# **Technology Management**

## Technology Management

The Technology Management department is in the Scott M. Smith College of Engineering. To find the most up-to-date information, including Program Learning Outcomes for degree programs offered by the Technology Management department, visit their website.

Technology Management department

#### DEPARTMENT CHAIR

THACKERAY, Susan Assistant Professor

#### FACULTY

ALIN, Pauli Associate Professor

ARENDT, Anne Associate Professor ILIKCHYAN, Armen Associate Professor

KUEHNE, Carolyn Sr. Lecturer

MERRILL, Kyle Professional In Residence

THACKERAY, Susan Assistant Professor

## Degrees & Programs

## Technology, A.A.S.

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Reauirements

The Associate in Applied Science (AAS) in Technology is designed for individuals seeking to work in a technical area or who have considerable work experience seeking better upward mobility in their professions. Students can receive up to 15 credit hours for extensive work experience, certifications, licenses, or apprenticeships. Additionally, students who earn certifications in many 900+ hour technical programs offered throughout the Utah Technical College system can transfer in their certificate and receive up to 30 hours of academic credit, or almost half the credit required to graduate from the AAS. Students in the AAS pathway will build on their technical education and experience by completing core and elective course options, including experiential portfolio, business computer proficiency, and supervision.

#### **Total Program Credits: 63**

-					
Gen	General Education Requirements:				
	ENGL 1010	Introduction to Academic Writing CC	3		
or	ENGH 1005	Literacies and Composition Across Contexts CC (5)			
	STAT 1040	Introduction to Statistics QL	3		
or	STAT 1045	Introduction to Statistics with Algebra QL (5)			
	Humanities / Fine Arts		3		
	Physical Science (Tech 1010 Recommended)		3		
	Social/Behavioral Science (TECH 200G Recommended)		3		
	PHIL 2050	Ethics and Values IH	3		
Disc	Discipline Core Requirements:		6 Credits		
	TECH 2010	Supervision in Technology	3		
	IM 2010	Business Computer Proficiency	3		

Discipline Elective Requirements:		9 Credits
	Complete 9 credits any course numbered 1000 or 2000	
	Recommended Courses: ENGR 1000; CS 1030; DGM 1110	
Approved or articulated technical credits:		30 Credits
	Complete 30 approved or articulated technical credits <sup>1</sup>	9
Not	26.	

#### Notes

#### Graduation Requirements:

- 1. Complete a minimum of 63 semester credits.
- 2. Overall grade point average of 2.0 (C) or above.
- 3. Residency hours minimum of 20 credit hours through course attendance at UVU.
- Completion of GE and specified departmental requirements 4.
- 5. This degree MAY apply toward the BS in Technology Management, if the majority of course work is in a related technical area, and has been approved by the department to be used toward the BSTM.

## Technology, A.A.S.

Careers

- 1. Explain technical cross-functional teams.
- 2. Explain complex systems and processes.
- 3. Apply current and emerging technologies to problem solve and support innovation.
- Compare business concepts and data to effect change. 4.
- 5. Demonstrate professional verbal and written communication skills.

#### **Related Careers**

NO MATCH

## Advanced Manufacturing, Certificate of Proficiency

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Requirements

The Certificate of Proficiency in Advanced Manufacturing is designed to provide entry-level manufacturing technician skills that are needed in expanding the manufacturing industry in Utah Valley. Although the term "advanced" might be confusing for a program providing entry-level skills, nationally this is the term that is being used. The program focuses on the basic skills used in advanced manufacturing processes expanding across the nation. The components of the certificate will include basic manufacturing skills with hands-on activities on equipment used in local facilities. Graduates of this certificate will have a basic understanding of advanced manufacturing operations with an emphasis on solving problems in the organization. While this program offers an entry-level certification for individuals pursuing a career in manufacturing, it has been designed to enable individuals the opportunity to continually expand and upgrade their applied skills as well as to maintain a thorough mastery of evolving manufacturing technologies.

#### **Total Program Credits: 18**

<sup>1.</sup> This requirement may be satisfied by credit for prior learning (CPL), prior learning assessment (PLA) or Articulation Agreements. Up to thirty credits may be satisfied.

