GEOG 2630L - Weather Lab

Fall 2026 Syllabus, Section A01, CRN 43889,

Credit hours: 1

Instructor

Jennifer Burrell

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Public Instructor Information

Instructor Title: Dr. Jennifer Burrell
Instructor Professional Qualifications:

2019 PhD Geography, Kent State University. Dissertation title: The Development and Utilization of Fine-scale methods to Track Neighborhood Changes: Case Study Youngstown, Ohio

2013 Certificate. Geospatial Intelligence, Pennsylvania State University, State College, PA

2011 M.A. Geography, Kent State University. Thesis title: Water Table Variability on the Pitted Karst Plain, Yucatán, Mexico

2008 B.S. Geology, Minors: Climatology, Geography. Kent State University, Kent, OH

Instructor Office Location: N/A
Instructor Office Phone: N/A To contact, email jlburrell@ysu.edu

Course Description

2630L. Weather Lab. Students observe, collect and analyze atmospheric data, and determine and predict weather conditions. Atmospheric laws and meteorological principles, concepts, and processes are investigated using the scientific method. Weekly investigations are undertaken in this hybrid lab encompassing in-class and online instructions. The class meets in person as needed for guidance. Optional lab to accompany GEOG 2630: Weather. Prereq.: GEOG 2630 or concurrently with GEOG 2630. 1 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Exercises for Weather & Climate, 9th Edition	Greg Carbone	978-0-13-404136-0

You do not need it brand new, and e-versions are accepted. You won't turn pages from the lab manual in; you just need it for information, graphs, figures, and data.

NO REQUIRED lecture textbook. The lecture textbook is not required for the lab. It is recommended as a reference material, and I advise you to have a reference text. Anyone taking the lecture course will have the book already. The book used in the lecture course is: Lutgens and Tarbuck (14th edition) The Atmosphere: An introduction to Meteorology. Publisher Pearson. Previous Book: Lutgens and Tarbuck 13th edition.

Additional Course Materials: Class notes will be provided via Blackboard

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Lab chapter 1 and Lab 1 Notes: Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 1: Lab 1 Vertical Structure of the Atmosphere	Weekly Discussion Post and Lab 1 due Sunday, 8/30 by 11:59pm
8/31	Lab chapter 2 and Lab 2 Notes Lab chapters 3, 4 and Lab 3 Notes Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 2: Lab 2 Earth-Sun Geometry Lab 3 Energy Budget	Weekly Discussion Post and Labs 2 & 3 due Sunday, 9/6 by 11:59pm
9/7	Lab chapter 5 and Lab 4 Notes Lab chapter 6 and Lab 5 Notes Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 3: Lab 4 Atmospheric Moisture Lab 5 Saturation & Atmospheric Stability Final Project Introduced	Weekly Discussion Post and Labs 4 & 5 due Sunday, 9/13 by 11:59pm Final Project Due Wednesday, 10/7 by 11:59pm
9/14	Lab chapters 7, 8 and Lab 6 Notes Lab chapter 9 and Lab 7 Notes Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 4: Lab 6 Atmospheric Motion Lab 7 Weather Map Analysis	Weekly Discussion Post and Labs 6 & 7 due Sunday, 9/20 by 11:59pm
9/21	Lab chapter 10 and Lab 8 Notes Lab chapter 11 and No notes - use previous weeks' notes Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 5: Lab 8 Mid-Latitude Cyclones Lab 9 Weather Forecasting	Weekly Discussion Post and Labs 8 & 9 due Sunday, 9/27 by 11:59pm
9/28	Lab chapter 12 and Lab 10 Notes Lab chapter 13 and Lab 11 Notes Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 6: Lab 10 Thunderstorms & Tornadoes Lab 11 Hurricanes	Weekly Discussion Post and Labs 10 & 11 due Sunday, 10/4 by 11:59pm
10/5	No chapters from manual; Lab 12 Notes: Please note that not every part of the lab manual material (readings and/or questions) will be utilized. Please refer to the lab assignment for which specific parts you need to read.	WK 7: Lab 12 Fire Weather	Weekly Discussion Post and Lab 12 due Saturday, 10/10 by 11:59pm Final Project Due Wednesday, 10/7 by 11:59pm

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