

# Bachelor of Science in Engineering Technology

## Student Learning Outcomes

Students will:

1. be able to design and conduct experiments and analyze and interpret data.
2. be able to apply knowledge and skills learned in mathematics, science, and engineering to solve problems related to engineering and other fields.
3. be able to design a system, component, or process to meet desired needs while meeting economic, political, ethical, health and safety, environmental, manufacturability, and sustainability constraints.
4. be adaptable problem solvers and critical thinkers with strong oral and written communication skills.
5. be able to work both independently and in team environments.
6. be life-long and self-directed learners.
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## Requirements for the Bachelor of Science in Engineering Technology

Code	Title	Hours
<b>Core Curriculum</b>		<b>60</b>
<b>Area A</b>		<b>9</b>
ENGL 1101 & ENGL 1102	Composition I and Composition II	6
MATH 1113 or MATH 2261	Precalculus <sup>1</sup> Analytic Geometry and Calculus I	3
<b>Area B (See VSU Core Curriculum)</b>		<b>4</b>
<b>Area C (See VSU Core Curriculum)</b>		<b>6</b>
Engineering Technology majors are advised to take COMM 1100 or COMM 1110 in Area C.		
<b>Area D <sup>1</sup></b>		<b>11</b>
MATH 2261 or MATH 2262	Analytic Geometry and Calculus I Analytic Geometry and Calculus II	4
Select 2 of the following courses (students are advised to take PHYS 2211K and PHYS 2212K)		8
BIOL 1107 & 1107L	Principles of Biology I and Principles of Biology Laboratory I	
BIOL 1108 & 1108L	Principles of Biology II and Principles of Biology Laboratory II	
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry Laboratory I	
CHEM 1212 & 1212L	Principles of Chemistry II and Principles of Chemistry Laboratory II	
PHYS 2211K	Principles of Physics I	
PHYS 2212K	Principles of Physics II	
<b>Area E (See VSU Core Curriculum)</b>		<b>12</b>
<b>Area F</b>		<b>18</b>
"Spillover" hours from Areas A and/or D		1-2
ENGT 2010	Introduction to Engineering Technology	3
ENGT 2500	Engineering Graphics for Design	3
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry Laboratory I (if not taken in Area D)	4
CS 1340 or CS 1301	Computing for Scientists <sup>2</sup> Principles of Programming I	3
MATH 2262	Analytic Geometry and Calculus II (if not taken in Area D) or ENGT 2110)	4 or 3
<b>Senior College Curriculum</b>		<b>60</b>
Major Area Courses		27-30
MATH 2262	Analytic Geometry and Calculus II (if not taken in Area D)	4

ENGT 2510	Statistics in Engineering Technology	3
ENGT 2520	Engineering Economics	3
ENGT 2530	Statics	3
ENGL 3020	Technical Writing and Editing	3
ENGT 3510	Advanced Statistics in Engineering Technology	3
ENGT 3520	Industrial Safety Engineering	3
ENGT 4530	Introduction to Manufacturing Systems	3
ENGT 4510	Basic Electricity and Electronics	3
ENGT 4520	Applied Thermodynamics	3
Select one of the following:		3
ENGT 4500 & ENGT 4550	Technical Project Proposal and Technical Project Lab	
ENGT 4950	Directed Study in Engineering Technology	
Concentration Electives		21-24
ENGT 3100	Six Sigma and Lean Manufacturing	3
ENGT 3120	Plant Layout and Material Handling	3
ENGT 3130	Industrial Cost Control	3
ENGT 3140	Simulation Modeling of Industrial Systems	3
ENGT 3150	Supply Chain and Logistics Concepts	3
ENGT 3500	Engineering Graphics for Design II	3
ENGT 4100	Motion and Time Study	3
ENGT 4110	Industrial Automation	3
ENGT 4120	Project Management	3
Electives <sup>2</sup>		9
<b>Total hours required for the degree</b>		<b>120</b>

<sup>1</sup> "Spillover" hour will be counted in Area F.

<sup>2</sup> A maximum of 3 additional hours of ENGT 4950 or ENGT 4500/ENGT 4550 may be counted here. The extra hour from CS 1301, if taken in Area F, will be counted here.