGR255	Signals and Systems	3	Specialization
		ENGR141	Foundations of Communications Systems	3	Specialization	ENGR256	Engineering Electromagnetics	3	Specialization
		ENGR142	Foundations of Communications Systems	3	Specialization	ENGR257	Signals and Systems	3	Specialization
		ENGR143	Foundations of Communications Systems	3	Specialization	ENGR258	Engineering Electromagnetics	3	Specialization
		ENGR144	Foundations of Communications Systems	3	Specialization	ENGR259	Signals and Systems	3	Specialization

### For Students Admitted to the University from the Fall Semester

**Total Degree Credit hours: 132**

Year	Semester	Course Code	Course Title	CR	Course Type	Semester	Course Code	Course Title	CR	Course Type
Year 1	(Fall)	ENGR101	Introduction to Academic English for Engineering	3	Gen Ed Course (Cluster 1: Area 2: English Communication)	(Spring)	ENGR216	Engineering Ethics	3	College Requirement
		ENGR111	General Chemistry I	3	Gen Ed Course (Cluster 1: Area 1: Natural Sciences)		ENGR217	General Physics I	3	College Requirement
		CHMT175	Chemistry Lab I/Hr Engineering	1	College Requirement		PHYS100	General Physics Lab I	1	College Requirement
		PHYS101	General Physics I	3	College Requirement		PHYS101	Probability and Statistics	3	College Requirement
		PHYS115	General Physics Lab II	1	College Requirement		MATH115	Calculus for Engineering	3	College Requirement
Year 2	(Fall)	ENGR120	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	(Spring)	ENGR220	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR125	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR225	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR130	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR230	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR135	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR235	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR140	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR240	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
Year 3	(Fall)	ENGR210	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	(Spring)	ENGR210	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR215	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR215	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR220	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR220	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR225	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR225	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR230	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR230	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
Year 4	(Fall)	ENGR235	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)	(Spring)	ENGR235	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR240	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR240	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR245	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR245	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR250	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR250	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)
		ENGR255	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)		ENGR255	Calculus for Engineering	3	Gen Ed Course (Cluster 1: Area 5: Quantitative Reasoning)

### For Students Admitted to the University from the Spring Semester

**Total Degree Credit hours: 132**

	Semester	Course Code	Course Title	CR	Course Type	Semester	Course Code	Course Title	CR	Course Type
Year 1	1 (Spring)	ENR102	Introduction to Academic English for Engineering	3	Gen Ed Course (Cluster 2: Area 2: English Communication)	2 (Fall)	ENGR222	Engineering Ethics	2	College Requirement
		CHM111	General Chemistry I: Aqueous Solutions	3	Gen Ed Course (Cluster 2: Area 2: Natural Sciences)		PHYS101	General Physics I	3	College Requirement
		CHM125	Chemistry Lab I for Engineering	2	College Requirement		PHYS102	General Physics Lab	1	College Requirement
		PHYS101	General Physics I	3	College Requirement		ENGR210	Probability and Statistics	3	College Requirement
		PHYS102	General Physics II	3	College Requirement		MATH135	Calculus II for Engineering	3	College Requirement
		MATH130	Calculus for Engineering	3	Gen Ed Course (Cluster 2: Area 3: Quantitative Reasoning)		ENGR200	Engineering Graphics	3	Gen Ed Course (Cluster 2: Area 3: Technical Communication)
		ENR150	Intermediate Statistics	3	Gen Ed Course (Cluster 2: Area 3: Quantitative Reasoning)					
Year 2	3 (Spring)	MATH140	Linear Algebra I	3	College Requirement	4 (Fall)	ENGR315	Thermodynamics	3	Specialization
		ENGR305	Machine Circuits I	3	Specialization		ENGR311	Fundamentals of Microelectronic Devices	3	Specialization
		ENGR310	Machine Circuits Lab	1	Specialization		ENGR320	Electric Circuits II	3	Specialization
		ENGR335	Digital Logic Design	3	Specialization		ENGR325	Electronic Communications	3	Specialization
		ENGR345	Digital Logic Design Lab	1	Specialization		ENGR330	Engineering Economics	3	Gen Ed Course (Cluster 2: Area 2: Social and Behavioral Sciences)
		ENGR350	Computer Programming I	3	Specialization		ENGR401	Microprocessors	3	Specialization
		ENGR370	Naturalistic Science	3	College Requirement		ENGR402	Engineering Differential Equations	3	Specialization
Year 3	5 (Spring)	ENGR360	Signals & Systems	3	Specialization	6 (Fall)	ENGR411	Control Systems	3	Specialization
		ENGR375	Electronic Circuits Lab	1	Specialization		ENGR413	Instrumentation & Control Lab	1	Specialization
		ENGR401	Microprocessors	3	Specialization		ENGR411	Electric Energy Conversion	3	Specialization
		ENGR411	Electric Energy Conversion	3	Specialization		ENGR412	Power Electronics	3	Specialization
		ENGR412	Power Systems	3	Specialization		ENGR413	Electric Energy Conversion Lab	1	Specialization
		ENGR413	Instrumentation & Control Lab	1	Specialization		ENGR422	Fundamentals of Innovation and Entrepreneurship	3	Specialization
		ENGR414	Advanced Methods for Electrical Engineering	3	Specialization		ENGR423	Entrepreneurship	3	Specialization
		ENGR415	Advanced Topics in Applications in Engineering & Laboratory	3	Specialization					Gen Ed Course (Cluster 1: Area 1: Innovation and Entrepreneurship)
Year 4	7 (Spring)	ENGR485	Internship I	3	Internship	8 (Fall)	ENGR585	Design and Critical Thinking in Electrical Engineering	3	Gen Ed Course (Cluster 1: Area 4: Critical Thinking)
		ENGR490	Internship II	3	Internship		ENGR522	Sustainability	3	Gen Ed Course (Cluster 3: Area 2: Sustainability)
Year 5	9 (Spring)	ENGR511	Capstone Design I	3	College Requirement		ENGR523	Gen Ed Health/Industrial/Nutrition	3	Gen Ed Course (Cluster 1: Area 3: Health/Industrial/Nutrition)
		ENGR521	Capstone Design II	3	College Requirement		ENGR524	Student choice	3	Major Elective
		ENGR522	Capstone Design III	3	College Requirement		ENGR525	Student choice	3	Major Elective
		ENGR523	Capstone Design IV	3	College Requirement					
		ENGR524	Capstone Design V	3	College Requirement					

