COURSE OUTLINE

AVI 213  Flight III  3
Course Number  Course Title  Credits

Hours: 1 / 3  Pre-requisite: AVI 114  Implementation
Lecture / Laboratory  Co-requisite: AVI 231  Fall 2010

Catalog description:
A continuation of flight training to obtain the commercial flight certificate and beginning of instrument flight training. The student completes the solo cross-country requirements. Instrument flight training will begin in Flight III. Consists of 45 hours flight time or the time needed to complete Flight Lesson 109. Be advised, additional time is regularly needed to meet completion standards and proficiency. Fee required.

Required texts/other materials:
1. Instrument Flying Handbook, U.S. Department of Transportation, Federal Aviation Administration
3. Owner’s and Operator’s Manual of Aircraft used in Training

Last revised: Spring 2014

Course coordinator: Joan Jones

Information resources:

Textbooks:
Guided Flight Discovery Instrument Commercial by Jeppeson Sanderson
The Instrument Flight Manual by William K. Kershner

Other Resources:

Other learning resources:
Learning Center and Tutoring in the Library
Student’s Flight Instructor
Gleim Software (www.gleim.com)
King Schools Software (www.kingschools.com)
Lesson Progress Checks:

_____ 89 VFR Flight Planning Review (Commercial Cross-country Check – 40 Hrs Solo Cross-country Required to Qualify)
_____ 91 Ground Trainer Pattern Flight Skills
_____ 94 Advanced Ground Trainer Pattern Flight Skills
_____ 102 Instrument Approach Review
_____ 109 Instrument Maneuvers Emphasizing Partial Panel

Course goals:

The course goals are referenced in the Commercial and Instrument Practical Test Standards. The tasks are carefully enumerated within each area of operation. Flight III requires the completion of 40 hours of solo cross-country and 35 hours of instrument flight. Please refer to these documents as they relate to these areas of operation:

Commercial Practical Test Standards:
1. Pre-flight Preparation Tasks C, D, F
2. Pre-flight Procedures Tasks A, B, C, D, F
3. Airport Operations Tasks A, B, C
4. Navigation Tasks A, B
5. Post-flight Procedures Task A

Instrument Practical Standards:
1. Pre-flight Preparation Tasks A, B
2. Pre-flight Procedures Tasks A, B, C
3. Air Traffic Control Clearances and Procedures Tasks A, B, C
4. Flight by Reference to Instruments Tasks A, B
5. Navigation Systems Task A
7. Emergency Procedures Tasks A, B, C, D
8. Post-flight Procedures Task A

GENERAL EDUCATION GOALS AND OBJECTIVES

<table>
<thead>
<tr>
<th>(√)</th>
<th>MCCC General Education Goals &amp; Objectives</th>
<th>Activities, projects, assignments, and exams that evaluate student learning of the course’s General Education goals and objectives</th>
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<tbody>
<tr>
<td></td>
<td>1. Communication – English Language: Students will communicate effectively in both speech and writing.</td>
<td>Students will interpret and comprehend weather information.</td>
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<tr>
<td>✓</td>
<td>1.1. Students will comprehend and evaluate what they read, hear and see.</td>
<td>The flight student will effectively communicate with ATC, Flight Service.</td>
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<td>✓</td>
<td>1.2. Students will state and evaluate the views and findings of others.</td>
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<tr>
<td>✓</td>
<td>1.3. Students will write and speak clearly and effectively in standard American English.</td>
<td>IFR flight plans will be accurately completed, filed and flown.</td>
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<td>1.4. Students will logically and persuasively state and support orally and in writing their points of view or findings.</td>
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<td>1.5. Students will evaluate, revise and edit their communication.</td>
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<td>1.6. Students will develop an understanding of sensory communication and other forms of non-verbal communication.</td>
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<tr>
<td><strong>2. Communication – Foreign Language:</strong> Students will have the opportunity to develop competence in a Foreign Language.</td>
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<td>2.1 Students will learn basic vocabulary, grammar and everyday conversation in a foreign language.</td>
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<td>2.2 Students will recognize the uniqueness of foreign countries, their people and their cultures.</td>
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<td>2.3 Students will gain a measure of facility at interaction in a foreign language on topics involving that language's history, its cultural and historical context, and current issues of interest to native speakers of the language.</td>
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<td><strong>3. Critical thinking, problem solving and information literacy:</strong> Students will use critical thinking and problem solving skills in analyzing information gathered through different media and from a variety of sources.</td>
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<td>✔ 3.1. Students will identify a problem and analyze it in terms of its significant parts and the information needed to solve it.</td>
<td>Weather information in relation to cross-country VFR &amp; IFR Flight will be accurately analyzed.</td>
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<td>✔ 3.2. Students will use appropriate library tools such as cataloging systems to access information in reference publications, periodicals, bibliographies and databases.</td>
<td>In flight emergencies and problems will be accurately evaluated and corrective actions taken.</td>
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<td>✔ 3.3. Students will use computers to access, analyze or present information, solve problems, and communicate with others.</td>
<td>Routes of flight will be chosen by the pilot to take into account topography, equipment, ATC routing, weather and mapping.</td>
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<td>3.4. Students will formulate and evaluate possible solutions to problems, and select and defend the chosen solutions.</td>
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<td>3.5. Students will recognize weaknesses in arguments, such as the use of false or disputable premises, suppression of contrary evidence, faulty reasoning, and emotional loading.</td>
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<td><strong>4. Ethical dimension: Students will recognize, analyze and assess ethical issues and situations.</strong></td>
<td>The student will be able to interpret accurately the Code of Federal Regulations in regard to airworthiness, recency of experience, weather minimums, airspace, safety and health.</td>
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<td>✓ 4.1. Students will identify ethical implications of an issue or a situation.</td>
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<td>✓ 4.2. Students will analyze and evaluate the strengths and weaknesses of different perspectives on an ethical issue or a situation.</td>
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<td>✓ 4.3. Students will integrate their knowledge, take a position on an ethical issue or a situation, and defend it with logical arguments.</td>
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<td><strong>5. Quantitative skills: Students will apply appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.</strong></td>
<td>The student will capably solve weight and balance problems, performance requirements, interpret charts and graphs, and draw conclusions for the safe completion for flight.</td>
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<td>✓ 5.1. Students will translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.</td>
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<td>✓ 5.2. Students will construct graphs and charts, interpret them, and draw appropriate conclusions.</td>
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<td><strong>6. Science and technology: Students will apply the scientific method of inquiry to draw conclusions based on verifiable evidence, use scientific theories and knowledge to understand the natural world, and explain the impact of scientific theories, discoveries and technological changes on society.</strong></td>
<td>The student will apply their knowledge of aerodynamics in their demonstration of flight.</td>
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<tr>
<td>✓ 6.1. Students will identify and recall scientific information and theories, and, integrating and applying this knowledge, will use the scientific method to solve problems and draw conclusions from data.</td>
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<tr>
<td>✓ 6.2. Students will distinguish between scientific theory and scientific discovery, will distinguish between science and its technological application, and will explain the impact of science and technology on society.</td>
<td>Characteristics such as $V_X$, $V_Y$, $V_{ent}$, $L/D$ max, stall speed variations, and maneuvering speed will be demonstrated, applied and understood.</td>
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6.3. Students will demonstrate a working knowledge of the subject matter of one of the physical or biological sciences.

