

## Technology Management

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### Faculty:

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### School of Technology and Computing

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The Technology Management program has a multi-disciplinary focus and is designed for students who want to add management skills to a chosen technology area. Students may enter the program with an AAS degree in an approved technical area or an AS degree containing at least 45 credit hours in an approved technical specialty. Students may also enter the program as freshmen and take their technology and management courses concurrently.

We view Technology as the practical application of knowledge, or a capability given by such, and see Management skills as keys that help bring innovation and change along with efficiency, effectiveness, continuity, quality, and safety to the process. In addition, we recognize the responsibility that all of us have to understand the impact of technology on society and to address the social and moral issues associated with the appropriate use of technology.

While the Technology Management Program was one of the first to offer a four-year degree at UVSC, it is also dynamic and changing to reach interested students and to add flexibility in meeting individual

needs. If we can be of service to you in any way, please feel free to contact us.

### CAREER OPPORTUNITIES

Multiple opportunities exist for students completing the Technology Management degree in corporate and operations management; as business owners, project managers, site superintendents, marketing and sales representatives, supervisors, and chief project officers. State agencies and the U.S. military also hire Technology Management graduates.

Based on a survey conducted in 2005, salaries range from \$40,000 to \$110,000. Companies seeking globally competitive managers, who have experience and knowledge of both the analytic and applied aspects of professional management are especially interested in our graduates.

### PROGRAMS

#### Bachelor of Applied Technology 123 CREDITS

##### Matriculation Requirements:

1. Have completed an AAT degree from UCAT in a sponsoring School at UVSC (60 credit hours)
2. Meet with an advisor in the AAT-emphasis discipline-related program and develop an academic contract specifying discipline-related courses, BAT core, BAT support courses, and BAT electives

##### General Education Requirements: 23 Credits

- Complete one of the following: 3.0
- HIST 2700 US History to 1877 (3.0)
  - and HIST 2710 US History since 1877 (3.0)
  - HIST 1700 American Civilization (3.0)
  - HIST 1740 US Economic History (3.0)
  - POLS 1000 American Heritage (3.0)
  - POLS 1100 American National Government (3.0)

- Complete the following:
- PHIL 2050 Ethics and Values 3.0
  - HLTH 1100 Personal Health and Wellness (2.0)
  - or PES 1097 Fitness for Life 2.0

- Distribution Courses
- Biology 3.0
  - Physical Science 3.0
  - Additional Biology or Physical Science 3.0
  - Humanities Distribution 3.0
  - Fine Arts Distribution 3.0

##### Discipline Core Requirements: 84 Credits

- Complete AAT Degree in Community Health or Information Technology 60.0
- ENGL 4310 Advanced Technical Communication 3.0
- DGM 3820 Presentation Applications 3.0
- TECH 3000 Introduction to Technology Management 3.0
- MGMT 3000 Organizational Behavior 3.0
- TECH 3850 Quality Assurance in Technology 3.0

##### COMMUNICATION: Complete one of the following courses

- MGMT 4220 Management Communication (3.0)
  - MGMT 3320 Cross-Cultural Communications for International Business (3.0)
- SUPERVISION: Complete one of the following courses 3.0
- DGM 3290 Developing Digital Media for Instruction and Training (3.0)
  - TECH 3400 Project Management (3.0)

##### TEAM BUILDING

- MGMT 3500 Leadership Process 3.0

##### Elective Requirements: 16 Credits

- Complete a minimum of one of the following courses: 3.0
- INFO 3120 Principles of Information Systems--A Managerial Approach (3.0)
  - LEGL 3000 Business Law (3.0)
  - MGMT 3000 Organizational Behavior (3.0)
  - MGMT 3170 Entrepreneurship (3.0)
  - MGMT 3440 Managing Organizations (3.0)
  - MGMT 3600 Principles of Marketing (3.0)

- MGMT 3620 Consumer Behavior (3.0)
- MGMT 3630 Services Marketing (3.0)
- MGMT 3650 Selling and Sales Management (3.0)
- PHIL 3510 Business and Professional Ethics (3.0)
- SOC 3460 Political Sociology (3.0)
- SOC 4400 Social Change (3.0)
- TECH 4000 Reliability Engineering and Safety (3.0)
- TECH 4200 Technology Marketing and Distribution (3.0)

##### Upper-Division Discipline-Related Courses:

- Coursework planned with advisor 13.0

##### Graduation Requirements:

1. Completion of a minimum of 123 semester credits, 40 of which must be upper division
2. Overall grade point average of 2.0 (C) or above. (Departments may require a higher GPA.)
3. Residency hours--a minimum of 30 credit hours through course attendance at UVSC, with at least 10 hours earned in the last 45 hours

Notes: ENGL 1010, MATH 1050, Social/Behavioral Science completed in the AAT degree. Students desiring to take more than three School of Business courses at or above the 3000 level must have a minimum accumulated GPA of 2.5 and have successfully completed the core foundation courses in the School of Business Information Technology program.

