I, ________________________________, have acquired and have in my possession a copy of the training course outline, training syllabus, and safety procedures and practices for AVIA 2231, Advanced Flying.

__________________________________________
Student Signature

__________________________________________
Flight Instructor Signature

__________________________________________
Chief Flight Instructor Signature
UNIVERSITY OF OKLAHOMA  
DEPARTMENT OF AVIATION  
COMMERCIAL PILOT CERTIFICATION COURSE

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, 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.
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 loose 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.
UNIVERSITY OF OKLAHOMA  
DEPARTMENT OF AVIATION  
COMMERCIAL PILOT CERTIFICATION COURSE  
RULES OF OPERATION

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.

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:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ceiling</th>
<th>Visibility</th>
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<tr>
<td>Solo Traffic Pattern</td>
<td>1,500'</td>
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<tr>
<td>Solo Area Work</td>
<td>2,500'</td>
<td>5 miles</td>
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<tr>
<td>Solo X-C</td>
<td>2,500'</td>
<td>10 miles</td>
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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:

<table>
<thead>
<tr>
<th>Ceiling</th>
<th>Visibility</th>
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<tbody>
<tr>
<td>1,000'</td>
<td>3 miles</td>
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* 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.
# UNIVERSITY OF OKLAHOMA COMMERCIAL PILOT CERTIFICATION COURSE
## COMMERCIAL PILOT STAGE IV
### LESSON TIME ALLOCATION

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*These lessons should be done in the C-152. If the C-152 is not available they may be done in a PA28-161.

** By the completion of Stage X the student will have completed 10 solo takeoffs and landings at night (with each landing involving a flight with a traffic pattern) at an airport with an operating control tower.

***Any shortages in a category must be made up in Stages V and X.

DUAL XC = Dual Cross Country
SOLO XC = Solo Cross Country
INST DUAL = Instrument
CA = Complex Airplane
UNIVERSITY OF OKLAHOMA STAGE IV

STAGE OBJECTIVE

Stage IV provides instruction and practice in the complex aircraft. The stage objective is to broaden the student’s knowledge and provide the skill necessary to safely fly a complex airplane which is similar to those frequently used in commercial operations. Additionally, the introduction and practice of commercial maneuvers is conducted so that the student can begin acquiring proficiency.

STAGE COMPLETION STANDARD

At the completion of this stage, the student will demonstrate knowledge in complex aircraft systems and proficiency in the maneuvers listed in the Stage Check Lesson (lesson 27).

Note: Reference to complex aircraft is an aircraft as described in 141 Appendix D (4) (b) (1) (ii).
STAGE IV FLIGHT LESSON 1 – DUAL - LOCAL

LESSON OBJECTIVE:
During this lesson, the student is provided with a review of basic flight procedures along with the introduction and practice of emergency procedures, and takeoffs and landings in the PA 28-161 aircraft.

CONTENT:
Lesson Review
Preflight Preparations and Procedures
- Visual Inspection
- Determining Performance and Limitations
Takeoffs and Landings
- Normal
- Go-Around From Rejected (Balked) Landing
Power Settings and Mixture Leaning
Use of Flaps
Climbs
Descents
Steep Turns
Post Flight Procedures

Lesson Introduction
Maneuvering During Slow Flight
Stalls
- Power-Off
- Power-On
Takeoffs and Landings
- Short-Field
- Soft-Field
Simulated Emergency Procedures
- Emergency Descent
- Emergency Approach and Landing
- System and Equipment Malfunctions
- Fire in Flight

COMPLETION STANDARDS:
At the completion of this lesson, the student should be thoroughly familiar with the flight characteristics, systems, and emergency procedures associated with the airplane. The student will demonstrate pilot-in-command proficiency and the ability to perform safe solo flights.
STAGE IV FLIGHT LESSON 2 – SOLO - LOCAL

LESSON OBJECTIVE:
This lesson will provide solo experience to allow the student to increase familiarity with the PA 28-161 and its systems.