## **Technology Management**

Discipline Core Requirements:			18 Credits
	TECH 1050	Manufacturing Processes and Systems	3
	TECH 2050	Introduction to Quality Management	3
	TECH 2010	Supervision in Technology	3
	TECH 281R	Internship in Technology (1-3)	1
or	TECH 1000	Experiential Credit Portfolio Development and Assessment (2)	
	IM 2010	<b>Business Computer Proficiency</b>	3
	STAT 1040	Introduction to Statistics QL	3
or	STAT 1045	Introduction to Statistics with Algebra QL (5)	
or	EGDT 1600	Technical Math Algebra (3)	
	EGDT 1000	Introduction to Engineering Drawing and Technical Design	2
or	EGDT 1071	3 Dimensional ModelingSolidworks (3)	

#### Graduation Requirements:

- 1. Completion of a minimum of 18 semester credits.
- 2. Minimum grade of C- required in all courses.
- 3. Overall grade point average of 2.0 (C) or above.
- 4. Residency hours: minimum of 5 credit hours through course attendance at UVU.

#### Advanced Manufacturing, Certificate of Proficiency Careers

- Graduates will have the ability to apply technical and management principles in an advanced manufacturing environment to achieve operational excellence.
- Graduates will apply technical skills such as quality assurance, risk analysis, process management, product management, and other necessary specialties in the field of technology management.

#### **Related Careers**

• Industrial Engineering Technicians

## Six Sigma Green Belt, Certificate of Proficiency

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Requirements

The Six Sigma Green Belt Certificate at UVU demonstrates knowledge in quality improvement and elimination of waste or defects in production processes. It can be utilized in every aspect of business such as production, human resources, information technology, and customer service. This certificate is built into the curriculum of the Bachelor of Science in Technology Management program. Students who complete this credential have high-demand, industry-recognized skill sets.

#### **Total Program Credits: 27**

Discipline Core Requirements:		27 Credits	
	TECH 3000	Introduction to Technology Management	3

	TECH 3010	Creativity Innovation and Change Management	3
	TECH 3400	Project Management WE	3
	TECH 3700	Materials Management	3
or	MGMT 3470	Lean Management Systems (3)	
	TECH 3850	Quality Management in Technology	3
or	MGMT 3070	Total Quality Management (3)	
	TECH 4000	Reliability Management	3
	TECH 4400	Advanced Project Management	3
or	MGMT 3450	Operations Management (3)	
	TECH 4910	Senior Capstone Project WE	3
Con	Complete one of the following for 3 credits		3
	ACC 2020	Managerial Accounting (3)	
	ACC 3000	Financial Managerial and Cost Accounting Concepts (3)	
	STAT 1040	Introduction to Statistics QL (3)	
	STAT 1045	Introduction to Statistics with Algebra QL (5)	
	STAT 2040	Principles of Statistics QL (4)	
	STAT 3040	Probability and Statistics for Engineering and the Sciences (3)	
	MGMT 2240	Business Calculus (3)	
	MGMT 2340	Business Statistics I (3)	

#### Graduation Requirements:

- 1. Completion of a minimum of 27 credits.
- 2. Overall grade point average of 3.0 (B) or above. Students must complete each course with a grade "B" or higher.
- 3. Residency hours -- minimum of 7 credit hours through course attendance at UVU.

# Six Sigma Green Belt, Certificate of Proficiency *Careers*

- 1. Graduates will have the ability to apply Six Sigma project management principles.
- 2. Graduates will have the ability to apply data-driven process improvements.

#### **Related Careers**

- · Computer and Information Systems Managers
- Industrial Production Managers
- Construction Managers
- · Logisticians
- Business Teachers, Postsecondary
- First-Line Supervisors of Mechanics, Installers, and Repairers
- First-Line Supervisors of Production and Operating Workers

## **Technology Management, Minor**

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Requirements

The Technology Management Minor will provide students the opportunity to explore many aspects of technology management, including project management, quality assurance, and creativity, as well as become more aware of the issues surrounding technology.

This background will also benefit such students in their quest for employment, since project management and its related skills are highly sought after by employers.

#### **Total Program Credits: 21**

Discipline Core Re	15 Credits	
TECH 3000	Introduction to Technology Management	3
TECH 3400	Project Management WE	3
TECH 3850	Quality Management in Technology	3
TECH 4000	Reliability Management	3
TECH 4420	Organization Information Technologies	3
Elective Requirem	6 Credits	
Select 6 credits fro	Select 6 credits from the following:	
TECH 3010	Creativity Innovation and Change Management (3)	
TECH 3700	Materials Management (3)	
TECH 405G	Global Ethical and Professional Issues in Technology GI (3)	
TECH 4200	Technology Marketing and Customer Relationship Management (3)	
TECH 4400	Advanced Project Management (3)	
TECH 497R	Independent Study (1-3) (May select between 1 and 4 credits)	

#### Technology Management, Minor Careers

- 1. Graduates will have the ability to apply technical and management principles in a technical environment to achieve operational excellence.
- 2. Graduates will earn increasing levels of leadership and technical responsibility in the workplace, exhibiting life long learning and ethical and professional integrity.
- 3. Graduates will apply technical skills such as quality, analysis, project management, design methods, and other necessary specialties in the field of technology management.