### BS in Technology

#### Management 125 Credits

##### General Education Requirements: 35 Credits

- ENGL 1010 Introduction to Writing 3.0
- ENGL 2010 Intermediate Writing--Humanities/Social Sciences 3.0
- or ENGL 2020 Intermediate Writing--Science and Technology (3.0)

##### Complete one of the following: 3.0

- MATH 1030 Quantitative Reasoning (recommended for Humanities or Arts majors) (3.0)
- MATH 1040 Introduction to Statistics (recommended for Social Science majors) (3.0)
- MATH 1050 College Algebra (recommended for Business, Education, Science, and Health Professions majors) (4.0)
- One course that requires MATH 1050 as a prerequisite (excluding MATH 1060)
- An Advanced Placement (AP) Mathematics Test with a score of 3 or higher

##### Complete one of the following: 3.0

- HIST 2700 US History to 1877 (3.0)
- and HIST 2710 US History since 1877 (3.0)
- HIST 1700 American Civilization (3.0)
- HIST 1740 US Economic History (3.0)
- POLS 1000 American Heritage (3.0)
- POLS 1100 American National Government (3.0)

##### Complete the following: 3.0

- PHIL 2050 Ethics and Values 3.0
- HLTH 1100 Personal Health and Wellness (2.0)
- or PES 1097 Fitness for Life 2.0

##### Distribution Courses

- Biology 3.0
- Physical Science 3.0
- Additional Biology or Physical Science 3.0
- Humanities Distribution 3.0
- Fine Arts Distribution 3.0
- TECH 2000 Technology and Human Life (Fulfills Social/Behavioral Science) 3.0

##### Discipline Core Requirements: 30 Credits

Meet with Technology Management advisor to complete a degree plan prior to enrollment in Technology Management courses.

- TECH 3000 Introduction to Technology Management 3.0
- TECH 3010 Creativity Innovation and Change Management 3.0

##### or MGMT 3170 Entrepreneurship 3.0

- TECH 3400 Project Management 3.0
- TECH 3850 Quality Assurance in Technology 3.0
- TECH 4050 Global Ethical and Professional Issues in Technology 3.0
- TECH 4420 Organization Information Technologies 3.0
- TECH 4820 Current Topics in Technology Management 2.0
- TECH 4910 Senior Capstone Project 3.0
- ACC 3000 Financial Managerial and Cost Accounting Concepts 4.0
- MGMT 3430 Human Resource Management 3.0

##### Emphasis Requirements: 45 Credits

# Technology Management

See specific Technical Area for the 45 credit requirement. 45.0

## Elective Requirements: 15 Credits

- Complete 15 credits from the following: 15.0
- TECH 3700 Materials Management (3.0)
- TECH 4000 Reliability Engineering and Safety (3.0)
- TECH 4200 Technology Marketing and Distribution (3.0)
- TECH 4400 Advanced Project Management (3.0)
- TECH 481R Internship (Up to 3 credits may be selected) (1.0)
- TECH 497R Independent Study (Up to 4 credit hours may be selected) (1.0)
- LEGL 3000 Business Law (3.0)
- ENGL 4310 Advanced Technical Communication (3.0)
- MGMT 3450 Operations Management (3.0)
- Up to 6 credits toward Leadership Certification with the Center for the Advancement of Leadership.
- Students may select up to 9 credits of other upper division technology related courses with advisor approval.

## Graduation Requirements:

- 1 Completion of a minimum of 125 semester credits
- 2 Overall grade point average of 2.0 (C) or above. (Departments may require a higher GPA.)
- 3 Residency hours--minimum of 30 credit hours through course attendance at UVSC, with at least 10 hours earned in the last 45 hours.
- 4 Completion of GE and specified departmental requirements.

## Note:

No upper division Technology Management (i.e. Technology Management or Business Management) course work older than six years can be counted toward graduation.

## Specialization in Air Conditioning and Refrigeration Technology 47 Credits

### Emphasis Requirements: 47 Credits

Complete the following:

- ACRT 1110 Refrigeration I 10.0
- ACRT 1210 Refrigeration II 9.0
- ACRT 1220 Basic Electricity and Motor Controls 5.0
- ACRT 2320 Motors--Controls and Wiring Diagrams 5.0
- ACRT 2340 Commercial Refrigeration Theory 4.0
- ACRT 234L Commercial Refrigeration Lab 5.0
- ACRT 2440 Commercial Refrigeration Heating and Air Conditioning Theory 4.0
- ACRT 244L Commercial Refrigeration Heating and Air Conditioning Lab 5.0

## Specialization in Air and Visual Communications 45 Credits

### Emphasis Requirements: 45 Credits

- ART 1120 2D Design 3.0
- ART 1400 Graphic Computer Applications 3.0
- ART 1000 Color Theory 3.0
- Complete an additional 36 credits from AVC 36.0 courses.

