COURSE OUTLINE

DEPARTMENT: Aviation Maintenance Technology

CURRICULUM: Airframe Maintenance Technology

COURSE TITLE: Advanced Airframe

COURSE NUMBER: AMT 215

TYPE OF COURSE: Occupational Preparatory

COURSE LENGTH: 1 quarter

CREDIT HOURS: 17

CLASS SIZE: 25

COURSE DESCRIPTION: The student will refine basic skills and concepts learned in earlier airframe courses in addition to performing rigging and assembly, testing, evaluation of aircraft instrument systems, advanced electrical systems, communication and navigation systems, and aircraft inspections for conformity and airworthiness in accordance with approved procedures.

COURSE OBJECTIVES: Upon completion of all lecture sessions and lab assignments, the student learns and are able to:

1. Inspect, check and troubleshoot electrical systems and components on assigned aircraft.
2. Inspect electronic communication and navigation equipment.
3. Check and repair pitot-static systems to conform to current FAR requirements.
4. Rig aircraft controls to manufacturer's specifications.
5. Inspect an aircraft for conformity and airworthiness.

AMT 215
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STUDENT LEARNING OUTCOMES:

1. Technology - Select and use appropriate aircraft technical data.
2. Human Relations - Use interpersonal skills to work in teams.
3. Critical Thinking and Problem solving - Evaluate inspection date and perform maintenance on aircraft.

PREREQUISITES: Successful completion of AMT 111,112, 113 and 214, or by permission of Unit Administrator and the instructor.

REQUIRED TEXT: Textbooks listed in student information packet.

COURSE SUBJECTS:

I. Airframe Inspection
II. Assembly and Rigging
III. Door and Interior Furnishings
IV. Aircraft Instrument Systems
V. Aircraft Communication and Navigation Systems
VI. Fire Protection Systems
VII. Aircraft Electrical Systems

Lecture time for **the program** will **be as** much **as 1/2** but not **less** than **1/4** of the total hours. **Laboratory/shop** time will **be as** much **as 3/4** but not **less** than **1/2** of the total hours.

AMT 215
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I. Aircraft Inspection

A. Applicable F.A.A. Regulations
B. Conformity-Airworthiness Inspection procedures
C. AD Note compliance
D. Inspection records

II. Assembly and Rigging

A. Assembly and rigging of fixed-wing aircraft
B. Assembly and rigging of rotary-wing aircraft
C. Structural alignment of components
D. Cable and pulley maintenance

III. Door and Interior Furnishings

IV. Aircraft Instrument Systems

A. Pitot-Static Systems

1. Applicable F.A.A. Regulations
2. Basic principles of pitot-static systems
3. System testing and repair
4. Inspection, servicing, troubleshooting and repair of electrical flight instrument systems, mechanical and electrical heading, speed, altitude, temperature, pressure and position indicating systems.

V. Aircraft Communication and Navigation Systems

A. Applicable F.A.A. and F.C.C. Regulations
B. Basic ILS and Radio Navigation Systems/VOR/ILS/Loran/Radar Beacon transponders/flight management computers, GPWS, electronic communication and navigation systems, VHF passenger address system and interphones and static discharge devices.
C. Installation of electronic equipment and antennas
D. Magnetic heading indicators
E. Principles of gyro instruments
F. Handling and installations of gyro instruments
G. Troubleshooting instrument air systems
H. Principles of autopilot servos and approach coupling systems.

VI. Fire Protection and Detection Systems

A. Inspect, check and service smoke and carbon monoxide detection systems
B. Inspect, check, service, troubleshoot and repair fire detection and extinguishing systems

VII. Airframe Electrical Systems

A. Inspect, check and repair as necessary, electrical systems and components as assigned