

# Department of Engineering and Technology Education

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**Degrees offered:** Bachelor of Science (BS) and Master of Science (MS) in Engineering and Technology Education, BS in Aviation Technology—Maintenance Management, BS in Aviation Technology—Professional Pilot, A&P Certificate in Aircraft Maintenance Technician—Airframe & Powerplant

**Undergraduate emphases:** *BS in Engineering and Technology Education—Technology Education and Trade and Technical Education*

## Undergraduate Programs

### Objectives

The Department of Engineering and Technology Education offers degrees in two fields: **engineering and technology education** and **aviation technology**. The department values the integration of academic knowledge with hands-on technical skills. This is achieved by emphasizing the application of scientific and technological principles in extensive laboratory activities. The department strives to ensure that all graduates will obtain employment to match their interests and preparation.

The **Engineering and Technology Education** programs prepare graduates to teach in public schools, applied technology colleges, and community colleges. **Aviation Technology—Maintenance Management** graduates fill aviation maintenance management positions in government and industry. The **Aviation Technology—Professional Pilot** curriculum prepares graduates to be professional pilots. The **A&P Certificate in Aircraft Maintenance Technician—Airframe & Powerplant** provides training and FAA licensing for graduates to perform maintenance and repairs on aircraft.

### Admission Requirements

Admission requirements are commensurate with those outlined for the University. See pages 16-19 in this catalog.

### Professional Technology Program (PTP)

The Professional Technology Program (PTP) applies to the Aviation Technology—Maintenance Management major, as well as to the Aviation Technology—Professional Pilot major. The purpose of the program is to provide a quality education for students by requiring that they be fully prepared for upper-division coursework by having satisfactorily completed all required pre-professional courses.

Enrollment in upper-division AV and ETE courses (3000-level and above) is available only to students who have been accepted into the PTP or into an appropriate graduate program or to students with a non-ETE major requiring a specific class. (Non-ETE majors may take a *maximum of two* upper-division AV or ETE classes.)

To be eligible to apply for admission to a professional program, a student must be in good academic standing in the University and college, must achieve a grade of *C-* or better in every required preprofessional course, and must have an overall grade point average of 2.0 in required preprofessional coursework completed at USU.

A student can repeat no more than three of the required preprofessional courses in order to satisfy the PTP application and eligibility requirements. Multiple repeats of the same course are included in the total of three repeats. Audits count as a time taking a class unless prior written approval is obtained from the college academic advisor.

Although transfer credit accepted by the department and the college may be applied toward PTP admission requirements, the grades received will not be used in the USU GPA calculation. A final decision on admission of a transfer student into the PTP will not be made until after the applicant has completed at least 15 credits of acceptable coursework at USU.

Eligible students must apply for admission to the PTP during the semester in which they are completing the required preprofessional courses.

For all technology majors in the Professional Program, the following academic regulations apply in addition to University regulations:

1. A minimum GPA of 2.0 must be maintained in technology/math/science/business courses required for, or used as technical electives in, the chosen major. Courses which were part of the preprofessional program requirements and University Studies courses are not included in this GPA calculation.
2. No more than 6 hours of *D* or *D+* credit may be applied toward meeting graduation requirements in technology/math/science/business classes.
3. College of Engineering courses may be repeated only once. Audits count as a time taking a class unless prior written approval is obtained from the department head. A maximum of three required or elective courses completed as part of a Professional Program can be repeated in order to meet graduation requirements. (Courses completed as part of a preprofessional program are not included in this total of three repeats.)
4. The *P-D-F* grading option may not be used in required or elective courses completed as part of a Professional Program. (The *P-D-F* grading option is approved for University Studies courses.)
5. The academic regulations listed above (1-4) apply to required coursework and any technology/math/science/business course which could be used to satisfy graduation requirements for the chosen degree. That is, once a student completes a particular technical elective, it becomes a required course for that student.
6. Students in violation of departmental or college academic regulations, no longer eligible for graduation, or not making satisfactory progress toward a degree will be placed on probation.

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- Students will be placed on probation if they (i) earn an *F* in a technology/math/science/business course which could be used to satisfy graduation requirements for the chosen degree (see item 5 above); (ii) have more than 6 hours of *D* credit (see item 2 above); or (iii) have a GPA of less than 2.0 (see item 1 above).
- Students remain on probation until they improve their standing by repeating and passing all failed classes, repeating classes to reduce the number of *D* credits to 6 or less, and/or by raising their GPA above 2.0.
- While on probation, a student must earn a semester GPA of 2.0 or higher in technology/math/science/business classes and must not earn any grades of *D* or *F*.

While on probation, a student may not preregister. The student's major code will be changed to a preprofessional code. The student must meet at least once per semester with the college academic advisor to work out a schedule having the primary goal of correcting the existing academic problems.

## Requirements

### Bachelor of Science in Engineering and Technology Education

#### Technology Education Emphasis

The Technology Education emphasis is designed to prepare students for teaching in junior and senior high schools. Students should follow the suggested semester schedule presented below, completing all courses listed. Consult with an advisor when choosing elective courses. All students in this program must maintain a cumulative GPA of 2.75 and gain admission to teacher education, in order to student teach and to receive secondary education licensure (College of Education and Human Services). The suggested semester schedule is as follows:

#### Freshman Year (33 credits)

##### Fall Semester (17 credits)

ETE 1000 <sup>2</sup> Orientation to Engineering and Technology Education	1
ETE 1010 Communications Technology	3
ETE 1030 Material Processing Systems	3
ETE 1200 Computer-Aided Drafting and Design	3
ENGL 1010 (CL) Introduction to Writing: Academic Prose	3
MATH 1050 (QL) <sup>4</sup> College Algebra	4

##### Spring Semester (16 credits)

ETE 1020 Energy, Power, Transportation Systems Control Technology	3
ETE 1040 Construction and Estimating	3
MATH 1060 Trigonometry	2
University Studies Breadth Courses	6
Elective Course	2

#### Sophomore Year (33 credits)

##### Fall Semester (16 credits)

**Note:** Students should apply to the Secondary Teacher Education Program (STEP) *early* (see advisor).

ETE 2030 Wood-Based Manufacturing Systems	3
ETE 2300 (QI) <sup>6</sup> Electronic Fundamentals	4
ETE 3220 Architecture and Construction Systems	3
University Studies Breadth Course	3
Elective Course	3

#### Spring Semester (17 credits)

ETE 3030 Computer-Integrated Manufacturing Systems	3
ETE 3050 Computer Systems and Networking	3
ENGL 2010 (CL) Intermediate Writing: Research Writing in a Persuasive Mode	3
PHYX 1800 (BPS) <sup>5,7</sup> Physics of Technology	4
SPED 4000 <sup>2,3</sup> Education of Exceptional Individuals	2
Elective Course	2

#### Junior Year (31 credits)

##### Fall Semester (16 credits)

ETE 3200 <sup>2,3</sup> Methods of Teaching Engineering and Technology Education I	3
ETE 3300 <sup>2,3</sup> Clinical Experience I	1
SCED 3100 <sup>2,3</sup> Motivation and Classroom Management	3
SCED 3210 (CI/DSS) <sup>2,3,5</sup> Educational and Multicultural Foundations	3
University Studies Breadth Courses	6

##### Spring Semester (15 credits)

ETE 3040 Engineering Systems	3
ETE 4300 <sup>2,3</sup> Clinical Experience II	1
ETE 4400 <sup>2,3</sup> Methods of Teaching Engineering and Technology Education II	3
SCED 4200(CI) <sup>2,3</sup> Reading, Writing and Technology	3
SCED 4210 <sup>2</sup> Cognition and Evaluation of Student Learning	3
ADVS 2040 Introduction to Biotechnology	1
INST 3500 <sup>1</sup> Technology Tools for Secondary Teachers	1

