



Salem State University Department of Geography

GPH100PL: Weather and Climate Lab

Spring 2013 All Sections

Professor Brian M. Cacchiotti

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Office Hours: Thurs 11:50 – 12:20 and by appointment

Website: <http://www.itsallgeography.com/> → Then click SSU Logo

This lab section is a **required** part of Weather and Climate (GPH100P) and will count as 25% of your final grade for that class.

Text: *Weather and Climate Laboratory Manual – Spring 2013*, available at the SSU bookstore. Please note that this text is **REQUIRED** and you must have a **personal copy** for lab.

Goals: The lab portion of this course is designed to supplement and expand upon the teachings, readings and activities of the lecture portion of *Weather and Climate* and to assist students, using experimentation and hands on learning, to better understand the concepts and methods discussed in this course. Your grade will be determined by combining your lecture class grade (75%) and your laboratory grade (25%) for a total 100% grade.

Lecture	75%
Lab	25%
Total	100%

Course Description: *Weather and Climate* (GPH100P) is comprised of two components – the classroom lectures and the laboratory sessions. The course description for the *Weather and Climate* course is supplemented by the laboratory sessions in order for the student to further investigate the information and concepts presented during the class lectures.

The 2012-2013 Salem State Catalog <<http://catalog.salemstate.edu>> has the following course description:

GPH 100P WEATHER AND CLIMATE, 4 credits DII, Q

This course analyzes the elements and controls of weather on the earth's surface including the extent and composition of the atmosphere, atmospheric heating and cooling, pressure and winds, moisture and precipitation. An introduction to weather forecasting techniques and a descriptive analysis of world climate regions. Introduction to maps and basic topics in physical geography. Three lecture hours and one two-hour laboratory per week. Satisfies laboratory science sequence requirement with GLS100. Required of B.S. Geological Sciences, Earth Science Concentration. Not open to students who have received credit for GGR100P, GGR101P, or GPH 101P.

Learning Objectives: To help students better understand the ideas and materials covered in lecture, laboratory sessions will strive to prepare the student with both basic and more advanced knowledge of geographic and earth science concepts. These include, but are certainly not limited to:

- Geographic grid (lat/long)
- Earth/Sun relationship
- Vertical structure of the atmosphere
- Cloud formation and type
- Synoptic weather charts
- Basic weather prediction
- Severe weather safety
- Weather characteristics
- Air masses and effects
- Hurricane tracking and dangers

Attendance: **Attendance is mandatory.** Attendance will be taken each class. **You are allowed to remain in the course if you miss three (3) labs or fewer. If you miss 4 labs, you will be automatically withdrawn and a grade of F will be assigned.** You will be required to sign a statement that you understand and will abide by this policy in order to be allowed to take any Weather and Climate lab section.

If you miss a lab session, you must turn in your work the following week or on your first day back in lab. Failure to turn in your work on this date will result in no credit for the missed work and a penalty to your grade (see Lab Work below.)

Some material presented in lab is not available in the textbook or lab manual and **you will be responsible for this material.** Also, I encourage you to wisely choose lab partners. All manual based lab work is permitted to be done together as a collaborative effort for all the labs. This is difficult to accomplish if any partners miss class.

Note: Non lab manual work (papers, quizzes, etc) are INDIVIDUAL efforts.

In other words... Don't miss class. If you do miss class, turn in the missed lab at the next lab meeting.

Lab Work: **All lab assignments MUST be completed on time to receive proper credit for the lab assignment.** This is a serious issue and will affect your success in this class! If you fail to turn in a lab you will receive a grade of zero for that lab **and also lose an additional 10 points from your final lab grade for each incomplete lab.** Note: Labs are DUE the lab meeting after they are assigned. For this reason I ***STRONGLY ENCOURAGE YOU TO COMPLETE ALL LABS ON TIME AND IN CLASS.*** Labs will be collected at the end of the lab period. If you miss lab you may turn in your work before the beginning of the next lab period. It must be accurate and complete (grade B or better) **or no credit will be given.**

This means if you do not turn in one lab assignments during the semester you will lose 14 points (4 pts for the lab + 10 deduction) and your maximum grade will become an 86. Missing two will bring your maximum grade down to 72. Not turning in three labs results in a maximum grade of 58 = FAIL.

Student Work: Students may work individually or in groups. As your instructor, **I strongly encourage students to work together in a collaborative and supportive environment.** This is not only of benefit for students when trying to master difficult concepts and material, but also as a preparation for the ever increasing needs of business and industry who need employees able to excel in a collaborative environment.

Grading: Your lab grade will be based on successful (and on time) completion of ALL the lab exercises, quizzes, a short paper and class participation. The schedule for labs, quizzes and the paper is outlined below. Please note that this schedule is subject to change without notice but will be announced in class before changes will occur. I will drop the one lowest lab grade, but all labs still must be completed!

Grading will be as follows:

Labs	4 pts. (each)	9 x 4 pts =	36
Darwin Paper	4 pts.	1 x 4 pts =	4
Quizzes	25 pts (each)	2 x 25 pts =	50
Film Paper.....	10 pts	1 x 10 pts =	10
TOTAL			100 pts

Schedule:

Week Date	Lab #	Other Activity (if any)	Note:
17-Jan	Lab 0		Email me!
24-Jan	Lab 1		
31-Jan	Lab 2		
7-Feb	Lab 3		
14-Feb	DARWIN FEST	Response Paper Assigned	
21-Feb	Lab 4	Study Guide 1 available	Response Paper Due
28-Feb	→ → →	Quiz 1 (first 60 mins of class)	Labs 1, 2, 3, 4 & Darwin Fest
7-Mar	Lab 5*	* Handout – Differs from manual	
14-Mar	No Class	SPRING BREAK	
21-Mar	FILM	Film: Paper Assigned	
28-Mar	Lab 7		
4-Apr	GPS Lab	Dress for outdoor activity	Film Paper Due
11-Apr	Lab 9		
18-Apr	Lab 13	Study Guide 2 available	
25-Apr	→ → →	Quiz 2 (first 60 mins of class)	Labs 5, 7, 9, 13, GPS & Film

NOTE: Schedule subject to change based on class progress! Will be announced in class!

Lab Rules: My number one rule is **RESPECT!** I believe that classes, like all other aspects of life, need to be a place where everyone is made to feel welcomed and valued. The best way we can achieve this is through treating each other with respect! I will insist that you treat other students, me, and most importantly YOURSELF with respect... at least while in this class!

Success?: Thus... in order to do well in GPH100P... you need to do well in **LAB** as it counts for 25% of your final grade... and to do that... you really need to come to class! And you really need to do your lab assignments in class and turn them in on time!

Cheating: Don't cheat. IF you are tempted to cheat... come and talk to me and we will figure it out together... don't throw away your academic careers on one desperate act! It is important that you understand cheating, plagiarism and other such offenses are wrong and can involve drastic penalties. It is in your best interest to fully understand your rights and responsibilities concerning these behaviors. The Salem State University Academic Catalog discusses these offenses and penalties in depth (available at http://www.salemstate.edu/registrar/ugrad_0810.pdf).

Students with Disabilities: Salem State University is committed to non-discrimination of handicapped persons as specified in Section 504 of the Rehabilitation Act of 1973. Students who qualify as handicapped persons under the definition of this Act should notify the instructor at the beginning of the class so that reasonable modifications in the course's requirements may be made when necessary. It is your responsibility to contact the Office for Students with Disabilities as soon as possible to obtain the appropriate documentation and other services/information. See the most current Salem State catalog for more information.
(<http://catalog.salemstate.edu/content.php?catoid=18&navoid=1802>)

Additional Information:

- All assignments handed in up to one week late will receive a substantially reduced score, and any work turned in after one week will receive a grade of **ZERO UNLESS PRIOR** arrangements have been made.
- Students are responsible for ALL material found in the required lab readings, outside readings, films, exercises and lectures.
- PLEASE ask questions if something is unclear. You may do so during class (within reason) and during my office hours.
- Be respectful! Disruptive behavior will not be tolerated.
- No fire arms, illegal drugs or alcohol in the classroom. No tobacco use in the classroom.
- My primary method of contact (outside of the classroom) is via email.
It is VITAL that I have your current email address on file.
- This syllabus is tentative and is subject to change.

Problems? Talk to me (see RESPECT above). I can usually help and am glad to do so if I can!

University Declared Emergency: In the event of a university declared critical emergency, Salem State University reserves the right to alter this course plan. Students should refer to <http://www.salemstate.edu> for further information and updates. The course attendance policy stays in effect until there is a university declared emergency.

In the event of an emergence, please refer to the alternative educational plans for this course located in the Geography Office. Students should review the plans and gather all required materials before an emergency is declared.

Other closings (weather, etc.): Announcements of university closings, delayed openings, early closings, or class cancellations will be made at salemstate.edu, a recorded message at (978) 542-6000 and the following radio and tv stations:

WBOQ 104.9 FM
WBZ-TV (4)

WCVB-TV (5)
WHDH-TV (7)

Fox (25)
WLVI-TV (56)

Regardless of media reports, a delayed opening means classes and work begin at 10:30 am.