CONTENT:
Lesson Review
Visual Inspection
Cruise Procedures
Power Settings and Mixture Leaning
Climbs
Descents
Steep Turns
Maneuvering During Slow Flight
Stalls
  - Power-Off
  - Power-On
Takeoffs and Landings
  - Short-Field
  - Soft-Field

COMPLETION STANDARDS:
This lesson will be complete when the student has conducted the assigned flight. During the flight, the student should attempt to increase proficiency in the smooth and accurate performance of the listed flight maneuvers in the airplane.

STUDENT NAME _______________________________ ID#
INSTRUCTOR NAME ____________________________ CERT#
AIRCRAFT# CRM____ FLYING STAGE # IV LESSON # 2
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 U OR I: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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FOR XC FLIGHTS, LIST DESTINATIONS:

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DATE: ____________________

TIME: IN ________________ ENTERED BY ________________
      OUT ________________ SYLL. LESSON ________________
      TOTAL ________________ PROCESSED ON ________________

HOBBS / TAC: IN ________/__________ REMARKS: __________________
             OUT ________/__________ __________________
             TOTAL TIME ________________ __________________

STUDENT SIGNATURE ____________________________________________
INSTRUCTOR SIGNATURE __________________________________________
STAGE IV FLIGHT LESSON 3 – DUAL - LOCAL

LESSON OBJECTIVE:
This lesson provides a review of basic ground reference maneuvers, S-turns, turns around a point and rectangular course. Slow flight and emergency procedures are also reviewed. Steep turns and chandelles are introduced to begin developing precise airplane control when operating near the performance limits of the airplane. In addition, accelerated stalls are introduced.

CONTENT:
Lesson Review
Private Pilot Ground Reference Maneuvers Assigned by the Instructor
- S-Turns
- Turns Around a Point
- Rectangular Course
Maneuvering During Slow Flight
Simulated Emergency Procedures
- Emergency Descent
- Emergency Approach and Landing
- System and Equipment Malfunctions

Lesson Introduction
- Steep Turns
- Chandelles
- Accelerated Stalls
- Steep Spiral

COMPLETION STANDARDS:
The lesson is complete when the student can perform basic ground reference maneuvers while maintaining a specified altitude and ground track; maintain specified headings and altitude while maneuvering during slow flight; and respond correctly to simulated emergency situations. The student will display the correct understanding of the necessary control inputs during entry to, performance of, and recovery from, the steep turn and chandelle. The student also will display the knowledge of the cause and recovery from accelerated stalls.
STAGE IV FLIGHT LESSON 4 – SOLO - LOCAL

LESSON OBJECTIVE:
The student will attempt to gain proficiency through the review of the listed maneuvers.

CONTENT:
Lesson Review
- Steep Turns
- Chandelles
- Maneuvering During Slow Flight
- Short-Field Takeoffs and Landings
- Soft-Field Takeoffs and Landings
- Power-Off Stalls
- Power-On Stalls
- Steep Spiral

COMPLETION STANDARDS:
This lesson is complete when the student has conducted the assigned flight. During the lesson, the student should attempt to minimize the transition and setup time between each maneuver.

STUDENT NAME ___________________________ ID# __________________
INSTRUCTOR NAME ___________________________ CERT# __________________
AIRCRAFT# CRM ______ FLIGHT STAGE # ____IV____ LESSON # ____4____
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 U OR I: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
____________________________________________________________________
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STUDENT SIGNATURE _____________________________________________
INSTRUCTOR SIGNATURE ___________________________________________
STAGE IV FLIGHT LESSON 5 – DUAL - LOCAL

LESSON OBJECTIVE:
The purpose of this lesson will be to increase the student's planning and coordination and introduce short and soft field takeoffs and landings, the power-off 180 degree accuracy approach and landing and the steep spiral.