#### Senior Year (27 credits)

##### Fall Semester (12 credits)

ETE 5500 <sup>2,3</sup> Student Teaching Seminar	2
ETE 5630 <sup>2,3</sup> Student Teaching in Secondary Schools	10

##### Spring Semester (15 credits)

ETE 3440 (DSC) Science, Technology, and Modern Society	3
ETE 5220 (CI) Program and Course Development	3
University Studies Depth Humanities and Creative Arts (DHA) Course	3
Elective Courses	6

<sup>1</sup> The INST 3500 requirement has been waived. However, INST 4500 is recommended.

<sup>2</sup> This course is included in the Secondary Education Licensure Requirements. Prior to enrolling in this course, students must be admitted to the STEP.

<sup>3</sup> Students must maintain a cumulative 2.75 GPA for admission to the College of Education and Human Services, for student teaching, and to receive secondary education licensure.

<sup>4</sup> A Math ACT score of 23 or higher is required for enrolment in MATH 1050. If Math ACT score is between 18 and 22, student should enroll in MATH 1010 first.

<sup>5</sup> PHYX 1800 fulfills the University Studies Breadth Physical Sciences (BPS) requirement. SCED 3210 fulfills the University Studies Depth Social Sciences (DSS) requirement.

<sup>6</sup> MATH 1050 is a prerequisite for ETE 2300.

<sup>7</sup> MATH 1050 and 1060 are prerequisites for PHYX 1800 (which needs to be completed during the sophomore year).

#### Trade and Technical Education Emphasis

The Trade and Technical Education emphasis is designed to prepare students to teach vocational courses at the high school or post-high school level. Students should complete all courses listed below. All students in this emphasis must maintain a GPA of 2.75 in order to student teach.

INST 3500 Technology Tools for Secondary Teachers (F,Sp,Su)	1
ETE 3200 Methods of Teaching Engineering and Technology Education I (F)	3
ETE 3300 Clinical Experience I (F)	1
ETE 3900 Principles and Objectives of Career and Technical Education	3
ETE 3930 Evaluation of Career and Technical Education	2
ETE 4300 Clinical Experience II (Sp)	1
ETE 4400 Methods of Teaching Engineering and Technology Education II (Sp)	3

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ETE 4700 Student Teaching in Postsecondary Schools .....	4
ETE 5220 (CI) Program and Course Development (Sp) .....	3
ETE 5910 Special Problems in Industrial Technology and Education .....	1-4
SPED 4000 Education of Exceptional Individuals (F,Sp,Su) .....	2
ENGL 1010 (CL) Introduction to Writing: Academic Prose (F,Sp,Su) ..	3
ENGL 2010 (CL) Intermediate Writing: Research Writing in a Persuasive Mode (F,Sp,Su).....	3
BIS 1400 Microcomputer Applications in Business (F,Sp,Su) .....	3
MATH 1050 (QL) College Algebra (F,Sp,Su).....	4
SPCH 1050 (CI) Public Speaking (F,Sp) .....	3
STAT 2000 (QI) Statistical Methods (F,Sp,Su) .....	3
University Studies .....	24
General Electives .....	9

State licensure requires a minimum of two years of approved vocational experience. Successful completion of a trade competency examination is accepted in lieu of vocational experience.

## Bachelor of Science in Aviation Technology—Maintenance Management

Aviation Technology—Maintenance Management graduates are qualified to enter the work force in many rewarding career fields in aviation. Employment opportunities exist in target industries such as major airline carrier maintenance management, commuter airline maintenance management, fixed-base operator (FBO) maintenance, and Federal Aviation Administration (FAA) aircraft inspection after some field experience. This major has a great deal of depth in general maintenance, which applies to most industrial maintenance operations. Although the major's focus is aviation, the knowledge and skills gained can be used in other fields.

