Aviation Maintenance Science (AMSA)

AMSA 244 Complex Air Vehicles Structures and Components 3 Credits (3,0)

Overview design and systems for electric and autonomous aircraft, including eVTOL and STOL systems, utilizes high levels of automation, distributed electric propulsion, and composite materials. Explore challenges associated with airworthiness certification, maintenance, and required supporting infrastructure.
Course Offered at: Daytona Beach

AMSA 350 Aviation Connectivity and Cybersecurity 3 Credits (3,0)

A foundational exploration of aviation connectivity and the crucial role of cybersecurity in modern air travel. Develops comprehension of communication systems, satellite and onboard connectivity, and examines network architecture combined with data protocols. Operational identification of vulnerabilities and implementing best practices to protect aviation data.
Prerequisites: COMM 219 and COMM 221 and MATH 111 and PHYS 113 and AMST 366

Course Offered at: Daytona Beach

AMSA 399 Special Topics in Aviation Maintenance Science 1-6 Credit (1-6,0)

Individual independent or directed studies in aviation maintenance science.
Course Offered at: Daytona Beach, Prescott

AMSA 420 Electronic Documentation and Aircraft Systems Troubleshooting 3 Credits (3,0)

Integration of digital technologies in a modern aircraft technical operation. The use of electronic recordkeeping systems, digital maintenance documentation, and data-driven troubleshooting methodologies. Simulation-based exercises to continue the development of critical thinking skills by interpreting aircraft system interactions for diagnostics, fault isolation procedures, predictive maintenance strategies, and recommended actions to return aircraft back to operational readiness.
Prerequisites: Completion of, or transfer credit for, all AMST courses (AMST courses include AMST 115 through AMST 376)

Course Offered at: Daytona Beach

AMSA 490 Aviation Technical Operations 3 Credits (3,0)

Capstone course for BSAMS students; holistic view of aviation technical operations; emphasis on CASS, OpSpecs, electronic recordkeeping, repair stations, SMS, MxHF, IS-BAO. Capstone project simulating VP of Tech Ops role in airline maintenance.
Prerequisites: All course work for the airframe and powerplant curriculum

Course Offered at: Daytona Beach