CONTENT:
Lesson Review
- Steep Turns
- Chandelles
- Stalls
- Collision Avoidance

Lesson Introduction
- Maximum Performance (Short-Field) Takeoff and Climb
- Soft-Field Takeoff and Climb
- Short-Field Approach and Landing
- Soft-Field Approach and Landing
- Power Off 180 Degree Accuracy Approach and Landing
- Steep Spiral

COMPLETION STANDARDS:
The student will display increased proficiency during steep power turns by maintaining altitude within +/- 200 feet and bank within +/- 20°. The student will demonstrate the correct procedures for the chandelle and the steep spiral. During takeoffs and landings, the student will demonstrate correct airspeed control techniques.
STAGE IV FLIGHT LESSON 6 – SOLO - LOCAL

LESSON OBJECTIVE:
The following lesson provides the student with the opportunity to review the listed flight maneuvers to increase proficiency.

CONTENT:
Lesson Review
  - Steep Turns
  - Chandelles
  - Steep Spiral
  - Short-Field Takeoffs and Landings
  - Soft-Field Takeoffs and Landings

COMPLETION STANDARDS:
This lesson is complete when the student has conducted the assigned solo flight. During the lesson, the student should attempt to gain proficiency in the listed maneuvers.

STUDENT NAME _______________________________ ID# __________________

INSTRUCTOR NAME ____________________________ CERT# ______________

AIRCRAFT# CRM____ FLIGHT STAGE # __IV__ LESSON # __6__

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: ________________________________________________

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STUDENT NAME _______________________________ ID# _______________

INSTRUCTOR NAME ____________________________ CERT# ______________

AIRCRAFT# CRM____ FLIGHT STAGE # __IV__ LESSON # __6__

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

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REMARKS: ________________________________________________

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INSTRUCTOR SIGNATURE _____________________________________
STAGE IV FLIGHT LESSON 7 – DUAL - LOCAL

LESSON OBJECTIVE:
This lesson provides a review and evaluation of the student’s progress during the previous solo lessons.

CONTENT:
Lesson Review
- Chandelles
- Normal Takeoffs and Landings
- Power Off 180 Degree Accuracy Approach and Landing
- Crosswind Takeoffs and Landings
- Wake Turbulence Avoidance

Lesson Introduction
- Lazy Eights
- Eights-On-Pylons

COMPLETION STANDARDS:
The student should show increased proficiency in the review maneuvers by demonstrating correct entry and recovery procedures and increased coordination during the performance of each maneuver. The student also will demonstrate an understanding of the important performance elements of lazy eights and eights-on-pylons.

UNIVERSITY OF OKLAHOMA

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

AIRCRAFT# CRM___ FLIGHT STAGE # IV LESSON # 7___

SAT ____% UNSAT ____% INCOMPLETE ____% CANCELLATION_____

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
Note:
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STAGE IV FLIGHT LESSON 8 – SOLO - LOCAL

LESSON OBJECTIVE:
The student is provided with the opportunity to review and practice flight maneuvers to gain added proficiency.

CONTENT:
Lesson Review
- Power-Off Stalls
- Power-On Stalls
- Maneuvering During Slow Flight
- Steep Turns
- Chandelles
- Lazy Eights
- Steep Spiral
- Eights-On-Pylons
- Short-Field Takeoffs and Landings
- Soft-Field Takeoffs and Landings

COMPLETION STANDARDS:
This lesson will be completed when the student has conducted the assigned solo flight. During flight, the student should attempt to increase accuracy and coordination on the listed maneuvers.

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

AIRCRAFT# CRM_____ FLIGHT STAGE # __IV___ LESSON # ___8____

SAT _____% UNSAT _____% INCOMPLETE ____% CANCELLATION_______

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

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STUDENT SIGNATURE ____________________________________________
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STAGE IV FLIGHT LESSON 9 – DUAL - LOCAL

LESSON OBJECTIVE:
The objective of this lesson is to determine the student’s preparedness for the stage check and correct any areas of faulty performance.

CONTENT:
Lesson Review
- Systems and Equipment Malfunctions
- Lazy Eights
- Chandelles
- Steep Turns
- Steep Spiral
- Eights-On-Pylons
- Flight at Slow Airspeeds with Realistic Distractions
- Power On Stalls
- Power Off Stalls
- Accelerated Stalls
- Power Off 180 Degree Accuracy Approach and Landing

COMPLETION STANDARDS:
Although the student’s coordination and accuracy of performance are not expected to be that of a commercial pilot, the student should demonstrate an understanding of the important performance elements of each maneuver and the correct entry, execution, and recovery techniques.
STAGE IV FLIGHT LESSON 10 – SOLO - LOCAL

LESSON OBJECTIVE:
This flight is a solo review lesson designed to increase the student’s proficiency.

CONTENT:
Lesson Review
- Lazy Eights
- Eights-On-Pylons
- Chandelles
- Steep Turns
- Steep Spiral
- Takeoffs and Landings
  - Normal
  - Crosswind
- Maneuvering During Slow Flight

COMPLETION STANDARDS:
This lesson is complete when the student has conducted the assigned solo flight. During the flight, the student should attempt to perform lazy eights with symmetrical loops and eights-on-pylons, chandelles, and steep turns with smoothness and coordination. In executing the steep spiral the student should attempt to adjust bank angle to maintain a constant distance from the selected point and adjust pitch to maintain a constant airspeed.
STAGE IV FLIGHT LESSON 11 – DUAL - LOCAL, NIGHT

LESSON OBJECTIVE:
This lesson introduces the student to night flight operations and the differences encountered between day and night flight.

CONTENT:
Lesson Introduction
Night Ground Operations
  - Aeromedical Factors
  - Personal Equipment Recommended
  - Night Flight Preparation
  - Night Preflight Inspections

Airport and Runway Markings and Lighting

Takeoffs and Landings
  - Normal
  - Crosswind

Stalls
  - Power-Off
  - Power-On

Maneuvering During Slow Flight

Steep Turns

Simulated Emergency Procedures
  - Emergency Approach and Landing (Simulated)
  - Systems and Equipment Malfunctions

Go-Around From Rejected (Balked) Landing

COMPLETION STANDARDS:
This lesson is complete when the student displays an understanding of night flight and the associated normal and emergency procedures.

UNIVERSITY OF OKLAHOMA

STUDENT NAME _______________________________ ID# _______________
INSTRUCTOR NAME ____________________________ CERT# ______________

AIRCRAFT# CRM_______ FLIGHT STAGE # ___IV___ LESSON # ___11___

SAT _____% UNSAT _____% INCOMPLETE ____% CANCELLATION_____

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

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STAGE IV FLIGHT LESSON 12 – SOLO - LOCAL, NIGHT

LESSON OBJECTIVE:
This lesson provides night solo practice so the student may gain proficiency and confidence in the night environment.

CONTENT:
Lesson Review
Maneuvering During Slow Flight
Steep Turns
Takeoffs and Landings to a full stop
- Normal
- Crosswind
- Controlled Airports
- UnControlled Airports

COMPLETION STANDARDS:
This lesson is complete when the student has conducted solo night flight. During the flight, the student should attempt to gain proficiency in takeoffs and landings in the night environment. See NOTE in stage X lesson 12.

UNIVERSITY OF OKLAHOMA

STUDENT NAME _______________________________ ID# _________________
INSTRUCTOR NAME ____________________________ CERT# ______________
AIRCRAFT# CRM____ FLIGHT STAGE # _IV___ LESSON # ___12___
SAT ____% UNSAT ____% INCOMPLETE ____% CANCELLATION____

HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
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INSTRUCTOR SIGNATURE _______________________________________
LESSON OBJECTIVE:
The objective of Lesson 13 is to introduce the student to the complex airplane which is used in this course. This introduction includes systems and basic flight operations.

CONTENT:
Lesson Introduction
Ground Operations
- Certificates and Documents
- Operation of Airplane Systems
- Determining Performance and Limitations
- Use of Checklists
- Cockpit Management
- Visual Inspection
- Engine Starting
- Taxiing
- Pretakeoff Check
Takeoffs and Landings
- Normal
- Crosswind
Climbs and Descents
Steep Turns
Cruise Procedures
Power Settings and Mixture Leaning
Use of Constant-Speed Propeller and Effects Upon Aircraft Performance
Use of Retractable Landing Gear and Flaps
Go-Around From Rejected (Balked) Landing
After-Landing Procedures

COMPLETION STANDARDS:
At the completion of the flight, the student should display a working knowledge of the airplane systems. Additionally, the student should display at least private pilot proficiency in the performance of basic flight operations.
STAGE IV FLIGHT LESSON 14 – DUAL - LOCAL, COMPLEX AIRCRAFT

LESSON OBJECTIVE:
During this lesson, the student is provided with a review of basic flight procedures along with the introduction and practice of emergency procedures, attitude instrument flying, and takeoffs and landings in the complex aircraft. In addition, this lesson will provide the student with the necessary proficiency to solo or act as pilot in command in the aircraft safely.

CONTENT:
Lesson Review
Visual Inspection
Determining Performance and Limitations
Takeoffs and Landings
- Normal
- Go-Around From Rejected (Balked) Landing
Power Settings and Mixture Leaning
Use of Constant-Speed Propeller and Effects Upon Aircraft Performance
Use of Landing Gear Flaps
Climbs
Descents
Steep Turns

Lesson Introduction
Stalls
- Power-Off
- Power-On
- Accelerated
- Flight at Slow Airspeeds with Realistic Distractions
Takeoffs and Landings
- Short-Field
- Soft-Field
Simulated Emergency Procedures
- Emergency Descent
- Emergency Approach and Landing
- System and Equipment Malfunctions
- Fire in Flight

COMPLETION STANDARDS:
At the completion of the flight, the student should display a working knowledge of the airplane systems. Additionally, the student should display at least private pilot proficiency in the performance of basic flight operations.
STAGE IV FLIGHT LESSON 15 – SOLO - LOCAL

LESSON OBJECTIVE:
This lesson provides solo practice of the flight maneuvers so that the student can acquire added proficiency.

CONTENT:
Lesson Review
Steep Turns
Chandelles
Lazy Eights
Steep Spiral
Eights-On-Pylons
Takeoffs and Landings
- Short-Field
- Soft-Field
- Crosswind

COMPLETION STANDARDS:
The solo lesson is complete when the student has conducted the assigned flight. During the flight, the student should attempt to attain or maintain commercial pilot proficiency.

STUDENT NAME _______________________________ ID# ______________
INSTRUCTOR NAME ____________________________ CERT# ______________
AIRCRAFT# CRM____ FLIGHT STAGE # IV LESSON # 15
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HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
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INSTRUCTOR SIGNATURE __________________________________________

STAGE IV FLIGHT LESSON 16 – DUAL - CROSS-COUNTRY, NIGHT

LESSON OBJECTIVE:
This lesson is a review and evaluation of the student's cross-country skills. The flight will include a landing at a point more than 100 n.m. from the original departure point.

CONTENT:
Lesson Introduction
Cross-Country Ground Operations
- Cross-Country Preflight Planning
- Obtaining Weather Information
- Cockpit Management
Navigation
- Pilotage
- Dead Reckoning
- VOR Navigation
- GPS Navigation
- Use of Radar Vectors
Cruise Procedures
Power Settings and Mixture Leaning
Radio Communications and ATC Light Signals
Simulated Emergency Procedures
- System and Equipment Malfunctions
- Low Fuel Supply
- Lost Procedures
- Turbulence
- Adverse Weather
- Airframe and Powerplant Icing
- Planning to Alternate
- Radio and Instrument Failure
Unfamiliar Airports
- Traffic Patterns
- FSS Field
- UNICOM-Equipped Field
- Tower-Controlled Field
- Operations in Heavy Traffic
- CTAF Procedures
- Airport and Runway Markings and Lighting
High Density Altitude Operations
Radio Facility Shutdowns

COMPLETION STANDARDS:
This lesson is complete when the student demonstrates the ability to safely act as pilot in command of the aircraft during cross-country flights at night.
STAGE IV FLIGHT LESSON 17 – SOLO - CROSS-COUNTRY, NIGHT

LESSON OBJECTIVE:
This and the following solo cross-country flight are provided to develop the student's cross-country proficiency and confidence. This flight will include a landing at a point more than 50 n.m. from the original departure point and shall incorporate night operations into the cross-country procedures. All landings should involve a traffic pattern at an airport.

