# Geography 105: Weather Lab

California State University, Northridge

##### Fall 2016

**(19839) Wednesdays, 2:00 PM – 3:40 PM**

**SH 170**

**Instructor:**Karen Sonksen

**Email:** karen.sonksen.105@my.csun.edu

**Office:** Sierra Hall 130-P

**Office Hours:** Wednesday – 3:45 - 4:45

Co-Requisite:

Geography 103 – Weather. The concepts used in this lab are drawn from Geography 103. Although not required, it is strongly suggested that you have taken or are currently taking Geography 103.

Course Description:

Observations, experiments, and demonstrations designed to familiarize students with the nature of California’s weather and climate.

Course Objectives:

By the end of this course, you will be familiar with basic meteorological concepts and their applications. This course is designated to satisfy the lab requirement of the Natural Sciences Section, Section B.2, of General Education (G.E.).

Required Text:

Kahn, Patrick (2016). Introduction to Weather Studies, 2nd Edition. This manual is completely free of charge. Exercises can be found linked on the course Moodle site or by clicking the following link: <https://mycsun.box.com/geog105>

Required Materials:

* Lab Manual
* Pens & pencils
* Calculator

Recommended Materials:

Any meteorology textbook (e.g. Weather Studies by Moran 4th edition)

Course Policies

Classroom Procedures and Conduct:

All regular university rules will apply. The idea of this class is for you to learn what physical geographers do, while being able to have fun with the concepts. Collaborative work is encouraged for lab assignments, but you must turn in your own lab and your lab only. No late assignments will be accepted—period. This means that any work turned in after the initial due date will receive no credit—no exceptions. Here are a few other strictly enforced policies to ensure a positive environment:

1. Firstly, all regular university rules apply.
2. Please keep your cell phones and other electronic devices on silent.
3. Texting and computer use during lecture is prohibited (except for taking notes).
4. Facebook and other social networking sites are prohibited while in class.
5. Please be courteous and respectful while interacting with one another.
6. Prejudice, discrimination, abrasive or abusive language of any kind will not be tolerated under any circumstances.
7. Keep up with all homework and reading assignments.

Academic Dishonesty:

In the age of technology, plagiarism, cheating and other forms of academic dishonesty have become more accessible. This is a serious offense, and if caught, can result in anything from a fail in the course to expulsion from the university, so DO NOT take the risk. It’s better for you to miss an assignment rather than submit one that was plagiarized. Just to be clear, copying another classmate’s work is also considered cheating. Avoid all temptation and DO NOT TAKE THE CHANCE! The University Policy on Academic Dishonesty is detailed on in the University Catalogue and under the Legal Notices Section (Academic Dishonesty) <http://www.csun.edu/a&r/soc/legalnotices.html> of the Schedule of Classes. The consequences of Academic Dishonesty are detailed under Student Affairs on the website <http://www.csun.edu/studentaffairs/studentconduct/update_on_faculty_policy_on_academic_dishonesty.pdf>

Attendance:

Attendance to each and every class meeting is necessary, although formal attendance will not be taken. Regular attendance and participation are your keys to success in this class and any other course you take in college. You are all adults and responsible for your own success. That being said, if you are not in class then you WILL miss the assignment. Also, please understand that I DO NOT accept late work.

Course Assistance:

I will be available during my posted office hours. Many times, questions can be effectively answered via email, of which I will respond in a timely fashion. If your question cannot be satisfactorily resolved via email then arrangements can be made to meet in person. You will also find Q & A Discussion Forums where you can post content-related questions for your online exercises. This is a good way to collaborate with your classmates when completing online assignments.

Student Disability Assistance:

If you require additional accommodations or assistance and need to register with Disability Resources and Educational Services (DRES), then you can either speak to me privately for further information or contact DRES directly at (818) 677-2684 or [dres@csun.edu](mailto:dres@csun.edu), or visit their office in Bayramian Hall 110.

Course Requirements

Course Webpage (Moodle):

The course webpage, accessible through [moodle.csun.edu](http://moodle.csun.edu)*,* is your primary resource for all course materials, such as the syllabus, assignments, and additional information. Make sure you access this page very soon and keep it easily accessible through preferred method (bookmark, make homepage, etc.). Technical support and help with Moodle is available to students through the IT Help Center. You can access the IT Website at: <http://www.csun.edu/it/helpdesk/> or call (818) 677-1400. You can also visit in-person at the Oviatt Library, Room 33. It is expected that you know how to access and use Moodle, I will not teach you how.

Lab Assignments:

This is an online-hybrid course so you have been divided into two groups (A and B), which will alternate in-class meetings throughout the semester. During the weeks your group is scheduled to meet on campus, you will be given an assignment that must be completed by the end of class. During the online weeks, you will be responsible for completing an online assignment that must be completed by the end of the week. In both cases, lab credit will be awarded based off the number of questions you answer correctly. Please understand that late work WILL NOT be accepted.

