I. INTRODUCTION

A. This course outline covers phase three of three phases in which the curriculum requirements for the Commercial Pilot Certification course contained in Appendix D of FAR 141.

B. This syllabus contains only the flight training which will be conducted at the Killeen Municipal Airport on property owned or leased by Central Texas College.

C. The flight training will consist of the following:
   1. 20 hours of dual in airplanes with at least the following breakdown:
      a. 15 hours dual in an aircraft having retractable landing gear, controllable pitch propeller, and flaps.
      b. 5.0 hours dual in a primary trainer which includes one 2.0 hour Day VFR cross country to an airport with a distance of more than 100 NM, and one 2.0 hour Night VFR cross country to an airport with a distance of more than 100 NM.

   2. 15 hours solo with the following breakdown:
      a. 5 hours solo in a primary trainer at night, including at least 10 take-offs and landings (with each landing involving a flight with a traffic pattern) at an airport with an operating control tower.
      b. 5 hours solo cross-country with landings at a minimum of three points and one segment of the flight consisting of straight-line distance of at least 250 nautical miles.
      c. 5 hours solo in the local area to prepare for the practical test.

D. The associated ground school will be taught at Central Texas College on campus or other property owned or leased by Central Texas College.

E. For aircraft, training aids, facilities, and instructor qualifications, see Appendix II of this syllabus.

F. This course, or its equivalent, is a required course for the Associate in Applied Science degree which will enhance employment in the aviation field.

G. Enrollment prerequisites
   1. Students enrolling in this course must hold a valid Private Pilot certificate with an
Instrument - Airplane Rating and at least a current Class II medical certificate.
2. Students must have satisfactorily completed AIRP 1255 and AIRP 2250 courses offered by Central Texas College or have equivalent experience and training.
3. Students must have completed or be concurrently enrolled in the Commercial Ground School offered by Central Texas College
4. Students will be issued a certificate of enrollment as per FAA requirements

II. OVERALL OR GENERAL OBJECTIVES OF THE COURSE

Upon completion of this course - AIRP 2239 Commercial Pilot Certification the student will have the experience and skills required to successfully demonstrate the tasks required for the issuance of the Federal Aviation Administration’s Commercial Pilot certificate with Airplane category and single-engine class rating.

III. INSTRUCTIONAL MATERIALS

The instructional materials identified for this course are viewable through www.ctcd.edu/books

IV. COURSE REQUIREMENTS

A. Students are required to attend scheduled flight lessons. Lessons that are cancelled due to bad weather are required to be made up on special schedule
B. Students are required to perform any outside study and research as may be required by their instructor
C. Each course will have one or more stage checks which will have both a written and flight check. The course grade will be decided by the grades earned during these stage checks as well as a daily grade supplied by their instructor

V. COMPLETION REQUIREMENTS

This course will be completed when the student has acquired the necessary flight hours, and has demonstrated through testing and school records that the necessary skills and knowledge required for the issuance of the FAA Commercial Pilot Airplane Single-Engine category and class rating have been acquired.
APPENDIX I

STAGE I - DUAL, SOLO, AND HIGH PERFORMANCE STAGE CHECK

STAGE ONE OBJECTIVES: The student will receive the training and practice necessary to safely complete the solo cross country. In addition, this stage will be used to give training required for night operations.

STAGE ONE COMPLETION STANDARDS: This stage will be complete when the student has satisfactorily completed the Stage I written exam, Stage I flight check, and is able to conduct solo operations in an airplane having retractable gear, flaps, and controllable pitch propeller.

FLIGHT LESSON 1: Dual (Primary Trainer)

A. OBJECTIVES: This lesson will be used by the instructor to review upper air maneuvers to include minimum controllable airspeed, stalls - power on and power-off, and steep turns. In addition, the instructor will determine the student is safe to conduct solo flights in the primary trainer.

