

Department of Engineering
and Technology Education
College of Engineering

<http://www.ete.usu.edu/>

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Effective for students beginning degree Summer Sem. 2008 thru Spring Sem. 2009

Admission Requirements For This Major

1. New freshmen admitted to USU in good standing qualify for admission to this major.
2. Transfer students from other institutions need a 2.5 total GPA for admission to this major in good standing.
3. Students transferring from other USU majors need a major GPA of 2.4 for admission to this major in good standing.

The Program

During the freshman and sophomore years, students in the Aviation Technology—Maintenance Management major will complete most of the courses required for the FAA Airframe and Powerplant (A&P) licenses. Students will also take advanced turbine engines, aviation law, and composites structures. Computer literacy, management, and communications courses are incorporated into the program to provide essential business skills. Industry internships are available and encouraged in the junior and senior years.

This major prepares students for entry-level positions in management and maintenance programs within the airline industry, corporate aviation, and general aviation. The FAA-approved airframe and powerplant (A&P) curricula form the basis for this degree, and most positions will require the A&P licenses. Employment opportunities include positions with major airlines as maintenance personnel, maintenance supervisors, fixed-base operators, maintenance directors, repair station managers, FAA inspectors, aircraft/powerplant, and component manufacturers, as well as aerospace manufacturers. These industries are expanding at a rapid rate with excellent employment opportunities. This is forecasted to continue well into the twenty-first century.

Admission

Students attending USU for the first time are admitted on the basis of an index score, which is a reflection of high school grades and ACT or SAT scores.

USU will accept students from other institutions provided they have a good academic standing. Students wishing to enter the Aviation Technology—Maintenance Management major must have a grade point average of 2.5 or higher in order to be admitted into the College of Engineering. To qualify for enrollment in Huntsman School of Business courses listed in the major, students must have a cumulative grade point average of 2.67 or higher.

Transfer credit from accredited U.S. institutions is automatically posted. Posting of credit from U.S. institutions does not imply acceptance as credits toward a degree.

A transfer student and a college academic advisor initiate a petition for acceptance of transfer credits to meet degree requirements (department head and dean must approve). If transfer credit is not from a Utah school, it is the student's responsibility to provide a catalog or copies of catalog materials (usually available online) to show the content of courses taken.

D grades are not accepted as transfer credit, except from Utah schools where USU is required to do so for general education coursework. The repeat policy applies to transfer courses as well as courses taken at USU (see *Graduation Requirements* section on this sheet).

Transfer credit from foreign and nonaccredited institutions may be used for meeting degree requirements only if posted on the USU record of the student.

Graduation Requirements

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

Although transfer credit accepted by the department and the college may be applied toward meeting graduation requirements, the grades received will not be used in the USU GPA calculation.

Students must maintain a USU GPA of 2.0 to remain in good standing both in the college and the University. Students who are not making satisfactory progress toward graduation or who become ineligible to graduate will be suspended from the college.

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

1. A minimum GPA of 2.4 must be maintained in technology/math/science/business courses required for, or used as technical electives in, the chosen major. University Studies courses are not included in this GPA calculation. To qualify for enrollment in Huntsman School of Business courses, students must have a cumulative grade point average of 2.67 or higher.

2. No more than 6 credits 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 six required or elective courses can be repeated in order to meet graduation requirements.

4. The P-D-F grading option may not be used in required or elective courses. (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 have a registration hold placed on their record.

- a. Students will be placed on probation (registration hold) if they (i) have more than 6 credits of D credit (see item 2 above); or (ii) have a GPA of less than 2.4 (see item 1 above).

- b. The hold remains until they improve their standing by repeating classes to reduce the number of D credits to 6 or less, and/or by raising their GPA above 2.4. Students must meet with their advisor to have the hold removed.

The student must meet with a college academic advisor at least once each semester to work out a schedule having the primary goal of correcting the existing academic problems.

Special Requirements

Students are required to furnish their own basic set of tools and toolbox. With special discounts available through USU, prices range from \$900 to \$1,400. Contact Randy Chesley, rchesley@cc.usu.edu or (435) 797-2748, for required tool list. Additional federal aid may be available for this purchase. See advisor for details. Special tools will be furnished by the department.

Internship Opportunities

Student internship opportunities are available from several companies and state agencies nationwide. These internships give Aviation Technology—Maintenance Management students the opportunity to work for a semester in an industrial setting, to learn what working in the profession is like. Because of this invaluable experience, most of the returning interns have job offers from these companies prior to graduation. Most of the internships are during the summer, but some internships are available during other semesters. Students are encouraged to plan ahead to participate in this program. For additional information, contact the college advisors.