The suggested semester schedule for **Aviation Technology—Maintenance Management** is as follows:

### Freshman Year (34 credits)

#### Fall Semester (17 credits)

AV 1130 <sup>8</sup> Flight Principles .....	2
AV 1140 <sup>8</sup> Aircraft Components and Principles .....	2
AV 1170 Aircraft Structures .....	3
AV 2180 Aircraft Hydraulic and Pneumatic Systems.....	2
AV 2200 Aircraft Hydraulics and Pneumatic Systems Lab .....	1
MATH 1050 (QL) <sup>8,9</sup> College Algebra .....	4
University Studies Breadth Course <sup>11,12</sup> .....	3

#### Spring Semester (17 credits)

AV 1240 Aircraft Maintenance .....	3
AV 2170 <sup>8</sup> Aircraft Systems.....	2
AV 2190 Aircraft Systems Lab.....	1
ETE 1030 <sup>11</sup> Material Processing Systems.....	3
ETE 1200 <sup>11</sup> Computer-Aided Drafting and Design .....	3
MATH 1060 <sup>8,15</sup> Trigonometry .....	2
University Studies Breadth Course <sup>11,12</sup> .....	3

### Sophomore Year (33 credits)

#### Fall Semester (16 credits)

AV 2100 Aircraft Reciprocating Powerplants and Accessories.....	3
AV 2110 Aircraft Reciprocating Powerplants and Accessories Lab.....	3
ETE 2300 (QI) <sup>8,9</sup> Electronic Fundamentals.....	4
BIS 1400 <sup>8,11</sup> Microcomputer Applications in Business.....	3
ENGL 1010 (CL) <sup>8,11,12</sup> Introduction to Writing: Academic Prose .....	3

### Spring Semester (17 credits)

AV 1100 <sup>11</sup> The Aviation Profession.....	1
AV 2140 <sup>8</sup> Aircraft Turbine Powerplants and Maintenance Operations ..	3
AV 2150 <sup>8</sup> Aircraft Turbine Powerplant Maintenance Operations Lab ..	3
AV 2430 Aircraft Electrical Systems and Components .....	2
AV 2440 Aircraft Electrical Systems Laboratory .....	2
ENGL 2010 (CL) <sup>8,11,12</sup> Intermediate Writing: Research Writing in a Persuasive Mode.....	3
University Studies Breadth Course <sup>11,12</sup> .....	3

### Junior Year (30 credits)

#### Fall Semester (14 credits)

AV 3010 <sup>11</sup> National Airspace, Air Traffic Control, and Airport Administration.....	3
AV 3280 Advanced Turbine Engines .....	2
MATH 1100 (QL) <sup>11,12</sup> Calculus Techniques.....	3
Technical Elective <sup>13</sup> .....	3
University Studies Breadth Course <sup>11,12</sup> .....	3

#### Spring Semester (16 credits)

AV 2420 FAA Regulations, Records, and Certification .....	2
AV 3610 AeroTechnology Design I .....	1
AV 4490 Human Factors in Aviation Safety.....	3
MHR 3110 (DSS) <sup>10,11,12,14</sup> Managing Organizations and People.....	3
PHYX 1800 (BPS) <sup>9,14,15</sup> Physics of Technology .....	4
University Studies Depth Humanities and Creative Arts (DHA) Course <sup>11,12</sup> .....	3

### Senior Year (29 credits)

#### Fall Semester (16 credits)

AV 3120 Aviation Law.....	3
AV 4610 (CI) AeroTechnology Design II .....	3
MHR 3710 <sup>10,11,12</sup> Developing Team and Interpersonal Skills.....	3
STAT 2300 (QL) <sup>9,12</sup> Business Statistics.....	4
University Studies Breadth Course <sup>11,12</sup> .....	3

#### Spring Semester (13 credits)

AV 4620 (CI) AeroTechnology Design III .....	3
AV 4200 Composite Manufacturing Processes and Repair .....	3
Technical Electives <sup>13</sup> .....	7

<sup>8</sup> This course is required for entrance to the Professional Technology Program (PTP). Completion of the Computer and Information Literacy (CIL) exam with a passing grade is also required.

