

Aviation 216 (AVIA 216) *
Instrument Pilot Ground School
M-F 11:00- 11:50 AM, 5 Credits

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Office Hours: TC 133 – Office 133, M-F 08:00-09:00

Course Description:

Provides students with information necessary to pass the FAA Instrument Pilot Written examination - Covers radio navigation, IFR flight planning and decision-making, ATC procedures, Federal Aviation Regulations pertinent to instrument flight, FAA Part 141 Approved, Includes up to 11 lab hours in the flight simulator to provide real-life experience in the topics included in the lecture portion of the class

Materials for AVIA 216:

- Jeppesen Instrument-Commercial Textbook & Test Guide
- FAA Instrument Test Booklet (FAA-CT-8080-3E)
- Materials: NOAA Flight Publications (FLIPs) or Jeppesen FLIPs
- E6-b Flight Computer (Manual)
- Navigation Plotter
- FAR/AIM
- Internet FAA publications
 - www.faa.gov/library/manuals/aircraft/ (for FAA flying manuals)
 - www.faa.gov/atpubs/ (for other FAA publications)

Learning Objectives:

At class completion, students completing all stages of AVIA 216 successfully should have sufficient knowledge of instrument flight to satisfy requirements to earn a Part 141 Instrument Ground School Completion Certificate. NOTE: to earn a Part 141 Certificate, students must get at least 80% on all Stage Exams and the Final Exam.

Instructional Methods and Homework

Lecture with in-class exercises, seminar discussions, oral and written quizzes and stage test reviews. Homework includes reading and self-study using the class materials and is essential for success in AVIA 216

Attendance/Absence/Tardiness Policy:

AVIA 216 is one of the most challenging classes in the GRCC Aviation Program because the class covers a tremendous amount of complex material, the trivia you must learn is tremendous, the class moves at a very rapid pace and AVIA 216 material is a

key part of each Aviation Degree. For these reasons, I strongly urge you to not miss any classes. If you must miss class, please tell me, and I will do what I can to catch you up. Also developing positive relationships with your classmates can help you in this class. Learning how to be a good class-mate who helps other classmates translates directly into being a good a good Flight Dispatcher, Flight Crew member, or ATC Team member

Student Code of Conduct:

Refer to GRCC catalog

Testing, Test Make-up, Retakes & Grading

Instructor will tentatively schedule test dates, class will vote to decide readiness to take tests to establish the “Scheduled Day”, instructor can over-ride class Scheduled Day vote. Students must arrange for Make-ups and Retakes with the instructor. Grade score for tests, make-ups, retakes and late assignments are as follows:

- 1. No re-takes of any test will be allowed more than 10 class days after the initial test date.**
- 2. The final score for any re-test given will be the average of the initial test and the re-take.**
- 3. Only 1 re-take of any given test will be allowed.**
- 4. No re-takes will be permitted after the official “study day” listed in the college calendar for the quarter (normally the week before finals).**
- 5. No re-takes will be allowed for the final exam.**

Final grade will be based on points earned. Points available are as follows:

8 tests worth 100 points each.....	= 800
Final exam worth 300 points.....	= 300
Completion of 5 hours of simulator training.....	= 200
TOTAL.....	= 1300

Evaluation Standards, Grading & Academic Honesty:

Students earn grades from Stage Exams, the Final Exam and other class work. Cheating in any form will result in a zero score with no opportunity for test retake

% =Test Percentage, GRCC= GRCC Decimal Grading Scale

%	GRCC	%	GRCC	%	GRCC	%	GRCC
100	4.0	90	3.5	80	2.5	70	1.5
99	4.0	89	3.4	79	2.4	69	1.4
98	3.9	88	3.3	78	2.3	68	1.3
97	3.9	87	3.2	77	2.2	67	1.2
96	3.8	86	3.1	76	2.1	66	1.1
95	3.8	85	3.0	75	2.0	65	1.0
94	3.7	84	2.9	74	1.9	64	0.9
93	3.7	83	2.8	73	1.8	63	0.8
92	3.6	82	2.7	72	1.7	62	0.7
91	3.6	81	2.6	71	1.6		

GRCC Campus-wide Outcomes:

Green River Community College (GRCC) identified specific fundamental knowledge, skills, behaviors, attitudes, and values that GRCC students must possess to be successful after leaving the Green River Community College environment:

1. Student's sense of individual responsibility to the community
 - Demonstrate knowledge of and willingness to accept stated/agreed expectations, policies, behavior, and procedures.
 - Demonstrate accountability (be punctual, prepared, ready to learn), integrity (do your own work, do your share of shared work), initiative (seek help when you need help), and tolerance (be awareness of your own biases). Actively and appropriately interact with others while respecting everyone's opinion.
 - Measured by occurrences of student readiness for class, participation in class, timely assignment submissions, and effective group membership.
2. Quantitative and symbolic reasoning
 - Student can evaluate and interpret information and data, can recognize which processes or methods are appropriate for solving a given problem, can estimate a solution, and correctly implements those processes.
 - Student can translate data into various formats such as graphs, tables, formulas, and sentences.
 - Measured by student work in class, on projects, homework, and tests.
3. Critical Thinking:
 - Student provides reasons for the conclusions he or she reaches and assesses the relevance and adequacy of those reasons.
 - Student connects past learning with current topics.

