

Aviation Technology Pathway Model

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

- 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

- Aviation engine mechanic
- Airframe mechanic
- Sheet metal construction and repair
- Reciprocating and turbine engine repair
- Ground support equipment
- Assembly and finishing
- Structures mechanic
- Avionics lead technicians

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

National Companies

- Lockheed Martin
- McDonnell Douglas
- Siemens
- Underwriters Labs

Illinois Companies

- Chicago's O'Hare and Midway Int'l Airports
- Ingersoll
- Maytag Aircraft
- Motorola
- Panasonic Avionics

Local Companies

- Emery Air
- Entege
- Hamilton Sundstrand (UTC Aerospace Systems)
- Woodward
- Worldwide Flight Services

2014 median pay nationwide - \$55,980 annually

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 with a range from \$35,000 - \$76,000 possible based on certifications and education

Source: Bureau of Labor Statistics

Rock Valley College has a state-of-the-art Aviation Maintenance Educational Facility, newly opened at Chicago Rockford International Airport.

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

Advancement opportunities include repair and maintenance of specialized equipment, inspectors for the FAA or managing a maintenance facility.

Most mechanics who work on civilian aircraft have either one or both of the FAA's Airframe and Powerplant (A&P) certificates.

Integrated Work-Based Learning Components

See back panel for more specific program requirements >>

Career Awareness Activities

Workplace Tours, Guest Speakers or Career Fairs

Career Exploration Activities

Job Shadowing, Site Visits, or Informational Interviews

Career Practice Activities

Student Camps and Challenges, Student Enterprises or Service Learning

Professional Learning

Internships and Industry Credentials

Recommended Aviation Technology Pathway

4 Semesters Rockford Public Schools (RPS) – Engineering, Manufacturing, Industrial and Trades Technology Academy Transportation Technology Pathway				6 Semesters Rock Valley College Associates Degree (AAS) – Aviation Maintenance, including completion of FAA Airframe and Power Plant Certificates						4 Semesters Northern Illinois University Bachelor of Science, NIU Aviation Management Technology Requires Associates Degree (AAS) – Aviation Maintenance NIU - Bachelor of Science, Aviation Management Technology			
EMITT Academy Transportation Technology				RVC - Aviation Maintenance Technology						NIU - Bachelor of Science, Aviation Management Technology			
Year 1	Year 2	Year 3	Year 4	Year 1		Summer	Year 2		Summer	Year 1		Year 2	
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)	Industrial Project Management (TECH 496)	Workshop in Technology (TECH 497) 1-6 credits
Exploring Engineering (Semester Elective)	Principles of Aero. Science and Unmanned Aircraft Systems (ERAU)	Tech Elective*	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)			
				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)	Energy Management (TECH 484)	Disaster Preparedness (TECH 432)	Elective 1
				Hydraulic & Pneumatic Control Systems (AVM-248)*	Landing Gear Systems (AVM-251)	Composition I (ENG-101)	Aircraft Welding (AVM-243)		Intro.to Technical Writing (ENG-110) or Fundamentals of Communication (SPH-131) or Composition II (ENG-103)	General Chemistry laboratory (CHEM 111)	Industrial Quality Control (TECH 391)	Human Factors in Industrial Accident Prevention (TECH 434)	Elective 2
				Aircraft Fuel Systems (AVM-249)*			Aircraft Auxiliary Systems (AVM-244)			Technical Writing (ENGL 308)	Supervision in Industry (TECH 404)	Basic Physics and Laboratory (PHYS 150A)	
				Assembly & Rigging (AVM-250)*			Airframe Inspection (AVM-252)			Basic Manufacturing Processes (TECH 265)	Technology Course (TECH 415 or TECH 416)	Accounting Elective (ACCY 206 or ACCY 288)	
Dual Credit, Advanced Placement or Articulated Credit				Prerequisite Information						Prerequisite Information FAA Airframe and Powerplant Certifications required			
Recommended Math/Science				Recommended Math/Science						Recommended Math/Science Trigonometry (MATH 155), Basic Statistics (STAT 208), General Chemistry (CHEM 110), General Chemistry laboratory (CHEM 111), Basic Physics and Laboratory (PHYS 150A), Accounting Elective (ACCY 206 or ACCY 288)			
Recommended English/Social Studies				Recommended English/Social Studies Composition I (ENG-101); Introduction to Technical Writing (ENG-110) or Fundamentals of Communication (SPH-131) or Composition II (ENG-103)						Recommended English/Social Studies Technical Writing (ENGL 308)			
Recommended Electives				Recommended Electives						Recommended Technology Electives (Choose 2) Green Technologies (TECH 305) - Industrial Training and Evaluation (TECH 402) Work Simplification (TECH 442) Engineering Economy (TECH 443) Production Control Systems (TECH 444) Manufacturing Distribution Applications (TECH 492) Workshop in Technology (TECH 497)			
Professional Learning/Internships				Professional Learning/Internships						Professional Learning/Internships			
Industry Credentials Earned				Industry Credentials Earned FAA Airframe and Powerplant Certificates						Industry Credentials Earned			
Degree Completion Information Rockford Public Schools, Transportation Technology Pathway (48 credits) Heidi Houy Executive Director College and Career Readiness heidi.houy@rps205.com 815-966-3123				Degree Completion Information Associates in Applied Science (82 credits) Maria Salazar Administrative Assistant, Aviation Technology (815) 921-3020 m.salazar@rockvalleycollege.edu						Degree Completion Information Bachelor Science Degree in Technology with an emphasis in Aviation Management (30 credits) Stacey Deegan Technology Program Advisor 815-753-9943 sdeegan@niu.edu			
Local Entry Level Positions after Degree				Local Entry Level Positions after Degree						Local Entry Level Positions after Degree			

- Key**
- Career-focused instructional sequence
 - Academic Competencies
 - Professional Learning