

XVI. ROADMAPS

**Sample 4 year plan for Freshman Students for the Bachelor of Science Degree in Electrical Engineering  
(Total: 122 Units)**

	Fall _____	Spring _____	Total
Year 1	ENGR 1500 (3) – Intro to Engr./Tech MATH 2110 (4) – Calculus I COMM 1100 (3) – Oral Comm. ENGL 1010 (3) – Accelerated College Writing EE 2440 (3) – Digital Engineering  TOTAL: (16)	MATH 2120 (4) – Calculus II ENGL 2030 (3) – Intro to Tech Writing PHYS 2100 (5) – General Physics I EE 2450 (3) – Embedded programming I EE 2449 (1) – Digital Logic Lab  TOTAL: (16)	32
Year 2	MATH 2130 (3) – Calculus III PHYS 2200 (5) – General Physics II EE 2040 (3)* -- Circuit Analysis I US History (3) EE 3450 (3) – Embedded Sys. Programming II  TOTAL: (17)	MATH 2150 (3) – Diff. Equation EE 2049 (1) – Electrical Measurements and Circ Lab EE 3020 (3)* -- Signals and Systems EE 3300 (3) – Electric Machines POLS 1000 (3) Government and American Society CHEM 1040 (4) – General Chemistry for Engineers  TOTAL: (17)	34
Year 3	EE 3040 (3) – Probability, Random Variable, and Random Processes EE 3000 (3) – Econ for Engineers EE 3810 (3) – Sensors & Instrumentation in BME GE: SOCIAL SCIENCE (3) ENGR 3010 (3) – Ethics & Professionalism in Eng EE 3001 (1) - Numerical Analysis and Modeling Using MATLAB  TOTAL: (16)	EE 3600 (3) – Control Sys. I EE 3700 (3) – Electronics I EE 3200 (3) – Analog Comm. Sys. EE 3030 (3) – Circuit Analysis II EE ELECTIVE (3)  TOTAL: (15)	31
Year 4	EE 4961 (3) – Senior Design I EE 3050 (3) – Electric & Magnetic Fields EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE LAB (1)  TOTAL: (13)	EE 4962 (3) – Senior Design II EE ELECTIVE (3) EE ELECTIVE (3) GE: HUMANITIES (3)  TOTAL: (12)	25

**Sample 5 year plan for Freshman Students who need Math 1040 for Calculus<sup>1</sup>  
for the Bachelor of Science Degree in Electrical Engineering (Total: 128 Units)**

	Fall _____	Spring _____	Total
Year 1	MATH 1040 – PreCalculus: Functions and Trigonometry (6) COMM 1100 (3) – Oral Comm. ENGR 1500 (3) – Intro to Engr./Tech  TOTAL: (12)	MATH 2110 (4) – Calculus I EE 2440 (3) – Digital Engineering ENGL 1010 (3) – Accelerated College Writing US History (3)  TOTAL: (13)	25
Year 2	MATH 2120 (4) – Calculus II EE 2450 (3) – Embedded programming I EE 2449 (1) – Digital Logic Lab PHYS 2100 (5) – General Physics I ENGL 2030 (3) – Intro to Tech Writing  TOTAL: (13)	CHEM 1040 (4) – General Chemistry for Engineers MATH 2130 (3) – Calculus III PHYS 2200 (5) – General Physics II EE 2040 (3)* -- Circuit Analysis I  TOTAL: (15)	31
Year 3	MATH 2150 (3) – Diff. Equation EE 3020 (3)* -- Signals and Systems EE 3450 (3) – Embedded Sys. Programming II EE 3001 (1) - Numerical Analysis and Modeling Using MATLAB GE: HUMANITIES (3)  TOTAL: (13)	EE 2049 (1) – Electrical Measurements and Circ Lab EE 3300 (3) – Electric Machines ENGL 2030 (3) – Intro to Tech Writing POLS 1000 (3) Government and American Society ENGR 3010 (3) – Ethics & Professionalism in Eng  TOTAL: (13)	33
Year 4	EE 3040 (3) – Probability, Random Variable, and Random Processes EE 3000 (3) – Econ for Engineers EE 3810 (3) – Sensors & Instrumentation in BME GE: SOCIAL SCIENCE (3)  TOTAL: (12)	EE 3600 (3) – Control Sys. I EE 3700 (3) – Electronics I EE 3200 (3) – Analog Comm. Sys. EE 3030 (3) – Circuit Analysis II  TOTAL: (12)	24
Year 5	EE 4961 (3) – Senior Design I EE 3050 (3) – Electric & Magnetic Fields EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE LAB (1)  TOTAL: (13)	EE 4962 (3) – Senior Design II EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE (3)  TOTAL: (12)	25

<sup>1</sup> To be advised by ECST Student Success Center.

