GEO3250 CLIMATOLOGY

3 CREDIT HOURS SPRING 2016 THIS COURSE IS 100% ONLINE

INSTRUCTOR:  Dr. Corene Matyas matyas@ufl.edu (Please email via Canvas)

3119 Turlington Hall (352) 294-7508 ufgeog – Skype

OFFICE HOURS:  Available Mon. – Fri. 9 am – 4 pm by advance appointment (24 hours notice minimum)

COURSE WEBSITE:  http://lss.at.ufl.edu

Course Communications:

Each week’s module has a discussion board. First, read through other posts to see if your question has been answered. Second, if not, post your question. Third, read through and answer questions of other students. If your grade is within 1% of the next category at the end of the semester, I will check to see how many times you answered questions of other students on the weekly discussion boards. Frequent participation via answering questions may earn you the extra 1% necessary to raise your grade. The instructor will not respond to every post, and will not respond on the weekends.

If no one has answered your question or you need to speak to me about your grade, please email me via Canvas with a time when we can connect on Skype or via telephone and I will confirm this time with you. These meetings are for a 15-minute time slot. Please include a bulleted list of topics that you need to discuss. I will not answer detailed questions via typing. I cannot return long distance phone calls, and I am not available evenings or weekends. I reserve the right to limit the number of hours I spend responding to student inquiries each week.

REQUIRED TEXT:  Climatology (3rd edition) by Rohli and Vega ibsn: 978-1-284-03230-7

Printer/scanner for homework assignments and exam diagrams, ability to zip images together into one file for upload, Microsoft Office (word, excel, powerpoint), ability to record presentation for debates project

ADDITIONAL RESOURCES:  phone or microphone on computer to communicate with instructor

COURSE DESCRIPTION: Credits: 3; Prereq: introductory atmospheric science or physical geography course, or instructor permission.

Genesis of regional climates and their global distribution. Emphasis on world regional climatology. Secondary topics include applied climatology and climate change. (P)
PREREQUISITE KNOWLEDGE AND SKILLS: Prerequisite courses: MET1010 or GEO2242.

This is an upper-level course, not an introductory course. We will NOT cover basic fundamentals of atmospheric science such as the difference between high and low pressure systems, the type of weather associated with each, and how a cloud forms. Instead, we will focus on the components of the climate system, how energy moves through the climate system, and how the climate system changes over space and time. You must be willing to put in extra time on your own to research and understand terminology or processes that are the foundations upon which this course is built. Please do not expect me to tutor you in the prerequisite knowledge.

PURPOSE OF COURSE: Climate change is a “hot” topic today. This course will provide you with a scientific understanding of the climate system and the processes that operate through it. Your goal is to develop an awareness of your physical environment as it relates to climatology so that you can apply knowledge gained in the real world. Students enroll in this course from a variety of majors: Engineering, Environmental Science, Journalism, Business, Sociology, English, Geological Sciences, Chemistry, and of course Geography among others. Many students tell me they take the course because they “love the weather.” This course will challenge you to communicate scientific information to these students majoring across the physical and social sciences and humanities. It also qualifies for undergraduate and graduate certificates.

COURSE GOALS AND/OR OBJECTIVES: By the end of this course, students will:

- Define the field of climatology and components of the climate system
- Recount the limitations of observational data both currently and in the past
- Describe where energy comes from and trace its movement through the climate system
- Analyze the controls of the climate system and detail how they work
- Compare and contrast atmospheric conditions differ in the tropics and the extratropics
- Illustrate why and how the climate system changes over time
- Represent processes and energy flows through diagrams and symbology commonly used by atmospheric scientists

HOW THIS COURSE RELATES TO THE STUDENT LEARNING OUTCOMES FOR THE CERTIFICATE IN METEOROLOGY AND CLIMATOLOGY (UNDERGRAD)

Content: Students will know the atmosphere from a geographic perspective from both meteorological and climatological time scales.
Critical Thinking: Students will analyze information relevant to climatology and meteorology and apply interpretation of data toward problem solving.

Communication: Students will interpret and effectively communicate information relevant to meteorology and climatology.

HOW THIS COURSE RELATES TO THE STUDENT LEARNING OUTCOMES FOR THE CERTIFICATE IN APPLIED ATMOSPHERIC SCIENCE (GRAD)

Knowledge: Students will demonstrate knowledge of the subject matter related to the atmospheric sciences and articulate orally and in writing the results and applications of their research and scholarship.

Skills: Students will demonstrate problem solving skills by applying the scientific method to the analysis of published and self-generated data for a research project of their design that is related to the atmospheric sciences.

Professional Behavior: Students will exhibit professional behavior and ethical practice while conducting their research.

INSTRUCTIONAL METHODS:

Weeks 1-7 feature textbook readings and video lectures that expand upon the readings, or emphasize material not covered in the book. This half of the course provides the foundation that you will need to be successful in the second part of the course.