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

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. See NOTE in stage X lesson 12.

STUDENT NAME __________________________ ID# _______________
INSTRUCTOR NAME ________________________ CERT# ______________
AIRCRAFT# CRM_____ FLIGHT STAGE # __IV__ LESSON # __17__
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HOMEWORK COMPLETE: Y / N (% grade is normally part of the lesson grade.)
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STAGE IV FLIGHT LESSON 18 – SOLO - CROSS-COUNTRY

LESSON OBJECTIVE:
This lesson develops student proficiency in cross-country flights in an unfamiliar area. 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
Cross-Country Flight Assigned by the Instructor
- Dead Reckoning
- Pilotage
- VOR Navigation
- GPS Navigation
- Use of Tower-Controlled Airport
- Use of UNICOM-Equipped Airport

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 cross-country operations and the use of unfamiliar airports.
STAGE IV FLIGHT LESSON 19 – DUAL - LOCAL, COMPLEX AIRCRAFT

LESSON OBJECTIVE:
During this lesson, the student is provided with a review of basic flight procedures along with the introduction and practice of emergency procedures, attitude instrument flying, and takeoffs and landings in the complex aircraft. In addition, this lesson will provide the student with the necessary proficiency to solo or act as pilot in command in the aircraft safely.

CONTENT:
Lesson Review
Visual Inspection
Determining Performance and Limitations
Takeoffs and Landings
- Normal
- Go-Around From Rejected (Balked) Landing
Power Settings and Mixture Leaning
Use of Constant-Speed Propeller and Effects Upon Aircraft Performance
Use of Landing Gear Flaps
Climbs
Descents
Steep Turns

Lesson Introduction
Maneuvering During Slow Flight
Stalls
- Power-Off
- Power-On
- Accelerated
Takeoffs and Landings
- Short-Field
- Soft-Field
- At Maximum Authorized Takeoff Weight
Simulated Emergency Procedures
- Emergency Descent
- Emergency Approach and Landing
- System and Equipment Malfunctions
- Fire in Flight

COMPLETION STANDARDS:
At the completion of this flight, the student should be thoroughly familiar with the flight characteristics, systems, and emergency procedures associated with the complex airplane. The student will demonstrate pilot-in-command proficiency and the ability to perform safe solo flights.

NOTE: Solo practice is not authorized in the complex airplane.
STAGE IV FLIGHT LESSON 20 – DUAL - COMPLEX AIRCRAFT

LESSON OBJECTIVE:
This lesson is a review and evaluation session. Here, the student will be asked to perform selected VFR precision flight maneuvers. The objective is to determine the student's VFR proficiency.

CONTENT:
Lesson Review
Ground Operations
- Certificates and Documents
- Determining Performance and Limitations
- Operation of Airplane Systems
- Visual Inspection
- Cockpit Management
Takeoffs and Landings
- Normal
- Crosswind
- Go-Around From Rejected (Balked) Landing
- Power Off 180 Degree Accuracy Approach and Landing
- After-Landing Procedures
Stalls
- Power-Off
- Power-On
- Accelerated
Cruise Procedures
Power Settings and Mixture Leaning
Constant-Speed Propeller Operations
- Effects on Aircraft Performance
Simulated Emergency Procedures
- System and Equipment Malfunctions
- Landing Gear Malfunctions
- Fire in Flight

COMPLETION STANDARDS:
At the completion of this flight, the student should be thoroughly familiar with the flight characteristics, systems, and emergency procedures associated with the complex airplane. The student will demonstrate pilot-in-command proficiency and the ability to perform safe solo flights.
NOTE: Solo practice is not authorized in the complex airplane.
STAGE IV FLIGHT LESSON 21 – SOLO - LOCAL, NIGHT

LESSON OBJECTIVE:
The object of this lesson is to increase the student proficiency in night operations. Night flight procedures, therefore, are reviewed and practiced in this session.