- Measured by student work in class, on projects, homework, and tests.
4. Written & Oral Communications skills suitable for the modern business environment
- Student becomes involved with the material and can express a clear sense of purpose, unity, and focus in his or her writing or speaking.
 - Student can organize of his or her thoughts in written and oral communications clearly and effectively using well-organized, logical writing and using correct grammar and spelling.
 - Measured by student work in projects, test answers, and class and group participation

Special Needs:

If, because of a disability, the student:

- Needs special accommodations (adapt a course activity, have additional assistance, etc.),
- Has emergency medical information the instructor should know about, or
- Has a need for special assistance in the event of a building evacuation,

Please contact the Instructor and be sure the instructor fully understands the special need. Students may use alternate modes to communicate Special Needs information (email, phone). In any case, and using any format, students should inform the Instructor as soon as possible after the start of school.

Students should also contact Disability Support Services (DSS) in LSC 277 – Phone DSS at: 253-833-9111, ext. 2631 or TDD at 253-288-3359.

COURSE OUTLINE

Stage 1

Lesson 1	Human Factors, Certificates and Ratings	1-B
Lesson 2	Flight Instrument Systems	2-A
Lesson 3	Attitude Instrument Flight	2-B
Test	Week 1	

Stage 2

Lesson 4	Instrument Navigation	2-C
Lesson 5	Federal Aviation Regulations	2-C
Lesson 6	Airport, Airspace, Flight information	3-A
Lesson 7	Air Traffic Control	3-B
Lesson 8	ATC Clearances	3-C
Test	Week 3	

Stage 3

Lesson 9	Departure Charts and Procedures	4-A and B
Lesson 10	Enroute and Area Charts	5-A
Test	Week 4	

Stage 4

Lesson 11	Holding & Enroute Procedures	5-B
Lesson 12	Arrival Charts	6-A and B
Test	Week 5	

Stage 5

Lesson 13	Approach charts	7-A
Lesson 14	Approach procedures	7-B
Lesson 15	VOR/NDB Approaches	8-A
Test	Week 7	

Stage 6

Lesson 16	ILS Approaches	8-B
Lesson 17	GPS and RNAV Approaches	8-C
Test	Week 9	

Stage 7

Lesson 18	Weather Factors/Hazards	9-A and B
Lesson 19	Printed Reports/Forecasts	9-C
Lesson 20	Graphic Weather Products	9-D
Lesson 21	Sources of Weather Information	9-E
Test	Week 10	

Stage 8.

Lesson 22	IFR Emergencies	10-A
Lesson 23	IFR Decision Making	10-B
Lesson 24	IFR Flight Planning	10-C
Test	Week 11	

FINAL EXAM

SIMULATOR FLIGHT PROGRAM

FLIGHT 1 – 1 HOUR

- Review Flight Instruments and systems and the Magnetic Compass
- Basic Attitude Instrument flying

FLIGHT 2 – 1 HOUR

- Review Radio Navigation, Flight Instruments and Instrument interpretation
- Review OBS, HIS, and RMI

FLIGHT 3 – 1 HOUR

- Review VOR Orientation, VOR Course Tracking and Wind Bracketing

FLIGHT 4 – 1 HOUR

- Fly a Departure Procedure
- Fly an Arrival Procedure

FLIGHT 5 – 1 HOUR

- Holding pattern entry, Holding pattern timing and drift planning and adjustment

FLIGHT 6 – 1 HOUR

- Fly VOR Approaches and NDB Approaches

FLIGHT 7 – 1 HOUR

- Fly ILS Approaches, LOC only Approaches, and BC LOC Approaches

FLIGHT 8 – 1 HOUR

- Fly GPS approaches and RNAV Approaches

FLIGHT 9 – 1 HOUR

- Fly approaches into low IFR conditions
- Fly Missed Approaches

FLIGHT 10 – 2 HOURS

- Plan and Fly a Cross Country to an airport at least 100 NM, from the departure airport. For this flight:
 - Depart from a Seattle Area Airport,
 - Fly a departure procedure from the Departure Airport,
 - Use Victor airways, and
 - Fly an approach to the Destination Airport