B. CONTENT
1. Preflight Discussion
2. Review
   a. Ground Operations
   b. Normal Take-offs
   c. Traffic pattern operations
   d. Climbs, turns, descents
   e. Minimum controllable airspeed
   f. Stalls power on and off
   g. Steep turns
   h. Forced landings
   i. Normal landings
3. Post-flight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates the necessary skills to safely solo the airplane.

LESSON 2: Dual (Cross-country - Day VFR - Primary trainer)

A. OBJECTIVE: This lesson will be used by the instructor to conduct a solo cross-country flight of at least two hours in duration to an airport more than 100 NM away in a primary trainer. The student will present a pre-planned VFR cross-country log and explain current and forecast weather conditions and how those conditions will affect the flight. In addition, the student will explain airspace and communications requirements for the flight.

B. CONTENT
1. Preflight discussion
2. Review
LESSON 3: Dual (Cross-country - Night - VFR - Primary trainer)

A. OBJECTIVE: This lesson will be used by the instructor to increase the student’s knowledge of the elements involved with planning and flying a cross-country flight at night. The student will present a pre-planned cross-country flight to include a developed cross-country navigation log, current and forecast weather, and be able to explain how that weather will affect the planned flight. (This lesson may be conducted in conjunction with lesson 2)

B. CONTENT
   1. Preflight discussion of the planned flight
   2. Review
      a. Night operations to include required equipment, hazards, and differences from daylight operations.
      b. Lighting to include airplane and airport
      c. VFR navigation to include pilotage, radio, and dead-reckoning.
   3. Post-flight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student can explain through oral quizzing the differences of night operations, can demonstrate the ability to safely conduct solo operations during the hours of darkness.

LESSON 4: Solo (Night)

A. OBJECTIVE: This lesson will be used to allow the student to gain night experience. The flight will be conducted at the primary airport where training is given and the student will remain in the traffic pattern.

B. CONTENT
   1. Preflight discussion
   2. Review night operations.
   3. Postflight discussion and preview of the next lesson.
C. COMPLETION STANDARDS: This lesson is complete when the student has completed at least 5 take-offs and 5 full-stop landings and has flown at least 1.0 hours a night.

LESSON 5: Dual (High-performance airplane)

A. OBJECTIVE: This lesson will be used by the instructor to introduce the student to an airplane having a constant speed propeller, retractable landing gear, and flaps.

B. CONTENT
   1. Preflight discussion
   2. Introduction
      a. Preflight of the aircraft to include required paperwork, inspections and checks
      b. Ground operations and run-up
      c. Normal take-offs and landings
      d. Straight and level, climbs, turns, and descents
      e. Minimum controllable airspeed, stalls, power on and power off
   3. Post-flight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates the ability to start, taxi and conduct the preflight checks of the airplane systems and can perform normal take-offs and landings with supervision from the instructor.

LESSON 6: Solo (Night)

A. OBJECTIVES: This lesson will be used to continue night orientation and will include 5 take-offs and landings to a full stop at a tower-controlled airport.

B. CONTENT
   1. Preflight discussion
   2. Review
      a. Night operations
      b. Take-offs and landings at night
   3. Postflight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student has accomplished 5 take-offs and 5 full-stop landings at a tower controlled airport and has acquired 2.5 hours of night experience as pilot-in-command.

LESSON 7: Dual (High Performance Airplane)

A. OBJECTIVE: This lesson will be used to continue the student’s familiarization with flying an airplane with retractable landing gear, controllable pitch propeller, and flaps.

B. CONTENT
1. Preflight discussion
2. Review
   a. Preflight inspection
   b. Ground maneuvering and run-up
   c. Normal take-offs and landings
   d. Minimum controllable airspeed, stalls power on and power off
3. Introduction
   a. Emergency procedures to include system and powerplant failures
   b. Short and soft field take-offs and landings
   c. Go-arounds
4. Postflight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates through oral quizzing an understanding of emergency procedures to include power plant and system failures; an ability to perform short and soft field take-offs and landings under supervision, and can perform normal take-offs and landings without supervision.

