# COURSE OUTLINE

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AVI 233</td>
<td>Flight Instructor-Airplane</td>
<td>3</td>
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</tbody>
</table>

**Hours:** 3  
Lecture/Lab/Other

**Pre-requisite:** Must have passed FAA Commercial Pilot and Instrument Rating written tests and possess FAA Private Pilot Certificate.

**Corequisite:** AVI 214 or Instructor’s Permission

**Implementation:** 1999

**Catalog description (2011-2013 Catalog):**
Prepares students to pass the Federal Aviation Administration FOI (Fundamentals of Instruction) and FIA (Flight Instructor/Airplane) computer examinations. Includes basic theory of learning and human behavior pertaining to flight instruction, flight instructor’s responsibilities, flight training maneuvers, plus review of FARs flight planning and performance.

**Is course New, Revised, or Modified?** Revised

**Required texts/other materials:**
- Aviation Instructor’s Handbook AC60-14 GPO
- Flight Training Handbook AC61-21A GPO
- Practical Test Standards: Private, Commercial, and CFI
  (Latest Edition will not be available until mid-term)

**Revision date:** February 2014

**Course coordinator:**
Joan Jones  
(609) 570-3436  
jonesj@mccc.edu
GENERAL OBJECTIVES:

This course is designed to assist the student in gaining the knowledge to pass the FAA, FOI, and FIA written tests and to provide opportunities to practice teaching techniques so that the student will be able to function as a competent flight instructor after appropriate flight training and certification.

UNIT I: 9 Hours

A. The Learning Process 1 ½ Hours
   1. Learning Comes Through Experience
   2. Laws of Learning
   3. Perception and Insight
   4. Forgetting and Retention
   5. Transfer of Learning

B. Barriers to Learning 1 ½ Hours
   1. Self Concept
   2. Defense Mechanism
   3. Stress and Anxiety
   4. Fatigue and Illness
   5. The Over-Confident or Impatient Student
   6. Student Self-Confidence

QUIZ I – UNIT 1 A & B

C. Human Behavior and Effective Communication 1 ½ Hours
   1. Human Needs
   2. Motivation
   3. Communication
   4. Instructor Professionalism

D. Aviation Instruction Overview 1 ½ Hours
   1. Instruction Method Overview
   2. Direct, Positive Approach
   3. Integrated Flight Instruction

QUIZ 2 – UNIT I C & D
E. Teaching Methods 1½ Hours
   1. Course Development
   2. Organization of Material
   3. Lesson Planning
   4. The Lecture
   5. The Guided Discussion
   6. The Demonstration/Performance/Instruction Method

F. Testing and Evaluating 1½ Hours
   1. The Instructor as a Critic
   2. Oral Quizzing and Questions from the Students
   3. Types of Written Questions
   4. Characteristics of a Good Test
   5. Review and Evaluation

QUIZ 3 – UNIT I E & F

FOI COLLEGE FINAL – UNIT I A, B, C, D, E & F

100 Questions

FAA, FOI EXAM – Prerequisite: 85 or better on College FOI EXAM

UNIT II: 12 Hours

A. Airplane and Aerodynamics 3 Hours
   1. Flaps
   2. Lift and Drag
   3. Turns
   4. Angle of Attack, Spins and Ground Effect
   5. Wings
   6. Airplane Stability
   7. P Factor and Other Torque Forces

QUIZ 4 – UNIT II A

B. Airplane Performance 3 Hours
   1. Density Altitude
   2. True Airspeed
   3. Multiengine Performance
   4. Wind Shear

QUIZ 5 – UNIT II B

C. Airplane Systems 3 Hours
   1. Pilot-Static System
   2. Fuel System
   3. Turbochargers and Reciprocating Engines
4. Propellers
5. Electrical System

QUIZ 6 – UNIT II C

D. Airports, Airspace and ATC  3 Hours
   1. Special Use Airspace
   2. Airport Radar Service Areas
   3. Radar Services
   4. Control Zones and Control Areas
   5. Airport Traffic Areas
   6. Airport Advisory Areas

QUIZ 7 – UNIT II D

COLLEGE FINAL FIA – UNIT II A, B, C, D

A score of 85 or better is required.