#### **Related Careers**

- Computer and Information Systems Managers
- Industrial Production Managers
- Construction Managers
- Logisticians
- Business Teachers, Postsecondary
- First-Line Supervisors of Mechanics, Installers, and Repairers
- First-Line Supervisors of Production and Operating Workers

## Master of Science in Engineering and Technology Management, M.S.

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Requirements

The Engineering and Technology Management (ETM) program prepares engineering and technological professionals to make process-, product-, and project-oriented strategic and operational decisions and become leaders in the management of technology by providing the link between engineering, science, and management. It helps companies, research organizations, and governments to plan, develop, and implement technologies by specifically addressing real needs identified by industry leaders. Effective planning, selection, implementation, and management of technology, and the teams involved, is essential to the success of any business in today's complex and time-critical global markets. Students learn to apply proven evaluation concepts and implementation strategies to fast moving, technical management decisions that make the difference in both career and business success. Courses provide practicing engineers and managers of technical teams or projects with the knowledge, tools, and skills to manage projects, operations, organizations, and people. The program includes product and project management, engineering management, quality and safety management, and statistical analysis to enable the graduate to be more effective in technical managerial and leadership roles in a business environment. The program is specifically tailored for professionals who want to advance their careers while still working full time. The entire program is available through distance learning as well as face to face and involves 30 credit hours of course work.

#### **Total Program Credits: 30**

Matriculation Requirements:

- Application for admission:
  - A bachelor's degree from a regionally accredited college/ university, a nationally accredited program, or an international college or university recognized by a Ministry of Education
  - 2. Overall undergraduate GPA of 3.0 or higher on a 4.0 scale from an accredited institution, or GPA of 3.0 or higher on a 4.0 scale from an accredited institution in last 60 semester hours (90 quarter hours) of undergraduate coursework
  - 3. Three professional letters of recommendation
  - 4. Official transcripts from all attended institutions of higher education
  - 5. A personal statement

Discipline Core Requirements:			24 Credits
	TECH 6010	Engineering Law and Patents	3
	TECH 6400	Six Sigma Project Management	3
	TECH 6420	Finance for Technical Systems	3
	TECH 6430	Product Management Processes	3
	TECH 6450	Engineering Economics and Project Evaluation	3
	TECH 6700	Data Driven Decision Making	3
	TECH 6950	Engineering and Technology Projects I	3
	TECH 6960	Engineering and Technology Projects	3
Elective Requirements:		6 Credits	
Com	plete six credi	ts from the following:	6
	TECH 6000	Strategic Management of Technology and Innovation in Engineering (3)	
	TECH 6500	Resource Management in Engineering and Technology (3)	
	TECH 6710	Materials Management (3)	
	TECH 679R	Special Topics in Engineering (3)	
	TECH 690R	Independent Study (3)	

#### Graduation Requirements:

- 1. Complete all courses with an overall GPA of 3.0 or higher
- A grade of "C" or higher required for all courses used to satisfy graduation requirement
- 3. Courses must be finished within a five-year period. No courses will apply toward graduation that are older than five years

## Technology Management

- Graduates may not transfer more than ten semester credit hours into this master's program. Only transfer courses approved by the graduateprogram faculty shall be counted as approved credit for the degree
- 5. A minimum of 30 credits is required

# Master of Science in Engineering and Technology Management, M.S.

#### Careers

- 1. Apply a business-driven approach to engineering and technology concepts.
- 2. Employ product and project management with the use of rationale and effective decision making.
- 3. Improve company practices using current technology, analysis, and design. Upon successful completion of this program, students will be able to make strategic and operational decisions in the management of technology by providing the link between engineering, science, and management.

## Technology Management, B.S.

UVU strives to ensure the accessibility of our catalogs. However, if individuals with disabilities need this document in a different format than provided, you may contact the Assistive Technology Center at ACCESSIBLETECH@uvu.edu or 801-863-6788.

#### Requirements

The Bachelor of Science in Technology Management curriculum is designed to prepare individuals with science, business and technical skills required for the management of people and systems in technology-based industries, government agencies, and non-profit organizations.Includes instruction in computer applications, general management principles, production and operations management, project management, quality control, saftey and health issues, and statistics.

