I, ________________________________, have acquired and have in my possession a copy of the training course outline, training syllabus, and safety procedures and practices for AVIA 2341, Secondary Flying.

________________________________________
Student Signature

________________________________________
Flight Instructor Signature

________________________________________
Chief Flight Instructor Signature
This course fulfills the requirements of 14 CFR, Section 141, Appendix D for obtaining a commercial pilot certificate with airplane category, single engine land class rating.

**COURSE OBJECTIVE:** The student will obtain the knowledge, skill, and aeronautical experience necessary to meet the requirements for a commercial pilot certificate with an airplane category rating and single-engine land class rating.

**COURSE COMPLETION STANDARD:** The student will demonstrate through written tests, oral tests, flight tests, and show through appropriate records that the knowledge, skill, and experience requirements necessary to obtain a commercial pilot certificate have been met. The specific requirements for each test and stage check are described in the appropriate syllabus lesson. At the completion of the ground school the student will pass the end of course test with a score of 70%. This test is the equivalent of the FAA commercial pilot knowledge test. At the completion of flight training the student will pass the Commercial Pilot practical test, based on the current Commercial Pilot Practical Test Standards (PTS).

**AIRPORT:** Max Westheimer Airport is the operations base for training in this course. Max Westheimer Airport has a hard surface runway and meets the requirements of 14 CFR, Section 141.38 for day and night operation. Fuel is available from 7:00 A.M. to 10:00 P.M. daily. Maintenance is available from 6:30 A.M. to 3:00 P.M. Monday through Friday and at other times on call. Training will originate at Max Westheimer Airport.

**AIRCRAFT:** The aircraft to be used in this course of training is the PA28-161, PA28-181, PA28R-200 and C-152. They meet the requirements of 14 CFR, Section 141.39. VFR airplanes are equipped for day and night VFR as specified in 14 CFR, Section 91.205. Airplanes used for instrument training are equipped for IFR as specified in 14 CFR, 91.205. Radio equipment will consist of at least one VHF transceiver and at least one VOR receiver.
CHIEF FLIGHT INSTRUCTOR: The Chief Flight Instructor will meet the requirements of 14 CFR, Section 141.35. (s)he must hold at least a commercial pilot certificate with an airplane category, single engine land rating and airplane instrument rating. In addition, (s)he must hold a flight instructor/instrument certificate with an airplane category rating and a single-engine class rating and have at least a second class medical certificate. See Appendix A of this Training Course Outline for Chief Flight Instructor designation.

ASSISTANT CHIEF FLIGHT INSTRUCTOR: The Assistant Chief Flight Instructor will meet the requirements of 14 CFR, Section 141.36. (S)he must hold at least a commercial pilot certificate with an airplane category, single engine land rating and airplane instrument rating. In addition, (s)he must hold a flight instructor/instrument certificate with an airplane category rating and a single-engine class rating and have at least a second class medical certificate. See Appendix A of this Training Course Outline for Assistant Chief Flight Instructor designation.

CHECK INSTRUCTORS: Check instructors will meet the requirements of 14 CFR, Section 141.37. S(he) must hold at least a commercial pilot certificate with an airplane category, single engine land rating and airplane instrument rating. In addition, (s)he must hold a flight instructor/instrument certificate with an airplane category rating and single-engine class rating and have at least a second class medical certificate.

FLIGHT INSTRUCTORS: Each flight instructor must hold at least a commercial pilot certificate with an airplane category, single engine land rating and airplane instrument rating. In addition, (s)he must hold a flight instructor certificate with an airplane category rating and a single-engine class rating and have at least a second class medical certificate. For Stages V and X, (s)he must also hold an instrument instructor rating.

CHIEF GROUND INSTRUCTOR: The Chief Ground Instructor will meet the requirements of 14 CFR, Section 141.35(e). See Appendix A of this Training Course Outline for Chief Ground Instructor designation.

ASSISTANT CHIEF GROUND INSTRUCTOR: The Assistant Chief Ground Instructor will meet the requirements of 14 CFR, Section 141.36(e). See Appendix A of this Training Course Outline for Assistant Chief Ground Instructor designation.

GROUND INSTRUCTORS: Each instructor used for ground training must hold a flight instructor or advanced or instrument ground instructor certificate for this course of training.
OFFICE AND CLASSROOM FACILITIES USED FOR AVIATION STUDENTS: The office and classroom facilities used for the training of aviation students of the University of Oklahoma are described in Appendix D of this Training Course Outline.

COURSE ENROLLMENT: You must hold a private pilot certificate with an aircraft category and single engine land rating and at least a third class medical certificate prior to enrolling in the flight portion of the commercial pilot certification course. You must also have an instrument airplane rating, or be concurrently enrolled in the University of Oklahoma Instrument Rating Course and pass the required instrument rating practical test prior to completing the commercial pilot certification course.

REQUIREMENTS FOR GRADUATION: To obtain a commercial pilot certificate, you must be able to read, speak, and understand the English language and have a valid FAA third-class medical certificate and be at least 18 years of age at the completion of the course. You must complete the lessons in the syllabus and satisfy the requirements described in the Course Completion Standard on page 1. You must also have an instrument airplane rating prior to the beginning of Stage X.

LESSON DESCRIPTION AND STAGES OF TRAINING: Each lesson is fully described within the syllabus, including the objectives, standards, and measurable units of accomplishment and learning for each lesson. You are expected to complete at least one stage approximately every 90 days. The objectives and standards of each stage are described within the syllabus.

COURSE POLICY: The course policies for this course of training are outlined in Appendix B of this Training Course Outline.

TESTS AND CHECKS: The syllabus incorporates stage checks in accordance with 14 CFR, Section 141, Appendix D. These checks are given by the Chief, or designated Assistant Chief Flight Instructor, or Check Instructor at the end of each stage. The student will complete the appropriate stage exams, pilot briefings, and final examinations that are described within the syllabus. The final stage check will be conducted by the Chief or Assistant Chief Flight Instructor and will be conducted in accordance with the current Commercial Pilot Practical Test Standards and will be at least equal in scope, depth, and difficulty to that practical test.
UNIVERSITY OF OKLAHOMA
DEPARTMENT OF AVIATION
COMMERCIAL PILOT CERTIFICATION COURSE
RULES OF OPERATION

**DISPATCH PROCEDURES** - The provisions of 14 CFR, Section 91.103 will be met prior to aircraft dispatch. For both dual and solo flights the instructor will provide a preflight briefing to the student. The instructor's signature on the syllabus sheet for that lesson constitutes permission to dispatch the aircraft. The student will check the scheduling clipboard to determine which aircraft is assigned for the flight and complete the information on the Aircraft Sign Out Sheet, the Plastic Flight Plan form and the Aircraft Information Sheet in the aircraft checklist binder. A flight plan will be filed with an Automated Flight Service Station for all cross country flights. For all solo cross country flights the student will also complete a Cross Country Sign Out form (available in the dispatch area). Aircraft keys are kept in a lock box in the dispatch area and will be issued upon completion of the above procedures.

Notification of solo students returning after normal business hours (Monday through Friday after 5:00 PM, or any time on weekends and holidays): The instructor will tell the student to call the OU mobile phone number at 405-919-6319 upon return. If the solo departure is during normal business hours the instructor will place a note in the Chief Flight Instructor's box indicating the student name, aircraft tail number and itinerary of the flight. The Chief Flight Instructor or designated assistant checks this box prior to departure each day. If the solo departure is after normal business hours, the instructor will call the OU mobile phone number with this information.

**STARTING PROCEDURES** - All aircraft will be started within the ramp area of the Department of Aviation unless otherwise designated by the Chief Flight Instructor or his designee. All starting procedures will comply with the procedures stated in the Pilots Operating Handbook for that aircraft.

**TAXIING PROCEDURES** - Taxi on yellow depicted taxi routes and at a slow and reasonable speed (use 10 miles per hour as a guide). Spacing between aircraft on taxi routes will be a minimum of two ship lengths. During the day, operate the anti-collision lights while taxiing. Use position lights and the landing light at night. To minimize the chance of runway incursion, read back taxi instructions, particularly hold short, position and hold, runway crossing and takeoff clearances. When obtaining complex taxi clearances at unfamiliar airports write down the clearance, have an airport diagram available and request progressive taxi if needed.

**FIRE PRECAUTIONS** - during fueling operations the aircraft involved will be unoccupied. Fire Extinguishers will be present when fueling is in progress. In the event of aircraft fire during engine start or taxiing, follow the emergency procedures in the aircraft POH. If there is any doubt about whether emergency procedures are working to extinguish the fire, evacuate the aircraft immediately.

**REDISPATCH PROCEDURES** - In the event a student landing is accomplished at an unscheduled destination for any reason, the student is to contact the Aviation Department at (405) 325-7231 (Long Distance instate toll free 1-800-522-0772 ext. 7231), or OU Aviation mobile phone at 405-919-6319 prior to determining any further course of action.
AIRCRAFT DISCREPANCIES: Upon noticing a discrepancy the pilot in command will take the following actions:

- Place the plastic "Maintenance Required" sign in the windshield of the aircraft (this sign is in a loose leaf binder in the aircraft).

- Complete Form OUAVMAIN #2 (copies of this form are in a loose leaf binder in the aircraft). When filling out the "Maintenance Problem" section, be as specific as possible. Provide the top copy to the mechanics in the hangar and place the yellow copy on the Aircraft Sign Out Sheet. If the mechanics are not available, place the top copy of the form in the maintenance in-box in the dispatch section. If the main office is closed, put both copies of the form in the envelope slot in the hangar door.

- Upon returning to the dispatch area, turn the plastic flight plan over so that the words "No Fly" are displayed.
  Note: If the main office is locked and this can't be done, the "Maintenance Required" sign in the aircraft serves as notification that the aircraft is not airworthy.

- Notify the director, the chief flight instructor or one of the assistant chief flight instructors as soon as possible.

APPROVAL FOR RETURN OF AIRCRAFT TO SERVICE: The mechanics will take whatever corrective actions are required to return the aircraft to service. Upon returning the aircraft to service the mechanics will place the "Maintenance Required" sign back in the lose leaf notebook and notify the main office. At that time the plastic flight plan will be turned back over and the yellow copy of OUAVMAIN #2 placed in the mechanics in-box. If the discrepancy can't be corrected immediately, but the mechanics determine the aircraft is still airworthy, this information will be noted in the "Maintenance Performed" section along with any required operating limitations due to the discrepancy. Inoperative equipment will be removed or deactivated and placarded IAW 14 CFR, Section 91.213. The aircraft may then be returned to service and flown within any operating limitations noted.

SECURING AIRCRAFT: The pilot in command is responsible for securing aircraft on the ramp. Only aviation department personnel and contract personnel from the FBO may hangar aircraft. Students may assist in hangaring aircraft under the supervision of these personnel. All university aircraft will be secured with tie-down ropes or chocks while unattended on the Department of Aviation ramp. On cross country flights, the pilot in command will make tie-down arrangements with the local FBO for securing the aircraft. At no time will an aircraft be left unattended without it being secured by wheel chocks or tie-down ropes. When returning aircraft to the ramp in front of the terminal, solo students will not park the aircraft in the first row by the fence.

AIRCRAFT AVOIDANCE: No person may operate an aircraft so close to another aircraft as to create a collision hazard either on the ground or in the air. At all times, the Pilot-in-Command will be responsible for, and actively use "See and Avoid" procedures as described in the AIM, Chapter 7, Section 5 and comply with the right of way rules specified in 14 CFR, Section 91.113.
UNIVERSITY OF OKLAHOMA
DEPARTMENT OF AVIATION
COMMERCIAL PILOT CERTIFICATION COURSE
RULES OF OPERATION

**FUEL RESERVES** - At no time will a department aircraft depart on a flight without the minimum fuel required by 14 CFR, Section 91.151 for VFR flights or 91.169 for IFR flights. Solo fuel reserves will be one hour remaining after the full stop landing on both local and cross-country flights.

**MINIMUM ALTITUDES** - Minimum altitude for solo maneuver practice with the exception of landing practice is 600' AGL or higher if the minimum altitude applicable in 14 CFR, Section 91.119 is higher than 600' AGL. All simulated emergency landings will be terminated at 500' AGL minimum. Minimum altitudes for IFR operations will be in accordance with 14 CFR, Sections 91.175 and 91.177.

**PRACTICE AREAS** - The University utilizes several practice areas for flight training. These areas are depicted in Appendix C of this Training Course Outline.

**WEATHER MINIMUMS REQUIRED FOR SOLO FLIGHT:**

Solo Traffic Pattern:
- 1,500' ceiling
- 3 miles visibility

Solo Area Work:
- 2,500' ceiling
- 5 miles visibility

Solo X-C:
- 2,500' ceiling
- 10 miles visibility

This minimum applies for the entire route to be flown and the forecast must indicate an improvement or to remain the same.

* Dual - All flights, except Instrument:
- 1,000' ceiling
- 3 miles visibility

* Special VFR Closed Traffic Pattern Operations may not be conducted unless normal traffic pattern altitude can be obtained. IFR operations will not be conducted unless weather minimums are at or above the specified approach minimums for the current instrument approach in use at Max Westheimer Airport.

**WEATHER MINIMUMS FOR IFR TRAINING**

Instrument training under VFR will be in accordance with the basic VFR weather minimums in 14 CFR, Section 91.155. For IFR operations, minimum weather for landings will be in accordance with 14 CFR, Section 91.175. For takeoffs, the ceiling and visibility will be equal to or greater than the lowest Category A aircraft instrument approach minimums at the departure airport. If prevailing winds dictate a circling procedure, the lowest Category A circling minimums will apply. Determination of the requirement for an alternate airport will be in accordance with 14 CFR, Section 91.169.

**WIND LIMITS:**

Solo: Maximum 25 knots - Maximum 10 knots gust spread
Dual: Maximum 35 knots - Maximum 15 knots gust spread
Crosswind: Crosswind limits will not exceed those specified by the POH for the aircraft to be flown.
AIRCRAFT CHECKLIST/KEY TURN IN: After completing the flight and securing the aircraft, the student will record the hobbs time on the Aircraft Information Sheet and return the aircraft checklists and keys to the dispatch area. Give the keys to a staff member for return to the lock box and complete the information on the Aircraft Sign Out Sheet. Return the syllabus sheet to the instructor for further processing. Solo students returning after hours when the main office is locked will leave the aircraft checklists and syllabus sheet in the aircraft. The aircraft keys will be placed in the envelope slot in the door to the large hangar. All solo students returning after normal business hours (5:00 PM, Monday through Friday or any time on weekends and holidays) will call the OU mobile phone at 919-6319 to report completion of the flight.

ATTENDANCE - TARDINESS:
Students are expected to attend all scheduled ground and flight training lessons. In the event of sickness or accident, call the Aviation Department at 325-7231. Do not make a determination of attendance due to weather. If in doubt, call the Aviation Department. Excessive absences or tardiness, are grounds for removal from the course.
LESSON | DUAL | SOLO | DL NGT | SO NGT | DL XC | SO XC | INST DL | TAA/CA
---|---|---|---|---|---|---|---|---
1 | 3.0 | | | 3.0 | | | 0.5 |
2 | 3.0 | 3.0 | | 3.0 | | | 0.5 |
3 | | 4.0 | | | | | 4.0 |
4 | 2.0 | | | | | | 1.5 |
5 | | 4.0 | | | | | 4.0 |
6 | 2.0 | | | | | | 1.5 |
7 | 2.0 | | | | | | 1.5 2.0 |
8 | 3.0 | | | 3.0 | | | 2.5 3.0 |
9 | | 5.0 | | | | | 5.0 |
10 | | 5.0 | | | | | 5.0 |
11 | | 6.0 | | | | | 6.0 |
12 | QUIZ | | | | | | |
13 | 1.0 | | | | | | 0.3 |
**TOTAL*** | 16.0 | 24.0 | 3.0 | 9.0 | 24.0 | 8.3 | 5.0 |

*Any shortages in a category must be made up in Stage X.

**DL NGT** = Dual Night  
**DL XC** = Dual Cross Country  
**SO XC** = Solo Cross Country  
**INST DL** = Instrument  
**TAA** = Technologically Advanced Aircraft  
**CA** = Complex Airplane
STAGE V

STAGE OBJECTIVE

The objective of this stage is to broaden the student's knowledge of VFR cross-country during day and night operations and provide the skills necessary to operate safely during extended cross-country flights. The student will also be introduced to a basic overview of IFR flight operations.

STAGE COMPLETION STANDARD

At the completion of this stage of training, the student must be able to demonstrate the complete and accurate planning of VFR cross-country flights and the safe conduct of those flights using pilotage, dead reckoning, and radio navigation. Also, at the completion of this stage the student should have a basic understanding of IFR flight.
STAGE V FLIGHT LESSON 1 - DUALCROSS-COUNTRY

LESSON OBJECTIVE:
This lesson is a review and evaluation of the student's cross-country skills in preparation for solo cross-country flights. The flight will be of at least 3-hour duration, a total straight line distance of more than 100 n.m. from the original point of departure. The flight will be conducted during the day.

CONTENT:
Lesson Introduction
Cross-Country Ground Operations
- Cross-Country Flight Planning
- Obtaining Weather Information
- Cockpit Management
Radio Communications and ATC Light Signals
- VOR (IR)
- GPS (IR)
- Pilotage
- Dead Reckoning
Cruise Procedures
Lost and Diversion Procedures
Power Settings and Mixture Leaning
Simulated Emergency Procedures
- System and Equipment Malfunctions
- Low Fuel Supply
- Lost Procedures
- Turbulence
- Adverse Weather
- Airframe and Powerplant Icing
- Planning to Alternate
- Emergency Descent
- Emergency Approach and Landing
Unfamiliar Airports
- Traffic Patterns
- UNICOM-Equipped Field
- Tower-Controlled Field
- Operations in Heavy Traffic
- CTAF Procedures
- Airport and Runway Marking and Lighting
Full Panel Instrument
- Straight and Level
- Descents
- Standard-Rate Turns
- Use of Radar Vectors
High Density Altitude Operations
Radio Facility Shutdowns

COMPLETION STANDARDS:
This lesson is complete when the student can demonstrate the ability to act as pilot in command on a cross-country flight with a landing at a point more than 100 n.m. from the original departure point.
STAGE V FLIGHT LESSON 2 - DUAL CROSS-COUNTRY, NIGHT

LESSON OBJECTIVE:
During this lesson, the student will learn night cross-country procedures, including preflight planning, navigation, emergencies, and the use of unfamiliar airports. The flight will be of at least 3-hour duration, a total straight-line distance of more than 100 n.m. from the original point of departure, and occurring at night.

CONTENT:
Lesson Review
Aeromedical Factors
Simulated Emergency Procedures
- System and Equipment Malfunctions
- Emergency Descent
- Adverse Weather
- Turbulence
- Lost Procedures
- Low Fuel Supply
- Airframe and Powerplant Icing
Airport and Runway Markings and Lighting
Normal Takeoffs and Landings
Full Panel Instrument
- Straight and Level
- Climb
- Descents
- Standard-Rate Turns
Go-Around From Rejected (Balked) Landing

Lesson Introduction
Night Cross-Country Ground Operations
- Cross-Country Flight Planning
- Obtaining Weather Information
- Cockpit Management
Night Cross-Country Procedures
Lost and Diversion Procedures
Night Navigation
- VOR (IR)
- GPS (IR)
- Pilotage
- Dead Reckoning
Unfamiliar Airports

COMPLETION STANDARDS:
Successful completion of this lesson is indicated by the student's demonstration of the correct operating procedures for night cross-country flights. The student must demonstrate the ability to safely act as pilot in command during a night flight with a landing more than 100 n.m. from the original departure point.

STUDENT NAME __________________________ ID# _______________
INSTRUCTOR NAME __________________________ CERT# _______________
AIRCRAFT # _CRM_ FLIGHT _STAGE # _V_ LESSON # _502_

SAT _____ % UNSAT _____ % INCOMPLETE _____ % CANCELLATION______

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.
REMARKS: ________________________________________________________

FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS

FOR XC FLIGHTS, LIST DESTINATIONS: ____________________________________________

DI | So | Dnt | Snt | Dxc | Sxc | Idl | Nldg | AATD | CA | PP | GI

DATE: __________________ ENTERED BY __________________
TIME: IN ______________ INVOICE ______ FLIGHT REC ______
OUT ______________ SYLL. LESSON ______________
TOTAL ______________ PROCESSED ON ______________

HOBBS / TAC: IN _______/_______ REMARKS: ______________________
OUT _______/_______
TOTAL TIME ______________

STUDENT SIGNATURE __________________________
INSTRUCTOR SIGNATURE __________________________
STAGE V FLIGHT LESSON 3 – SOLO CROSS-COUNTRY

LESSON OBJECTIVE:
This and the following solo cross-country flights are provided to develop the student's cross-country proficiency and confidence. The flight will include a landing at a point more than 50 n.m. from the original departure point.

CONTENT:
Lesson Review
Cross-Country Ground Operations
  - Preflight Planning
Cross-Country Flight Assigned by the Instructor
  - Airport Operations (Tower and CTAF/Unicom)
  - Dead Reckoning
  - Pilotage
  - VOR Navigation
  - GPS Navigation

COMPLETION STANDARDS:
The student will show added skill in cross-country planning by selecting optimum cruising altitudes and appropriate checkpoints for a flight with a landing at a point more than 50 n.m. from the original departure point. Additionally, fuel planning will be accurate and allow for an adequate reserve.
STAGE V FLIGHT LESSON 4 - DUAL LOCAL, INSTRUMENT

LESSON OBJECTIVE:
This lesson reviews full panel attitude instrument flying to prepare the student for the later introduction of partial panel air work.

CONTENT:
Lesson Review
Aircraft Flight Instruments and Navigation Equipment

Full Panel Instrument
- Straight and Level
- Standard-Rate Turns
- Constant Airspeed Climbs
- Constant Airspeed Descents
- Maneuvering During Slow Flight

Lesson Introduction
Full Panel Instrument
- IFR Preflight Inspection
- Preflight Check of Instruments, Equipment, and Systems
- Instrument Cockpit check
- IFR Takeoff Preparations
- Change of Airspeed
- Steep Turns
- Instrument Takeoffs
- Timed Turns to Magnetic Headings
- Magnetic Compass Turns
- Power-Off Stalls (Imminent)
- Power-On Stalls (Imminent)
- Recovery from Unusual Flight Attitudes

COMPLETION STANDARDS:
The student will demonstrate an understanding of aircraft attitude control by instrument reference. Altitude should be maintained within +/- 200 feet and airspeeds within +/- 15 knots of the desired values. Additionally, the student should display an understanding of the IFR preflight inspection and the importance of IFR takeoff preparations.

UNIVERSITY OF OKLAHOMA

STUDENT NAME _____________________ ID# ______________
INSTRUCTOR NAME ____________________________ CERT# ______________
AIRCRAFT # CRM FLIGHT STAGE # V LESSON # 504
SAT _____% UNSAT _____% INCOMPLETE ____% CANCELLATION______
HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)

Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.

REMARKS: __________________________________________________________
FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS: _________________________________

DATE: ___________________ ENTERED BY ____________________
TIME: IN ________________ INVOICE ______ FLIGHT REC ______
OUT _______________ SYLL. LESSON _______________
TOTAL _______________ PROCESSED ON _______________
HOBB / TAC: IN ________/__________ REMARKS:____________________
OUT ________/__________
TOTAL TIME _______________ ____________________________
STUDENT SIGNATURE ________________________________________________
INSTRUCTOR SIGNATURE ____________________________________________
STAGE V FLIGHT LESSON 5 - SOLO CROSS-COUNTRY

LESSON OBJECTIVE:
The objective of this lesson is for the student to plan and complete a cross-country flight using pilotage, dead reckoning, and radio navigation. The flight will include a landing at a point more than 50 n.m. from the original departure point.

CONTENT:
Lesson Review
Cross-Country Ground Operations
- Preflight Planning
Cross-Country Flight Assigned by the Instructor
- Pilotage
- Dead Reckoning
- VOR Navigation
- GPS Navigation
- Use of Tower Controlled Airports
- Use of UNICOM Equipped Airports

COMPLETION STANDARDS:
This lesson is complete when the student has conducted a solo cross-country to include a landing at a point more than 50 n.m. from the original departure point. The student should attempt to gain proficiency in the accurate tracking of selected VOR radials and the GPS course line.
STAGE V FLIGHT LESSON 6 – DUAL INSTRUMENT

LESSON OBJECTIVE:
During this lesson the student will be introduced to VOR and GPS holding patterns.

CONTENT:
Lesson Review
Full and Partial Panel Instrument
- Straight and Level
- Standard-Rate Turns
- Constant Rate Climbs
- Constant Airspeed Climbs
- Constant Rate Descents
- Constant Airspeed Descents
- Recovery from Unusual Flight Attitudes

Lesson Introduction
Full and Partial Panel Instrument
- VOR Accuracy Test
- VOR Radial Interception and Tracking
- VOR Orientation
- Holding

COMPLETION STANDARDS:
The student will display increased proficiency in attitude instrument flight. The student also will understand VOR and GPS orientation and tracking and holding procedures.
STAGE V FLIGHT LESSON 7 DUAL INSTRUMENT - TAA

LESSON OBJECTIVE:
This lesson introduces the student to non-precision instrument approach procedures and missed approach planning.

CONTENT:
Lesson Review
Full Panel Instrument
- Straight and Level
- Constant Rate Climbs
- Constant Airspeed Climbs
- Constant Rate Descents
- Constant Airspeed Descents
- Standard-Rate Turns

Systems and Equipment Failures

Lesson Introduction
Non-Precision Approaches (VOR, GPS, LOC)
Precision Approaches (ILS)
Straight-In Approach Procedures
Circling Approach Procedures
Missed Approach Procedures
Landing from a Straight-In or Circling Approach Procedure

COMPLETION STANDARDS:
At the completion of this lesson, the student should be able to:
- Explain and use the information displayed on the approach charts.
- Execute several initial and intermediate approach segments to arrive at the final approach fix.
- Complete the final approach and letdown to the missed approach point.
- Demonstrate the missed approach procedure, as published on the appropriate chart or as instructed by ATC.

STUDENT NAME ___________________________ ID# ______________
INSTRUCTOR NAME _________________________ CERT# ______________

AIRCRAFT # __________________ FLIGHT STAGE # V LESSON # 507

SAT ______% UNSAT ______% INCOMPLETE ______% CANCELLATION________

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.

REMARKS: __________________________________________________________

FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS: ______________________________

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DATE: __________________ ENTERED BY __________________

TIME: IN _____________ INVOICE ______ FLIGHT REC ______

OUT _____________ SYLL. LESSON _____________

TOTAL _____________ PROCESSED ON _____________

HOBBS / TAC: IN _______/_______ REMARKS: __________________

OUT _______/_______ __________________

TOTAL TIME _____________ __________________

STUDENT SIGNATURE ______________________________________________

INSTRUCTOR SIGNATURE ____________________________________________
STAGE V FLIGHT LESSON 8 - DUAL CROSS-COUNTRY, INSTRUMENT - TAA

LESSON OBJECTIVE:
During this lesson, the student will plan and conduct a short IFR cross-country flight. During the flight, the student will become familiar with IFR departure and arrival procedures.

CONTENT:
Lesson Review
Holding
VOR and GPS Navigation
Precision and Non-Precision Approaches

Lesson Introduction
Filing an IFR Flight Plan
Air Traffic Control Clearances
Simulated Emergency Procedures
IFR Cross-Country Flight Planning
   - Obtaining Weather Information
   - Aircraft Performance, Limitations, and Systems related to IFR Operation
En route Navigation and Tracking
Calculating ETAs and ETAs
En route Course Changes

COMPLETION STANDARDS:
At the completion of this flight, the student will be able to explain the basic principles of IFR cross country flight including navigation and tracking along published airways. Additionally, the student will know the methods used to calculate ETAs and comply with course changes that may be issued by ATC or necessitated by en route weather.

UNIVERSITY OF OKLAHOMA

STUDENT NAME _______________________________ ID# __________________
INSTRUCTOR NAME ____________________________ CERT# __________________

AIRCRAFT # CRM FLIGHT STAGE # V LESSON # 508

SAT ____% UNSAT ____% INCOMPLETE ____% CANCELLATION______

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)

Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.

REMARKS: __________________________________________________________

FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS: _________________________________

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DATE: __________________ ENTERED BY __________________

TIME: IN ________________ INVOICE _____ FLIGHT REC _____

OUT ________________ SYLL. LESSON ________________

TOTAL ________________ PROCESSED ON ________________

HOBBS / TAC: IN ________ / ___________ REMARKS: ________________

OUT ________ / ___________ __________________________

TOTAL TIME ________________ __________________________

STUDENT SIGNATURE _____________________________________________

INSTRUCTOR SIGNATURE ___________________________________________
STAGE V FLIGHT LESSON 9 - SOLO CROSS-COUNTRY

LESSON OBJECTIVE:
During this lesson, the student will continue to practice cross-country planning and accurate flying. The flight will include a landing at a point more than 50 n.m. from the original departure point.

CONTENT:
Lesson Review
Cross-Country Ground Operations
  - Preflight Planning
Cross-Country Flying Assigned by the Instructor
  - Pilotage
    - Dead Reckoning
    - VOR Navigation
    - GPS Navigation
    - Use of Controlled and Uncontrolled Airports

COMPLETION STANDARDS:
This lesson is complete when the student has conducted a cross-country to include a landing at a point more than 50 n.m. from the original departure point. The student should attempt to increase proficiency by accurately adhering to the preplanned navigation log.
STAGE V FLIGHT LESSON 10 - SOLO CROSS-COUNTRY

LESSON OBJECTIVE:
The purpose of this cross-country is to build the student's experience and meet the long cross-country requirements. Therefore, the flight will include a landing at a point more than 50 n.m. from the original departure point.

CONTENT:
Lesson Review
Cross-Country Ground Operations
  - Preflight Planning
  - Cockpit Management
Cross-Country Flight Assigned by the Instructor
  - Pilotage
  - Dead Reckoning
  - VOR Navigation
  - GPS Navigation
  - Use of Controlled and Uncontrolled Airports

COMPLETION STANDARDS:
This lesson is complete when the student has conducted a solo cross-country to include a landing more than 50 n.m. from the original departure point. The student should attempt to increase proficiency by accurately adhering to the pre-planned navigation leg.
STAGE V FLIGHT LESSON 11 - SOLO CROSS-COUNTRY

LESSON OBJECTIVE:
The purpose of this cross-country is to build the student's experience and meet the long cross-country requirements. The flight must have landings at a minimum of three points and one of the segments must consist of a straight line distance more than 250 nautical miles.

CONTENT:
Lesson Review
Cross-Country Ground Operations
- Preflight Planning
- Cockpit Management

Cross-Country Flight Assigned by the Instructor
- Pilotage
- Dead Reckoning
- VOR Navigation
- GPS Navigation
- Use of Controlled and Uncontrolled Airports

COMPLETION STANDARDS:
This lesson is complete when the student has conducted a solo cross-country with landings at a minimum of three points, and one of the segments has a straight line distance of more than 250 nautical miles. During the preflight orientation and post-flight evaluation, the student should display efficient use of applicable FAA publications, correct weather analysis, and accurate flight planning.
STAGE V LESSON 12 – QUIZ

LESSON OBJECTIVE:
The objective of this lesson is to test the student’s knowledge of this stage through a quiz.

COMPLETION STANDARDS:
This lesson is complete when the student scores a 70% or better. In addition, the instructor is responsible for reviewing those questions missed.

STUDENT NAME _______________________________ ID# _________________
INSTRUCTOR NAME ____________________________ CERT# ______________
AIRCRAFT #: ________ FLIGHT ________ STAGE #: V LESSON #: 512
SAT ____% UNSAT ____% INCOMPLETE ____% CANCELLATION______

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.

REMARKS: __________________________________________________________
FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS: _________________________________

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DATE: __________________ ENTERED BY __________________
TIME: IN ___________ INVOICE _____ FLIGHT REC _____
OUT ___________ SYLL. LESSON __________
TOTAL __________ PROCESSED ON __________

HOBBs / TAC: IN _______/_______ REMARKS: ______________
OUT _______/_______
TOTAL TIME __________

STUDENT SIGNATURE
INSTRUCTOR SIGNATURE
STAGE V FLIGHT LESSON 13 - DUAL CROSS-COUNTRY

STAGE CHECK

LESSON OBJECTIVE:
The objective of this stage check is to test the student's understanding of VFR cross-country procedures and to determine the student's ability to perform these procedures at the proficiency level of a commercial pilot. The student will also be tested on basic IFR navigation.

