



Course Description

AVM1162 | Maintenance Repair and Overhaul (MRO) Interactions with Commercial Airline Operations | 3.00 credits

Students will learn the Maintenance Repair and Overhaul (MRO) Procedures in Commercial Airline Operations. Topics include airline maintenance operations, engineering, maintenance, repair of structures, systems, and aircraft components. In addition, students will explore MRO financing, domestic and offshore operations, regulatory requirements, logistics, supply chain support, human resources and industry oversight.

Course Competencies:

Competency 1: The student will learn the regulatory controls and oversight required by national and international governmental entities over Maintenance Repair and Overhaul (MRO) operations by:

1. Determining the national and international regulatory requirements for conducting MRO operations for both domestic and international airlines
2. Implementing effective internal testing operations to assure routine compliance with maintenance service requirements
3. Establishing effective procedures to address the inspection of certified aircraft parts and the corresponding program to prevent the use of fraudulent or defective parts in airline maintenance programs
4. Initiating performance metrics to establish operational efficiencies and effective financial oversight

Competency 2: The student will learn about the operational functions performed by Maintenance Repair and Overhaul (MRO) entities by:

1. Identifying the various roles that an MRO provides for an operating airline, including maintenance, parts replacement, engine overhaul, and routine repairs
2. Identifying best practice interactions that will occur between airline management and MRO personnel.
3. Identifying the effectiveness and cost differentials in outsourcing essential MRO operations
4. Initiating effective financial controls to maintain the cost-effectiveness for the delivery of maintenance services to an airline

Competency 3: The student will learn about the impact that a logistics and supply chain support network provides for MRO's by:

1. Integrating logistics principles into the delivery of high-quality maintenance services
2. Establishing effective inventory control programs to maintain the efficient delivery of consumable aircraft parts and components
3. Creating an effective supply chain network to maintain efficient and cost-effective delivery of aircraft maintenance services and parts
4. Identifying an international network of supply chain manufacturers to facilitate the timely delivery of consumable goods and services to airline partners

Competency 4: The student will learn about the personnel organizational make-up of an MRO and will learn the best personnel practices that positively enhance an MRO's operations by:

1. Identifying those personnel's educational requirements and work experiences that provide for the most qualified and effective workforce for Mors
2. Determining the testing and continuing educational programs that are needed to enhance the professional qualifications and performance of MRO employees
3. Identifying those human factors that impact MRO employees work performance evaluations
4. Integrating a work safety program to enhance employee performance and efficiency

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning