



## Bachelor of Science – Engineering Technology

Catalog Year: 2024 – 2025

Degree: BSET

Major: Engineering Technology  
Concentration: Mechatronics

The major map illustrates one path to completing your major, based on faculty members' advice on course sequence and a department's tentative plans for scheduling courses. This document provides general direction.

### Roane State Community College

#### Freshman Year – Fall Semester

Course Title	Cr	✓
ENST 1362 – Industrial Equipment	3	
ENST 1311 – Computer Aided Design I	3	
MATH 1730 – Pre-Calculus	4	
CHEM 1010 – Introductory Chemistry or CHEM 1110 – General Chemistry I	4	
ENGL 1010 – Composition I	3	
<b>Total</b>	<b>17</b>	

#### Freshman Year – Spring Semester

Course Title	Cr	✓
Humanities/Fine Arts Elective	3	
ENST 1350 – Industrial Safety	3	
MATH 1910 – Calculus I	4	
HIST 2010 – Early U.S. History	3	
ENGL 1020 – Composition II	3	
PHIL 1040 – Introduction to Ethics	3	
<b>Total</b>	<b>19</b>	

#### Sophomore Year – Fall Semester

Course Title	Cr	✓
ENGL 2110, 2120, 2210, 2220, 2310 or 2320 Literature	3	
COMM 2025 – Fundamentals of Communication	3	
CISP 1010 – Computer Science Programming	4	
PHYS 2010 – Introductory Physics I or PHYS 2110 – Calculus-Based Physics I	4	
ECON 2200 – Principles of Microeconomics	3	
<b>Total</b>	<b>17</b>	

#### Sophomore Year – Spring Semester

Course Title	Cr	✓
MECH 2425 – Mechanics and Machine Elements <sup>1</sup>	4	
PHYS 2020 – Introductory Physics II or PHYS 2120 – Calculus-Based Physics II	4	
ECON 2100 – Principles of Macroeconomics	3	
History 2020 – Modern U.S. History	3	
PSYC 1030 – Intro to Psychology	3	
<b>Total</b>	<b>17</b>	

## Tennessee Technological University

### Junior Year – Fall Semester

Course Title	Cr	✓
BMGT 3510 – Mgmt and Org Behavior	3	
ME 3010 – Materials & Processes in Mfg or MET 3100 – Applied Physical Metallurgy	3	
MET 3200 – Applied Electricity and Electronics	3	
MET 2065 – Metal Manufacturing Tech	2	
ACCT 3720 – Survey of Accounting	3	
<b>Total</b>	<b>14</b>	

### Junior Year – Spring Semester

Course Title	Cr	✓
MET 3003 – Principles of Metal Casting	3	
MET 3270 – Industrial Electronics and PLCs	3	
MET 3150 – Maintenance Technology I	2	
MET 3303 – CAD for Technology	3	
ECON 3610 – Business Statistics I	3	
<b>Total</b>	<b>14</b>	

### Senior Year – Fall Semester

Course Title	Cr	✓
MET 3403 – Applied Machine Elements	3	
MET 3060 – Computer Numerical Control Machining Practices	3	
MET 3713 – Methods Design and Work Meas	3	
MKT 3400 – Principles of Marketing	3	
Technical Elective <sup>2</sup>	3	
<b>Total</b>	<b>15</b>	

### Senior Year – Spring Semester

Course Title	Cr	✓
MET 4250 – Applied Mechatronics	3	
FIN 3210 – Principles of Managerial Finance	3	
MET 4620 – Senior Projects	3	
LAW 2810 – Business Legal Env and Ethics	3	
Technical Elective <sup>2</sup>	3	
<b>Total</b>	<b>15</b>	

128 hours minimum required for graduation

<sup>1</sup> MECH 1320 prerequisite will be waived for MECH 2425 provided successful completion of Math requirements

<sup>2</sup> Technical Electives: MET 4000, MET 4210 (5210), MET 4220 (5220), or MET 4990 (5990)

**Red color listed courses are taken at Roane State**

**Purple color listed courses are taken at TTU**