UNIT III:  15 Hours

A. Weight and Balance  3 Hours
   1. Center of Gravity Questions
   2. Center of Gravity Calculations

QUIZ 8 – UNIT III A

B. Weather  3 Hours
   1. Causes of Weather
   2. High-Low Pressure Systems
   3. Clouds
   4. Stability of Air Masses
   5. Weather Fronts
   6. Wind Shear and Thunderstorms
   7. Surface Aviation Reports
   8. Pilot Reports
   9. Radar Weather Reports
  10. Surface Analysis Charts
  11. Weather Depiction Chart
  12. Radar Summary Chart
B. Continued

13. Constant Pressure Analysis Chart
14. Stability Chart
15. Winds and Temperature Aloft Forecasts
16. Terminal Forecasts
17. Area Forecasts
18. Low-Level Prognostic Chart
19. Airmets and Sigmets

QUIZ 9 – UNIT III B

C. Federal Aviation Regulation 3 Hours

All applicable parts of FAR Parts 61 and 91 pertaining to flight instructors.

QUIZ 10 – UNIT III C

D. Navigation 3 Hours
1. Navigation Concepts

QUIZ 11 – UNIT III D

E. Flight Maneuvers 3 Hours
1. Taxiing
2. Takeoffs
3. Turns
4. Landings
5. Rectangular Course
6. Turns About a Point
7. S-Turns Across a Road
8. Eights on Pylons
9. Slow Flight, Stalls
10. Steep Turns
11. Chandelles
12. Lazy Eights
13. Scanning for Traffic
14. Flight Physiology

QUIZ 12 – UNIT III E

COLLEGE FINAL FIA – UNIT III A, B, C, D, & E

A score of 85 or better is required.

FAA, FIA FINAL – Prerequisite: A score of 85 or better on Unit Tests.
Additional Requirements:

Each student is required to have by the end of the fourth week an FAR 61 syllabus for the private pilot flight course. There is an additional requirement of having the required FAA signoffs for the flight instructor.

The equivalent time of three weeks will be used for practice lessons given and reviewed.

Attendance:

Each student is required to attend all classes. If for an unforeseen reason you are going to be absent please telephone. Three unexcused absences will lower your grade one letter value. Absences beyond three will lead to an instructor initiated withdrawal or an F grade.

Evaluation:

The student will be required to take the 12 quizzes, the three college final unit tests and the FAA, FOI, and FIA examinations. A failure in the FAA exams will automatically fail you for the course. Each student will be required to have an Instructor Notebook which includes this syllabus, the signoffs and any other relevant material pertinent to the course. Three 8-10 minute lessons will be given by each student during Units II and III.

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>FAA Tests</td>
<td>20%</td>
</tr>
<tr>
<td>Unit Tests</td>
<td>40%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Attendance</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
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Academic Integrity Statement:

“A student who a.) knowingly represents work of others as his/her own; b.) uses or obtains unauthorized assistance in the execution of any academic work; or c.) gives fraudulent assistance to another student is guilty of cheating. Violators will be penalized.” (Student Handbook)

Classroom Conduct Statement:

It is the student’s responsibility to attend all of their classes. If they miss a class meeting for any reason, students are responsible for all content that is covered, for announcements made in their absence, and for acquiring any materials that may have been distributed in class. It is expected that students be on time for all their classes. If students walk into a class after it has begun, it is expected that they choose a seat close to where they entered the room so that they do not disrupt the class meeting.
Students are expected to follow ordinary rules of courtesy during class sessions. Engaging in private, side conversations during class time is distracting to other students and to the instructor. Leaving class early without having informed the instructor prior to class is not appropriate. Unless there is an emergency, leaving class and returning while class is in session is not acceptable behavior. Disruptive behavior of any type, including sharpening pencils during class while someone is speaking, is not appropriate.

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