## Specialization in Automotive Technology 45 Credits

### Emphasis Requirements: 45 Credits

- AUT 1110 Brake Systems 2.0
- AUT 111L Brake Systems Lab 1.0
- AUT 1120 Manual Power Trains 2.0
- AUT 112L Manual Power Trains Lab 1.0
- AUT 1130 Engine Repair 2.0
- AUT 113L Engine Repair Lab 1.0
- AUT 1160 Automotive Electrical Systems 2.0
- AUT 116L Automotive Electrical Systems Lab 1.0
- AUT 1170 Engine Electrical Systems 2.0
- AUT 117L Engine Electrical Systems Lab 1.0
- AUT 1210 Suspension and Steering Systems 2.0
- AUT 121L Suspension and Steering Systems Lab 1.0
- AUT 1220 Automatic Transmissions and Transaxles 2.0
- AUT 122L Automatic Transmissions and Transaxles Lab 1.0
- AUT 1230 Engine Performance 2.0
- AUT 123L Engine Performance Lab 1.0
- AUT 2110 Advanced Steering Suspension and Alignment 2.0
- AUT 2120 Advanced Engine Performance 2.0
- AUT 2130 Advanced Emission Control Systems 2.0
- AUT 2140 Chassis Electrical and Electronics Systems 2.0
- AUT 2210 Advanced Braking and Control Systems 2.0
- AUT 2220 Automatic Transmissions and Electronic Controls 2.0
- AUT 2240 Automotive HVACR 2.0

- AUT 2250 Electronic Fuel Management Systems 2.0
- Complete 5 credits from the following: 5.0
- AUT 201R Automotive Service Practicum (2.0)
  - AUT 281R Cooperative Work Experience (1.0)

## Specialization in Aviation Science 45 Credits

### Emphasis Requirements: 39 Credits

- AVSC 1010 Survey of Aviation Science 2.0
- AVSC 1100 Ground Private Pilot 4.0
- AVSC 1110 Flight Private Pilot Certification 3.0
- AVSC 1220 Ground Commercial Pilot--Phase I 1.0
- AVSC 1230 Flight Commercial Pilot--Phase I 3.0
- AVSC 1240 Ground Instrument Pilot 4.0
- AVSC 1250 Flight Instrument Pilot Rating 2.0
- AVSC 2150 Air Transportation Management 3.0
- AVSC 2160 Aviation Law 3.0
- AVSC 2300 Ground Commercial Pilot--Phase II 2.0
- AVSC 2310 Flight Commercial Pilot--Phase II 3.0
- AVSC 2440 Ground Multi-Engine 1.0
- AVSC 2450 Flight Multi-Engine 1.0
- AVSC 281R Cooperative Work Experience (Must repeat 3 times) (1.0) 3.0
- AVSC 285R Cooperative Related Class 1.0
- METO 1010 Introduction to Meteorology 3.0

### Elective Requirements: 6 Credits

Complete 6 credits from the following: 6.0

- AVSC 1020 Aircraft Identification (1.0)
- AVSC 2330 Theory of Instruction (1.0)
- AVSC 2400 Ground Certified Flight Instructor (3.0)
- AVSC 2410 Flight Certified Flight Instructor (1.0)
- AVSC 2420 Ground CFI Instrument (1.0)
- AVSC 2430 Flight CFI Instrument (1.0)
- AVSC 2500 Ground Multi-Engine Instructor (1.0)
- AVSC 2510 Flight Multi-Engine Instructor (1.0)
- AVSC 3020 Aviation Insurance and Risk Management (3.0)
- AVSC 3100 Corporate Aviation Management (3.0)
- AVSC 3120 Airport Management (3.0)
- AVSC 3140 Fixed Base Operations Management (3.0)
- AVSC 2860 SkillsUSA (1.0)
- AVSC 475R Current Topics in Aviation (1.0)

## Specialization in Building Construction and Construction Management 45 Credits

### Emphasis Requirements: 45 Credits

- BCCM 1110 Principles of Residential Framing 3.0
- BCCM 1120 Blueprint Reading 2.0
- BCCM 1130 Concrete and Masonry 1.0
- BCCM 1150 Building Construction Safety 1.0
- BCCM 1160 Stair Design and Construction 1.0
- BCCM 1190 Framing and Concrete Lab 5.0
- BCCM 1210 Principles of Finish Carpentry 3.0
- BCCM 1220 Finishing Lab 5.0
- BCCM 1230 Construction Estimating 2.0
- BCCM 1240 Roof Framing 2.0
- BCCM 1250 Utah Contractors License Regulation and Procedure 2.0
- BCCM 1260 Computer Estimating 2.0
- BCCM 1270 Construction Scheduling 2.0
- BCCM 299R VICA 1.0
- BIT 1010 Building Codes 3.0
- or BIT 1020 Residential Codes (3.0)
- EGDT 1040 Computer Aided Drafting--AutoCAD 3.0
- EGDT 1090 Introduction to Architecture Drafting 3.0
- EGDT 1400 Surveying 4.0