LESSON 8: Dual (High-performance airplane)

A. OBJECTIVE: This lesson will be used to introduce the student to performance maneuvers.

B. CONTENT
   1. Preflight discussion
   2. Review
      a. Ground maneuvering and run-up
      b. Short and soft field take-offs and landings
      c. Forced landings
      d. System failures (oral quizzing)
   3. Introduction
      a. Chandelles
      b. Lazy eights
      c. Steep turns
      d. Pylon eights
   4. Postflight discussion and preview of next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates the ability to fly a high performance airplane in solo operations and has received a high performance endorsement from the instructor. In addition, demonstrates through oral quizzing an understanding of the performance maneuvers.

LESSON 9: STAGE I CHECK (Dual high performance airplane)

A. OBJECTIVE: This lesson will be used by the authorized check pilot to conduct a check in
order to determine the student is safe to operate a high-performance airplane in solo operations

B. CONTENT:
1. Completion of the High Performance (Stage I) written test (prior to scheduled stage check)
2. Preflight discussion
   a. Use of performance charts to include take-off and landing, climb, cruise, and weight and balance computations.
   b. Operations of systems to include normal and abnormal operations
3. Review
   a. Ground operations including use of checklists to perform run-ups
   b. Normal take-offs and landings
   c. Straight and level, climbs, turns and descents
   d. Minimum controllable airspeed, stalls - power on and power off
   e. Forced landings
   f. Short and soft field take-offs and landings

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates the ability to safely operate a high-performance airplane in solo operations

STAGE II
CROSS COUNTRY AND PREPARATION FOR COMMERCIAL CHECKRIDE

STAGE II OBJECTIVES: This stage will be used to meet the solo cross-country requirements and preparation for the Commercial Pilot Airplane Single-Engine checkride.

STAGE II COMPLETION STANDARDS: This stage will be complete when the student meets the regulatory requirements and demonstrates the knowledge and skill necessary for the issuance of the Commercial Pilot Airplane Certificate with Single-Engine class rating.

LESSON 10: Solo (Cross-country in a high performance airplane)

A. OBJECTIVES: This lesson will be used by the student to complete the solo cross-country requirements of FAR Part 141 by planning and flying a Day VFR cross-country to an airport more than 250 NM away and return with an en route stop.

B. CONTENT
1. Preflight discussion
2. Review
   a. Cross-country planning procedures to include the development of a VFR navigation log
   b. Use of available weather services

AIRP 2239 7
c. Use of performance charts to include take-off and landing and en route charts
d. Conduct of cross-country flight using pilotage, dead-reckoning and radio
   navigation
e. Use of radio for communication with FSS and ATC facilities
3. Postflight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student has flown the
cross-country to an airport more than 250nm away and returned with an en route landing.

LESSON 11: Dual (High Performance Airplane - Preparation for checkride)

A. OBJECTIVES: this lesson will be used to continue preparing for the Commercial Pilot
   check ride by reviewing the performance maneuvers

B. CONTENT
   1. Preflight discussion
   2. Review
      a. Normal take-offs and landings
      b. Chandelles, Lazy eights, and steep turns
      c. Forced landings
   3. Postflight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates
   improved skills in performing the performance maneuvers.

LESSON 12: Solo (Night)

A. OBJECTIVE: This lesson will be used to continue gaining night experience by
   completing five take-offs and five landings to a full-stop at a tower controlled airport.

B. CONTENT
   1. Preflight discussion
   2. Review night operations and take-offs and landings at a tower controlled airport
   3. Postflight discussion and preview of next lesson

C. COMPLETION STANDARDS: This lesson will be complete when the student has
   acquired 10 take-offs and 10 landings to a full stop at a tower controlled airport between
   the hours of sunset and sunrise.