<sup>9</sup> A Math ACT score of 23 or higher is required to enroll in MATH 1050. If Math ACT score is between 18 and 22, student should enroll in MATH 1010 first. MATH 1050 is a prerequisite for STAT 2300, ETE 2300, and PHYX 1800.

<sup>10</sup> Students must have a cumulative GPA of at least 2.67 and have professional status to be admitted to these College of Business courses.

<sup>11</sup> Due to teaching load constraints, these courses may be offered during semesters other than those listed here. Check with the department regularly for possible changes. Most of these classes are offered only once each year.

<sup>12</sup> These courses may be taken during summer semester to allow for more reasonable course loads during the academic year.

<sup>13</sup> Students must take 10 credits of technical electives which must be in upper-division courses (3000-level and above).

<sup>14</sup> PHYX 1800 fulfills the University Studies Breadth Physical Sciences (BPS) requirement. MHR 3110 fulfills the University Studies Depth Social Sciences (DSS) requirement.

<sup>15</sup> MATH 1060 is a prerequisite for PHYX 1800.

## Bachelor of Science in Aviation Technology—Professional Pilot

Aviation Technology—Professional Pilot graduates are trained to be commercial pilots. The degree requirements include completion of the following FAA licenses: private, instrument, commercial, CFI, CFII, and Multi-Engine. The suggested semester schedule for this degree is as follows:

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## Freshman Year (31 credits)

### Fall Semester (15 credits)

AV 1100 The Aviation Profession .....	1
AV 1130 Flight Principles .....	2
AV 2330 <sup>16</sup> Private Pilot Ground School .....	4
AV 2350 <sup>16,19</sup> Private Pilot Certification .....	1
MATH 1050 (QL) <sup>16,21</sup> College Algebra .....	4
University Studies Breadth Course .....	3

### Spring Semester (16 credits)

AV 2170 Aircraft Systems .....	2
AV 2510 <sup>16,19</sup> Intermediate Flight .....	1
BIS 1400 <sup>16</sup> Microcomputer Applications in Business .....	3
BMET 2000 (BPS) <sup>16</sup> The Atmosphere and Weather .....	3
ENGL 1010 (CL) <sup>16</sup> Introduction to Writing: Academic Prose .....	3
MATH 1060 <sup>16</sup> Trigonometry .....	2
Elective .....	2

## Sophomore Year (34 credits)

### Fall Semester (17 credits)

AV 2180 Aircraft Hydraulic and Pneumatic Systems .....	2
AV 2520 <sup>16,22</sup> Instrument Pilot Ground School .....	4
AV 2540 <sup>19</sup> Instrument Pilot Certification I .....	1
ETE 2300 (QI) <sup>16,20</sup> Electronic Fundamentals .....	4
BIS 1550 (CI) Business Correspondence (taught through Center for Independent and Distance Learning only) .....	3
University Studies Breadth Course .....	3

### Spring Semester (17 credits)

AV 2430 Aircraft Electrical Systems and Components .....	2
AV 2550 <sup>19</sup> Instrument Pilot Certification II .....	1
AV 2620 Commercial Pilot Ground School .....	2
BMET 3250 <sup>22</sup> Aviation Weather .....	3
ENGL 2010 (CL) <sup>20</sup> Intermediate Writing: Research Writing in a Persuasive Mode .....	3
MATH 1100 (QL) <sup>20</sup> Calculus Techniques .....	3
University Studies Breadth Course .....	3

## Junior Year (30 credits)

### Fall Semester (16 credits)

AV 2660 <sup>19</sup> Commercial Pilot Certification .....	1
AV 3010 National Airspace, Air Traffic Control, and Airport Administration .....	3
AV 3120 Aviation Law .....	3
AV 3140 Advanced Avionics Systems and Flight Simulation .....	3
AV 4280 Airline Operations .....	3
University Studies Breadth Course .....	3