## Specialization in Building Inspection Technology 45 Credits

### Emphasis Requirements: 45 Credits

- BIT 1010 Building Codes 3.0
- BIT 1170 Field Lab--Building Codes 1.0
- BIT 1230 Plan Review 3.0
- BIT 1240 Plumbing Codes 3.0
- BIT 1330 Mechanical Codes 3.0
- BIT 1340 Electrical Codes 3.0
- BIT 1380 Ride-Along Lab 1.0
- BCCM 1110 Principles of Residential Framing 3.0
- BCCM 1120 Blueprint Reading 2.0
- BCCM 1130 Concrete and Masonry 1.0
- BCCM 1150 Building Construction Safety 1.0
- BCCM 1160 Stair Design and Construction 1.0
- BCCM 1190 Framing and Concrete Lab 5.0
- BCCM 1240 Roof Framing 2.0
- EGDT 1040 Computer Aided Drafting--AutoCAD 3.0
- EGDT 1400 Surveying 4.0
- EGDT 1600 Technical Math--Algebra 3.0

- FSO 2030 Fire Inspector I 3.0

## Specialization in Cabinetry and Architectural Woodwork 45 Credits

### Emphasis Requirements: 45 Credits

Complete 45 credits from the following: 45.0

- CAW 1130 Residential Cabinetry (4.0)
- CAW 1140 Millworking and Safety Shop I (5.0)
- CAW 1150 Design Drafting and Billing (3.0)
- CAW 1170 Finish Technology (2.0)
- CAW 1210 Cabinetmaking Materials and Hardware (1.0)
- CAW 1240 Millworking Shop II (5.0)
- CAW 1250 Drafting and Computer Applications for Cabinetmakers (4.0)
- CAW 2300 Counter-top Technology (3.0)
- CAW 2310 Cabinetry Math (2.0)
- CAW 2340 Millworking Shop III (5.0)
- CAW 2440 Millworking Shop IV (5.0)
- CAW 2450 Machine Maintenance and Up-keep (2.0)
- CAW 2430 Commercial Cabinetry Technology (4.0)
- EGDT 1040 Computer Aided Drafting--AutoCAD (3.0)

## Specialization in Carpenter Union Apprentice (JATC) 45 Credits

### Emphasis Requirements: 45 Credits

- APPR 1800 Carpenter Apprentice 1A 5.0
- APPR 1810 Carpenter Apprentice 1B 5.0
- APPR 1820 Carpenter Apprentice 2A 5.0
- APPR 1830 Carpenter Apprentice 2B 5.0
- APPR 1840 Carpenter Apprentice 3A 5.0
- APPR 1850 Carpenter Apprentice 3B 5.0
- APPR 1860 Carpenter Apprentice 4A 5.0
- APPR 1870 Carpenter Apprentice 4B 5.0
- BCCM 281R Cooperative Work Experience (Must be repeated 4 times) (1.0) 4.0
- BCCM 285R Cooperative Correlated Class 1.0

## Specialization in Collision Repair Technology 45 Credits

### Emphasis Requirements: 45 Credits

- CRT 1120 Nonstructural Repair 4.0
- CRT 1130 Overall Refinishing and Problem Solving 4.0
- CRT 1210 Blending Tinting and Detailing 4.0
- CRT 1220 Panel Replacement and Adjustment 4.0
- CRT 1230 Welding and Cutting 4.0
- CRT 2310 Collision Damage Reporting 4.0
- CRT 2320 Structural Damage Analysis 4.0
- CRT 2330 Structural Repair 4.0
- CRT 2410 Full and Partial Panel Replacement 4.0
- CRT 2420 Plastic Repair 4.0
- CRT 2430 Mechanical and Electrical Repair 4.0
- CRT 299R VICA 1.0

## Specialization in Diesel Mechanics Technology 48 Credits

### Emphasis Requirements: 48 Credits

- DMT 1110 Diesel Engine Overhaul 4.0
- DMT 111L Diesel Engine Overhaul Lab 2.0
- DMT 1120 Diesel Engine Operation/Tune Up 4.0
- DMT 112L Diesel Engine Operation/Tune Up Lab 2.0
- DMT 1510 Electrical Systems Theory 4.0
- DMT 151L Electrical Systems Lab 2.0
- DMT 1520 Engine Electronics and Diagnostics Theory 4.0
- DMT 152L Engine Electronics and Diagnostics Lab 2.0
- DMT 2230 Climate Control Theory 2.0
- DMT 223L Climate Control Lab 1.0
- DMT 2310 Fluid Power Theory 4.0
- DMT 231L Fluid Power Lab 2.0
- DMT 2320 Fluid Power Transmission Theory 2.0
- DMT 232L Fluid Power Transmission Lab 1.0
- DMT 2410 Chassis Theory 4.0
- DMT 241L Chassis Lab 2.0
- DMT 2420 Power Trains Theory 4.0
- DMT 242L Power Trains Lab 2.0