✓ 6.4. Students will demonstrate a working knowledge of a major domain of technological application.

FLIGHT TRAINING COURSE OBJECTIVES

The student obtains the aeronautical skills and experience necessary to meet some of the requirements of an instrument pilot certificate with an airplane category rating and a single-engine land class rating.

COURSE COMPLETION STANDARDS

The course completion standards are based upon the Instrument Pilot Practical Test Standards as outlined by the Federal Aviation Administration. The student demonstrates through flight test and school records that he/she has some of the aeronautical skills and experience necessary to obtain an instrument pilot certificate with an airplane rating and a single-engine land class rating.

* DENOTES ADDITIONAL TIME MAY BE NEEDED TO MEET COMPLETION STANDARDS AND PROFICIENCY.

FLIGHT BLOCK 11 – LESSONS 81 TO 89

OBJECTIVES

BEFORE BEGINNING FLIGHT OPERATIONS IN THE GLASS COCKPIT, THE GLASS COCKPIT GROUND COURSE NEEDS TO BE COMPLETED AND A COMPLETION CERTIFICATE OBTAINED.

During this block, the student learns to conduct day and night VFR cross-country flights in a professional and safe manner. VFR flight plans must be filed for each cross-country. Students are encouraged to plan cross-countries to unfamiliar destinations. The student also completes the cross-country requirements specified in revised CFR Part 141, Appendix D.

CONTENT:

♦ Block 11 Commercial Cross-Country Requirements
♦ Flight Lessons 81 - 89

COMPLETION STANDARDS

The student must successfully complete each of the flight lessons in this Block. At the completion of this block, the student will demonstrate that he can perform cross-country operations and radio navigation, and handle critical emergency situations with the competence and judgment of a professional pilot.

FLIGHT LESSON 81 – PRIMARY AIRCRAFT

Dual Flight

INSTRUCTION

1.0 Flight *
0.5 Ground *
0.5 Instrument *

Learning Objectives:
During this lesson, the student will practice basic attitude instrument flight. He/she will learn the basic techniques used to control the airplane in straight and level cruise, straight ahead climbs and descents,
turns to a heading and unusual attitudes. The student will also become acquainted with the operations of the instrument trainer.

**CONTENT:**

1. **Pre-Flight Orientation**
   A. Pre-flight procedures for instrument training
   B. Review $V_X$, $V_Y$ en route climb speeds, and $V_A$, $V_{FE}$, $V_{NO}$ typical power settings

2. **Review**
   A. Pre-flight Walk Around (use checklist)
   B. Taxi, Run Up, Normal Takeoff
   C. Climbs, Descents, Straight and Level Cruise, Standard Rate Turns (IR)
   D. Unusual Attitude Recovery (IR)

3. **Instrument Trainer Transition**
   A. Landings and Takeoffs (VR)
   B. Leveling Off (VR)
   C. Cruise, Descents, Climbs, Turns (VR)

4. **Post-Flight Discussion**

**COMPLETION STANDARDS**

The student will display the ability to maintain control of the aircraft using basic instruments. He will demonstrate the correct recovery from critical attitudes. The student will also be able to fly the instrument trainer VR and land the aircraft with little intervention by the instructor.

**FLIGHT LESSON 82 – PRIMARY AIRCRAFT**

*SOLO*  
2.5 Flight *

**Learning Objectives:**

This cross-country lesson will be used as a means of reviewing and reinforcing the student's knowledge in the area of cross-country flight. The student will review all phases of navigation and piloting technique which will include those procedures necessary for successful commercial operation.

**CONTENT:**

1. **Pre-Flight Orientation**
   A. **Final Preparation**
      The student will arrive at the airport one hour before departure time to gather weather information for the day. This information should be recorded on the weather log and should include:
      1) Hourly aviation weather reports from airports along the intended flight route
      2) Area forecast
      3) Terminal forecast for destination airport and other airports along the route
      4) Winds aloft forecast
      5) Pilot reports
      6) **AIRMETs and SIGMETs** - in addition to the weather information, the student will research and record on the flight log all other needed route information
      7) Airport information from AIM Part 2 or Airport Facility Directory
      8) Notices to Airmen
      9) FDC NOTAMs
      10) Restrictions to En Route
      11) Area notices

   B. **Flight Log Sheet**
      After weather and route information have been gathered and recorded, the student will complete the flight log sheet and calculate estimated times en route for the trip.

   C. **Aircraft Performance**
The student will determine the useful load and maximum gross weight of the aircraft and will work out any loading problems at this time. Also, the takeoff distance from the departure airport will be calculated along with the landing distance at the first airport of intended landing. The owner’s manual should be taken so this operation can be repeated at each airport.

D. FAA Flight Plan
The student will be required to demonstrate the proper method of filing a VFR flight plan and will describe the method with which this flight plan will be opened and closed during the trip.

E. Review of Pre-flight Planning by Instructor and Diversion Procedures

2. Introduction
A. Three Leg Cross-country Flight. One leg at least 50 nautical miles
   1) Pilotage navigation (all three legs)
   2) Dead reckoning navigation (all three legs)
   3) VOR radio navigation (on least two legs)
B. Departure
The student will be required to obtain taxi clearance, airport terminal information service, or airport advisory, as appropriate. The student will record the actual takeoff time, depart the traffic area, and establish compass heading for the first leg to be flown. While climbing to a preplanned VFR cruising altitude using cruise climb airspeed, the student will activate the VFR flight plan as soon as possible with the proper facilities.
C. En Route
Using a combination of pilotage, dead reckoning, and radio navigation, the student will establish proper heading to make a desired track and maintain it within 5º throughout the flight. Cruising altitudes will be maintained within 100 feet. The student will record time over checkpoints to determine the actual groundspeed and will revise ETAs, as necessary. The student will make VFR position reports to the appropriate facility, monitor en route weather, adjust altimeter when necessary, and demonstrate good cabin management. The student should demonstrate a thorough understanding of turbulence, structural and carburetor icing, strong headwinds, rapidly deteriorating weather, how to detour around thunderstorms, and what procedures to use when encountering reduced visibilities due to haze, smoke, etc.
D. Arrivals
The student will demonstrate how to obtain VFR advisory information from a radar or no radar approach control facility, an airport advisory from the flight service station, and aeronautical advisories using UNICOM or Automatic Terminal Information Service, as the route facilitates. The student will obtain clearance before entering or departing traffic areas, landing and clearing the runway, and will obtain proper communications while taxiing to the parking area. At the end of this flight, the student will close the VFR flight plan with the appropriate complete and necessary paperwork, such as pilot logbooks and school records.

3. Review
A. Straight and Level Flight
B. Climbs and Climbing Turns
C. Level Off Procedures
D. Descents and Descending Turns
E. Emergency Procedures (mentally review)
   1) Lost procedures
   2) Adverse weather
   3) Turbulence
   4) Icing
   5) Lost communications
   6) Loss of radio navigation
   7) Partial and complete power failure
8) Engine and electrical fire
9) Aircraft and equipment malfunctions

F. Airspeed and Configuration Changes
G. Short Field and Soft Field Takeoffs and Landings
H. En route Radio Procedures
I. VOR Tracking
J. VOR Position Findings

4. Post-Flight Discussion

COMPLETION STANDARDS
The student will be expected to demonstrate the ability to safely conduct cross-country flight operations as a commercial pilot. The student should display complete familiarization with proper pre-flight action, flight planning, weather gathering and analysis, and the publications available. The student will conduct all duties of pilot in command with smoothness, accuracy, competency, and self-confidence. At the conclusion of this flight, the student will demonstrate a complete understanding of pilotage, dead reckoning navigation, radio navigation, and the use of these navigation aids in emergency situations.

FLIGHT LESSON 83 – PRIMARY AIRCRAFT

Dual Flight

INSTRUCTION
2.0 Flight *
0.5 Ground *

Learning Objectives:
The student will learn how to plan and execute a 100 nautical mile night cross-country flight to meet the commercial requirement. This will include knowledge of the operational differences between day and night navigation. This flight must be at least two hours in duration and have a total straight line distance of 100 nautical miles from the original point of departure and must be flown in night VFR conditions.

CONTENT:

1. Pre-Flight Orientation
   A. Flight Planning
      1) A course should be selected which will provide radio navigation over all or most of the intended route of flight
      2) Weather gathering should be conducted with special consideration to night operation
      3) The student should research airport lighting availability in the Facility Directory
      4) The student’s choice of visual checkpoints for the course should include special consideration to their visibility at night
      5) A flight plan will be filed for the intended route and flight

2. Review
   A. Departure
      1) Night visual references
      2) Departing the local area
      3) Establish the aircraft on course
      4) Flight from lighted areas into darkness
   B. En Route
      1) Identification of visual checkpoint
      2) Loss of visual contact with ground point
      3) Flight into restricted visibility
      4) Radio navigation
      5) Spatial disorientation
   C. Arrival
      1) Locating the airport
      2) Flight from darkness into lighted area
      3) Flying higher at night


4) Landing references
3. Post-Flight Discussion

COMPLETION STANDARDS
Through demonstrated performance, the student will display an understanding of night cross-country operations, associated hazards and precautionary methods. The student will show increased proficiency and confidence in general cross-country planning and execution.

FLIGHT LESSON 84 – PRIMARY AIRCRAFT
Solo Flight

Learning Objectives:
During this solo flight, the student will review cross-country flight and increase his experience and navigation accuracy.

CONTENT:
1. Pre-Flight Orientation
   A. Review of Pre-flight Planning by Instructor
2. Review
   A. Cross-Country Flight (at least three legs)
      1) Pilotage navigation (all legs)
      2) Dead reckoning navigation (all legs)
      3) Radio navigation (at least two legs)
   B. Flight Plan
   C. Departure
   D. En Route
   E. Operations at Unfamiliar Airports
      1) Tower controlled airport
      2) Airport with only FSS on the field
      3) Airport with only UNICOM Aeronautical Advisory Service
      4) Pilot Log completed at each airport
   F. Flight Plan
      1) Filing
      2) Activating
      3) Extending, if necessary
      4) Closing
3. Post-Flight Discussion

COMPLETION STANDARDS
This lesson is complete when the student has performed the assigned cross-country flight. During the flight, the student should continue to gain experience and accuracy in cross-country operations.

FLIGHT LESSON 85 – PRIMARY AIRCRAFT
Solo Flight

Learning Objectives:
During this solo cross-country lesson, the student will gain experience in cross-country operations involving flight to locations of substantial distance from the home airport. The course should be flown over an area in which the student has not previously flown. This flight will meet the commercial long cross-country solo requirement.
CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Planned Flight
      1) At least three legs
      2) At least 1 point 250 nautical miles from original departure point
   B. Departure
   C. En Route
      1) Pilotage
      2) Dead reckoning
      3) Radio navigation
   D. Operations at Unfamiliar Airports
      1) One airport must be at least 250 nautical miles apart
      2) The remaining airports must be at least 50 nautical miles apart from original departure point
      3) Tower controlled airport
      4) Airport with only UNICOM Aeronautical Advisory Service
   E. Flight Plan
      1) Filing
      2) Activating
      3) Closing
3. Post-Flight Discussion

COMPLETION STANDARDS
This lesson is complete when the student has performed the assigned cross-country flight. Additionally, the student should demonstrate, by the proper computations on the flight log, increased accuracy and proficiency in cross-country planning and flying.

FLIGHT LESSON 86 – PRIMARY AIRCRAFT
Solo Flight
SOLO
2.5 Flight *

Learning Objectives:
During this solo cross-country flight, the student will review navigation and operations at familiar airports. This will increase the student’s proficiency in both planning and flight.

CONTENT:
1. Pre-Flight Orientation
   A. Flight Planning
2. Review
   A. Planned Flight
      1) At least three legs
   B. Departure
   C. En route
      1) Pilotage
      2) Dead reckoning
      3) Radio navigation
   D. Operations at Unfamiliar Airports
      1) Tower controlled airport
      2) Airport with only UNICOM Aeronautical Advisory Services
   E. Flight Plan
      1) Filing
      2) Activating
COMPLETION STANDARDS
This lesson is complete when the student has performed the assigned cross-country flight. The student should show increased skill in flight preparation and execution. The instructor will evaluate the student on his ability to fly the cross-country flight according to preplanning on the flight log.

FLIGHT LESSON 87 – PRIMARY AIRCRAFT
Solo Flight

Learning Objectives:
During this solo lesson, the student will review cross-country procedures to obtain greater proficiency in the use of the three methods of navigation.

CONTENT:
1. Pre-Flight Orientation
   A. Review of Pre-flight Planning by Instructor
2. Review
   A. Cross-Country Flight (at least three legs)
      1) Pilotage navigation (all legs)
      2) Dead reckoning navigation (all legs)
      3) Radio navigation (at least two legs)
   B. Flight Planning
   C. Departure
   D. En Route
   E. Operations at Unfamiliar Airports
      1) Tower controlled airport
      2) Airport with only FSS on the field
      3) Airport with only UNICOM Aeronautical Advisory Service
      4) Pilot log completed at each airport
   F. Flight Plan
      1) Filing
      2) Activating
      3) Closing
3. Post-Flight Discussion

COMPLETION STANDARDS
This lesson is complete when the student has performed the cross-country flight. During the flight, the student should attempt to increase accuracy in maintaining the preplanned course and in computation of ETAs.

FLIGHT LESSON 88 – PRIMARY AIRCRAFT
Solo Flight

Learning Objectives:
During this solo cross-country flight, the student will define his cross-country technique based on flight instructor critique from the previous dual flight. The route will be selected by the student, approved by the instructor, and should be a trip which the student has not previously flown.

CONTENT:
1. Pre-Flight Orientation
   A. Flight Planning
B. Review of Flight Plan by Instructor

2. Review
   A. Cross-Country Flight (at least three legs)
   B. Departure
   C. En Route
      1) Pilotage
      2) Dead reckoning
      3) Radio navigation
   D. Operations at Unfamiliar Airports
      1) One tower controlled airport
      2) One airport with only FSS on the field
      3) Airports with only UNICOM facilities
   E. Flight Plan
      1) Filing
      2) Activating
      3) Closing

3. Post-Flight Discussion

COMPLETION STANDARDS
This lesson is complete when the student has performed the assigned cross-country flight. The student should realize during this last solo cross-country an increase in proficiency in navigation, planning, and cross-country flying to the level of a commercial pilot.

FLIGHT LESSON 89 – PRIMARY AIRCRAFT

PROGRESS CHECK

Dual Flight
1.0 Flight *
0.5 Ground *

Learning Objectives:
This flight lesson will be conducted by the Chief Instructor or his assistant as a progress check of the student's cross-country abilities and radio navigation to determine that he has attained the competency of a commercial pilot. A cross-country navigation plan and log shall be prepared prior to the flight. The flight review will utilize the navigation log in the elements for the review in the progress check.

CONTENT:
1. Pre-Flight Orientation
   A. National Airspace system

2. Review
   A. Flight Planning
      1. Weight and Balance
   B. Aircraft Pre-flight
   C. Takeoff
   D. Area Departure
   E. VOR Bracketing and Tracking
   F. Lost Procedures
   G. Emergency and Critical Situations Procedures
   H. Diversion Procedures
   I. Normal and Crosswind Takeoffs And Landings
   J. Short Field And Soft Field Takeoffs And Landings
   K. Unfamiliar Airport Operations

3. Post-Flight Discussion

COMPLETION STANDARDS
The student will demonstrate that he can perform cross-country operations and radio navigation, and can handle critical emergency situations with the competency and judgment of a commercial pilot. The successful outcome of the flight will not be in question at any time.

**FLIGHT BLOCK 12 - LESSONS 90**

**OBJECTIVES**

During this block, with the PCATD and/or flight training device, the student learns to use the communication and navigation facilities available to the IFR pilot. He obtains a thorough knowledge of the airplane instruments, systems, and attitude instrument flying. This is combined with the practice of attitude instrument flying to prepare the student for the introduction of radio navigation during IFR flight.

**CONTENT:**

- Block 12 Instrument Training
- Flight Lessons 90 - 94

**COMPLETION STANDARDS**

The student will display proficiency and judgment in all attitude instrument flying maneuvers and procedures practiced in this block. He will demonstrate his understanding of radio navigation systems, indicating his readiness to begin radio navigation in the airplane.

**FLIGHT LESSON 90 – INSTRUMENT TRAINING DEVICE**

*Flight Simulator*

**INSTRUCTION**

1.3 Simulator *

0.3 Ground *

**Learning Objectives:**

During the lesson, the student is introduced to the instrument training device. Additionally, he will be introduced to basic attitude instrument flight in the training device and will learn the technique for establishing power settings for the various phases of flight.

**CONTENT:**

1. **Pre-Flight Orientation**

   This includes pre-flight inspection of the training device, its operating characteristics, and the cabin. The student will be shown the locations and procedures for an instrument cockpit check including operation of throttle, propeller, mixture control, trim control, and all flight instruments.

2. **Introduction**

   A. Engine Start and Instrument Cockpit Check
   B. Basic Instrument Flight Maneuvers
      1) Constant airspeed climb
      2) Straight and level flight
      3) Standard rate turns and timed turns
      4) Power settings
      5) Constant airspeed
      6) Constant airspeed descents
   C. Pattern A
   D. Configuration and airspeed changes
   E. Steep turns

3. **Post-Flight Discussion**
COMPLETION STANDARDS
The student will display understanding of the use of the checklist, safety considerations of engine starting, instrument indications on the ground, and run up. The student will be required to display understanding of the proper procedures for entering and executing the basic instrument flight maneuvers. Roll out from turns should be within 10º of the preselected heading. Altitude will be held within 100 feet and airspeed within 10 knots of assigned airspeed.

FLIGHT LESSON 91 – INSTRUMENT TRAINING DEVICE
Dual Flight Simulator Progress Check

Learning Objectives:
This progress check, conducted by the Chief Instructor or his assistant, evaluates the student’s attitude instrument flying skills to aid in determining areas in need of additional practice.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Engine Start and Instrument Cockpit Check
   B. Basic Instrument Flight Maneuvers
      1. Constant Airspeed climb
      2. Straight and Level Flight
      3. Standard Rate Turns and Timed Turns
      4. Power Settings
      5. Constant Airspeed
      6. Constant Airspeed Descents
   C. Pattern A
   D. Configuration and Airspeed Changes
   E. Steep Turns
3. Post-Flight Discussion

COMPLETION STANDARDS
The student will display proficiency and judgment in all attitude instrument flying maneuvers and procedures, indicating competency for commencing airplane radio navigation. Where appropriate, the student will maintain altitude within 100 feet, headings with 10º and climb or descent rates within 200 fpm of the desired values.

FLIGHT LESSON 92 – INSTRUMENT TRAINING DEVICE
Flight Simulator

Learning Objectives:
The student will acquire additional proficiency in attitude instrument flying and he will learn the basics of IFR radio communications.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Starting the Engine
   B. Level Off Procedures
   C. Power Settings
   D. Straight and Level
E. Standard Rate Turns

3. Introduction
   A. En Route Cruise Descent, Approach Cruise Descent and Missed Approach Climb
   B. Pattern B
   C. NOS and Jeppesen Approach Plates

4. Post-Flight Discussion

COMPLETION STANDARDS
The student will be able to perform leveling off procedures, straight and level flight and standard rate turns. The student will also be familiar with IFR communications procedures.

FLIGHT LESSON 93 – INSTRUMENT TRAINING DEVICE
Flight Simulator

Learning Objectives:
During this lesson, the student will practice basic attitude instrument flight to gain added proficiency. Additionally, he will learn the basic techniques used to control airplane attitude using only the emergency panel. He also will learn to comply with the provisions of CFR 91.185 concerning communications failure.

CONTENT:
1. Pre-Flight Orientation
   A. Instrument Approach Plate Review
2. Review
   A. Power Settings
      1) En route cruise and descent
      2) Approach cruise
      3) Descent and missed approach climb
   B. Pattern B
3. Post-Flight Discussion

COMPLETION STANDARDS
The student will acquire further proficiency in IFR scan techniques. The student will also demonstrate the ability to read and understand instrument approach plates. Communications failure procedures shall be explained by the student to the satisfaction of the instructor.

FLIGHT LESSON 94 – INSTRUMENT TRAINING DEVICE
Dual Flight Simulator Progress Check

Learning Objectives:
This progress check, conducted by the Chief Instructor or his assistant, evaluates the student’s performance of all maneuvers learned in previous lessons.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Pattern B
   B. Scan Proficiency
   C. Power Settings
   D. NOS and Jeppesen Approach Plates
3. Post-Flight Discussion
COMPLETION STANDARDS
The student will demonstrate mastery of the advanced simulator pattern, as well as proficiency in maintaining airspeed within 5 knots of the appropriate airspeed and roll out with 10º of the desired heading. Loss or gain of altitude will be restricted to within 100 feet and heading controlled within 5º while in straight flight configuration.

FLIGHT BLOCK 13 - LESSONS 95 AND 96

OBJECTIVES
Throughout this block the student learns the basics of IFR navigation as well as holding patterns and procedure turns. He also learns to accurately navigate by VOR and ADF.

CONTENT:
- Block 13 Flight Simulation Instrument Training
- Flight Lessons 95 - 96

COMPLETION STANDARDS
At the completion of this block the student will successfully demonstrate the ability to locate himself and proceed via VOR or ADF to a navigational fix and prepare to shoot an IFR approach.

FLIGHT LESSON 95 – INSTRUMENT TRAINING DEVICE

*INSTRUCTION 1.5 Simulator*

**Learning Objectives:**
In this lesson, the student will review maneuvers and procedures learned in previous lessons. In addition to review items, the student will be introduced to VOR, ADF, and GPS orientation procedures and will learn to orient himself from an unknown position with respect to VHF and low frequency navigational aids. From the established position, the student will learn how to proceed to the navigational fixes via simulated clearance routes prescribed by the instructor.

**CONTENT:**
1. Pre-Flight Orientation
2. Review
   A. En Route Cruise and Descent, Approach Cruise and Descent, and Climbs with Proper Power Settings.
3. Introduction
   A. VOR, ADF, and GPS Orientations
   B. VOR Holding Patterns
   C. Radio Communications
   D. IFR Pre-takeoff Checklist including GPS Flight Plans
4. Post-Flight Discussion

**COMPLETION STANDARDS**
The student will demonstrate the ability to locate himself and proceed to the hold via the instructor’s clearance. During the radio navigation and orientation procedures the student will be expected to display proficiency in maintaining airspeed within 5 knots of the appropriate airspeed during the performance of all maneuvers. Loss or gain of altitude will be restricted to within 100
feet and heading controlled within 5º while in straight flight configuration. Understanding of VOR holds and holding pattern entries is also required.

**FLIGHT LESSON 96 – INSTRUMENT TRAINING DEVICE**  
*Flight Simulator*  
1.5 Simulator *

**Learning Objectives:**  
In this lesson the student will review VOR, GPS and ADF navigational procedures including bracketing, tracking and VOR holds. The student will also be introduced to ADF tracking and holds. Simulated wind conditions of up to 20 knots should be used.

**CONTENT:**  
1. Pre-Flight Orientation  
2. Review  
   A. VOR Tracking and Bracketing  
   B. VOR Holds  
   C. GPS Course Tracking and Holds  
3. Introduction  
   A. ADF Tracking and Bracketing  
   B. ADF Holds  
4. Post-Flight Discussion

**COMPLETION STANDARDS**  
The student should demonstrate understanding and proficiency of VOR, GPS and ADF bracketing, tracking and holding patterns. Throughout the maneuvers, airspeed should be maintained within 5 knots and altitude within 100 feet. These conditions should be met in up to a 20 knot simulated crosswind. The student must have ten (10) hours logged in the simulator to proceed.

**FLIGHT BLOCK 14 - LESSONS 97 TO 102**

**OBJECTIVES**

The student will be introduced to the operations of glass cockpit and will learn the correct procedures to plan IFR cross-country flights, meet IFR emergencies, and perform IFR holding patterns and approaches. Proficiency in the approach phase of the IFR system will be emphasized. This knowledge prepares the student for IFR cross-country flights introduced in Block 15.

**CONTENT:**

- Block 14 Instrument Training  
- Flight Lessons 97 - 102

**COMPLETION STANDARDS**

The student must successfully complete each of the flight study units in Block 14. At the completion of Block 14, the student will demonstrate the correct procedures to execute precision and non-precision approaches and standard and non-standard holding patterns.
FLIGHT LESSON 97 – INSTRUMENT AIRCRAFT

**Dual Flight**

**INSTRUCTION**

1.2 Flight *
0.5 Ground *
0.8 Instrument *

**Learning Objectives:**
During this lesson, the student will practice basic attitude Instrument flight. Additionally, he/she will learn basic techniques to control the airplane in straight and level cruise, straight ahead climbs and descents, and turns to a heading.

**CONTENT:**
1. Pre-Flight Orientation
   A. Pre-flight Procedures for Instrument Training
   B. Review $V_X, V_Y$ En Route Climb Speeds and $V_A, V_{FE}, V_{NO}$ typical power settings
2. Review
   A. Pre-flight Walk Around (use checklist)
   B. Taxi, Run Up, Normal Takeoff
   C. Climbs, Descents, Straight and Level, Cruise, Standard Rate Turns (VR & IR)
   D. Stalls
   E. Minimum Controllable Airspeed
3. Instrument Trainer Transition
   A. Landings and Takeoffs (VR & IR)
   B. Leveling Off (VR)
   C. Cruise, Descents, Climbs, Turns (VR & IR)
4. Post-Flight Discussion

**COMPLETION STANDARDS**
The student will display the ability to maintain control of the aircraft solely by reference to the aircraft instruments.

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FLIGHT LESSON 98 – INSTRUMENT AIRCRAFT

**Dual Flight**

**INSTRUCTION**

1.2 Flight *
0.8 Instrument *

**Learning Objectives:**
The student will learn the proper method of controlling the aircraft by sole reference to the instruments while executing holding procedures. The student will learn and practice the various methods of entering the standard and non-standard holding patterns, along with the proper method of departing the assigned holding pattern. He will also learn to interpret and comply with ATC clearances regarding holding patterns. Proper radar/non-radar radio reports will be reviewed.

**CONTENT:**
1. Pre-Flight Orientation & Aircraft Pre-Flight Procedures
2. Review
   A. Straight and Level Flight
   B. Level Standard Rate Turns (Left and Right)
   C. VOR Orientation
3. Introduction
   A. Holding Pattern Entries
   B. Holding Pattern
      1) VOR and/or DME
2) Unusual Attitude Recovery
3) Intersection
C. Power Settings
4. Post-Flight Discussion

COMPLETION STANDARDS
The student will display understanding of the holding pattern entries. He will select the proper holding pattern entry within 5°. Altitude will be maintained within 100 feet, airspeed within 10 knots, and heading within 5°. The student will be expected to adjust for the wind so that the inbound leg will be one minute in duration. Appropriate power settings will be used.

FLIGHT LESSON 99 – INSTRUMENT AIRCRAFT

Dual Flight

Learning Objectives:
During this lesson, the student will learn the procedures necessary to program GPS and follow a published VOR instrument approach procedure down to the minimum descent altitude (MDA), for the specified airport in use. Upon completion of the timed approach, the student will learn to execute a missed approach as outlined on the approach chart.

This airplane lesson will be conducted as a review with particular emphasis on increasing the student’s understanding of holding pattern entries.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Straight and Level Flight
   B. Standard Rate Turns (Left and Right)
   C. VOR Orientation
   D. Holding Patterns
   E. Power Settings
   F. Unusual Attitude Recovery
3. Introduction
   A. Programming the Procedure
   B. VOR Approaches
   C. Missed Approaches
4. Post-Flight Discussion

COMPLETION STANDARDS
Altitude will be held within 100 feet of the prescribed altitudes during the initial and intermediate approach segment; no more than 50 feet above specified minimum altitudes and never below MDA after passing the final approach fix on a non-precision approach. The student will display, through performance and discussion, a complete understanding of all of the approach segments and minimums, as shown on the approach charts.
Learning Objectives:
This lesson will consist of a review of the VOR approach procedures. The student will learn the associated similarities of the VOR, localizer, and ILS approaches. The student will learn to execute localizer and ILS approaches down to the lowest MDA or DH that the radio navigation equipment allows.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Straight and Level Flight
   B. Standard Rate Turns
   C. VOR Orientation
   D. VOR Approaches
   E. Missed Approach Procedures
   F. Programming Procedures
3. Introduction
   A. ILS and Localizer Approaches
4. Post-Flight Discussion

Completion Standards
The student will display a continued increase in proficiency in programming and approach procedures. The altitude maintained on the final approach segment of a non-precision approach will be no more than 50 feet above specified minimum altitude and never below MDA. On a precision approach, the altitude will be maintained within plus or minus two dots on the glide slope and no variance below the glide slope after the middle marker. The localizer tracking will be held within plus or minus two degrees of the localizer course.

Learning Objectives:
During the lesson, the student will improve his proficiency and understanding of the procedures necessary to follow a published instrument approach procedure down to the minimum descent altitude (MDA) or decision height (DH) for the airports used. The student will learn to perform the transition from instrument to visual references and complete a circling or straight in landing appropriate to the active runway in use. Additionally, radar approaches are introduced to familiarize the student with this procedure.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Standard Rate Turns
   B. VOR Orientation
   C. Holding Patterns
   D. VOR and ILS Approaches
3. Introduction
   A. Radar Approaches
   B. IFR Flight Planning
1) En Route Cruise and Descent  
2) Approach Cruise and Descent  
3) Missed Approach Climb  

C. DME ARC  
D. Circling Approach  

4. Post-Flight Discussion  

COMPLETION STANDARDS  
The student will be expected to arrive at the minimum authorized altitude within the visibility minimum distance of the runway’s threshold or airport boundary for circling approaches during the execution of VOR approaches. While executing ILS approaches, the student will be expected to arrive at authorized minimums in position for a prescribed altitude during the initial and intermediate approach segments; no more than 50 feet above specified minimum altitudes after passing the final approach fix and never below MDA on the non-precision approach. On a precision approach, the altitude should be maintained within plus or minus one dot on the glide slope and no variance below the glide slope after the middle marker. The student also will demonstrate the ability to comply with altitude restrictions and controller instructions during radar approaches.  

FLIGHT LESSON 102 – INSTRUMENT AIRCRAFT  

Dual Flight  

PROGRESS CHECK  
1.2 Flight *  
0.5 Ground *  
1.0 Instrument *  

Learning Objectives:  
This flight lesson is a progress check conducted by the Chief Instructor or his assistant to determine if the student has reached the proficiency level necessary to begin IFR cross-country instruction in the following block.  

CONTENT:  
1. Pre-Flight Orientation  
2. Review  
   A. VOR Orientation  
   B. DME ARC  
   C. Holding Patterns  
   D. VOR Approaches  
   E. ILS Approaches  
   F. GPS Approaches  
   G. Circling Approach  
   H. Unusual Attitude Recovery  
3. Post-Flight Discussion  

COMPLETION STANDARDS  
The student will display a complete understanding and increase in proficiency in all of the VOR and ILS approach procedures. Additionally, he will demonstrate an understanding of VOR/DME ARCs. The altitude maintained on the final approach segment of the non-precision approach will be no more than 50 feet above specific minimum altitudes and never below MDA.  

FLIGHT BLOCK 15 - LESSONS 103 TO 109  

OBJECTIVES
During this phase, the student learns to conduct IFR cross-country flights and completes the final stage of his instrument training. Additionally, review is provided so the student can increase and maintain his proficiency during the performance of previously learned procedures. The student will now assume radio responsibilities. Loss of primary instrument procedures will be heavily emphasized during this phase. The student will be introduced to circle to land procedures.

**CONTENT:**

- Block 15 Instrument Training and IFR Cross-Country Flying
- Flight Lessons 103 – 109
- Instructional Ground Lesson

**COMPLETION STANDARDS**

The student must possess the knowledge and proficiency to act as pilot in command during IFR flight and meet the proficiency of the Practical Test Standards.

**FLIGHT LESSON 103 – INSTRUMENT AIRCRAFT**

*Dual Flight*

**INSTRUCTION**

1.2 Flight *
0.9 Instrument *

**Learning Objectives:**
In this lesson, the student reviews attitude instrument flying and VOR procedures to increase his proficiency and understanding prior to beginning cross-country flight in Flight Lesson 104.

**CONTENT:**

1. Pre-Flight Orientation – Discussion of Autopilot Programming
2. Review
   - A. Straight and Level Flight
   - B. Standard Rate Turns
   - C. Level Off Procedures
   - D. VOR Tracking and Bracketing
   - E. Programming Approaches
   - F. Unusual Attitude Recovery

3. Post-Flight Discussion

**COMPLETION STANDARDS**
The student will display an understanding of basic instrument flying and VOR procedures and demonstrate ability to track the centerline of specified airway and radials. CDI indications must be within 2º of the selected course. The student also will show increased proficiency in maintaining attitude control using only the emergency panel.

**FLIGHT LESSON 104 – INSTRUMENT AIRCRAFT**

*Dual Flight*

**INSTRUCTION**

2.5 Flight *
0.7 Ground *
2.3 Instrument *

**Learning Objectives:**
During this lesson, the student will be introduced to basic IFR cross-country procedures, including departure, en route, and arrival. This introduction will aid the student in obtaining the maximum benefit from the extended cross-country which follows in Flight Lesson 105.
CONTENT:
1. Pre-Flight Orientation
2. Introduction and Review
   A. IFR Cross-Country Planning
   B. Filing and IFR Flight Plan
   C. Obtaining an IFR Clearance
   D. IFR Departure
      1) Use of SIDs
      2) Use of Radar
   E. VOR Navigation
   F. Holding
   G. En Route Radio Communications Procedures
   H. Non-Radar Position Reporting Requirements
   I. Emergency Procedures – Radio Communication Failure
   J. IFR Arrival
   K. Precision and/or Non-Precision Approaches
3. Post-Flight Discussion

COMPLETION STANDARDS
The student will demonstrate an understanding of all procedures and maneuvers required on this IFR cross-country flight. He will possess a working knowledge of the appropriate CFRs and other sources of necessary data, including NWS reports and forecasts, the AIM, en route charts, and approach charts.

FLIGHT LESSON 105 – INSTRUMENT AIRCRAFT
Dual Flight

INSTRUCTION
4.0 Flight *
0.5 Ground *
3.8 Instrument *

Learning Objectives:
During this cross-country flight, the student will apply all prior learning experiences in the instrument training program. The student will learn the proper procedures for planning and flying extended IFR flights. The trips will be at least 250 nautical miles on Federal airways, including VOR and ILS approaches at different airports. The route will be TTN-ESN-LNS-TTN or TTN-IPT-CXY-TTN or a similar approved route. This flight will satisfy the dual cross-country requirements in CFR 141 Appendix C Section 3. Partial panel operations will be a continuous part of this flight.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. IFR Flight Planning
   B. En Route Cruise and Descent, Approach Cruise and Descent, and Power Settings
   C. Level Off Procedures
   D. Emergency Procedures
   E. En Route Radio Communications Procedures
   F. VOR and GPS Approaches
   G. VOR Tracking and Bracketing
   H. Non-Radar Position Reporting Requirements
   I. Final Preparation
      1) Weather analysis and decision making
      2) Notices to airmen
      3) Completion of flight log
   J. Route and Airports
      1) Flight log must include:
K. Aircraft Performance
   1) Weight and balance computations
   2) Takeoff and landing distances

L. FAA Flight Plan
   1) Filing
   2) Cancelling

3. Introduction
   A. Departure
      1) Taxi clearance
      2) En route clearance
      3) ATIS or airport advisory
      4) ATC communications
   B. En route
      1) Navigation
      2) Communication
      3) Discussion of weather avoidance
      4) Planning to an alternate
   C. Emergency Procedures
      1) Communications failure
      2) Engine failure
   D. Arrival
      1) ATC clearance
      2) Missed approach
      3) Landing clearance
      4) Tie-down
      5) Paperwork

4. Post-Flight Discussion

COMPLETION STANDARDS
The student will demonstrate the ability to safely conduct IFR cross-country flight operations as pilot in command of the airplane. The student will display complete familiarity with the proper pre-flight action, flight planning, weather analysis, and publications available. The student will conduct all duties of pilot in command with smoothness, understanding, accuracy, and competence. At the conclusion of this flight, the student will demonstrate complete understanding of IFR radio communications and navigation procedures and the use of altitudes and nav aids in an emergency, as stated in CFR 91.185.

FLIGHT LESSON 106 – INSTRUMENT AIRCRAFT

INSTRUCTION
1.5 Flight *
1.2 Instrument *

Learning Objectives:
This lesson will be conducted as a review of the attitude instrument flying maneuvers and radio navigation procedures so the student can gain added proficiency and the instructor can evaluate his progress.

CONTENT:
1. Pre-Flight Orientation
2. Review
   A. Attitude Instrument Flying
      1) Unusual attitudes
   B. Partial Panel
      1) Straight and level
      2) Timed turns
      3) Compass turns
      4) Climbs and descents
      5) Instrument and systems
      6) Critical attitude recoveries
   C. VOR Tracking
   D. VOR Orientation
   E. Holding Patterns
   F. Instrument Approaches
      1) VOR approaches
      2) ILS approaches
      3) DME-ARC

3. Post-Flight Standards

COMPLETION STANDARDS
The student will display competency in all maneuvers in the airplane. The student, through demonstration and explanation, will be expected to display an understanding of procedures to be used in holding patterns and instrument approach procedures.

FLIGHT LESSON 107 – INSTRUMENT AIRCRAFT

INSTRUCTION
1.1 Flight*
1.0 Instrument *

Learning Objectives:
During this flight lesson, the student will conduct instrument approach procedures utilizing the autopilot. He will maneuver his aircraft with respect to transitions and approach segments using the autopilot as the primary means of navigation.

CONTENT:
1. Pre-Flight Orientation – Discussion of Autopilot Programming
2. Application for:
   A. Holding Patterns
   B. Procedure Turns
   C. VOR Approaches
   D. ILS Approaches
   E. Radar Approaches
   F. DME-ARC
   G. GPS Approaches
   H. Missed Approach Procedures

3. Post-Flight Discussion

COMPLETION STANDARDS
The student will be expected to arrive at the minimum authorized altitude within the visibility minimum distance of the runway’s threshold or airport boundary for circling approaches during the execution of non-precision approaches. While executing precision approaches, the student will be expected to arrive at authorized minimums in position for a straight in landing. The altitude will be held within 100 feet of the prescribed altitude during the initial and intermediate approach
segments; no more than 50 feet above specified minimum altitudes after passing the final approach fix and never below MDA on the non-precision approach. On a precision approach, the altitude should be maintained within plus or minus one dot on the glide slope and with no variation below the glide slope 20 seconds before missed approach point. During radar approaches the student will accurately comply with all prescribed altitudes and controlled instructions.

