

AMMOP Course Outline 2026-27

AMMOP Staff:

Aerospace Coordinator: Mrs. DeKlerck kdeklerck@wsd1.org

AMMOP Teacher: Mr. Tapley dtapley@wsd1.org

ATTENDANCE POLICY

- All AMMOP students will be required to sign a "Student Requirement" contract which will outline the requirements of all AMMOP students throughout the program duration.
- You are allowed **(2) absences** for the entire school year. Upon the **3rd unexcused absence**, your attendance will be reviewed and you **MAY BE REMOVED** from the course. If you are going to be absent, you are responsible for contacting via TEAMS:

Mr. Tapley or @ 786.1401,

YOU MUST CONTACT THE MAIN OFFICE IF YOU ARE ABSENT

ASSESSMENT POLICY

The course consists of the following allocations of learning units:

- **Practical – 70%**
- **Theory – 30%**
- Grade point average assessed on a cumulative basis.
- All assignments/exercises must be complete by the required due date. Not adhering to these due dates can result in the **removal from the program**.
- Passing mark is **70% average** between the **Aerospace Technology and Metal Working** components of the program.
- You will be provided 3 Student Performance Reviews TBA.

Credit Hours & High School Credits

Machining Technology Credits

Aviation Technology Credits

Work Experience Component

220 Credit Hours or 2 High School Credits 220

Credit Hours or 2 High School Credits 110

Credit Hours or 1 High School Credit

TOTAL CREDITS

550 Credit Hours or 5 High School Credits

WORKPLACE ESSENTIAL SKILLS MANITOBA AEROSPACE ASSESSMENT

- This assessment will assess your document use, reading and writing skills and will be performed twice throughout the school year (early portion and later portion of the course)
- You are required to attend and prepare for this assessment with the provided resources.
- **This does not cost anything and is not used for employment purposes.**
- **This assessment is used to benchmark and improve workplace essential and employability skills.**

MICROSOFT TEAMS (TO BE SET UP FIRST WEEK OF IN CLASS LEARNING)

This is your online coursework hub. You will access all material and submit assignments with this application. This application will be used to access all course material when not in the school. All students **must have access to a computer or other device for Microsoft 360 applications.**

WE WILL USE THIS ON A DAILY BASIS & YOU WILL BE REQUIRED TO USE Microsoft Teams WHEN YOU ARE NOT AT TEC VOC ATTENDING CLASS.

CHILD ABUSE REGISTRY CHECK

- This is to be **completed/dated** and submitted months of August 2026 and February 2027.

AMMOP

Aerospace and Aviation Technology Course Outline

(Course Code: AV544V2S/AV562V4S)

SECTION	Description
1 (2 weeks)	<u>Learning with ICT</u> Students will engage in computer application usage in industry with emphasis on the Microsoft Office Suite. Word, PowerPoint, Excel and Microsoft TEAMS.
2 (2 weeks)	<u>Theory of Flight</u> - Physics of Flight - Aerodynamics - Principles of Flight
3 (1 week)	<u>Aircraft Components & Functions (OCT)</u> - Fixed wing aircraft salient features - Flight control systems - Primary & Secondary flight controls
4 (2 weeks)	<u>Composite Fabrication</u> - WHMIS CERTIFICATION - Introduction to composite materials - Sandwich Panel Construction Process
5 (2 days)	<u>Composite Repair</u> - Introduction to composite repair techniques - Sandwich panel repair procedure
6 (2 weeks)	<u>Basic Electrical</u> - Electrical Principles - Circuit Fundamentals - Troubleshooting
7 (3 weeks)	<u>Powerplant Fundamentals</u> - Piston Engine Theory - Piston Engine Teardown and Rebuild - Gas Turbine Theory and Operation - Gas Turbine
8 (1 week)	<u>Non Destructive Testing</u> - Concepts and principals of NDT - Theory of Visual, LPI/FPI, MPI, ECI, Ultrasonic, Radiography - Practical LPI
9 (2 Weeks)	<u>Industry Standards</u> - Lockwire techniques for aviation hardware - Procedural standards - Silicone, sealants and adhesives - Buffing, polishing and sanding techniques - Component cleaning techniques - Lean Manufacturing and 5S concepts and standards - Ethics and Integrity in Aviation and Aerospace - Human Factors - Aviation governing bodies - Hierarchy of maintenance, manufacturing and overhaul documents - AD's, SB's, OEM Manuals and CP's

AMMOP

Aerospace Metal Manufacturing & Fabrication Course Outline

(Course Code: MT842V2S/MT857V4S)

SECTION	Description
1 (2 weeks)	<u>Numeracy and Applied Mathematics</u> - Whole numbers, Decimal Numbers, Fractions, Percentages - Measurement Conversions - Ratios and Proportions - Degree, Minute and Seconds Angular Measurement - Geometric Shapes - Trigonometry - Basic Graphing - Manufacturing Applied Mathematics - Precision and linear measurements'
2 (3 days)	<u>Health & Safety, Shop Organization</u> - Personal Safety - Machine/Equipment Safety - House Keeping Practices
3 (2 weeks)	<u>Blueprint Fundamentals, Interpretation & Geometric Dimensioning and Tolerances</u> - Isometric and Orthographic Views - Introduction to drafting - Blueprint reading and interpretation - Introduction to CAD and CAM software - Introduction to Coordinate Measuring Systems and measurement plans CMM
4 (2 days)	<u>Introduction to Machine Saw Operations</u> Vertical and Horizontal Band Saws operation
5 (2 days)	<u>Introduction to Drilling Operations</u> - Sharpening twist drills - Cutting through mild steel plates - Drill press vice set up and operation - Drill press accessories
6 (3 weeks)	<u>Introduction to Machining Hand Tools and Techniques:</u> - Precision Measuring - Layout techniques - Filing, hacksawing, sanding, grinding and buffing techniques
7 (3 weeks)	<u>Introduction to Bench Sheet Metal</u> - Identification of sheet metal stock material - Use of layout, measurement and metal cutting tools - Use of metal fabrication equipment; squaring shear, bar folder, and bonding machine - Hand tools identification
8 (3 weeks)	<u>Introduction to Milling Machines</u> - Mill safety - Vice set up and alignment using dial indicators - Milling machine operations techniques
9 (1 week)	<u>Introduction to CNC Milling and Lathe Machines</u> - Set up of fixtures - Set up of mill and lathe tooling - Set up of work coordinates - Basic operation of CNC Milling and lathe machines
10 (2 weeks)	<u>Introduction to Lathe & Turning Techniques</u> - Mount work in 3 & 4 jaw chuck - Develop proficiency in facing, center drilling, parallel turning, knurling, tapering and external thread cutting

AMMOP

Aerospace and Aviation Technology Course Outline

(Course Code: LWTR4S)

SECTION	Description
1 (online pre-requisite)	<u>Online AMMOP Upgrading & Industry Orientation</u> - Numeracy, - Online Portfolio - Industry/company Research - Manufacturing Methods
2 (4 days)	<u>Industry Exploration</u> - This includes tours of the workplaces of some of our industry partners: - Standard Aero - Boeing Winnipeg - Prop Works - Keewatin Air - United Aero Group - Av Max - Calm Air - Magellan Aerospace - PAL Aerospace - Aero Recip - Perimeter Aviation - Cadorath Aerospace - Fast Air - And more
4 (2-3 WEEKS)	<u>Work Experience (MAY – JUNE) (LWTR4S)</u> - Security Clearance Documentation (completed 2 months prior to work experience) - Students will go out for a 2 week job shadowing experience. - Students will have options of sites. 110 Credit HRS and will be receive upon completion.