**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	CR	Course type	Semester	Course Code	Course Title	CR	Course type
Year 1 (Fall)	CHEM101	Engineering Calculus for Non-Scientists I (2024)	3	Gen. Ed. Theme 2: Academic Language Proficiency	2 (Spring)	ENGR101	Engineering Ethics	3	College Requirement
	CHEM111	General Chemistry I	3	College Requirement		PHYS101	General Physics I	3	College Requirement
	CHEM275	Chemistry Lab for Engineering	2	College Requirement		PHYS140	General Physics Lab II	1	College Requirement
	PHYS105	General Physics I	3	College Requirement		ENGR222	Fundamentals of Innovation and Entrepreneurship	3	Gen. Ed. Theme 4: Entrepreneurship
	PHYS185	General Physics Lab I	1	College Requirement		MATH110	Calculus II for Engineering	3	College Requirement
Year 2 (Fall)	MATH101	Calculus for Engineering	3	College Requirement	4 (Spring)	ENGR105	Student Choice	3	Gen. Ed. Theme 1 or 3 or 4 or 5
	CHEM101	Contemporary Global Studies	3	Gen. Ed. Theme 1 UAE National Identity		MATH140	Linear Algebra I	3	College Requirement
	MATH275	Ordinary Differential Equations	3	College Requirement		ENGR315	Fundamentals of Microelectronic Devices	3	Specialization
	STAT210	Probability and Statistics	3	College Requirement		ENGR320	Electric Circuits II	3	Specialization
	ELC305	Electric Circuits I	3	Specialization		ENGR325	Engineering Electromagnetics	3	Specialization
Year 3 (Fall)	ELC310	Electric Circuits Lab	1	Specialization	6 (Spring)	ENGR360	Signals & Systems	3	Specialization
	ELC325	Digital Logic Design	3	Specialization		ENGR385	Analysis of Methods for Electrical Engineering	3	Specialization
	ELC345	Digital Logic Design Lab	1	Specialization		CHEM270	Material Science	3	Specialization
	ENGR300	Computer Programming	3	Specialization		ENGR415	Data Communications & Networks	3	Specialization
	ENGR360	Fundamentals of Communication Systems	3	Specialization		ENGR445	Data Communications & Networks Lab	1	Specialization
Year 4 (Fall)	ENGR390	Artificial Intelligence for Engineering	3	Gen. Ed. Theme 3: Innovation	8 (Spring)	ENGR472	Power Systems	3	Specialization
	ELC411	Control Systems	3	Specialization		ENGR490	Student Choice	3	Major Elective
	ELC433	Instrument & Control Lab	1	Specialization		ENGR395	Artificial Intelligence Applications in Engineering Laboratory	1	Specialization
	ENGR395	Engineering Economics	3	Gen. Ed. General (Cluster 1: Area B: Social and Behavioral Sciences)		ENGR451	Microcomputers	3	Specialization
	ELC435	Electronic Circuits Lab	1	Specialization		ENGR461	Microprocessors Lab	1	Specialization
Year 5 (Fall)	ENGR485	Internship I	3	Internship	9 (Spring)	ENGR462	Computer Architecture & Organization	3	Specialization
	ENGR490	Internship II	3	Internship		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
Year 6 (Fall)	ENGR490	Student Choice	3	Major Elective	10 (Spring)	ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective
	ENGR490	Student Choice	3	Major Elective		ENGR490	Student Choice	3	Major Elective