

Bachelor of Science in Electrical Engineering Degree (BSEE)

Mechatronics Concentration

Curriculum - Effective Fall 2020

Freshman - Fall

ENGL 1010 English Composition I	3
MATH 1910 Calculus I	4
CHEM 1110 General Chemistry I	4
ECE 1020 Connections to Electrical & Computer Engineering ¹	1
Soc/Beh Sci Elec ² _____	3
Total	15

Freshman - Spring

ENGL 1020 English Composition II	3
MATH 1920 Calculus II	4
MATH 2010 Introduction to Linear Algebra	3
CSC 1300 Intro. to Problem Solving & Computer Programming	4
ENGR 1110 Engineering Graphics	2
Total	16

Sophomore - Fall

ENGL 2130, 2235, or 2330 Literature	3
COMM 2025 or PC 2500 Communication	3
MATH 2120 Differential Equations	3
PHYS 2110 Calculus-based Physics I	4
ECE 2010 Electric Circuits I	3
ECE 2011 Electrical Engineering Lab. I	1
Total	17

Sophomore - Spring

MATH 2110 Calculus III	4
PHYS 2120 Calculus-based Physics II	4
CEE 2110 Statics	3
ECE 2001 Computer Aided Engr. in ECE	1
ECE 2020 Electric Circuits II	3
ECE 2110 Intro. to Digital Systems	3
Total	18

Junior - Fall

ECE 3010 Signals & Systems	3
ECE 3060 Electrical Engineering Lab. II	1
ECE 3130 Microcomputer Systems	4
ECE 3160 Digital Systems Lab.	1
ECE 3300 Electronics I	3
ECE 3510 Electromagnetic Fields I	3
ME 2330 Dynamics	3
Total	18

Junior - Spring

ECE 3020 Discrete-Time Signals & Systems	3
ECE 3210 Control System Analysis	3
ECE 3260 Control System Lab.	1
ECE 3270 Prog. Logic Controller Lab.	1
ECE 3610 Intro. to Power Systems	3
ECE 3920 Professional Issues in ECE	1
ECE 4140 Embedded System Design	3
ME 3610 Dynamics of Machinery	3
Total	18

Senior - Fall

ECE 4961 Capstone Design I	3
ECE 4210 Control System Design I	3
MATH 3470 Intro. Probability & Statistics	3
ME 4140 Intro. to Robotics and Intelligent Machines Engineering	3
Hum/Fine Arts Elec ² _____	3
Total	15

Senior - Spring

ECE 4971 Capstone Design II	3
EE Senior Elec ³ _____	3
Hum/Fine Arts Elec ² _____	3
Soc/Beh Sci Elec ² _____	3
Total	12

Notes

(1) This course not included in 128-hour curriculum.

(2) Select from University approved list.

(3) Select from electives list, below.

Course descriptions are in the Undergraduate Catalog.

Electives

Students are encouraged to consult with their advisor when selecting elective courses.

EE Senior Elective

- All ECE 4000-level courses
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Department of Electrical and Computer Engineering / Tennessee Technological University / Cookeville, Tennessee, U.S.A.