### Spring Semester (14 credits)

AV 2720 CFI and CFII Ground School .....	3
AV 2880 <sup>19</sup> Multi-Engine Certification .....	1
AV 4490 Human Factors in Aviation Safety .....	3
AV 5400 Regional Jet Ground School I .....	4
MHR 3110 (DSS) <sup>17,18</sup> Managing Operations and People .....	3

## Senior Year (31 credits)

### Fall Semester (15 credits)

AV 2740 <sup>19</sup> CFI Certification .....	1
AV 2860 <sup>19</sup> CFII Certification .....	1
AV 4660 (CI) Flight Senior Project .....	3
AV 5410 Regional Jet Ground School II .....	4
Upper-division Elective <sup>17</sup> .....	3
University Studies Breadth Course .....	3

## Spring Semester (16 credits)

ETE 5910 Special Problems: Regional Jet Simulator .....	3
PHYX 1800 (BPS) <sup>18,23</sup> Physics of Technology .....	4
Upper-division Electives <sup>17</sup> .....	6
University Studies Depth Humanities and Creative Arts (DHA) .....	3

<sup>16</sup> This course is required for entrance to the Professional Technology Program (PTP). Completion of the Computer and Information Literacy (CIL) exams with passing grades is also required for PTP admission.

<sup>17</sup> Students should contact their advisor for a list of approved upper-division electives.

<sup>18</sup> MHR 3110 fulfills the University Studies Depth Social Sciences (DSS) requirement. PHYX 1800 fulfills the University Studies Breadth Physical Sciences (BPS) requirement.

<sup>19</sup> Depending on weather and other factors, flying courses may be taken during semesters other than those indicated. It is imperative that students work with their advisors and flight instructor to determine the best arrangement for these courses.

<sup>20</sup> MATH 1050 is a prerequisite for ETE 2300 and MATH 1100.

<sup>21</sup> A Math ACT score of 23 or higher is required to enroll in MATH 1050. If Math ACT score is between 18 and 22, student should enroll in MATH 1010 first.

<sup>22</sup> Students should take BMET 2000 prior to taking AV 2520 and BMET 3250.

<sup>23</sup> MATH 1050 and 1060 are prerequisites for PHYX 1800.

Students must complete a total of 40 credits of upper-division coursework. University Studies courses and electives must be used to fill part of this requirement.

## A&P Certificate in Aircraft Maintenance Technician—Airframe & Powerplant

This two-year technical program emphasizes aircraft repair and maintenance. Required courses are:

AV 1130 Flight Principles (F) .....	2
AV 1140 Aircraft Components and Principles (F) .....	2
AV 1170 Aircraft Structures (F) .....	3
AV 1240 Aircraft Maintenance (Sp) .....	3
AV 2100 Aircraft Reciprocating Powerplants and Accessories (F) .....	3
AV 2110 Aircraft Reciprocating Powerplants and Accessories Lab (F) .....	3
AV 2140 Aircraft Turbine Powerplants and Maintenance Operations (Sp) .....	3
AV 2150 Aircraft Turbine Powerplant Maintenance Operations Lab (Sp) .....	3
AV 2170 Aircraft Systems (Sp) .....	2
AV 2180 Aircraft Hydraulic and Pneumatic Systems (F) .....	2
AV 2190 Aircraft Systems Lab (Sp) .....	1
AV 2200 Aircraft Hydraulics and Pneumatics Systems Lab (F) .....	1
AV 2420 FAA Regulations, Records, and Certification (Sp) .....	2
AV 2430 Aircraft Electrical Systems and Components (Sp) .....	2
AV 2440 Aircraft Electrical Systems Laboratory (Sp) .....	2
AV 3280 Advanced Turbine Engines (F) .....	2
AV 4200 Composite Manufacturing Processes and Repair (Sp) .....	3
ETE 1030 Material Processing Systems (F,Sp) .....	3
ETE 1200 Computer-Aided Drafting and Design (F,Sp,Su) .....	3
ETE 2300 (QI) Electronic Fundamentals (F,Su) .....	4
MATH 1050 (QL) College Algebra (F,Sp,Su) .....	4
MATH 1060 Trigonometry (F,Sp,Su) .....	2
PHYX 1800 (BPS) Physics of Technology .....	4
ENGL 1010 (CL) Introduction to Writing: Academic Prose (F,Sp,Su) .....	3

FAA regulations require students to earn a 70 percent or higher score to pass each course.