#### Total Program Credits: 120

General Education Requirements:			35 Credits
	ENGL 1010	Introduction to Academic Writing CC	3
or	ENGH 1005	Literacies and Composition Across Contexts CC (5)	
	ENGL 2010	Intermediate Academic Writing CC	3
	STAT 1040	Introduction to Statistics QL	3
or	STAT 1045	Introduction to Statistics with Algebra QL (5)	
Con	nplete one of t	ne following:	3
	HIST 2700	US History to 1877 AS (3)	
and	HIST 2710	US History since 1877 AS (3)	
	HIST 1700	American Civilization AS (3)	
	HIST 1740	US Economic History AS (3)	
	POLS 1000	American Heritage SS (3)	
	POLS 1100	American National Government AS (3)	
Corr	nplete the follo	wing:	
	PHIL 2050	Ethics and Values IH	3
	HLTH 1100	Personal Health and Wellness TE	2
or	EXSC 1097	Fitness for Life TE (2)	
Dist	Distribution Courses:		
	Biology		3
	Physical Scie	nce	3

	Additional Bio recommende	ology or Physical Science (TECH 1010 d)	3
	Humanities		3
	Fine Arts		3
	Social/Behav recommende	ioral Science (TECH 200G d)	3
Disc	ipline Core Re	equirements:	34 Credits
	IM 2010	Business Computer Proficiency	3
	TECH 2010	Supervision in Technology	3
	TECH 3000	Introduction to Technology Management	3
	TECH 3010	Creativity Innovation and Change Management	3
	TECH 301R	Technology Lecture Series	1
	TECH 3400	Project Management WE	3
	TECH 3850	Quality Management in Technology	3
	TECH 405G	Global Ethical and Professional Issues in Technology GI	3
	TECH 4420	Organization Information Technologies	3
	TECH 4910	Senior Capstone Project WE	3
	ACC 3000	Financial Managerial and Cost Accounting Concepts	3
	HR 3430	Introduction to Human Resource Management	3
Disc	ipline Elective	Requirements:	12 Credits
Com cour	Complete 12 credits from the following upper division courses:		12
	TECH 3700	Materials Management (3)	
	TECH 4000	Reliability Management (3)	
	TECH 4200	Technology Marketing and Customer Relationship Management (3)	
	TECH 4400	Advanced Project Management (3)	
	TECH 481R	Internship (1-3) (Up to 3 credits may be selected)	
	TECH 489R	Undergraduate Research in Technology Management (1-3)	
	TECH 490R	Current Topics in Technology Management (3)	
	TECH 497R	Independent Study (1-3) (Up to 4 credits may be selected)	
	ENTR 3170	Entrepreneurship: Feasibility Analysis (3)	
	LEGL 3000	Business Law (3)	
	MGMT 3470	Lean Management Systems (3)	
	ENGL 3300	Collaborative Communication for Technology Professions (3)	
Elec	tives:		9 Credits
Complete 9 credits from any course numbered 1000 or higher:		9	
Recommended courses: ENGR 1000; CS 1030; DGM 1110			
Approved or Articulated Technical Credits:			30 Credits

Neteo	
credits <sup>1</sup>	
Complete 30 credits of approved or articulated technical	30

#### Notes:

 This requirement may be satisfied by credit for prior learning (CPL), prior learning assessment (PLA) or Articulation Agreements. Up to thirty credits may be satisfied.

#### Graduation Requirements:

- 1. Completion of a minimum of 120 semester credits: a minimum of 40 credits must be upper division.
- 2. Overall grade point average of 2.0 (C) or above.
- 3. No grade lower than a C- in any TECH course.
- Residency hours: Minimum of 30 credit hours through course attendance at UVU, with at least 10 hours earned in the last 45 hours.
- 5. Completion of General Education (GE) and specified departmental requirements.
- 6. Successful completion of at least one Global/Intercultural course.
- Successful completion of at least two Writing Enriched (WE) courses.

# Technology Management, B.S. *Careers*

#### Program Learning Outcomes

- 1. Manage and develop technical cross-functional teams.
- 2. Manage and develop complex systems and processes.
- 3. Assess current and emerging technologies to problem solve and support innovation.
- 4. Analyze business concepts and data to effect change.
- 5. Communicate with a wide range of internal stakeholders and various outside communities.

#### **Related Careers**

- · Computer and Information Systems Managers
- Industrial Production Managers
- Construction Managers
- Logisticians
- Business Teachers, Postsecondary
- First-Line Supervisors of Mechanics, Installers, and Repairers
- · First-Line Supervisors of Production and Operating Workers