Career Opportunities

Graduates of the Aviation Technology—Maintenance Management major 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.

Information about career requirements and opportunities can be found at: <http://www.atec-amt.org/>

Research

A component of the undergraduate upper-division curriculum is devoted to applied technology research. Students are involved in many research projects sponsored by industry. Seniors are required to complete a research project dealing with a practical application of a problem encountered in their field. Many other departments of the University have made available sophisticated equipment that can be utilized in Aviation Technology—Maintenance Management research projects.

Degrees and Programs Offered Through This Department

Aviation Technology—Maintenance Management:
Bachelor of Science (BS)

Aviation Technology—Professional Pilot: BS

Engineering and Technology Education: BS and Master of Science (MS)

Academic Advisement

All students should contact their academic advisor for assistance with course selection, program planning, and meeting graduation requirements. If they do not know who their advisor is, students should contact their department, college, or the Office of University Advising.

Graduation Requirements: BS Degree in Aviation Technology— Maintenance Management

Minimum University Requirements*

Total credits	120
Grade point average (most majors require higher GPA)	2.00 GPA
Credits of C- or better	100
Credits of upper-division courses (#3000 or above)	40
USU credits	30
(20 of which must be upper division, including 10 required by major)	
Completion of approved major program of study	See department
Credits in minor (if required by department)	12
Credits in American Institutions (ECON 1500; HIST 1700, 2700, or 2710; POLS 1100; or USU 1300)	3
University Studies requirements	See below

*Colleges and departments may require more credits or a higher GPA. See requirements on this sheet.

University Studies Requirements for Aviation Technology— Maintenance Management Major

Note: Approved University Studies courses and requirements are listed in the back section of each semester's *Schedule of Classes*.

General Education Requirements (31-34 credits)

Competency Requirements (10 credits)

Communications Literacy (CL1 and CL2) (6 credits)

ENGL 1010 (CL1) (3 credits) or satisfactory AP, CLEP, IBO, ACT, or SAT score

AND

ENGL 2010 (CL2) (3 credits) or satisfactory IBO score

Quantitative Literacy (QL) (4 credits)

MATH 1050 (4 credits)

OR

One MATH or STAT course requiring MATH 1050 as a prerequisite

OR

Satisfactory AP, CLEP, IBO, ACT, or SAT score

Computer and Information Literacy (0 credits)

Passing grade on six computer and information literacy related examinations.

Breadth Requirements (18-20 credits)

Select at least one approved course from each of the following six categories: **American Institutions (BAI)**, **Creative Arts (BCA)**, **Humanities (BHU)**, **Life Sciences (BLS)**, **Physical Sciences (BPS)**, and **Social Sciences (BSS)**. At least two of the six breadth courses must be University Studies courses with a **USU prefix** (excluding USU 1000, 1010, 1100, 3330, 4900, and 6900). (CLEP or AP credit may be used.) PHYS 1800, which is required for this major, fulfills the Breadth Physical Sciences requirement.

Exploration Requirement (3-4 credits)

Choose an additional class from one of the following General Education categories: QL, BAI, BCA, BHU, BLS, BPS, or BSS. MATH 1100, which is required for this major, fulfills this requirement.

Depth Education Requirements

Communications Intensive (CI) (2 courses)

AV 4610 and 4620 will meet this requirement.

Quantitative Intensive (QI) (1 course)

ETE 2300, a course taken for the major, will meet this requirement.

Depth Course Requirements (4 credits minimum, including 2 credits minimum completed in each of two courses)

Complete at least 2 credits in approved 3000-level or above courses from each of the following two categories: **Humanities and Creative Arts (DHA)** and **Social Sciences (DSS)**. MHR 3110, which is required for this major, fulfills the Social Sciences requirement. USU 3330 may be used to fulfill the Humanities and Creative Arts requirement, provided it is taken for 2 credits.

Aviation Technology— Maintenance Management (126 credits) Suggested Semester Schedule

Freshman Year (32 credits)

Fall Semester (17 credits)

	Credits
□ AV 1130 Flight Principles	2
□ AV 1140 Aircraft Components and Principles	2
□ AV 1170 Aircraft Structures	3
□ AV 2180 Aircraft Hydraulic and Pneumatic Systems	2
□ AV 2200 Aircraft Hydraulics and Pneumatics Systems Lab.	1
□ MATH 1050 (QL) ² College Algebra	4
□ University Studies Breadth American Institutions (BAI) course ^{4,5}	3

Spring Semester (15 credits)	Credits
<input type="checkbox"/> AV 1240 Aircraft Maintenance	3
<input type="checkbox"/> AV 2170 Aircraft Systems	2
<input type="checkbox"/> AV 2190 Aircraft Systems Lab.	1
<input type="checkbox"/> ETE 1030 ⁴ Material Processing Systems	3
<input type="checkbox"/> ETE 2300 (QI) ² Electronic Fundamentals.	4
<input type="checkbox"/> MATH 1060 Trigonometry	2

Sophomore Year (32 credits)¹

Fall Semester (15 credits)	
<input type="checkbox"/> AV 2100 Aircraft Reciprocating Powerplants and Accessories	3
<input type="checkbox"/> AV 2110 Aircraft Reciprocating Powerplants and Accessories Lab	3
<input type="checkbox"/> ETE 1200 ⁴ Computer-Aided Drafting and Design	3
<input type="checkbox"/> ENGL 1010 (CL1) ^{4,5} Introduction to Writing: Academic Prose	3
<input type="checkbox"/> MATH 1100 (QL) ^{4,5,7} Calculus Techniques	3

Spring Semester (17 credits)	
<input type="checkbox"/> AV 1100 ⁴ The Aviation Profession	1
<input type="checkbox"/> AV 2140 Aircraft Turbine Powerplants and Maintenance Operations	3
<input type="checkbox"/> AV 2150 Aircraft Turbine Powerplant Maintenance Operations Lab	3
<input type="checkbox"/> AV 2430 Aircraft Electrical Systems and Components	2
<input type="checkbox"/> AV 2440 Aircraft Electrical Systems Laboratory	2
<input type="checkbox"/> ENGL 2010 (CL2) ^{4,5} Intermediate Writing: Research Writing in a Persuasive Mode	3
<input type="checkbox"/> University Studies Breadth Life Sciences (BLS) course ^{4,5}	3

Junior Year (31 credits)

Fall Semester (15 credits)	
<input type="checkbox"/> AV 3280 Advanced Turbine Engines	2
<input type="checkbox"/> AV 4280 ⁴ Airline Management	3
<input type="checkbox"/> STAT 2300 (QL) ^{2,5} Business Statistics	4
<input type="checkbox"/> Elective course(s)	3
<input type="checkbox"/> Technical Elective course ⁶	3

Spring Semester (16 credits)	
<input type="checkbox"/> AV 2420 FAA Regulations, Records, and Certification	2
<input type="checkbox"/> AV 3610 AeroTechnology Design I	1
<input type="checkbox"/> AV 4490 Human Factors in Aviation Safety.	3
<input type="checkbox"/> MHR 3110 (DSS) ^{3,4,5,7} Managing Organizations and People.	3
<input type="checkbox"/> PHYS 1800 (BPS) ⁷ Physics of Technology	4
<input type="checkbox"/> University Studies Breadth Humanities (BHU) course ^{4,5}	3

Senior Year (31 credits)

Fall Semester (15 credits)	
<input type="checkbox"/> AV 3120 Aviation Law	3
<input type="checkbox"/> AV 4610 (CI) AeroTechnology Design II	3
<input type="checkbox"/> MHR 3710 ^{3,4,5} Developing Team and Interpersonal Skills	3
<input type="checkbox"/> University Studies Breadth Creative Arts (BCA) and Breadth Social Sciences (BSS) courses ^{4,5}	6

Spring Semester (16 credits)	Credits
<input type="checkbox"/> AV 4200 Composite Manufacturing Processes and Repair	3
<input type="checkbox"/> AV 4620 (CI) AeroTechnology Design III	3
<input type="checkbox"/> University Studies Depth Humanities and Creative Arts (DHA) course ^{4,5}	3
<input type="checkbox"/> Technical Elective courses ⁶	7

Students must complete a total of 40 credits of stipulated upper-division coursework.

¹Completion of the Computer and Information Literacy (CIL) exams with passing grades is required by the end of the sophomore year.

²A 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 and ETE 2300.

³Students must have a cumulative GPA of at least 2.67 and have professional status to be admitted to these Huntsman School of Business courses.

⁴Due 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.

⁵These courses may be taken during summer semester to allow for more reasonable course loads during the academic year.

⁶Students must take 10 credits of related technical electives which must be in upper-division courses (3000-level and above).

⁷PHYS 1800 fulfills the University Studies Breadth Physical Sciences (BPS) requirement. MHR 3110 fulfills the University Studies Depth Social Sciences (DSS) requirement. MATH 1100 fulfills the University Studies Exploration requirement.

Requirement Changes

Graduation requirements shown on this sheet are subject to change. Students should check with their assigned advisor concerning possible changes.

Materials for Persons with Disabilities

This requirement sheet is available in digital format, recordings, or large print upon request to the USU Disability Resource Center.

For information contact

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