## Specialization in Drafting Technology 45 Credits

### Emphasis Requirements: 45 Credits

Complete the following:

- EGDT 1010 Electrical-Electronic Drafting 3.0
- EGDT 1040 Computer Aided Drafting--AutoCAD 3.0
- EGDT 1070 3 Dimensional Computer Modeling 3.0
- EGDT 1080 AutoLisp 2.0

• EGD1 1100	Architectural Drafting	3.0
• EGD1 1200	Mechanical Drafting	3.0
• EGD1 1300	Structural Drafting	3.0
• EGD1 1400	Surveying	4.0
• EGD1 2020	Descriptive Geometry	3.0
• EGD1 2040	Piping Drafting	2.0
• EGD1 2050	Plate Layout	2.0
• EGD1 2600	Statics	3.0
• EGD1 2610	Strength of Materials	3.0
Complete 8 credits from the following:		8.0
• EGD1 1060	MicroStation (2.0)	
• EGD1 2010	Advanced Electrical--CAD (2.0)	
• EGD1 2100	Advanced Architectural--CAD (3.0)	
• EGD1 2200	Advanced Mechanical--CAD (3.0)	
• EGD1 2300	Advanced Structural--CAD (3.0)	
• EGD1 2310	Structural Steel Modeling (3.0)	
• EGD1 2400	Surveying Applications (4.0)	

## Specialization in Electrical Automation and Robotics Technology 45 Credits

<b>Emphasis Requirements:</b>		<b>44 Credits</b>
• EART 1130	Basic Electrical	4.0
• EART 1050	Applied Electrical Math	5.0
• EART 1180	Basic Electrical Lab	5.0
• EART 1260	Logic	2.0
• EART 1270	DC and AC Machines	9.0
• EART 2110	Semiconductors Devices	6.0
• EART 2150	Hydraulics and Pneumatics	3.0
• EART 2160	Industrial Solid State Circuit	5.0
• EART 2250	Programmable Logic Controllers 1	5.0

### Elective Requirements: 1 Credits

Electives in EART based on chosen option (students must see advisor for list of approved course options).

## Specialization in Electrical Construction Apprentice 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
• APPR 281R	Cooperative Work Experience (Must be repeated 4 times) (1.0)	4.0
• APPR 285R	Cooperative Correlated Class	1.0
• EART 1110	Electrical Apprentice 1A	5.0
• EART 1120	Electrical Apprentice 1B	5.0
• EART 1210	Electrical Apprentice 2A	5.0
• EART 1220	Electrical Apprentice 2B	5.0
• EART 2310	Electrical Apprentice 3A	5.0
• EART 2320	Electrical Apprentice 3B	5.0
• EART 2410	Electrical Apprentice 4A	5.0
• EART 2420	Electrical Apprentice 4B	5.0

## Specialization in Electrical Union Apprentice (JATC) 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
• EART 1300	Electrical Union Apprentice 1A	5.0
• EART 1310	Electrical Union Apprentice 1B	5.0
• EART 1320	Electrical Union Apprentice 2A	5.0
• EART 1330	Electrical Union Apprentice 2B	5.0
• EART 2330	Electrical Union Apprentice 3A	5.0
• EART 2340	Electrical Union Apprentice 3B	5.0
• EART 2350	Electrical Union Apprentice 4A	5.0
• EART 2360	Electrical Union Apprentice 4B	5.0
• EART 2370	Electrical Union Apprentice 5A	5.0

## Specialization in Facilities Management 45 Credits

<b>Emphasis Requirements:</b>		<b>45 credits</b>
• ACRT 2420	Heating and Air Conditioning Controls	5.0
• BCCM 1120	Blueprint Reading	2.0
• BCCM 1270	Construction Scheduling	2.0
• BIT 1010	Building Codes	3.0
• BIT 1240	Plumbing Codes	3.0
• BIT 1330	Mechanical Codes	3.0
• BIT 1340	Electrical Codes	3.0
• EGD1 1600	Technical Math--Algebra	3.0
• ECT 1000	Survey of Electronics	2.0
• ENVT 1200	Environmental Worker Safety	3.0
• FAC 1010	Survey of Facilities Management	3.0
• FAC 1600	Survey of Grounds and Building Maintenance (optional) (3.0)	
• FAC 281R	Cooperative Work Experience (take twice) (1.0)	8.0
• FAC 285R	Cooperative Correlated Class (take twice) (1.0)	2.0
• MGMT 2200	Business Communications	3.0

