



ANTELOPE VALLEY COLLEGE

Academic Affairs
Course Outline of Record

Academic Affairs Only

<input type="checkbox"/>	New Course
<input type="checkbox"/>	Effective Date (for articulation)
<input checked="" type="checkbox"/>	COR Revision 10/8/2009
<input checked="" type="checkbox"/>	Pre Req/Advisories 10/8/2009
<input type="checkbox"/>	Other Changes
<input checked="" type="checkbox"/>	SLOs 4/10/08

COURSE SUBJECT & NUMBER: GEOL 101L

COURSE NAME: *Physical Geology Lab

COURSE UNITS: 1 **COURSE HOURS:** 3 hours weekly

COURSE REQUISITES: *(Follow format of similar courses found in the college catalog.)*

Corequisite: Completion or concurrent enrollment in GEOL 101.

Advisory: Eligibility for College Level Reading, ENGL 101 and MATH 102

COURSE DESCRIPTION: *(Write a short paragraph providing an overview of topics covered. Be sure to identify target audience--transfer, major, GE, degree/certificate, etc. If repeatable, state the number of times at end of description as (R#).*

Physical Geology Laboratory provides students with hands-on introduction to the analyses and identification of common minerals and rocks. The class provides an introduction to the analysis and interpretation of topographic and geologic maps. The students will learn basic analytical and geologic skills that will enable them to interpret geologic histories based on fundamental geologic principles. (CSU, UC, AVC)

COURSE OBJECTIVES: *(Title 5 requires that courses show evidence of critical thinking skills. Use Bloom's taxonomy to formulate concise, performance-based measurable objectives common to all students. Objectives must be closely aligned with course content, assignments, and methods of evaluation)*

Upon completion of course, the successful student will be able to

1. Identify common minerals by examining and evaluating various physical properties.
2. Categorize and identify common igneous, sedimentary, and metamorphic rocks by evaluating appearance, textures, and mineral assemblages.
3. Recognize, analyze, and interpret major geologic structural features.
4. Examine and evaluate geologic maps and cross sections to construct a geologic history.
5. Interpret and appraise relative ages of geologic strata by applying and comparing fundamental geologic principles.
6. Analyze and interpret information presented on topographic maps.
7. Locate areas or map features using various standard map grid systems.
8. Evaluate elevation point data and construct isoline (contour) maps.
9. Prepare topographic profiles based on elevation data.

Course Subject & Number: GEOL 101L
Course Name: *Physical Geology Lab

COURSE CONTENT: *(Enter course content in terms of specific topics or a specific body of knowledge that each instructor must cover. Put topics in outline form with major and minor headings. Each instructor must cover all material listed below.)*

A. Mineral and rock identification:

1. Physical properties to identify minerals.
2. Physical characteristics of igneous, sedimentary, and metamorphic rocks.
3. Classification of igneous and metamorphic rocks via mineral assemblages and textures.
4. Classification of sedimentary rocks by grain size distribution and sedimentary features.

B. Topographic maps:

1. Topographic maps.
2. Relief and surface features on topographic maps.
3. Elevation contours, slope angles, and profiles.
4. Latitude and longitude, and township and range grid systems.

C. Geologic maps and geologic data:

1. Geologic maps.
2. Geologic cross sections.
3. Geologic histories based on geologic principles.
4. Relative age relationships and geologic histories based on fossil assemblages.

Course Subject & Number: GEOL 101L
Course Name: *Physical Geology Lab

TYPICAL HOMEWORK ASSIGNMENTS: (Do not include in-class work, quizzes, or tests)

This information is necessary for all credit courses. Assignments should be closely related to course objectives, content, and methods of evaluation. (See sample of a "Model Outline" in the AP&P Standards & Practices Handbook.) Include a range of assignments (minimum of three) from which faculty may choose when designing their syllabus.

1. Describe nature and frequency of typical reading assignments if applicable; note if any are required:

Weekly reading assignments from Physical Geology Laboratory Manual in preparation for in-class work.

2. Describe nature and frequency of typical writing assignments if applicable; note if any are required:

Not applicable

3. Describe nature and frequency of typical computational assignments if applicable; note if any are required:

Not applicable as homework assignments

4. Describe other types of homework assignments that students may be asked to complete (oral presentations; special projects; visual/performing arts; etc); note if any are required:

Students may prepare a report on some specific geologic feature or area that was not discussed or covered during the class as an extra credit assignment, but is not required.

*For categories 1-4 above, list the estimated hours per week it would take a student to complete assignments. Title 5 (section 55002) requires that each unit must be shown to require three hours of work per week by the student either in or out of class. Homework formula: 3 hours of class work *times* each unit of credit *minus* classroom hours *equals* required homework hours.*

Reading Assignments: 1-2

Writing Assignments: not applicable

Computational Assignments: not applicable

Other Assignments: not applicable

Course Subject & Number: GEOL 101L

Course Name: *Physical Geology Lab

METHODS OF INSTRUCTION: *(Methods must be consistent with content and appropriate to objectives; state in terms of what instructor will be doing in order to present course content to students: for example, lecture, demonstration, present audio/visual materials; facilitate group work, etc. Do not list specific instructional equipment.)*

Methods and procedures for each lab activity will be explained to the students with lecture and demonstrations at the beginning of each lab session. Students will be continually monitored and questioned to determine their comprehension as they are guided through the hands-on lab activities.

METHODS OF EVALUATION: *(These must be clearly related to course objectives and reflect course content and assignments in order to comply with Title 5 requirements. Describe what instructor will be looking for when evaluating various assignments and tests in order to determine whether students have met course objectives. Grades must be based on demonstrated proficiency in subject matter and determined, where appropriate, by essays, objective and essay tests, research papers or projects, problem solving exercises, or skills' demonstrations.)*

Observation of student comprehension and performance during in-class lab assignments in conjunction with student performance on tests will be used to evaluate Objectives 1 through 9.

Suggested Texts or Other Instructional Materials

(List several when possible; include title, author, publisher, date, and latest edition. If older than five years, provide brief rationale.)

Laboratory Manual for Physical Geology, Norris W. Jones & Charles E. Jones, McGraw-Hill, 2008, 6th edition or later.

Geoscience Laboratory, Tom Freeman, Wiley & Sons, Inc., 2006, 4th edition or later.

Laboratory Manual in Physical Geology, American Geological Institute, National Association of Geoscience Teachers, Richard Busch, Prentice Hall, 2006, 7th edition or later.

The above are standard geology laboratory manuals and others may be substituted at the discretion of the instructor.