



Syllabus

AEROSPACE MANUFACTURING & MAINTENANCE TECHNOLOGY

COURSE INFORMATION

- 2022-2023 School Year
- High School Credits: 3
- Equivalency Credit: English 1.0, Science 1.0, and 3rd Year Math 1.0
- CTE Dual Credits:
 - Credits upon completion can be earned on General course of study with Everett Community College.
 - MFGT 102: MANUFACTURING EMPLOYMENT READINESS AT EVCC (Everett Community College. Credits: 12 CTE
- **Session Time, Class Days:** Students attend either a half day morning or afternoon session.

AM Session: 7:55 AM – 10:25 AM, Monday - Friday

PM Session: 11:10 AM – 1:40 PM, Monday - Friday

Course Description: The Aerospace program provides basic training in aircraft assembly and maintenance. A combination of textbook assignments, lectures, shop activities and teamwork incorporate the goal of preparing students for entry level training programs in local aerospace manufacturing companies and community/technical colleges. We focus on Safety, tool identification, proper use, and technical skills - drilling, deburring, riveting and fastener installation on aluminum sheet metal and this year, I am pleased to announce, we will be introducing composites and 3D printing for the 2022-2023 school year.

TEACHER INFORMATION

Teacher Name: Karen Morales Vincent
Office Hours: 7:45 AM – 2:30 PM
Office Location: Building 3, Room 311
Phone: 425-348-2245
Email: VincentKM@mukilteo.wednet.edu

The best way to contact the teacher is by email and school office phone.

COURSE MATERIALS

- Textbook Title: Aviation Maintenance Technician Handbook-General- FAA 8083-30A available free on-line.
https://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/
- Required Materials:
 - Mechanic's Gloves (can be obtained from Home Depot or Lowes) – 1 pair each semester
 - Earplugs- supplied by instructor. (Earmuffs are preferred; they are more durable)
 - Scientific Calculator (basic one) Most cell phone have calculators
 - 3" Binder
 - Composition Book (black cover)
 - Coveralls for mechanics (optional)
- Other Resources: Download Prepware (**General**) on smart phone/laptop (nominal download fee attached to application). Approximately \$10, This is the test bank I use for exams and study tests. Students can download to phone or laptop.
- Lab Fee (if applicable): None

LEARNING OBJECTIVES

- Safety course must be passed with 100%, This includes OSHA10 Certification- good for two years.
- The ability to read technical texts, service manuals and blueprints
- Basic math skills including decimals, fractions, percentages, and formulas
- Work independently or in groups to complete projects
- Solve problems, and complete project tasks

ASSIGNMENTS AND GRADING

Assessment Criteria and Grading Policies.

In order to: earn credits for the Aviation Maintenance Technician at EvCC, students are required to:

- Complete ALL HOURS at Sno Isle TECH, absences will require an assignment make-up. Most likely essay on current topic.
- Complete all the general related subjects (practical and theory) at a minimum of 85% score in all the tests, exams and quizzes
- To retake a test, students must obtain and complete a review assignment from the teacher within 10 days after the first test. The minimum passing grade for re-taken test is 90%
- There will be a comprehensive final at the end of each quarter for subjects covered this far
- Grades will be calculated as follows:
 - A 95% - 100%
 - A 90%-94%
 - B 85% - 90%
 - B 80%-84%

- C 75% - 80% (77% is a passing grade for EvCC)
- C 71% - 74%
- D+ 65% - 70% (Not eligible for EvCC credit)
- D 60% - 66%

Professionalism Policy

Classroom/Shop Rules of Conduct

- Students are required to complete safety instruction, including OSHA 10 and successfully pass the evaluation before using any machinery or tools in the shop, classroom and the hangar at 100%.
- There will be no cell phone use in class. Make sure parents have the number to the main office (425)348-2220
- No radios/music are allowed in class unless operated only with headphones and only during assignments, test/exam or quizzes.
- Food and beverages are permitted in the classroom; however, failure to clean up after yourself will result in losing this privilege for the rest of the semester. This includes plates, food, drinks, candy, snacks etc., whether opened or not.
- Shop time is expected to be spent in shop work. Shop time is not free time.
- Work at home will be required in addition to work during shop times (work at home does not substitute for work during shop periods).
- The maximum volume for shop stereo is 20.
- All books, tools and resources must be returned from where they were taken from.
- Shop/class cleanup must begin at least 15 minutes before your dismissal time.
- Any use of tools outside the shop requirements are prohibited. Use tools only for the purposes they are made to be used for. Tools are not toys!
- Use of the bathroom is unlimited; however, it becomes obvious when students leave classroom far too many times.
- Use of classroom computers are allowed with permission from the teacher
- Use of any machinery is not permitted without the permission of the teacher
- Students cannot leave the classroom, shop or the vicinity of hanger without permission of the teacher. Students must obtain a hall pass before leaving the class for any business with other classes, shop or admin office.
- Aerospace class students are not permitted to purchase any snacks from the culinary class cafeteria in Building 1 unless bistro is open on designated days. Plan ahead, bring your own food/snacks.
- All students will always wear their personal protective equipment in the shop, when crossing the yellow caution line in the shop or any other shop in the campus.

