

METRO 10L Course Outline as of Spring 2012**CATALOG INFORMATION**

Dept and Nbr: METRO 10L Title: METEOROLOGY LAB

Full Title: Meteorology Lab

Last Reviewed: 9/24/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	0	17.5	Lecture Scheduled	0
Minimum	1.00	Lab Scheduled	3.00	6	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 0.00

Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

The study, interpretation, and analysis of weather data reports, forecasts, surface weather maps, upper level air charts, satellite imagery, and radar data. Emphasis is placed on how weather forecasts are prepared and utilized.

Prerequisites/Corequisites:

Course Completion or Current Enrollment in METRO 10

Recommended Preparation:**Limits on Enrollment:****Schedule of Classes Information:**

Description: The study, interpretation, and analysis of weather data reports, forecasts, surface weather maps, upper level air charts, satellite imagery, and radar data. Emphasis is placed on how weather forecasts are prepared and utilized. (Grade or P/NP)

Prerequisites/Corequisites: Course Completion or Current Enrollment in METRO 10

Recommended:

Limits on Enrollment:

Transfer Credit: CSU;UC.

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
	B3	Fall 1981	
	Laboratory Activity		

IGETC:	Transfer Area	Effective:	Inactive:
	5C	Fall 1981	
	Fulfills Lab Requirement		

CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:
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UC Transfer:	Transferable	Effective:	Fall 1981	Inactive:
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CID:

Certificate/Major Applicable:

Major Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Upon completion of this course, the student will:

1. Examine, construct, and decode station data.
2. Interpret satellite imagery and radar returns.
3. Analyze and decipher weather maps.
4. Differentiate between and critique forecasting methods.
5. Describe how geographical features influence weather.

Topics and Scope:

- I. North American geography
 - A. Geographic Grid
 - B. Time Zones
 - C. Place Names
 - D. Geographic Features
- II. Meteorological Data
 - A. Weather Elements
 1. Air Temperature
 2. Air Pressure
 3. Wind
 4. Humidity
 5. Clouds
 6. Precipitation
 7. Visibility
 - B. Measurement Scales
 - C. Data Analysis
- III. Earth-Sun Relationships
- IV. Atmosphere

- A. Composition
 - B. Vertical Structure
- V. Mapping Techniques
 - A. Isopleths
 - B. Station Models
 - C. Weather Map Symbols
- VI. Surface Weather Maps
 - A. Station Data
 - B. Air Pressure
 - C. Fronts
- VII. Upper Air Constant Pressure Charts
 - A. 850 - 700 millibar
 - B. 500 millibar
 - C. 300 - 200 millibar
- VIII. Remote Sensing
 - A. Satellite Imagery
 - 1. Visible
 - 2. Infrared
 - B. Radar
 - C. weather balloons
- IX. Forecasting
 - A. Methods
 - B. Accuracy
 - C. Common Uses
- X. Weather Services
 - A. Sources
 - 1. National Weather Service
 - 2. Other
 - B. Source Reliability

Assignment:

1. Assigned readings (5-20 pages per week)
2. Assignments: written homework; lab exercises (10-17)
3. Quizzes (5-17)
4. Exams (0-4)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework

Writing 5 - 15%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Lab exercises

Problem solving 30 - 60%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and/or exams including objective questions, short answer and/or essay questions

Exams
30 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

Participation and attendance

Other Category
0 - 10%

Representative Textbooks and Materials:

Exercises for Weather and Climate, 7th edition. Carbone, Gred. Pearson/Prentice Hall: 2010

Meteorology Lab Manual. 2nd edition Swanson, Kyle. Kendall/Hunt Publishing Company: 2010

Weather Studies Investigations manual. American Meteorological Society: 2012.

Instructor prepared materials