Darwin Festival 2013: Schedule of Events <http://w3.salemstate.edu/~pkelly/darwin/schedule.htm>

	MONDAY, FEBRUARY 11, 2013	
8:00 a.m.	VIDEO: "Darwin's Secret Notebooks" - National Geographic.	Slater Lecture Hall
9:00 a.m.	"HOW RACE BECOMES BIOLOGY: GENES, ENVIRONMENT, AND HEALTH" - Clarence Gravlee, Department of Anthropology, UFG	Veterans Hall
10:00 a.m.	VIDEO: "To the Ends of the Earth" - Frozen Planet.	Slater Lecture Hall
11:00 a.m.	"GENES INFLUENCE BEHAVIOR, BUT IT'S NOT SO SIMPLE" - Steven Hyman, Stanley Center for Psychiatric Research, Broad Institute, Cambridge	Veterans Hall
12:30 p.m.	VIDEO: "What Makes Us Human?" - NOVA scienceNOW.	Slater Lecture Hall
1:30 p.m.	"A SUSTAINABLE WORKFORCE = A SUSTAINABLE ECONOMY" - Adrian Dahlin, Rising Green, Holyoke MA.	Veterans Hall
2:30 p.m.	VIDEO: "Silence of the Bees" (110 min) - Nature.	Slater Lecture Hall

	TUESDAY, FEBRUARY 12, 2013 - Charles Darwin's Birthday	
8:00 a.m.	VIDEO: "Revealing the Origins of Life" - Where Did We Come From? -NOVA	Slater Lecture Hall
9:30 a.m.	"SEX DIFFERENCES IN CHIMPANZEE BEHAVIOR" - Zarin Machanda, Department of Human Evolutionary Biology, Harvard University, Cambridge	Veterans Hall
11:00 a.m.	VIDEO: "Cracking Your Genetic Code" - NOVA.	Slater Lecture Hall
12:30 p.m.	"THE GEOMETRIC CHANGES ASSOCIATED WITH THE EVOLUTION OF ALGAL CELL WALLS: THE ROAD TO LAND PLANTS AND COMPLEX MULTICELLULAR LIFE" - Larry Lewis, SSU	Veterans Hall
2:00 p.m.	VIDEO: "Mind Over Money" - NOVA.	Slater Lecture Hall
3:15 p.m.	VIDEO: "Incredible Journey of the Butterflies" - NOVA.	Slater Lecture Hall

	WEDNESDAY, FEBRUARY 13, 2013 <i>Charles Albert Read Science Lecture</i>	
8:00 a.m.	VIDEO: "Ultimate Mars Challenge" - NOVA.	Slater Lecture Hall
9:00 a.m.	"THE IMMORTAL LIFE OF NITROGEN" - Robinson W. Fuller, BU	Veterans Hall
10:00 a.m.	VIDEO: "What Females Want" - Nature.	Slater Lecture Hall
11:00 a.m.	"EFFECT OF WINTER CLIMATE CHANGE ON NORTHERN HARDWOOD FORESTS" - Pamela Templer, Department of Biology, BU	Veterans Hall
12:30 p.m.	VIDEO: "The Last Frontier" - Frozen Planet.	Slater Lecture Hall
1:30 p.m.	"TINY FOSSILS TELL TIME ACROSS THE PACIFIC" -Nicholas Venti, UMA	Veterans Hall
2:30 p.m.	VIDEO: "Blue Gold: World Water Wars" (90 min) - PBS	Slater Lecture Hall

	THURSDAY, FEBRUARY 14, 2013 <i>Charles Albert Read Science Lectures</i>	
8:00 a.m.	VIDEO: "Ice Age Death Trap" - NOVA.	Slater Lecture Hall
9:30 a.m.	"THE BENEFIT OF BUDDIES: AN INSECT PERSPECTIVE ON COOPERATION AND SOCIAL LIVING" - Lynn Fletcher, SSU	Veterans Hall
11:00 a.m.	"DOWN TO THE LAST DROP: CLIMATE CHANGE AND WATER RESOURCES IN THE AMERICAN SOUTHWEST" - Christopher Williams, Department of Geography, Clark University, Worcester MA.	Veterans Hall
12:30 p.m.	VIDEO: "Can I Eat That?" - NOVA scienceNOW.	Slater Lecture Hall
2:00 p.m.	VIDEO: "And What Males Will Do" - Nature.	Slater Lecture Hall
3:15 p.m.	VIDEO: "A Sense of Wonder" - Bullfrog Films.	Slater Lecture Hall

	FRIDAY, FEBRUARY 15, 2013 - <i>Biology Alumni Day</i>	
8:00 a.m.	VIDEO: "Animal Odd Couples" - Nature.	Slater Lecture Hall
9:00 a.m.	VIDEO: "Lice and Human Evolution" – Where Did We Come From? - NOVA	Slater Lecture Hall
10:00 a.m.	VIDEO: "On Thin Ice" - Frozen Planet.	Slater Lecture Hall
11:00 a.m.	"ACOUSTICS: BEYOND WHAT IT SOUNDS LIKE" - Seth Horowitz, President, The Engine Institute, Warwick, RI.	Veterans Hall
12:30 p.m.	"HOW SLOW CAN LIFE GO? LESSONS FROM THE SUBSEAFLOOR" - Steven D'Hondt, Graduate School of Oceanography, U of RI	Veterans Hall
1:30 p.m.	VIDEO: "Hurricane Katrina: The Storm That Drowned a City" - NOVA.	Slater Lecture Hall
2:30 p.m.	"INTERNAL PARASITES OF NORTH ATLANTIC SHARKS" - Mae Taylor SSU '07, Biology Department, SSU	Veterans Hall

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