CONTENT:
Lesson Review
- Steep Turns
- Maneuvering During Slow Flight
- Takeoffs and Landings

COMPLETION STANDARDS:
The student's increase in night proficiency to that of a commercial pilot will be evident during the postflight evaluation. The student will thoroughly explain the additional operational aspects and safety considerations which are associated with night flight. See NOTE in stage X lesson 12.

UNIVERSITY OF OKLAHOMA

STUDENT NAME _______________________________ ID# __________________

INSTRUCTOR NAME _________________________ CERT# __________________

AIRCRAFT# CRM_____ FLIGHT STAGE # ___IV___ LESSON # ___21___

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: __________________________________________________________

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TIME: IN _______________ ENTERED BY _____________
      OUT _______________ SYLL. LESSON ___________
      TOTAL _____________ PROCESSED ON __________

HOBBS / TAC: IN ________/_______ REMARKS: ________________
             OUT ________/_______ __________________________________
             TOTAL TIME ______________________________

STUDENT SIGNATURE ____________________________________________

INSTRUCTOR SIGNATURE ________________________________________
STAGE IV FLIGHT LESSON 22 – DUAL - COMPLEX

LESSON OBJECTIVE:
This lesson is to determine the student's ability to fly commercial maneuvers in a complex aircraft.

CONTENT:
Lesson Review
- Chandelles
- Eights-On-Pylons
- Steep Turns
- Stalls
- Maneuvering During Slow Flight
- Lazy Eights
- Steep Spirals
- Takeoffs and Climbs
  - Normal
  - Crosswind
  - Short-Field
  - Soft-Field
- Approaches and Landings
  - Normal
  - Crosswind
  - Short-Field
  - Soft-Field
  - Go-Around From Rejected (Balked) Landing
- After Landing Procedures

COMPLETION STANDARDS:
The student will demonstrate commercial pilot proficiency in the operation of the aircraft and a basic knowledge of the advanced commercial maneuvers. At the completion of this lesson, the student should have completed their Arrow Quiz and they should receive their complex sign-off.

STUDENT NAME _______________________________ ID# _______________
INSTRUCTOR NAME ____________________________ CERT# ______________
AIRCRAFT# CRM_____ FLIGHT STAGE # ___IV__ LESSON # ___22___
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 U OR I: SUBJECTS THAT ARE NOT COMPLETE/INSTRUCTOR COMMENTS
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TIME: IN _____________ ENTERED BY _______________
      OUT _____________ SYLL. LESSON ___________
      TOTAL _____________ PROCESSED ON ___________

HOBBYS / TAC: IN ________/___________ REMARKS: ___________________
              OUT ________/___________ _______________________________
              TOTAL TIME _________________________________

STUDENT SIGNATURE ___________________________________________
INSTRUCTOR SIGNATURE _________________________________________
STAGE IV FLIGHT LESSON 23 – SOLO - LOCAL

LESSON OBJECTIVE:
This lesson provides solo practice of the flight maneuvers so that the student can acquire added proficiency.

CONTENT:
Lesson Review
Lazy Eights
Chandelles
Eights-On-Pylons
Steep Spiral
Takeoffs and Landings
  - Short-Field
  - Soft-Field
  - Crosswind

COMPLETION STANDARDS:
The solo lesson is complete when the student has conducted the assigned flight. During the flight, the student should attempt to attain or maintain commercial pilot proficiency.
STAGE IV FLIGHT LESSON 24 – DUAL - LOCAL

LESSON OBJECTIVE:
This lesson presents additional instruction in the chandelle, steep power turn, and steep spiral. Maximum performance takeoffs and landings are practiced to increase the student's proficiency in the takeoff and landing phases of flight.

