



Powerplant Maintenance Technology A.A.S.

Career Community: Transportation

Curriculum Code: 0745

Effective: Fall 2025 – Summer 2030

Purpose of the Major

Powerplant Maintenance Technicians maintain aircraft in accordance with the Federal Aviation Regulations. Technicians perform inspections, repairs and alterations to aircraft powerplants, propellers and their related systems. In addition, they troubleshoot the operation of induction, cooling, exhaust, fuel metering, ignition, electrical, starting, lubrication propeller and other associated systems. Powerplant maintenance technicians are employed throughout the world maintaining aircraft for major air carriers, commuter airlines, air freight operators, corporate flight departments, fixed base operators and a variety of other specialized aviation businesses. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of AVGM 111, AVGM 112, AVGM 113, and AVGM 114, with a 2.0 or higher is a key component for success in this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional information

Students are required to successfully complete the entire 6 semester program with a 2.0 or higher in each class that includes Basic Aviation Technology and Airframe Maintenance Technology in order to be eligible to test for Federal Aviation Administration (FAA) licensure as an Airframe and Powerplant (A&P) Mechanic. All program courses are offered one time per year and this is a full-time program. Program courses are offered in a required sequence. General Education courses may be taken any time throughout the program.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

Major Required Courses - *Some courses meet General Education requirements for MTA. A minimum grade of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
AUTM 102 or	Automotive/Collision Safety	1 / 1

Course Code	Course Title	Credit/ Billing Hours
DCTM 102 or TECH 102	Industrial/Construction Safety General Industry Safety	2 / 3 2 / 3
AVAF 212	Aircraft Electrical II	4 / 5.75
AVGM 111	Aviation General I	4 / 5
AVGM 112	Aviation General II	6 / 8
AVGM 113	Aviation General III	4 / 5
AVGM 114	Materials and Processes	5 / 7
AVPP 241	Reciprocating Engine	8 / 11.25
AVPP 251	Reciprocating Engine Systems	2 / 2.5
AVPP 253	Reciprocating Ignition Systems	5 / 6.75
AVPP 255	Reciprocating Induction Sys	4 / 5.5
AVPP 257	Aircraft Propeller Systems	4 / 5.5
AVPP 259	Turbine Engine I	4 / 5.5
AVPP 261	Turbine Engine II	4 / 5.5
AVPP 263	Turbine Engine Systems	2 / 2.75
AVPP 265	Powerplant Instruments	2 / 2.5
AVPP 267	Powerplant Certification	1 / 1.5
COMM 110 or COMM 120 or COMM 130	Communication in the Workplace Dynamics of Communication Fundamentals Public Speaking	3 / 3 3 / 3 3 / 3
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131	Composition I Technical Writing Business Writing Honors Composition I	4 / 4 3 / 3 3 / 3 4 / 4
MATH 115 or MATH 119 or MATH 120 or STAT 170	Technical Mathematics Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought

Students wishing to waive ACAD 100 should contact their advisor.

Students considering future transfer, choose MATH 119 or MATH 120 or STAT 170.

Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Science or Applied Social Science - *Select one as recommended or select one from [General](#)*

[Education - Applied Degrees, Humanities and Fine Arts or Social Sciences or Applied Social Sciences](#). A minimum grade of 2.0 is required for General Education courses.

Course Code	Course Title	Credit / Billing Hours
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MGMT 234	Diversity in the Workplace	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Note: Students considering future transfer, choose HUMS 223, HUMS 224, or SOCL 120.

Major Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab - Select one lab course as recommended or select one from [General Education - Applied Degrees, Natural Sciences or Applied Sciences and Technology Lab](#). A minimum grade of 2.0 is required for General Education courses.

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
PHYS 200	Intro to Applied Physics	4 / 5

Note: Students considering future transfer, choose ASTR 201 or BIOL 120.

[General Education - Applied Degrees](#)

- English Composition or Applied English
Major Required Courses will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Major Required Courses will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Major Required Limited Choice Courses will meet this requirement.
- Mathematics/Applied Mathematics
Major Required Courses will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Major Required Limited Choice Courses will meet this requirement.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

77 credits / 99 billing hours

Required Course Sequence

Semester I (Fall)
AVGM 111 – Milestone course
AVGM 112 – Milestone course
AVGM 113 – Milestone course
AVGM 114 – Milestone course

Semester II (Spring)
ACAD 100
AUTM 102 or DCTM 102 or TECH 102
COMM 110 or COMM 120 or COMM 130
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab

Semester III (Summer)
AVAF 212

Semester IV (Fall)
AVPP 241
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
MATH 115 or MATH 119 or MATH 120 or STAT 170

Semester V (Spring)
AVPP 251
AVPP 253
AVPP 255
AVPP 257
AVPP 259

Semester VI (Summer)
AVPP 261
AVPP 263
AVPP 265
AVPP 267

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.