![Miami Dade College logo]

AMT 0269   Aircraft Electrical Systems & Quality Control

Course Description: In this course, the student will learn the principles of basic electricity as it relates to aviation electrical systems; work with data, including computer-generated flow diagrams and spreadsheets; working with wiring & fiber optics; advanced blueprint reading with respect to performing actual tasks; and key elements of quality control. (64 Clock Hours)

Course Competency	Learning Outcomes
Competency 1: The student will learn the principles of basic electricity as it relates to aviation electrical systems by:	• Communication • Numbers / Data • Critical thinking • Information Literacy
1. Examining the fundamentals that underpin DC & AC electricity. 2. Identifying and examining aviation electrical systems. 3. Analyzing safety considerations when working with electricity in an aviation environment.	
Competency 2: The student will learn to use data, flow charts & spreadsheets by:	
1. Collecting information and evaluate its quality with respect to a project. 2. Creating schedules, flow diagrams and spreadsheets. 3. Interpreting computer-generated data as in relates to aviation environment.	
Competency 3: The student will learn to the techniques of installing wiring and fiber optics by:	

1. Demonstrating basic knowledge of uses of wiring & fiber optics. 2. Reviewing specifications for installation & troubleshooting. 3. Routing wiring & fiber optic cables per specifications. 4. Verifying completed installation and perform operational checks.	
Competency 4: The student will learn advanced blueprint reading with respect to performing actual tasks by:	
1. Demonstrating advanced knowledge of Allowance & Tolerance. 2. Identifying Cumulative Measurement and references within a Drawing. 3. Calculating Geometric Dimensioning & Tolerance.	
Competency 5: The student will demonstrate knowledge of the quality control process by:	
1. Explaining the role of external standards: ASTM, ISO, ASME, ICAO. 2. Working to approved specifications defined by regulatory bodies. 3. Validating observed data and determining best practices.	

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