

Aviation 123 - Distant Education (AVIA 123 DE) Aviation Weather

Instructor: Paul Vandette
Office Hours: M & W 5:30-6:00PM and 8:30-9:00pm Room 108
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Item Number 0831

Course Description:

Covers theory of weather processes and interpretation of weather reports and charts Special aviation-related topics such as high-altitude weather, arctic weather and tropical weather are covered. Students gain a fundamental knowledge of weather observation and forecasting techniques and instruments. Includes special aviation problems such as wind-shear and micro-burst detection - Terminal Aerodrome Forecast/Aviation Routine Weather

Text and Materials for AVIA 123:

Jeppesen Weather Textbook
Aviation Weather Services AC 00-45F (NOAA)
METAR & TAF quick reference manual, (suggested)- Miller
Access to the ANGEL Website
www.aviationweather.gov (NOAA Aviation Weather website)

Learning Objectives:

The successful student will obtain a solid foundation of aviation weather knowledge necessary for follow-on classes in all of the Aviation Department degree programs.

Conduct of the Class and Instructional Methods

GRCC uses the ANGEL online Distant Education (DE) website to conduct AVIA 123 DE. Instruction is:

- Read Jeppesen Text chapters according to the Block Schedule (see last page of this syllabus)
- Completing each Chapter self-study guide (available on the ANGEL website) and
- Complete assignments covering ICAO METAR weather formats, codes and products.
- Complete each end of Block Test

If, after you have read the text, accomplished the study guides, and done the assignments, you still don't understand a weather topic, I expect you to email, call or visit me to discuss what you don't understand. Use all email addresses and phone numbers to contact me.

Participation

Successful students will attain and maintain a steady pace of study (study about 10 hours each week and complete each block test about every 14 days) throughout the term to ensure completing all the readings, study guides and assignments by the last full week of the Term (week before Finals Week). Students planning to accelerate course completion will need to study more than 10 hours each week. All tests must be completed no later than the FIRST DAY of FINALS WEEK to count for grade.

Testing

Testing will be via the ANGEL Website. I will activate Block Tests at a pace that will allow the students to finish about one every two weeks and will open all tests about 6 weeks before the end of the term (for those students accelerating the course). The first test will activate approximately one week after the Term starts. Tests are lengthy and cover every aspect of the topics covered in the Study Guides. Completing the study guides and doing each assignment will prepare you for each Block Test. You will have four hours to complete each block test or ANGEL will time you out. All tests must be completed by midnight of the FIRST DAY of FINALS WEEK to count for grade.

Student Code of Conduct:

Refer to GRCC catalog

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 Students:

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.
3-833-9111, ext. 2631 or TDD at 253-288-3359**

Evaluation Standards, Grading & Academic Honesty:

Block Test Scores will be the basis for grades. The minimum overall percentage for passing the course is 62%. See Table Below. Do your own work.

% = Grade % Average, 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		

Course Outline:

Course coverage for AVIA 123 DE will be in the order below, training on METAR will occur continuously – see Block METAR Assignments

Block One

Chapter 1 The Atmosphere
 Chapter 2 Atmospheric Energy and Temperature
 Chapter 3 Pressure, Altitude and Density
Test over Chapters 1, 2 and 3 and METARs and TAFs

Block Two

Chapter 4 Wind
 Chapter 5 Vertical Motion and Stability
 Chapter 6 Atmospheric Moisture
Test over Chapters 4, 5, 6

Block Three

Chapter 7 Scales of Atmospheric Circulations
 Chapter 8 Air masses, Fronts and Cyclones
 Chapter 9 Thunderstorms
Test over Chapters 7, 8, 9

Block Four

Chapter 10 Local Winds
 Chapter 11 Wind Shear
 Chapter 12 Turbulence
 Chapter 13 Icing
Test over Chapters 10, 11, 12, 13

Block Five

Chapter 14 Instrument Meteorological Conditions
 Chapter 15 Additional Weather Hazards
 Chapter 16 Aviation Weather Resources
 Chapter 17 Weather Evaluation for Flight
Test over Chapters 14, 15, 16, 17

Block Five Test completes the course

GRCC-FAA AT-CTI Program APPROVAL CRITERIA

GRCC AT-CTI Program Completion/Approval Criteria to earn a GRCC FAA AT-CTI Program Positive Recommendation to work as an FAA Air Traffic Controller

ACADEMIC PERFORMANCE – Students must successfully complete

1. Non-aviation courses with a grade of 75% (GRCC grade 2.0) or higher,
2. Aviation courses, except ATC courses, with a grade of 80% (GRCC grade 2.5) or higher
3. ATC courses, excluding AVIA 203 ATC Capstone Course, with a grade of 85% (GRCC grade 3.0) or higher
4. Successfully complete AVIA 203 – the GRCC ATC Degree Capstone Course – with a grade of 87% (GRCC grade 3.2) or higher, AND, complete the following tests in the AVIA 203 Capstone Class with a minimum score of:
 - A. AVIA 203 Area Knowledge Test – 90%
 - B. AVIA 203 Phraseology Tests – 80%
 - C. AVIA 203 Strip-Marking Tests – 80%
 - D. AVIA 203 AT-Basics Final Exam series (Four Tests) – Minimum Score on any Final Four exams above 80% and an overall average of 90% or higher for all four tests.
5. The ATC Degree Program with an overall minimum GPA of 85% (GRCC 3.0)

CONDUCT and DEPARTMENT

GRCC AT-CTI Faculty must recommend to the FAA the suitability of each GRCC AT-CTI student to work for the FAA in an Air Traffic Control job. To earn a positive recommendation, students must demonstrate excellent judgment and superior cooperation and respectful behavior at all times and in all situations. Any factual situation on or off campus that a GRCC AT-CTI student becomes involved in, that reflects on the student's judgment or ability of the student to work effectively within groups or teams, will be included in the GRCC Recommendation for suitability to work as an FAA Air Traffic Controller.