



## **Transportation Technologies GA**

Career Community: Transportation Careers

Curriculum Code: 1850

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

This degree is designed to immerse students in the multifaceted world of transportation, focusing on key areas such as automotive maintenance, aviation maintenance, and heavy equipment maintenance. This program is structured to provide students with a comprehensive skill set that extends beyond traditional transportation boundaries, encompassing a diverse range of technical expertise crucial to the modern transportation landscape. Emphasizing practical applications and industry-relevant training, this degree program equips students with the skills needed to thrive in dynamic and demanding roles within the transportation field. Upon completion, graduates will be well-positioned to pursue careers in a broad spectrum of industries, from automotive and aviation to manufacturing and infrastructure maintenance.

### **Milestone**

Completion of General Education courses in Math and English with a 2.0 or higher is a key component for success in completing 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**

The Aviation Program requires acceptance into the program before a student can start courses. Students may take other courses on this pathway before beginning to apply to the Aviation Program. Please contact the program if you are interested, Mason Campus, telephone number 517-483-1406

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Students completing this curriculum may also be eligible to apply for multiple certificates in the different specific technologies.

### **Contact Information**

For further information, including about career options, course substitutions and waivers, etc., contact the Technical Trades Department, West Campus, Room M103, telephone number 517-483-1336, or the Aviation Center, Mason, telephone number 517-483-1406 or Student Services, West Campus, telephone number 517-483-5509.

### **Career Community Courses**

*These courses are required for all Transportation programs (Automotive, Aviation, and Heavy Equipment Repair). They should be taken before other Major Required or Limited Choice*

*Courses. Some courses meet General Education requirements for MTA. A minimum 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 DCTM 102 or TECH 102	Automotive/Collision Safety Industrial/Construction Safety General Industry Safety	1 / 1 2 / 3 2 / 3
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, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future major areas:

- Automotive Technologies choose AUTM 102
- Aviation Maintenance Technology or Powerplant Maintenance Technology contact the department for information.
- Heavy Equipment Repair choose TECH 102 or DCTM 102

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

**Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences** - Select one as recommended or select one from [LCC 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 as recommended or select one from [LCC 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.

### Major Required Courses, Limited Choice

Select a minimum of 38 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. A minimum of 2.0 is required 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
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 125	Manual Drive Train and Axles	4 / 6
AUTM 126	Automatic Transmissions	4 / 6
AUTM 131	Automotive Engine Repair	4 / 6
AUTM 141	Braking Systems and ABS	4 / 6
AUTM 151	Suspension and Steering	4 / 6
AUTM 161	Auto Heating/Air Conditioning	4 / 6
AUTM 180	Intro to Alternative Fuels	2 / 2
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 273	Lt. Diesel Drivability Diag.	4 / 6
AUTM 275	Ignition/Emission Sys Diag.	4 / 6

Course Code	Course Title	Credit/ Billing Hours
AUTM 284	Hybrid Systems & Maintenance	4 / 6
AVGM 111	Aviation General I	4 / 5
AVGM 112	Aviation General II	6 / 8
HERT 110	Equipment Introduction	5 / 5
HERT 120	Heavy Engine Rebuild	6 / 6
HERT 125	Heavy Equipment Electronics	5 / 5
HERT 130	Equipment Hydraulics	6 / 6
HERT 135	Diesel Fuel Systems	4 / 4
HERT 140	Equipment Powertrain	5 / 5
HERT 145	Equipment Service Writing	4 / 4
HERT 160	Equipment HVAC/Cab Controls	4 / 6
MGMT 150	Managing Customer Relations	3 / 3
WELD 103	Combination Welding	4 / 6

### General Education – Applied Degrees

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

60 credits / 61 billing hours

### **Recommended Course Sequence**

#### **College-ready Full-time**

Semester I
ACAD 100
AUTM 102 or DCTM 102 or TECH 102

Semester I
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice course(s) for students completing the Transportation GA

Semester II
COMM 110 or COMM 120 or COMM 130
MATH 115 or MATH 119 or MATH 120 or STAT 170
Limited Choice course(s) for students completing the Transportation GA

Semester III – Summer (Optional)
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester IV
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab (if no Summer enrollment)
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester V
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

### College-ready Part-time

Semester I
ACAD 100
AUTM 102 or DCTM 102 or TECH 102
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
MATH 115 or MATH 119 or MATH 120 or STAT 170

Semester II
COMM 110 or COMM 120 or COMM 130
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester II
Limited Choice course(s) for students completing the Transportation AAS
Semester III
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Semester IV
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Semester V
Limited Choice course(s) for students completing the Transportation GA
Students who have decided on an academic program within the Transportation Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

*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*