- Each student will wear his or her badge as required by the FAA(Federal Aviation Administration and EvCC.(Everett Community College)
- Students will ensure they sign in on arrival and sign out when they depart
- Students must depart at the designated time of departure as scheduled by their sending school. The times will be issued to students at the beginning of class. Students who leave early will be marked truant.
- Students are not permitted to drive to Sno Isle TECH unless special arrangements have been made through parents, sending school and the administration of Sno Isle TECH.

Make-up or Late Work

All missed work and hours due to absence will be required to be done to earn full credit for successfully passing class and high school credits.

Grading communication

Students/parents have access to the gradebook on Qmlative. This portion will be covered during orientation in June 2022. Students will also be given a checklist of steps to share with parents showing how to sign into Qmlative to view the grades. Grades will be updated every 15th and 30th day of the month.

EMERGENCY PROCEDURES

- In case of emergency, injury, or other concern, immediately notify the teacher or the substitute teacher.
- Evacuation procedures and instructions are posted in the classroom and shop.
- The first aid kit, located in front of the classroom door under the coffee table.
- Contact the main office at **425-348-2220** in the absence of the teacher or substitute teacher. In such situations, any of the classroom executive members may walk/run to the front office to notify the administrators of any emergency.

COURSE EXPECTATIONS

This course involves a 50/50 participation of class and shop/tech. prep. Students will learn theory and practical sections of the course that will cover the understanding of aircraft manufacturing, maintenance, operation as well as systems. The class prepares students for the workforce as well as college in the aviation/aerospace sector. Students who successfully complete the program will be eligible for employment at Boeing, ATS (Aviation Technical Services) and various other aerospace related manufacturing jobs. In addition, students will have the opportunity to earn college credits at Everett Community College in the Aviation Maintenance Technology program as well as earn a high school equivalency credit for Math, Science, and English pending counselor approval.

This is a one- or two-year program. The teacher invites a few first-year students to participate in the second-year program. Students qualify for this opportunity by scoring at least 85% on all class exams

and scoring to the “satisfactory” level in the shop projects. In addition, they must demonstrate leadership as well as good conduct and attitude in order to be invited for the second year.

Second year students will be evaluated on 21st Century Skills. **21st century skills** refer to the knowledge, life skills, career skills, habits, and traits that are critically important to student success in today’s world, particularly as students move on to college, the workforce, and adult life. The invitation can be revoked at any time the student’s behavior warrants such action.

21st century skills.

Critical thinking, Communication skills, Creativity, Problem solving, Perseverance, Collaboration, Information literacy, Technology skills and digital literacy, Media literacy, Global awareness, Self-direction, Social skills, Literacy skills, Civic literacy, Social responsibility, Innovation skills, Thinking skills.

Course Calendar

Theory	Practical/Shop/Technical Prep
Fall (1st quarter)	
Mathematics	Calculation of fasteners, thickness and measurements
Physics (Includes Theory of Flight)	Aircraft Nomenclature – Identifying parts. Piper Apache
Aircraft Drawings	Assemble an aircraft part, fabricate and repair a damaged part
Materials and Processes	Identify aircraft hardware and their materials
Sheet Metal	Fabricate aircraft parts using sheet metal
Winter (2nd Quarter)	
Basic Electricity – Theory	Basic electricity – AC/DC ELECTRICAL LEARNING SYS.
Fluid Lines and Fittings – Theory	Fabricate tubes
Weight & Balance – Theory	AIRCRAFT WEIGHT LOADING
Cleaning and Corrosion – Theory	Inspect and repair corroded parts.
Sheet Metal Project	Fabricate aircraft parts using sheet metal
Composites	Fabricate a composite part, inspect and repair

Spring (3 rd and 4 th Quarter)	
21 st Century Skills Evaluation	21st century skills refer to the knowledge, life skills, career skills, habits, and traits that are critically important to student success in today's world, particularly as students move on to college, the workforce, and adult life.
3D Printer use	Instruction and Direction
Maintenance Forms & Records (Aviation Regulations)	Search for ADs ACc and bulletins
Mechanic Privileges & Limitations (Aviation Regulations)	Search Federal Aviation Regulations
Ground Operations & Servicing - Theory	Ground Operations and Servicing. Evaluation.

Mukilteo School District complies with federal and state rules and regulations and does not discriminate in any programs or activities on the basis of sex, race, creed, religion, color, national origin, age, veteran or military status, sexual orientation, gender expression or identity, disability, or the use of a trained dog guide or service animal and provides equal access to the Boy Scouts and other designated youth groups. Further, the District recognizes the needs of persons with disabilities, as defined by the Americans with Disabilities Act (ADA) of 1990. The District complies with state and federal accessibility regulations to provide access for our students, staff, parents and guests.

The following individuals have been designated to handle questions or complaints of alleged discrimination: Title IX Officer - Bruce Hobert (425-356-1319), Section 504 Coordinator - Lisa Pitsch (425-356-1277), and the ADA/Access Coordinator - Karen Mooseker (425-356-1330), all located at 9401 Sharon Drive in Everett, WA 98204. Inquiries regarding ADA/Access issues at Sno-Isle TECH Skills Center should be directed to Maggie Bagwell, Director (425-348-2220) at 9001 Airport Road in Everett, WA 98204.