

Aviation Technology Pathway

Aviation technology includes the design, production, repair, and maintenance of all types of aircraft. Employees with aviation technology degrees are highly sought after for careers in the aviation industry, manufacturing, and maintenance, repair and overhaul, in northern Illinois and nationwide.

Potential Careers in Transportation Technology (RPS 205)

- Airplane Pilot/Co-Pilot
- Air Traffic Controller
- Avionics Technician
- Cargo and Freight Agent
- Customs Inspector
- Environmental Manager
- Facility Engineer
- Industrial Equipment Mechanic
- Industrial and Packaging Engineer
- International Logistics Specialist
- Safety Analyst
- Storage and Distribution Manager
- Urban and Regional Planner

Potential Careers in Aviation Maintenance (Rock Vally College)

- Aviation engine mechanic
- Airframe mechanic
- Sheet metal construction and repair
- Reciprocating and turbine engine repair

Graduates with a Bachelor of Science, Aviation Management Technology (NIU) find careers at companies like

- Lockheed Martin
- McDonnell Douglas
- Hamilton Sundstrand (UTC Aerospace Systems)
- Chicago's O'Hare and Midway
- International Airports
- Ingersoll
- Motorola
- Siemens
- Underwriters Labs
- Woodward



Did you know...

584,000 new maintenance technicians will be needed to maintain the world fleet over the next 20 years.

Source: The 2014 Boeing Pilot & Technician Outlook

\$55,980 – median salary of an aircraft mechanic

Source: Bureau of Labor Statistics

Rock Valley College has a state-of-the-art Aviation Maintenance Educational Facility, scheduled to open Fall 2015 at Chicago Rockford International Airport.

All required 300-400 courses in NIU's Aviation Management Technology program are **offered online**.

See back panel for more specific program requirements >>

4 Semesters

Coursework at **Rockford Public Schools** – EMITT Academy Transportation Technology Pathway

6 Semesters

Coursework at **Rock Valley College** Associates Degree (AAS) – Aviation Maintenance, including completion of FAA Airframe and Power Plant Certificates

2 Semesters

Coursework at **Northern Illinois University** Bachelor of Science, NIU Aviation Management Technology Requires Associates Degree (AAS) – Aviation Maintenance

Aviation Technology Pathway Model

The table below shows the courses that, if taken in this sequence, should result in completion of the program in the least amount of time while evenly distributing the course load. Some courses are prerequisites for the courses that follow in the sequence and are subject to change. Please consult your institution's advising staff for the latest program requirements when registering for courses.

Missing coursework will hinder a students' progress in the program. To progress seamlessly from one institution to the next, students should obtain a degree from the first institution. All plans of study should meet local and state high school graduation requirements, general education requirements, and prerequisites for advanced courses.

To read this table -

Each column represents a single grade year or semester as noted. Summer coursework may be necessary for some students. All information was taken from online materials published by each institution on its website in February, 2015.

RPS 205 - EMITT Academy Transportation Technology				RVC - Aviation Maintenance Technology						NIU - Bachelor of Science, Aviation Management Technology			
Grade 9	Grade 10	Grade 11	Grade 12	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 1	Semester 2	Semester 3	Semester 4
Freshman Seminar	Orientation to Transportation	Automotive Technology I	Automotive Technology II	Materials & Processes (AVM 101)	Basic Electricity (AVM-102)	Aircraft Electrical Systems (AVM-245)	Basic Powerplants (AVM-162)	Fuel and Lubrication Systems (AVM-160)	Engine Support Systems (AVM-161)	Trigonometry (MATH 155)	Plant location, Layout and Materials Handling (TECH 429) - <i>TECH 265 also a prereq</i>	Industrial Project Management (TECH 496) - ENGL 308 and TECH 415 or 416 and senior status required	Workshop in Technology (TECH 497) 1-6 credits
Exploring Engineering (Semester Elective)	Principles of Aero. Science and Unmanned Aircraft Systems (ERAU)		Automotive Suspension and Brakes Certificate (RVC Course)	Aviation Math Physics (AVM-103)*	Records and Publications (AVM-104)	Cleaning and Corrosion Control (AVM-106)	Aircraft Finishing and Covering (AVM-241)	Ignition Systems (AVM-163)	Engine Electrical Systems (AVM-165)	Basic Statistics (STAT 208)	Energy Management (TECH 484)	Disaster Preparedness (TECH 432)	Elective 1
				Aircraft Drawing - Weight & Balance (AVM-105)*	Aircraft Metal Structures (AVM-247)	Aircraft Instrument & Communication Sys. (AVM-246)	Cabin Atmosphere Control Systems (AVM-242)	Advanced Powerplants (AVM-164)	Propeller Systems (AVM-166)	General Chemistry (CHEM 110)	Industrial Quality Control (TECH 391)	Human Factors in Industrial Accident Prevention (TECH 434)	Elective 2
				Hydraulic & Pneumatic Control Systems (AVM-248)*	Landing Gear Systems (AVM-251)	Composition I (ENG-101)	Aircraft Welding (AVM-243)	Introduction to Technical Writing (ENG-110) or Fundamentals of Communication (SPH-131) or Composition II (ENG-103)	Introduction to Technical Writing (ENG-110) or Fundamentals of Communication (SPH-131) or Composition II (ENG-103)	General Chemistry laboratory (CHEM 111)	Supervision in Industry (TECH 404)	Basic Physics and Laboratory (PHYS 150A)	Elective 2
			Aircraft Fuel Systems (AVM-249)*	Aircraft Auxiliary Systems (AVM-244)			Technical Writing (ENGL 308)			Facilities Management Technology (TECH 406)	Introductory Financial Accounting (ACCY 206) or Fundamentals of Accounting (ACCY 288)		
			Assembly & Rigging (AVM-250)*	Airframe Inspection (AVM-252)									
Recommended Electives: Exploring Engineering, Aerospace, Introduction to Industrial Tech and Engineering Recommended out of school experiences in workplaces, weekend and summer activities:				Other Notes: *AVM 101, 103 and 105 must be taken concurrently. *AVM 248, 249 and 250 must be taken concurrently.						Technology Electives (Choose 2) Green Technologies (TECH 305) - MATH 155 and CHEM 110 prereq Industrial Training and Evaluation (TECH 402) - MATH 155 and TECH 265 prereq Work Simplification (TECH 442) - MATH 155 and TECH 265 prereq Engineering Economy (TECH 443) - MATH 155 prereq Production Control Systems (TECH 444) - MATH 155 and TECH 265 prereq Manufacturing Distribution Applications (TECH 492) Workshop in Technology (TECH 497)			

For more information about Rockford Public School's – EMITT Academy Transportation Technology program, contact Dave Carson Executive Director, College and Career Readiness 815-966-3123

For more information about the Rock Valley College Aviation Maintenance Technology program, contact Mark Adolphson Academic Chair, Aviation Technology 815-921-3015

For more information about NIU's Bachelor of Science, Aviation Management Technology Program, contact Stacey Deegan Program Advisor 815-753-9943