CONTENT:
Lesson Review
Steep Turns
Chandelles
Steep Spiral
Traffic Patterns
Maximum Performance (Short-Field) Takeoff and Climb
Soft-Field Takeoff and Climb
Short-Field Approach and Landing
Soft-Field Approach and Landing

COMPLETION STANDARDS:
Steep power turns will be maintained within +/- 150 feet and bank angle and recovery heading within +/- 15°. The student will demonstrate the correct procedures for performing the chandelle. During the steep spiral the student will smoothly adjust bank angle to maintain a constant distance from the selected point and adjust pitch to maintain a constant airspeed +/- 10 knots and roll out +/- 15° of the specified heading. During takeoffs and landings, the student will demonstrate correct airspeed control techniques. During short field landings the student should touch down at or within 150 feet beyond the specified point.
STAGE IV FLIGHT LESSON 25 – SOLO - LOCAL

LESSON OBJECTIVE:
This lesson provides solo practice of the flight maneuvers so that the student can acquire added proficiency.

CONTENT:
Lesson Review
Steep Turns
Chandelles
Steep Spiral
Eights On Pylons
Steep Spiral
Takeoffs and Landings
  - Short-Field
  - Soft-Field
  - Crosswind

COMPLETION STANDARDS:
The solo lesson is complete when the student has conducted the assigned flight. During the flight, the student should attempt to attain or maintain commercial pilot proficiency, touch down at or within 150 feet beyond s specified point.

UNIVERSITY OF OKLAHOMA
STUDENT NAME _______________________________ ID# __________________
INSTRUCTOR NAME ____________________________ CERT# ________________

AIRCRAFT# CRM____  FLIGHT  STAGE # __IV__  LESSON # __25__
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.
REMKS: ________________________________________________________________

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TIME: IN ____________ ENTERED BY ____________
      OUT ____________ SYLL. LESSON ____________
      TOTAL ____________ PROCESSED ON ____________

HOBBS / TAC: IN _______/_______ REMARKS: ________________
              OUT _______/_______
              TOTAL TIME ________________
STUDENT SIGNATURE _______________________________________
INSTRUCTOR SIGNATURE ____________________________________
STAGE IV LESSON 26 – QUIZ

LESSON OBJECTIVE:
The students' knowledge will be evaluated through a quiz.

COMPLETION STANDARDS:
The student should score at least 70% on the quiz. In addition, the instructor will review those questions missed with the student.
STAGE IV FLIGHT LESSON 27 – DUAL STAGE CHECK, VFR

LESSON OBJECTIVE:
This lesson is conducted by the chief instructor or assistant chief instructor or check instructor to determine the student's knowledge of complex aircraft systems and ability to fly the designated commercial maneuvers below.

CONTENT:
Lesson Review
Complex Aircraft System Knowledge (PA28R-200)
- Constant Speed Propeller and Governor System
- Retractable Landing Gear System
- Fuel Injection System
Chandelles
Eights-On-Pylons
Steep Turns
Stalls
- Power-On
- Power-Off
- Accelerated
Maneuvering During Slow Flight
Steep Spiral
Takeoffs and Climbs
- Normal
- Crosswind
- Short-Field
- Soft-Field
Approaches and Landings
- Normal
- Crosswind
- Short-Field
- Soft-Field
- Go-Around From Rejected (Balked) Landing
After Landing Procedures

COMPLETION STANDARDS:
The student will demonstrate knowledge of PA28R-200 systems and will perform the flight maneuvers listed above in a PA28-161 to commercial PTS standards with the following exceptions:
Short Field Landing: Touches down at or within 150 feet beyond a Specified point.
Chandelles and Steep Spirals: Completes rollout within +/- 20° of specified heading.
Eights on Pylon: Holds pylon plus or minus one wing width using appropriate pivotal altitude avoiding slips and skids.
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. 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.

4. 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.