Quizzes:

There is no final exam in this class but there will be two quizzes throughout the semester pertaining to material covered by the lab exercises. Both quizzes will take place in-class and you will be required to bring a scantron (Form 882-E) and #2 pencil on quiz days. Please see the course schedule for what time you should arrive on quiz days. Furthermore, there are absolutely NO make-up quizzes.

Extra Credit:

There will NOT be any extra credit available in this course.

Grading System:

The following list represents the point breakdown for each grade category used to calculate your final course grade.

Lab Assignments (12) 120 pts

Quizzes (2) 50 pts

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Total 170 pts

Grading Scale:

The following percentages will be used in assigning grades:

A 93-100 % C 73-76 %

A- 90-92 % C- 70-72 %

B+ 87-89 % D+ 67-69 %

B 83-86 % D 63-66 %

B- 80-82 % D- 60-62 %

C+ 77-79 % F < 60 %

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| **Week** | **Date** | **Topic** | **Assignment** |
| **1** | **August 31** | Class Introduction |  |
| **2** | **September 7** | Lab 1: Air Pressure & Wind | Group A |
| Lab 2: Earth’s Atmosphere (Online) | Group B |
| **3** | **September 14** | Lab 1: Air Pressure & Wind | Group B |
| Lab 2: Earth’s Atmosphere (Online) | Group A |
| **4** | **September 21** | Lab 3: Earth-Sun Relationships (Online) | Group B |
| Lab 4: Radiation & Temperature | Group A |
| **5** | **September 28** | Lab 3: Earth-Sun Relationships (Online) | Group A |
| Lab 4: Radiation & Temperature | Group B |
| **6** | **October 5** | Lab 5: Atmospheric Moisture | Group A |
| Lab 6: Atmospheric Stability (Online) | Group B |
| **7** | **October 12** | Lab 5: Atmospheric Moisture | Group B |
| Lab 6: Atmospheric Stability (Online) | Group A |
| **8** | **October 19** | **Quiz 1** | **(A) 2:00 – 2:40 PM**  **(B) 3:00 – 3:40 PM** |
| **9** | **October 26** | Lab 7: Mid-Latitude Weather Systems | Group A |
| Lab 8: Upper-Air Weather Maps (Online) | Group B |
| **10** | **November 2** | Lab 7: Mid-Latitude Weather Systems | Group B |
| Lab 8: Upper-Air Weather Maps (Online) | Group A |
| **11** | **November 9** | Lab 9: Thunderstorms and Tornadoes | Group A |
| Lab 10: Tropical Weather Systems (Online) | Group B |
| **12** | **November 16** | Lab 9: Thunderstorms and Tornadoes | Group B |
| Lab 10: Tropical Weather Systems (Online) | Group A |
| **13** | **November 23** | Lab 11: Weather Observations and Forecasting | Group A |
| Lab 12: El Nino (Online) | Group B |
| **14** | **November 30** | Lab 11: Weather Observations and Forecasting | Group B |
| Lab 12: El Nino (Online) | Group A |
| **15** | **December 7** | **Quiz 2** | **(B) 2:00 – 2:40**  **(A) 3:00 – 3:40** |

# Learning Outcomes & Assessment

***Goal A: Knowledge***

* Students will understand the composition, pressure and temperature structure of the atmosphere.
* Students will understand the electromagnetic spectrum and the Earth’s energy balance.
* Students will understand the greenhouse effect and global warming.
* Students will understand the Earth’s seasons.
* Students will understand daily and seasonal variations in temperature.
* Students will understand the factors controlling climate in different parts of the world.
* Students will understand pressure gradients and winds.
* Students will understand the factors controlling the weather in Los Angeles. Students will learn how to read a weather map.
* Students will understand local and regional winds.
* Students will understand global circulation patterns and global climate patterns.
* Students will understand about weather in different parts of the United States.
* Students will understand mid-latitude cyclones and the weather conditions they bring.
* Students will understand the concept of humidity and saturation.
* Students will understand the formation of clouds and precipitation.
* Students will understand the concept of atmospheric stability.
* Students will understand the causes of air pollution in Los Angeles.
* Students will understand El Nino and its importance.
* Students will understand the causes and effects of thunderstorms and hurricanes.
* Assessment/Evaluation tool: class participation, lab exercises, quizzes

***Goal B: Acquiring Knowledge***

* Students will develop skills for acquiring new knowledge.
* Students will develop hands-on skills through labs.
* Students will take comprehensive lecture notes during class.
* Students will read supplementary material referenced in class.
* Students will reference Internet sites to read and interpret maps.
* Students will study from their notes daily or at a minimum, weekly.
* Assessment/Evaluation tool: class participation, lab exercises, quizzes

***Goal C: Problem Solving Skills***

* Students will assimilate knowledge from different parts of the course to understand the physical environment.
* Students will demonstrate their knowledge by analyzing visual and textual data.
* Students will demonstrate their ability to apply facts to their understanding of the physical world around them.
* Assessment/Evaluation tool: class participation, lab exercises, quizzes

***Goal D: Communicating Knowledge***

* Students will communicate the knowledge they have gained from different parts of the course to explain their physical environment.
* Assessment/Evaluation tool: class participation, lab exercises, quizzes