



## **Course Description**

### **AVM1164 | Logistics and Maintenance Programs for Commercial Airlines | 3.00 credits**

This course focuses on the concepts and application of logistics and supply chain management utilized within the aviation maintenance industry to increase efficiency in production and maintenance. Students will learn the logistics support from Maintenance Repair Operators and Original Equipment Manufacturers in aviation maintenance operations.

### **Course Competencies:**

**Competency 1:** The student will learn the essential principles of logistics and supply chain and the roles these principles play in aviation maintenance programs by:

1. Identifying the principles of developing an effective aircraft logistics sustainability strategy
2. Identifying the business entities involved in the aerospace supply chain process and understanding their roles, responsibilities, and effectiveness
3. Identifying qualified logistics and supply chain partners to promote the effective transfer of aircraft parts and components, nationally and internationally
4. Creating effective inventory control processes to minimize costly depletions or overstocking of aircraft parts and components

**Competency 2:** The student will learn the makeup- up and functions of the business entities involved in aircraft manufacturing and maintenance and the importance of an effective business relationship between these entities by:

1. Identifying the organizational structure and the operational functions of an aviation maintenance repair operator (MRO)
2. Identifying the organizational structure and the operational functions of an aviation original equipment manufacturer (OEM)
3. Identifying the advantages and disadvantages of outsourcing component repair by commercial airlines
4. Developing an effective maintenance scheduling strategy that forecasts aircraft parts and components demand to maintain the operational availability of aircraft

**Competency 3:** The student will learn the efficiencies that can be achieved by maintaining adequate inventories of consumable repair and overhaul items to support an effective aviation maintenance program by:

1. Developing a competitive business advantage by effective collaboration between international manufacturers of aircraft parts and components and operating airlines
2. Determining an effective quality control program to reduce part and component waste and maintain a cost-effective repair program
3. Identifying effective training programs to isolate and extract absolute aircraft parts and components from maintenance repair operators' (MRO) inventories
4. Developing collaborative relationships between aerospace manufacturers and distributors to maintain an adequate flow of consumable inventories

**Competency 4:** The student will learn the role that effective financial planning and regulatory compliance have on the development of efficient aircraft part and component transformers between airlines and part manufacturers by:

1. Identifying the international laws and regulations that impact logistics support for aircraft parts and components
2. Identifying the Federal Aviation Administration's (FAA's) regulatory oversight over
3. The aircraft parts and components industry for commercial aircraft
4. Determining the different financial impacts between domestic and international manufacturing suppliers of aircraft components
5. Developing an effective testing program to identify unapproved defective aircraft parts and components.

**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