**Sample 5 year plan for Freshman Students who need Math 1082, Math 1083 for Calculus<sup>2</sup>  
for the Bachelor of Science Degree in Electrical Engineering (Total: 130 Units)**

	Fall _____	Spring _____	Total
Year 1	MATH 1082 - PreCalculus: Functions, with Lab (4) ENGR 1500 (3) – Intro to Engr./Tech ENGL 1010 (3) – Accelerated College Writing POLS 1000 (3) Government and American Society  TOTAL: (13)	MATH 1083 - Mathematical Analysis II (4) EE 2440 (3) – Digital Engineering ENGL 2030 (3) – Intro to Tech Writing GE: SOCIAL SCIENCE (3)  TOTAL: (13)	26
Year 2	MATH 2110 (4) – Calculus I COMM 1100 (3) – Oral Comm. EE 2450 (3) – Embedded programming I US History (3)  TOTAL: (13)	MATH 2120 (4) – Calculus II PHYS 2100 (5) – General Physics I EE 2449 (1) – Digital Logic Lab CHEM 1040 (4) – General Chemistry for Engineers  TOTAL: (14)	27
Year 3	MATH 2130 (3) – Calculus III PHYS 2200 (5) – General Physics II EE 2040 (3)* -- Circuit Analysis I EE 3001 (1) - Numerical Analysis and Modeling Using MATLAB  TOTAL: (12)	MATH 2150 (3) – Diff. Equation EE 2049 (1) – Electrical Measurements and Circuit Lab EE 3020 (3)* -- Signals and Systems EE 3300 (3) – Electric Machines EE 3450 (3) – Embedded Sys. Programming II  TOTAL: (13)	25
Year 4	EE 3040 (3) – Probability, Random Variable, and Random Processes EE 3000 (3) – Econ for Engineers EE 3810 (3) – Sensors & Instrumentation in BME ENGR 3010 (3) – Ethics & Professionalism in Eng  TOTAL: (12)	EE 3600 (3) – Control Sys. I EE 3700 (3) – Electronics I EE 3200 (3) – Analog Comm. Sys. EE 3030 (3) – Circuit Analysis II EE ELECTIVE (3)  TOTAL: (15)	27
Year 5	EE 4961 (3) – Senior Design I EE 3050 (3) – Electric & Magnetic Fields EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE LAB (1)  TOTAL: (13)	EE 4962 (3) – Senior Design II EE ELECTIVE (3) EE ELECTIVE (3) GE: HUMANITIES (3)  TOTAL: (12)	25

<sup>2</sup> To be advised by ECST Student Success Center.

**Sample 2 year plan for Transfer Students for the Bachelor of Science Degree in Electrical Engineering  
(Total: 122 Units including Transfer Units)**

	Fall _____	Spring _____	Total
Year 3	EE 3020 (3)* -- Signals and Systems EE 3300 (3) – Electric Machines ENGR 3010 (3) – Ethics and Professionalism in Eng ENGL 2030 (3) – Intro to Tech Writing EE 3450 (3) – Embedded Sys. Programming II EE 3001 (1) - Numerical Analysis and Modeling Using MATLAB  TOTAL: (16)	EE 3600 (3) -- Control Sys. I EE 3700 (3) – Electronics I EE 3200 (3) – Analog Comm. Sys. EE 3810 (3) -- Sensors & Instrumentation in BME EE 3000 (3) – Econ for Engineers EE 3030 (3) – Circuit Analysis II  TOTAL: (18)	34
Year 4	EE 4961 (3) – Senior Design I EE 3050 (3) -- Electric & Magnetic Fields EE 3040 (3) – Probability, Random Variable, and Random Processes EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE LAB (1)  TOTAL: (16)	EE 4962 (3) – Senior Design II EE ELECTIVE (3) EE ELECTIVE (3) EE ELECTIVE (3) GE SOCIAL SCIENCE (cl) (3)  TOTAL: (15)	31

**Assumes transfer credit received for the following courses (Equivalent of 57 Units):**

ENGL 1010 (3)	CHEM 1040 (4)	EE 2040 (3)*
COMM 1100 (3)	MATH 2110 (4)	EE 2049 (1)
US History (3)	MATH 2120 (4)	EE 2440 (3)
POLS 1000 (3)	MATH 2130 (3)	EE 2449 (1)
GE Humanities (3)	MATH 2150 (3)	EE 2450 (3)
GE Block E (3)	PHYS 2100 (5)	
	PHYS 2200 (5)	
<u>Total: 18 Units</u>	<u>Total: 28 Units</u>	<u>Total: 11 Units</u>

**UD GE Requirements:** Transfer students shall take UD GE courses to meet diversity (d), Race/Ethnicity (re) and Civic Learning (cl) requirements. It is recommended to select GE courses with (d), (re), and (cl) designation from available course list. Courses with \* are gate keeper courses and students should take them as soon as possible to avoid delays in graduation.