Weeks 8-13 have textbook readings but do not have accompanying lectures- the second part of the course focuses on applying what you learned in the first half.

COURSE POLICIES:

ATTENDANCE POLICY: You must log into Canvas regularly to participate in this course. Logging in once per week will NOT be sufficient in most weeks. No specific points towards the grade are reserved solely for your virtual attendance. Students who withdraw from the course must do so according to the UF deadlines. No students will be automatically dropped from the course.

QUIZ/EXAM POLICY: Textbook and Lecture quizzes are 15 questions with a mix of multiple choice, true/false, and fill in the blank. These are open book/open note but you should NOT work with anyone else. Midterm and final exams are closed book/notes and you should NOT work with anyone else. Exams will have sections for me to hand grade – you will need to download the worksheets, fill them in, then scan and upload before the time expires. Please allow a minimum of 3 days after the due date for grades to become available for hand-graded
items. You have one week after grades are released to arrange a time discuss results with the instructor. If you request a regrade, your score may go up or down. Regrades must be requested within one week of the grades being available.

MAKE-UP POLICY: No late homework will be accepted as you have one week to work on each assignment. Please budget your time well. Unless official documentation of an absence is presented (police report, ticket number from IT), NO MAKE-UP EXAMS will be permitted. Quizzes and exams open and close at scheduled times. Once closed, they will not be reopened so please plan your schedule accordingly. Do not wait until the last hour before it is due to take it.

ASSIGNMENT POLICY: Due dates for assignments are listed on Canvas. Late assignments will NOT be accepted – please submit before the due date each week. Rubrics for applicable homework assignments are available on the assignment’s page in Canvas. You will work in groups for some assignments, and work individually on others. You must ALWAYS turn in your own work, else you are guilty of an honor code violation. Some assignments are assessed through homework quizzes. You MUST have your completed homework assignment handy and use your answers to answer the quiz questions. Please allow a minimum of 3 days after the due date for grades to become available for hand-graded items. You have one week after grades are released to arrange a time discuss results with the instructor. You have one week after grades are released to arrange a time discuss results with the instructor. If you request a regrade, your score may go up or down. Regrades must be requested within one week of the grades being available.

COURSE TECHNOLOGY: You will be watching lecture videos for the first half of the class. You will need to record yourself giving a powerpoint presentation for the debates project. You will also need to download homework assignments and in some cases, hand-write information and scan or take a photo of your results and upload to Canvas for me to hand-grade. We will use the Conference tool in Canvas for review sessions prior to the midterm and final exams.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (http://www.dso.ufl.edu/drc/). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. A minimum of one week is needed for the instructor to find ways to provide the accommodation. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at
http://www.dso.ufl.edu/students.php. Each suspected honor code violation will be reported to the Dean of Students Office.

NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, discussion posts and chats. First instance of improper behavior will receive a warning. Subsequent instances may result in a lowering of the course grade. See Sample Netiquette Document

GETTING HELP:

For issues with technical difficulties for E-learning in Sakai, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at http://www.distance.ufl.edu/getting-help for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit http://www.distance.ufl.edu/student-complaints to submit a complaint.
GRADING POLICIES:

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<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework Assignments</td>
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<tr>
<td>Textbook Chapter Quizzes</td>
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<tr>
<td>Lecture Quizzes</td>
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<tr>
<td>Final Exam</td>
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<td>Debate Project</td>
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GRADING SCALE:

A: 93% +
A-: <93% to 90%
B+: <90% to 87%
B: <87% to 83%
B-: <83% to 80%
C+: <80% to 77%
C: <77% - 73%
C-: <73% to 70%
D+: <70% to 67%
D: <67% to 63%
D-: <63% to 60%
E: < 60%
COURSE SCHEDULE:

Module 1: Introduction to the Climate System
Module 2: Radiation and Atmospheric Structure
Module 3: Energy
Module 4: Controls on the Climate System
Module 5: Diurnal Cycle, Moisture, and Stability
Module 6: Precipitation and Water Balance
Module 7: Primary and Secondary Circulations

Midterm Exam: Week 8
Spring Break: Week 9

Module 8: Climate Classification
Module 9: Climate Change and Variability
Module 10: Anthropogenic Climate Change
Module 11: Interactions with Other Spheres
Module 12: Extratropical Northern Hemisphere Climates
Module 13: Tropical and Southern Hemisphere Climates
Final Exam: Week 16

INFORMATION ON CERTIFICATES:

So long as you receive a grade of B- or higher, this course counts as 25% of the credits needed for the undergraduate certificate: Meteorology and Climatology, or 33% of the credits needed for the graduate certificate Applied Atmospheric Science. If you are interested in pursuing the certificate, you can apply by going to http://admissions.ufl.edu/start.html and scrolling down to the section for CERTIFICATE. There is no charge to apply if you are already a UF student. If you have applied but don’t see that you are enrolled in the certificate, please email me as the Certificate Coordinator so I can check into the problem. I have uploaded fliers to Canvas that list all certificate courses.

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.