## Specialization in Fire Science 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
Complete 45 credits from the following:		45.0
• PESM 3300	Public Program Administration (3.0)	
• PESM 3700	Master Planning for Public Emergency Services (3.0)	

• PESM 4100	Health and Safety Program Management (3.0)	
• PESM 4500	Managing Emergency Medical Services (3.0)	
• PESM 4900	Advanced Seminar in Public Emergency Services Leadership (3.0)	
• FSD 1330	Fundamentals of Apparatus Operation (3.0)	
• FSD 1340	Fire Apparatus Skill (3.0)	
• FSE 2500	Paramedic I (5.0)	
• FSE 2510	Paramedic I Lab (3.0)	
• FSE 2520	Paramedic II (7.0)	
• FSE 2530	Paramedic III (4.0)	
• FSE 2540	Paramedic IV (6.0)	
• FSE 2550	Paramedic Work Experience (6.0)	
• FSF 1000	Survey of Fire and Rescue Emergency Services (3.0)	
• FSF 1010	Firefighting Fundamentals I (3.0)	
• FSE 1140	Emergency Medical Technician--Basic (6.0)	
• FSF 1210	Firefighting Skills I (4.0)	
• FSF 1220	Firefighting Fundamentals and Skills II (3.0)	
• FSW 1400	Wildland Firefighting Fundamentals (4.0)	
• FSF 1310	Recruit Candidate Academy--Fundamentals (8.0)	
• FSF 1320	Recruit Candidate Academy--Skills (3.0)	
• FSF 1330	Recruit Candidate Academy--Operations (3.0)	
• FSF 1340	Hazardous Materials First Responder (3.0)	
• FSF 1350	Mathematics for the Fire Service (3.0)	
• FSH 2410	Hazardous Materials Technician Fundamentals (3.0)	
• FSH 2420	Hazardous Materials Technician Skills (2.0)	
• FSH 2440	Hazardous Materials Chemistry (3.0)	
• FSO 2020	Incident Command (3.0)	
• FSO 2030	Fire Inspector I (3.0)	
• FSP 2310	Fire Investigator I (3.0)	
• FSO 2050	Fire Protection and Detection Systems (3.0)	
• FSO 2060	Fire Service Management and Administration (3.0)	
• FSO 2080	Building Construction for the Fire Services (3.0)	
• FSO 2090	Fire Officer I (3.0)	
• FSO 2100	Fire Supervision and Leadership (3.0)	
• FSO 2110	Fire Instructor I and II (3.0)	
• FSO 211A	Fire Service Instructor I (1.0)	
• FSO 211B	Fire Service Instructor II (2.0)	
• FSO 2200	Fire Officer Work Experience (3.0)	
• FSW 2500	Wildland/Urban Interface Fire Protection (3.0)	
• FSP 2320	Fire Investigator II (3.0)	
• FSP 2350	Public Fire Education I (2.0)	
• FSR 2180	Environmental Rescue (3.0)	
• FSR 2700	Technical Rescue Principles (3.0)	
• FSR 2740	Rope Rescue (3.0)	

## Specialization in HVAC Apprentice 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
• ACRT 281R	Cooperative Work Experience (Must be repeated 4 times) (1.0)	4.0
• ACRT 285R	Cooperative Correlated Class	1.0
• HVAC 1130	HVAC 1B	5.0
• HVAC 1150	HVAC 2B	5.0
• HVAC 1170	HVAC 3B	5.0
• HVAC 1190	HVAC 4B	5.0
• HVAC 1200	HVAC 1A	5.0
• HVAC 1220	HVAC 2A	5.0
• HVAC 2200	HVAC 3A	5.0
• HVAC 2220	HVAC 4A	5.0

## Specialization in Industrial Maintenance Apprentice 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
• APPR 281R	Cooperative Work Experience (Must be repeated 4 times) (1.0)	4.0
• APPR 285R	Cooperative Correlated Class	1.0
• DMT 1400	Industrial Maintenance 1A	5.0
• DMT 1410	Industrial Maintenance 1B	5.0
• DMT 1430	Industrial Maintenance 2B	5.0
• EART 1010	Industrial Maintenance 2A	5.0
Complete 10 credits from the following:		10.0
• DMT 1440	Industrial Maintenance 3B (5.0)	
• MET 1400	Industrial Maintenance 3A (5.0)	
• WELD 1300	Industrial Maintenance 3C (5.0)	
• WELD 1350	Industrial Maintenance 3D (5.0)	

Complete 10 credits from the following:		10.0
• EART 1020	Industrial Maintenance 4A (5.0)	
• HVAC 1110	Industrial Maintenance 4D (5.0)	
• WELD 1310	Industrial Maintenance 4B (5.0)	
• WELD 1320	Industrial Maintenance 4C (5.0)	