CONTENT:

Lesson Review
Cross-Country Ground Operations
- Preflight Planning
- Cockpit Management

Cross-Country Flight
- VOR Navigation (IR)
- GPS Navigation (IR)
- Pilotage
- Dead Reckoning
- Cruise Procedures
- Use of Unfamiliar Airports
- Airport and Runway Markings and Lighting
- Radio Communications and ATC Light Signals

Simulated Emergency Procedures
- Systems and Equipment Malfunctions
- Emergency Descent
- Low Fuel Supply
- Lost Procedures
- Diversion Procedures
- Turbulence
- Adverse Weather
- Airframe and Powerplant Icing
- Planning to an Alternate
- Radio and Instrument Failure

COMPLETION STANDARDS:
At the completion of this lesson, the student will display a complete understanding of VFR cross-country planning and flight procedures. The student will show the ability to operate safely in the national airspace system and use good judgment consistently. The student will also be able to exhibit basic IFR navigation skills.

STUDENT NAME ___________________________ ID# ______________
INSTRUCTOR NAME __________________________ CERT# ______________
AIRCRAFT # CRM FLIGHT STAGE # V LESSON # 513
SAT ____% UNSAT ____% INCOMPLETE ____% CANCELLATION_____

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
Note:
1. Circle appropriate status/grade and put number (%) grade on line.
2. If cancellation state reason.

REMARKS: __________________________________________________________

FOR I OR U: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS: _________________________________

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      OUT ____________ SYLL. LESSON ______________
      TOTAL ____________ PROCESSED ON ______________

HOBBS / TAC IN _______/_______ REMARKS: __________________
           OUT _______/_______ ____________________________
           TOTAL TIME ______________ ______________________

STUDENT SIGNATURE __________________________
INSTRUCTOR SIGNATURE _________________________

UNIVERSITY OF OKLAHOMA
APPENDIX B
UNIVERSITY OF OKLAHOMA
COURSE POLICIES

1. At the discretion of the instructor, students who progress rapidly within a specific stage, may within reasonable variances, continue to the next lesson with less time than is specified in the specific lesson curriculum, provided all content and completion standards are satisfactorily completed. The time stated in the lesson is the approximate minimum time that a student would need to meet the lesson objectives and completion standards; not absolute required times. The lesson time could be slightly more or slightly less. These reduced hours must be included in other lessons to complete the total ground or flight time specified by category in the training course outline in order to satisfactorily complete the course.

2. At no time will a student be allowed to continue to the next stage without having successfully completed all of the lessons and the required tests or stage checks related to the completion of the previous stage.

3. Any lesson stated as a FTD lesson may be flown in an aircraft, ATC-710 or PCATD. The lesson will include the required pre- and post-flight procedures.

4. Flight training for this course will be done in accordance with the F.A.A approved syllabus. Deviations from the syllabus due to student training requirements, weather related factors, or other items as necessary will be allowed as long as the following requirements are met:
   1.) A notation will be made in the student training record as to the lesson covered and the reason for the deviation.
   2.) The student will complete all syllabus requirements before a graduation certificate is issued.

5. To satisfactorily complete the course of training, the student must meet all course objectives and completion standards. The student must have satisfactorily completed all required ground school courses and have completed the minimum flight time stated at the end of the course for each category as well as total flight time.
APPENDIX C
UNIVERSITY OF OKLAHOMA
PRACTICE AREAS

The University of Oklahoma Department of Aviation has three (3) practice areas used for normal flight training operations on a daily basis. They are designated practice area 'A', 'B', and 'C'.

Practice area 'A' is described as an area southwest of Max Westheimer Airport bounded on the north by State Highway 9, on the south by the 35° line of latitude, on the west by the line extending north and south along a similar direction road extending south from the town of Blanchard, and on the east by the line formed by the railroad tracks running southeast from Norman, OK along and near Interstate Highway 35.

Practice area 'B' is described as an area southeast of Max Westheimer Airport bounded on the north by State Highway 9, on the south by State Highway 33, on the west by the railroad tracks extending southeast from Norman, OK, and on the east by an imaginary line extending south from the east side of Lake Thunderbird and ending at State Highway 33.

Practice area 'C' is described as an area west of Max Westheimer Airport bounded on the north by an imaginary line extending west from State Highway 9 southwest of Norman, Ok. to the town of Pocasset, OK., on the south by the 35° line of latitude, on the west by the line extending north and south along a similar direction road extending north from the town of Chickasha, OK. and on the east by the line extending north and south along a similar direction road extending south from the town of Blanchard, OK.