LESSON 13: Solo

A. OBJECTIVE: This lesson will be used by the student to practice those maneuvers
   selected from the Commercial Pilot Practical Test standards and as assigned by the
   instructor.
B. CONTENT
1. Preflight discussion
2. Review selected maneuvers
3. Postflight discussion and preview of the next maneuver

C. COMPLETION STANDARDS: This lesson will be complete when the student demonstrates through oral quizzing an increased knowledge of the elements involved with the selected maneuvers.

LESSON 14: Dual (High-performance - Preparation for checkride)

A. OBJECTIVE: This lesson will be used to review basic maneuvers and to review basic instrument flying skills.

B. CONTENT
1. Preflight discussion
2. Review
   a. Normal take-offs and landings
   b. Minimum controllable airspeed and stalls both power on and power off
   c. Basic instrument flying skills
      (1) Straight and level
      (2) Turns, climbs, and descents
      (3) Unusual attitudes
3. Postflight discussion and preview of the next lesson

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates an increased skill in performing basic maneuvers and demonstrates the ability to control the airplane solely by reference to instruments.

LESSON 15: Solo (Night)

A. OBJECTIVE: This lesson will be used to finish the requirements for night experience as required by the FAR’s for the issuance of a Commercial Pilot Certificate.

B. CONTENT
1. Preflight discussion
2. Review night operations by performing take-offs and landings at the primary airport during the hours between sunset and sunrise.
3. Postflight discussion and preview of next lesson

LESSON 16: Solo

A. OBJECTIVE: This lesson will be used to continue developing the skills necessary to pass
the Commercial Pilot Airplane checkride by practicing those maneuvers selected by the 
instructor from the Commercial Pilot Practical Test Standards

B. CONTENT
1. Preflight discussion
2. Review Selected maneuvers
3. Postflight discussion and preview of next lesson

C. COMPLETION STANDARDS: This lesson will be complete when the student 
demonstrates through oral quizzing and increased knowledge of the elements involved 
with the selected maneuvers.

LESSON 17: Dual (High Performance Airplane - Preparation for checkride)

A. OBJECTIVE: This lesson will be used by the instructor to conduct a practice checkride 
by using the Commercial Pilot Airplane Single Engine Land Practical Test Standards.

B. CONTENT
1. Preflight discussion
   a. Required certificates and documents
   b. Performance charts
   c. VFR cross-country procedures to include the use of available weather services and 
      the development of a cross-country navigation log.
   d. Commercial Pilot privileges and limitations
2. Review of all maneuvers as outlined in the Commercial Pilot Airplane Single-engine 
   Land Practical Test Standards
3. Postflight discussion and preview of next lesson.

C. COMPLETION STANDARDS: This lesson is complete when the student meet the 
regulatory requirements and demonstrates through oral quizzing and demonstration the 
ability to act as a Commercial Pilot in single engine land airplanes.

LESSON 18: Dual STAGE II (FINAL) CHECK (High Performance Airplane)

A. OBJECTIVE: This lesson will be used by the authorized check pilot to administer the 
final stage check written and flight check.

B. CONTENT
1. Stage check written (administered prior to scheduled stage check)
2. Preflight discussion
   a. Oral discussion using the Commercial Pilot Practical Test Standards as a guide
   b. Performance charts and factors effecting airplane performance
   c. Required certificates and documents and their significance
   d. VFR Cross-country flight planning to include use of weather services, charts and
reports, and development of a VFR Cross-country navigation log
  e. Commercial pilot privileges and limitations

3. Flight
   a. VFR cross-country operations
   b. Maneuvers as outlined in the Commercial Pilot Airplane Single Engine Land Practical Test Standards

C. COMPLETION STANDARDS: This lesson is complete when the student demonstrates through oral quizzing and demonstration the knowledge and skill necessary to act as a Commercial Pilot in single engine land airplanes.