## Specialization in Information Systems and Technology 45 Credits

<b>Emphasis Requirements:</b>		<b>45 Credits</b>
Specialty Core Requirements (33.0):		
• INFO 1120	Information Systems and Technology Fundamentals	3.0
• INFO 1200	Computer Programming I for IS/IT	3.0
• INFO 1420	Computer Architecture and Systems Software	3.0
• INFO 1510	Introduction to System Administration--Linux/UNIX	3.0
• INFO 2030	Data Communication Fundamentals	3.0
• INFO 2050	Database Fundamentals	3.0
• INFO 2200	Computer Programming II for IS/IT	3.0
• INFO 2450	Web Application Design	3.0
• INFO 3030	Networks and Networking	3.0
• INFO 3410	Database Systems	3.0
• INFO 3430	Systems Analysis Design and Integration	3.0

### Elective Requirements: 6 Credits

Complete a minimum of 6 credits from the following:		6.0
• INFO 1000	Computer Programming Concepts (3.0)	
• INFO 1100	Exploring the Digital Domain (3.0)	
• INFO 2100	Business Computer Productivity with IS Technology (3.0)	
• INFO 2640	Router Management (3.0)	
• INFO 2650	Voice and Data Cabling Fundamentals (3.0)	
• INFO 2660	Information Security--Fundamentals (3.0)	
• INFO 281R	Internship (1.0)	
• INFO 301R	Digital Lecture Series (1.0)	
• INFO 3420	Web Systems Development I (3.0)	
• INFO 3440	Enterprise Database Development (3.0)	
• INFO 3510	Advanced System Administration--Linux/UNIX (3.0)	
• INFO 3620	System Administration--Windows (3.0)	
• INFO 3630	Advanced System Administration--Windows Server (3.0)	
• INFO 3660	Information Security--Network Defense and Countermeasures (3.0)	
• Any approved Accounting- or Business-related Course up to 6 credits		

## Specialization in Line Meter Apprentice 48 Credits

<b>Emphasis Requirements:</b>		<b>48 Credits</b>
• LINE 1600	Meter Apprentice 1A	6.0
• LINE 1610	Meter Apprentice 1B	6.0
• LINE 1620	Meter Apprentice 2A	6.0
• LINE 1630	Meter Apprentice 2B	6.0
• LINE 2600	Meter Apprentice 3A	6.0
• LINE 2610	Meter Apprentice 3B	6.0
• LINE 2620	Meter Apprentice 4A	6.0
• LINE 2630	Meter Apprentice 4B	6.0

## Specialization in Lineman Apprentice 48 Credits

<b>Emphasis Requirements:</b>		<b>48 Credits</b>
• LINE 1010	Lineman Apprentice 1A	6.0
• LINE 1020	Lineman Apprentice 1B	6.0
• LINE 1030	Lineman Apprentice 2A	6.0
• LINE 1040	Lineman Apprentice 2B	6.0
• LINE 2010	Lineman Apprentice 3A	6.0
• LINE 2020	Lineman Apprentice 3B	6.0
• LINE 2030	Lineman Apprentice 4A	6.0
• LINE 2040	Lineman Apprentice 4B	6.0

## Specialization in Lineman Substation Apprentice 48 Credits

<b>Emphasis Requirements:</b>		<b>48 Credits</b>
• LINE 1500	Lineman Substation Apprentice 1A	6.0
• LINE 1510	Lineman Substation Apprentice 1B	6.0
• LINE 1520	Lineman Substation Apprentice 2A	6.0
• LINE 1530	Lineman Substation Apprentice 2B	6.0
• LINE 2500	Lineman Substation Apprentice 3A	6.0
• LINE 2510	Lineman Substation Apprentice 3B	6.0
• LINE 2520	Lineman Substation Apprentice 4A	6.0
• LINE 2530	Lineman Substation Apprentice 4B	6.0

## Specialization in Lineman Technology 51 Credits

<b>Emphasis Requirements:</b>		<b>51 Credits</b>
• LINE 1110	Lineman DC Theory and Lab	4.0
• LINE 1120	Residential Wiring	2.0

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• LINE 1130	Lineman Applied DC Math	3.0
• LINE 1140	Basic Skill Development and Safety	4.0
• LINE 1210	AC Theory and Transformer Applications	4.0
• LINE 1220	Commercial Wiring	2.0
• LINE 1230	Lineman Applied AC Math	3.0
• LINE 1240	Single/Three-Phase Lines and Safety	4.0
• LINE 2310	Powerline Technician and Safety Code I	4.0
• LINE 2320	Industrial Wiring	2.0
• LINE 2330	Single and Polyphase Metering	2.0
• LINE 2340	Three-Phase Lines and Safety	5.0
• LINE 2410	Powerline Technician and Safety Code II	4.0
• LINE 2430	Substation Equipment	4.0
• LINE 2440	High Voltage Substation and Safety	4.0