FLIGHT LESSON 108 – INSTRUMENT AIRCRAFT
Dual Flight

**Learning Objectives:**
The objective of this lesson is to prepare the student for the Block 15 progress check. The lesson will review all areas of flight training that pertain to the instrument pilot as per the Practical Test Standards.

**CONTENT:**
1. Pre-Flight Orientation
   A. The student and flight instructor will discuss the operational aspects of IFR Flight to determine the student’s knowledge of the practical test standards.
2. Flight
   A. This flight will consist of a thorough review of all areas of training to insure the student meets the instrument proficiency requirements as per the practical test standards.
3. Post-Flight Discussion

**COMPLETION STANDARDS**
The student will demonstrate the knowledge and flight skills as outlined in the practical test standards.

**BRIEFING LESSON**

During this briefing lesson, the student will review the entire overview of instrument pilot operations, privileges, and responsibilities as per the Practical Test Standards. The student will prepare for this lesson by covering instrument pilot operations and typical instrument oral examination questions.

Before this lesson, the following will be examined for completeness and accuracy.

**CONTENT:**
1. Review
   A. Flight Planning
   B. Regulations
   C. En Route Charts
   D. Instrument Approach Procedure
   E. Emergencies
   F. Aircraft
      1) Specifications
      2) Performance
      3) Equipment
      4) Competence with PFD/MFD
5) Use of Autopilot
   a. Errors during MAP

**COMPLETION STANDARDS**
The instructor will determine, at the completion of this lesson, if the student is qualified in all areas of understanding to perform as a competent instrument pilot. This briefing lesson must immediately precede Flight Lesson 109.

**FLIGHT LESSON 109 – INSTRUMENT AIRCRAFT**

*Dual Flight*

**Learning Objectives:**
This lesson will be conducted as a progress check by the Chief Instructor or his assistant to determine the student's proficiency and understanding of all maneuvers and procedures necessary to conduct flight operations as an instrument pilot. The emphasis on this lesson will also include partial panel operations.

**CONTENT:**
1. **Pre-Flight Preparation**
   This oral examination will determine whether the student exhibits the correct knowledge to act as Pilot in Command under IFR in the National Airspace System describing pilot qualifications, weather information, and cross-country flight planning as per the Practical Test Standards.
2. **Progress Check**
   This flight will be conducted according to the Instrument Pilot Practical Test Standards, with evaluation to be made by the Chief Instructor or his assistant as to the student's ability to perform successfully the duties of an instrument pilot.
3. **Post-Flight Discussion**

**COMPLETION STANDARDS**
This lesson is complete when the student displays the ability to perform each IFR maneuver and procedure with the proficiency and safety of a competent instrument pilot. At all times during the progress check, the student must demonstrate good judgment and a thorough understanding of IFR operations in the national airspace system. The student's performance during each maneuver and procedure must meet or exceed the minimum acceptable performance standards outlined in the current Instrument Pilot Practical Test Standards.

**ACADEMIC INTEGRITY STATEMENT OMB 210**

Mercer County Community College is committed to Academic Integrity -- the honest, fair and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work and that faculty and academic support services staff members will take reasonable precautions to prevent the opportunity for academic dishonesty. The college recognizes the following general categories of violations of Academic Integrity, with representative examples of each. Academic Integrity is violated whenever a student:

A. Uses or obtains unauthorized assistance in any academic work.
   - copying from another student's exam
 using notes, books, electronic devices or other aids of any kind during an exam when prohibited
 stealing an exam or possessing a stolen copy of an exam.

B. Gives fraudulent assistance to another student
 completing a graded academic activity or taking an exam for someone else.
 giving answers to or sharing answers with another student before, during or after an exam or other graded academic activity.
 sharing answers during an exam by using a system of signals.

C. Knowingly represents the work of others as his/her own, or represents previously completed academic work as current.
 submitting a paper or other academic work for credit which includes words, ideas, data or creative work of others without acknowledging the source.
 using another author’s words without enclosing them in quotation marks, without paraphrasing them or without citing the source appropriately.
 presenting another individual's work as one's own.
 submitting the same paper or academic assignment to another class without the permission of the instructor.

D. Fabricates data in support of an academic assignment.
 falsifying bibliographic entries.
 submitting any academic assignment which contains falsified or fabricated data or results.

E. Inappropriately or unethically uses technological means to gain academic advantage.
 inappropriately or unethically acquiring material via the Internet or by any other means.
 using any electronic or hidden devices for communication during an exam.

Each instructor and academic support service area is authorized to establish specific guidelines consistent with this policy.

CONSEQUENCES FOR VIOLATIONS OF ACADEMIC INTEGRITY

For a single violation, the faculty member will determine the course of action to be followed. This may include assigning a lower grade on the assignment, assigning a lower final course grade, failing the student in the course, or other penalty appropriate to the violation. In all cases, the instructor shall notify the Chair of the Academic Integrity Committee of the violation and the penalty imposed. When two (or more) violations of academic integrity are reported on a student, the Academic Integrity Committee (AIC) may impose disciplinary penalties beyond those imposed by the course instructors. The student shall have the right to a hearing before the AIC or a designated AIC subcommittee.

APPEALS

The student has a right to appeal the decision of the instructor or the Academic Integrity Committee. Judicial procedures governing violations of Academic Integrity are contained in the Student Handbook.

Approved by the MCCC Board of Trustees March 18, 2004
CLASSROOM CONDUCT STATEMENT

It is the student's responsibility to attend all of their classes. If they miss a class meeting for any reason, students are responsible for all content that is covered, for announcements made in their absence, and for acquiring any materials that have been distributed in class. If students walk into a class after it has begun, it is expected that they choose a seat close to where they entered the room so that they do not disrupt the class meeting.

Students are expected to follow ordinary rules of courtesy during class sessions. Engaging in private, side conversations during class time is distracting to other students and to the instructor. Leaving class early without having informed the instructor prior to class is not appropriate. Unless there is an emergency, leaving class and returning while the class is in session is not acceptable behavior. Disruptive behavior of any type, including sharpening pencils during class while someone is speaking, is not appropriate.

The college welcomes all students into an environment that creates a sense of community of pride and respect; we are all here to work cooperatively and to learn together.