## AVM 1163  
**Policies and Procedures for Commercial Airlines Maintenance Programs**

**Course Description:** Students will learn the maintenance policies and programs for commercial airlines. Concepts of Maintenance Steering Group (MSG) and Reliability Centered Maintenance (RCM) programs, maintenance Control by Reliability Methods (MCEM) program, and Operational Availability (OA) for Commercial Aircraft will be discussed. (3-hour lecture)

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<th><strong>Course Competency</strong></th>
<th><strong>Learning Outcomes</strong></th>
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| **Competency 1:** The student will learn the regulatory procedures mandated by the Federal Aviation Administration (FAA) applicable to commercial aircraft for their maintenance protocols, procedures and programs by: | • Communication  
• Numbers / Data  
• Critical thinking  
• Information Literacy |
| 1. Identifying the concepts contained in Federal Aviation Administration (FAA) Circulars AC 65-9A, AC65-12A, AC65-15A.  
2. Understanding how to conduct research for maintenance information contained in FAA Federal Aviation Regulations (FAR's).  
3. Identifying federal and state environmental regulations applicable to commercial aviation maintenance programs.  
4. Understanding the federal and corporate internal maintenance inspection processes and their impact on enhancing operational efficiency for commercial airlines. | |
| **Competency 2:** The student will learn the best practice concepts of implementing and operating a commercial aviation maintenance program by: | |
| 1. Understand the concept and the role of a Maintenance Steering Group (MSG) program in a commercial aviation maintenance program.  
2. Understand the concept and the role of a Reliability Centered Maintenance (RCM) program in a commercial aviation maintenance program. | • Communication  
• Numbers / Data  
• Critical thinking  
• Information Literacy |
3. Identifying the principles contained in a Maintenance Control by Reliability Methods (MCRM) program.
4. Identifying the principles contained in the theory and program of Operational Availability (OA) for commercial aircraft.

**Competency 3**: The student will learn how the principles of performance based metrics as applied to an airline maintenance program and the impacts they have on operational efficiency of commercial aircraft by:

1. Understanding the role of quality control, both testing and evaluation, and its impact on a commercial aviation maintenance program.
2. Understanding the concept of maintaining aviation equipment through cyclical scheduling process and the corresponding impact on equipment as applied to the Operational Availability (AO) of this equipment and the cost effectiveness of these maintenance programs.
3. Understanding how to implement a program of Maintenance Control by Reliability Methods (MCRM) program and the performance metrics that are established for each of the major aircraft components.
4. Identifying the record keeping requirements for the maintenance of commercial aircraft and the role this process plays in improving the cost efficiencies for aircraft operational expenses.

**Competency 4**: The student will learn the organizational structure and personnel development initiatives of a commercial airline maintenance organization by:

1. Understanding the recruitment process to select individuals to serve on a Maintenance Steering Group (MSG) committee.
2. Identifying the continuing education process in the field of aviation maintenance and how this process enhances maintenance personnel performance.

| Communication | Numbers / Data | Critical thinking | Information Literacy |
| 4. Understanding the concept of requiring redundancy in aircraft maintenance inspection actions and identifying the measurable efficiencies that such a system creates. |