## Specialization in Digital Media **45 Credits**

Emphasis Requirements: **30 Credits**

Complete the following:

DGM 1110	Digital Media Essentials I	4.0
DGM 1210	Digital Media Essentials II	4.0
DGM 2110	Digital Cinema Essentials	3.0
DGM 2120	Web Essentials	3.0
DGM 2130	Digital Audio Essentials	3.0
DGM 2210	3D Modeling and Animation Essentials	4.0
DGM 2220	Marketing for Digital Media	3.0
DGM 2240	Interaction Design	3.0
ART 1120	2D Design	3.0
or DGM 2250	Principles of Digital Design (3.0)	

Elective Requirements: **15 Credits**

Complete 15 credits from approved DGM electives (see advisor) **15.0**

## Specialization in Plumber Apprentice **45 Credits**

Emphasis Requirements: **45 Credits**

• APPR 1410	Plumbing Independent 1A	5.0
• APPR 1420	Plumbing Independent 1B	5.0
• APPR 1430	Plumbing Independent 2A	5.0
• APPR 1440	Plumbing Independent 2B	5.0
• APPR 1450	Plumbing Independent 3A	5.0
• APPR 1460	Plumbing Independent 3B	5.0
• APPR 1470	Plumbing Independent 4A	5.0
• APPR 1480	Plumbing Independent 4B	5.0
• BCCM 281R	Cooperative Work Experience (Must be repeated 4 times) (1.0)	4.0
• BCCM 285R	Cooperative Correlated Class	1.0

## Specialization in Sheet Metal Apprentice **48 Credits**

Emphasis Requirements: **48 Credits**

• APPR 1110	Sheet Metal 1A	6.0
• APPR 1120	Sheet Metal 1B	6.0
• APPR 1210	Sheet Metal 2A	6.0
• APPR 1220	Sheet Metal 2B	6.0
• APPR 2310	Sheet Metal 3A	6.0
• APPR 2320	Sheet Metal 3B	6.0
• APPR 2410	Sheet Metal 4A	6.0
• APPR 2420	Sheet Metal 4B	6.0

## Specialization in Welding Technology **46 Credits**

Emphasis Requirements: **46 Credits**

Complete the following:

• EGDT 1000	Basic Drafting	2.0
• WELD 1100	Essentials of Welding	8.0
• WELD 1200	Intermediate Arc Welding	6.0
• WELD 1210	Print Reading and Layout	6.0
• WELD 2300	Portable and Advanced Arc Welding	7.0
• WELD 2310	Welding Inspection	2.0
• WELD 2320	Metallurgy	4.0
• WELD 2400	Industrial Joining Processes	8.0
• WELD 2410	Advanced Blueprint and Design	3.0

## Minor in Technology Management **21 Credits**

Discipline Core Requirements: **15 Credits**

• TECH 3000	Introduction to Technology Management	3.0
• TECH 3400	Project Management	3.0
• TECH 3850	Quality Assurance in Technology	3.0
• TECH 4000	Reliability Engineering and Safety	3.0
• TECH 4420	Organization Information Technologies	3.0

Elective Requirements: **6 Credits**

Select 6 credits from the following: **6.0**

• TECH 3010	Creativity Innovation and Change Management (3.0)	
• TECH 3700	Materials Management (3.0)	

• TECH 4050	Global Ethical and Professional Issues in Technology (3.0)	
• TECH 4200	Technology Marketing and Distribution (3.0)	
• TECH 4820	Current Topics in Technology Management (2.0)	
• TECH 497R	Independent Study - May select between 1 and 4 credits (1.0)	

## BA/BS in Integrated Studies **123 Credits**

The following Integrated Studies Emphasis is available (see the Integrated Studies section of this catalog for complete degree requirement listings.)

### Emphasis in Technology Management **18 Credits**

Emphasis Requirements: **18 Credits**

- Completion of an AA or AS degree with at least 25 credits in a technical specialty.

Complete 18 credits from the following: **18.0**

• TECH 3000	Introduction to Technology Management (3.0)	
• TECH 3010	Creativity Innovation and Change Management (3.0)	
• TECH 3400	Project Management (3.0)	
• TECH 3700	Materials Management (3.0)	
• TECH 3850	Quality Assurance in Technology (3.0)	
• TECH 4000	Reliability Engineering and Safety (3.0)	
• TECH 4050	Global Ethical and Professional Issues in Technology (3.0)	
• TECH 4200	Technology Marketing and Distribution (3.0)	
• TECH 4400	Advanced Project Management (3.0)	
• TECH 4420	Organization Information Technologies (3.0)	
• TECH 4820	Current Topics in Technology Management (2.0)	

See Course Descriptions section of the catalog for detailed course information. This department manages the following course prefixes:

- TECH, Technology Management