

Aviation Technology- Maintenance  
Standard Course Outline

AVTG 1011 – MATHEMATICS

Catalog Description: A review of basic math including algebraic operations, fractions, exponents, roots, and area and volume of geometric figures. Clock hours: 14 lecture, 10 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 1/24/6 hours per day for 4 days

Target Audience & Transferability:

This course is designed for students seeking a Certificate of Proficiency, Technical Certificates in Airframe and Powerplant, an AAS in Aviation Maintenance Technology, or an AS in Aviation Maintenance Management. Individual AVT courses or Certificates may be transferable to other FAA Certified Aviation Maintenance Technician schools under Federal Regulations

Student Outcomes/ Course Topics:

REFERENCES: AC 65-9A; ABS; AMT-G.

FAA Standard: *FAA-S-8081-26* 1-8, Change 2 9/24/03

**By the end of the course, a student will:**

1. Exhibit knowledge of at least two of the following—
  - a. areas of various geometrical shapes.
  - b. volumes of various geometrical shapes.
  - c. definitions/descriptions of geometrical terms, including but not limited to any of the following: polygon, pi, diameter, radius, and hypotenuse.
  - d. ratio problems, including one or more examples of where or how they may be used in relation to aircraft maintenance or system(s) operation.
  - e. proportion problems, including one or more examples of where or how they may be used in relation to aircraft maintenance or system(s) operation.
  - f. percentage problems, including one or more examples of where or how they may be used in relation to aircraft maintenance or system(s) operation.
  - g. algebraic operations, including one or more examples of where or how they may be used in relation to aircraft maintenance.
  - h. conditions or areas where metric conversion may be necessary.
2. N/A
3. Demonstrate the ability to perform at least one of the following—
  - a. calculate the area of a polygon and/or circle. (Level 2)
  - b. calculate the volume of a sphere, cube, or cylinder. (Level 2)
  - c. algebraic operations involving addition, subtraction, multiplication, and/or division of positive and negative numbers. (Level 2)
  - d. locate mathematical formulas used to assist in the maintenance, preventive maintenance, or alteration of aircraft. (Level 1)

**NOTE:** The practical portion of the Mathematics subject area may be tested simultaneously when performing calculation(s) in subject areas Basic Electricity and/or Weight and Balance.

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Required Text(s):

General Textbook (ASA)	ISBN # 1-56027-550-3
General Test Study Guide (ASA)	ISBN # 1-56027-570-7
FAR Handbook for AMT (ASA)	ISBN # 1-56027-563-4
AC43.13-1B Acceptable Methods, Practices, & Techniques (ASA)	ISBN # 1-56027-488-3

Optional Text(s):

Technician General Textbook (Jeppesen)	ISBN # 0-88487-203-3
Technician General Workbook (Jeppesen)	ISBN # 0-88487-212-2
AC65-9A Aircraft Mechanics Handbook General (FAA)	ISBN # 1-56027-064-0

Supporting Reference(s)

O&P Study Guide (ASA)	ISBN # 1-56027-406-9
Maintenance Handbook (ASA)	ISBN # 1-56027-518-9
Dictionary of Aeronautical Terms (ASA)	ISBN # 1-56027-587-2

The workbooks and test study guides may be used to aid the instructor and students to reinforce the textbook information. Other Textbooks may be issued depending upon availability.

Required Methods of Instruction:

Classes are taught off-campus in a full time day or night format, requiring maximum attendance. Attendance is taken every hour. Missed time must be made up outside of regular scheduled class time before moving to the next subject.

Required Forms of Assessment:

Periodic exams will be performed by FAA approved instructors as required to insure progress. Students must pass this course with a 70% or better to qualify for an FAA approved Certificate of Completion in the General Section.