

Major Courses 66 SH

Mathematics-Science Core	12 SH
MATH 1150 Calculus for Technology	
OR *MATH 1420 Calculus I	4
*CHEM 1020 Chemical Technology	
OR *CHEM 1110 General Chemistry I	4
*PHYSICS 1511 General Physics I	
OR PHYSICS 1701 Physics I for Science & Engineering	4

Technical Core	42 SH
TECH 1017 Intro to CADD**	3
TECH 1008 Manufacturing Processes I	3
TECH 1010 Manufacturing Processes II	3
TECH 1024 Technical Drawing & Design I	3
TECH 2024 Technical Drawing & Design II	3
TECH 2060 Fundamentals of Automated Mfg.	3
TECH 2072 Engineering Materials	3
TECH 2080 Statics & Strengths of Materials	3
TECH 3142 Statistical Quality Control	3
TECH 3143 Managing Operations & Mfg Systems	3
TECH 3180 Introduction to Lean & Sustainable Mfg	3
TECH 3196 Industrial Safety	3
TECH 4110 Manufacturing Process Planning	
TECH 4187/5187 Applied Indust. Supervision & Mgmt	3
TECH 4112 Industrial Projects I	1
TECH 4113 Industrial Projects II	2

Metal Casting Emphasis	12 SH
TECH 3127 Transport Phenomena for Technologists	3
TECH 3134 Molding Practices in Metal Casting	3
TECH 4137 Tooling Practices in Metal Casting	3
TECH 4136 Melting Metallurgy & Practices	3

Major	66 SH
Liberal Arts Core	45 SH
University Elective	15 SH
Total B.S. program	126 SH

Liberal Arts Core 45 SH

For detailed information on the liberal arts core, please visit www.uni.edu/lac

Category 1. Core Competencies	12 SH
A. Reading and Writing	
B. Speaking and Listening	
C. Quantitative Techniques & Understanding	
D. Personal Wellness	
Category 2. Civilizations & Cultures	9 SH
A. Humanities	
B. Non-Western Cultures	
Category 3. Fine Arts, Literature, Philosophy and Religion	6 SH
A. Fine Arts	
B. Literature, Philosophy, or Religion	
Category 4. Natural Science and Technology	7 SH
A. Life Sciences	
B. Physical Sciences	
Category 5. Social Science	9 SH
A. Sociocultural & Historical Perspectives	
B. Individual & Institutional Perspectives	
C. Topical Perspectives	
Category 6. Capstone Experience	2 SH
Total Hours	45 SH

*Course also satisfies Liberal Arts Core requirement.

**TECH 1017 CADD is a pre-requisite for TECH 1024 applies to university electives.



Recommended Course Sequence

Freshman	32 SH
TECH 1008 Manufacturing Processes I	3
TECH 1010 Manufacturing Processes II	3
TECH 1017 CADD	3
TECH 1024 Technical Drawing & Design I	3
Calculus Requirement	4
Chemistry Requirement	4
Liberal Arts Core	12

Sophomore	31 SH
TECH 2024 Technical Drawing & Design II	3
TECH 2060 Fundamentals of Automated Mfg.	3
TECH 3143 Managing Operations & Mfg Systems	3
TECH 2072 Engineering Materials	3
TECH 2080 Statics & Strengths of Materials	3
TECH 3196 Industrial Safety	3
Physics Requirement	4
Liberal Arts Core/electives	9

Junior	36 SH
TECH 3127 Transport Phenomena for Technologists	3
TECH 3180 Introduction to Lean & Sustainable Mfg	3
TECH 3134 Molding Practices in Metal Casting	3
TECH 3142 Statistical Quality Control	3
Liberal Arts Core/electives	24

Senior	33 SH
TECH 4112 Industrial Projects I	1
TECH 4136 Melting Metallurgy & Practices	3
TECH 4137 Tooling Practices in Metal Casting	3
TECH 4187/5187 Applied Indust. Supervision & Mgmt	3
TECH 4110 Manufacturing Process Planning	3
TECH 4113 Industrial Projects II	2
Liberal Arts Core/electives	12