## Departmental Honors

Students who would like to experience greater academic depth within their major are encouraged to enroll in departmental honors. Through original, independent work, Honors students enjoy the benefits of close supervision and mentoring, as they work one-on-one with faculty in select upper-division departmental courses. Honors students also complete a senior project, which provides another opportunity to collaborate with faculty on a problem that is significant, both personally and in the student's discipline. Participating in departmental honors

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enhances students' chances for obtaining fellowships and admission to graduate school. Minimum GPA requirements for participation in departmental honors vary by department, but usually fall within the range of 3.30-3.50. Students may enter the Honors Program at almost any stage in their academic career, including at the junior (and sometimes senior) level. The campus-wide Honors Program, which is open to all qualified students regardless of major, offers a rich array of cultural and social activities, special classes, and the benefit of Honors early registration. Interested students should contact the Honors Program, Merrill Library 374, (435) 797-2715, [honors@cc.usu.edu](mailto:honors@cc.usu.edu). Additional information can be found online at: <http://www.usu.edu/honors/>

## Additional Information

For more information about Bachelor of Science requirements and the sequence in which courses should be taken, see major requirement sheets, available from the Engineering and Technology Education Department, or online at: <http://www.usu.edu/ats/majorsheets/>

## Graduate Programs

The Master of Science (MS) degree in Engineering and Technology Education is offered by the department. Candidates may choose either the Plan A thesis option or the Plan B nonthesis program.

## Admission Requirements

See the general admission requirements for graduate study in this catalog (pages 93-94). Students applying for admission to the MS program must complete the GRE with a minimum quantitative and verbal score of 1,000 and a 40th percentile minimum score on the verbal and quantitative tests or must complete the MAT with a minimum score of 43. Admission committees also consider experience, undergraduate record, and formal recommendations.

## MS Degree

The degree is designed for technology educators who want to strengthen their background in current educational theory and practice. Students are required to complete a professional core of courses relating to technology education or applied technology education and to select additional courses from a list of related courses. Plan A requires a minimum of 30 semester credits, including a thesis. Plan B is a nonthesis option that requires 33 semester credits, including a creative project. The core courses for this specialization are as follows: ETE 6090, 6100, 6150, 6450, and 6750.

## Financial Assistance

The department offers a limited number of graduate research and teaching assistantships. For further information, contact the Engineering and Technology Education Department.

## Engineering and Technology Education Faculty

### Professors

*Kurt Becker*, technology education, construction technology, computer aided drafting

*Edward M. Reeve*, technology education, communication technology

*Maurice G. Thomas*, technology education

### Professor Emeritus

*Jay C. Hicken*, technology education, wood technology, power/energy transportation

### Associate Professors

*Ward P. Belliston*, computer electronics technology

*Gary A. Stewardson*, technology education, manufacturing technology

### Associate Professor Emeritus

*David P. Widauf*, aviation technology

### Assistant Professors

*Kevin S. Garrity*, aviation technology, professional pilot

*Paul D. Schreuders*, engineering education

### Senior Lecturer

*James L. Garrett*, aviation maintenance

### Lecturers

*Randall W. Chesley*, aviation maintenance

*Gary R. Green*, aviation technology, professional pilot

### Chief Flight Instructor

*Sean E. Heiner*

## Course Descriptions

Aviation Technology (AV), pages 462-463

Engineering and Technology Education (ETE), pages 506-509