

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

✓ Transfer Course ✓ A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: Geography 110 – Meteorology: Weather & Climate

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS: Appropriate language and mathematics skills

ENTRANCE REQUIREMENTS

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

Elements of weather including temperature, moisture, air pressure, and circulation of the atmosphere; air masses, storms, and their geographical distribution. Practical applications in the use of weather instruments, and the reading and interpretation of weather maps and climatological data.

SPECIFIC COURSE OBJECTIVES:

Successful students will:

1. Recognize, and analyze the meteorological processes that control this segment of their physical environment.
2. Gain the factual knowledge and conceptual understanding needed for more advanced courses in meteorology and climatology.
3. Interpret weather maps, climatological data, and use specific weather instruments.
4. Apply the scientific method as an essential tool of past and present research in meteorology.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

1. Introduction
2. Solar and terrestrial radiation
3. Air Temperature
4. Moisture and Atmospheric Stability
5. Forms of Condensation and Precipitation
6. Air Pressure and Winds
7. Atmospheric Circulation

8. Air Masses
9. Weather Patterns/Fronts/Cyclones
10. Severe Weather-Thunderstorms, Tornadoes, and Hurricanes
11. Weather Analysis and Forecasting
12. Air Pollution
13. Climate Change
14. World Climates

REQUIRED READING:

Lutgens, Frederick K. and Edward J. Tarbuck. The Atmosphere. 9th edition. Upper Saddle River, NJ: Prentice-Hall, 2004.

OR

Aguado, Edward, and James E. Burt. Understanding Weather and Climate. 3rd edition. Upper Saddle River, NJ: Prentice-Hall, 2004.

SUGGESTED READING:

Any pertinent articles that may appear in the daily and/or weekly public press that relate to meteorological phenomena.

REQUIRED WRITING:

Exams may require written responses varying from one to several paragraph essays. A 2 - 3 page review of a journal article related to subject matter in the class may also be assigned. A 6 – 10 page paper requiring the use of the scientific method to support or reject a climatological hypothesis may also be required.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Outside assignments will, at a minimum, include reading the text and studying lecture notes.

INSTRUCTIONAL METHODOLOGY:

Instruction is primarily in the lecture format with the aid of science demonstrations, color slides, weather maps, overhead transparencies, radar and satellite images available on the internet, and video tapes. Student participation with demonstrations, discussions, and questions will be encouraged.

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380. Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)

_____ Computer Assisted Instruction (A specialized form of mediated instruction relying...)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

A student's grade is based on his/her performance on four objective examinations. Each exam will be worth 100 points or 25% of the course grade. When an outside written assignment is required, it will add 20 points to the total possible for the course.

OR

A student's grade is based on four examinations each worth 20% of the total grade, and a final paper worth 20% of the total grade.

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes _____ No X Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON(S):

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SIGNATURES ON FILE: