



COURSE SYLLABUS
Semester: Fall **Year:** 2014

Mission Statement:

Richard J. Daley College provides high-quality education which leads to academic success, career development, and personal enrichment that fulfill diverse community needs.

Course (Discipline): Physical Science **Number:** 111 **Section:** JK
Course Title: Earth Science **Length of Course (Weeks):** 16
Credit Hours: 4 **Lab Hours:** 1 **Contact Hours:** 5
Meeting Day(s): TTh **Times:** 1:00-3:20 PM **Building:** Trum **Classroom #:** 3833

Instructor's Name: Dennis Smoot

E-mail Address: dsmoot1@ccc.edu

Phone #: Adjunct Office: 773-907-4694

Home: 773-276-1821

Office #: 3826 **Building:** Trum

Cell: 312-216-9621

Office Hours: 1/2 hour before and after class

Course Description:

Introduction to scientific phenomena, method, and practices relevant to Earth environmental studies such as geology, meteorology, and astronomy. Writing assignments, as appropriate to the discipline, are part of the course. There is a laboratory component of the course for a more hands-on exposure.

Course Prerequisites:

Eligibility for English 101, OR grade of C or better in English 100, OR Consent of Department Chairperson.

Students Course is Expected to Serve:

This course contributes to the General Education core requirement for Physical and Life Sciences nonlab course. Physical Science 101 fulfills the non-laboratory science requirements for an A.A. degree at City Colleges of Chicago. The course is intended for non-science majors who are interested in expanding their knowledge of the earth and our physical environment. Most students in this class have little or no science background. Therefore, this course serves as an overview of the scientific method and of the disciplines that examine the world around us.

Course Objectives:

1. Incorporate the scientific method of problem solving through earth science topics.
2. Relate Earth materials to the internal and external processes of the solid earth.
3. Examine the physical properties of the atmosphere and their relationship to weather and climate.
4. State the origin, composition, and properties of the different components of the solar system and the universe.
5. Develop analytical skills through laboratory exercises in each of the three earth science areas.

Student Learning Outcomes:

Upon satisfactory completion of the course, students will be able to:

1. Define scientific hypotheses, theories, and laws.
2. Articulate the development of earth science theories through the scientific method.
3. Describe the materials of which the earth is composed.
4. Explain how surface processes alter Earth's surface materials.
5. Relate the plate tectonics theory to earthquakes and mountain building.
6. Summarize Earth's history and the means by which it has been estimated.
7. Integrate the relationship between solar radiation and Earth in generating weather.
8. Describe the role of moisture in the atmosphere, including evaporation, condensation, cloud formation, and precipitation.
9. Analyze the concept of atmospheric pressure and its effects on weather and winds.
10. Explain the origin and development of severe weather, including thunderstorms, tornadoes, and hurricanes.
11. State the origin, composition and properties of the different components of the solar system and the universe.
12. Summarize the explanations of the origin of the solar system and universe.

Student Learning Outcomes(Truman Physical Science Department):

1. Relate information obtained in the course to current stories in the media about geological, meteorological and astronomical phenomena.
2. Describe the role the scientific method has played in arriving at our current theories about Earth Science.
3. Read and interpret a variety of maps: topographical, meteorological, geographical
4. Discuss the historical development and present rational arguments for our current state of knowledge in the Earth sciences

Required Texts and Course Materials:

Text: Earth Science by Tarbuck and Lutgens, 2012, 13th edition, Prentice Hall, ISBN 13: 978-0-321-688507 ISBN 10: 0-321-68850-3 Some earlier editions may be acceptable if not too early,--say less about 2.

Materials: (N/A means this section does not apply to this course.) N/A

Additional Course Requirements: N/A

Method of Instruction:

Classes will include a variety of instructional methods. Approximately 3 hours a week are spent in lectures which will include traditional lectures, class discussions, individual work, and group work. The Course is about 3/5 Lecture and 2/5 Lab.

Methods of Evaluation:

Your midterm and final course grades will be based on the following information.

Assessments:	Grading Scale:
Attendance and Participation 5%	A = 90 – 100%
Homeworks 20%	B = 80 – 89 %
Midterm 37.5%	C = 70 – 79 %
Final 37.5%	D = 60 – 69 %
	F = 0 – 59 %

See the Student Policy manual regarding grade appeals at

<http://www.ccc.edu/departments/Documents/CCC%20Grade%20Appeal%20Form.pdf>

NOTE: Type or copy and paste the link above into a web browser (i.e. Internet Explorer, Firefox or Google Chrome, etc.) to view its content.

Exit Exam Policy: There is Truman College Physical Science Mandatory Exit Exam. It is given in two parts. Part One is Geology and it is given at Midterm. Part Two is Meteorology and Astronomy and it is given at the end of the course. Students MUST answer 20 out of 50 questions correctly when both parts are combined (each part is 25 questions). You must do this to receive a passing grade. If you cannot do you will receive a D or an F.

Late Work and Make-up Assignments:

If it is necessary to miss a class, I highly recommend you contact me ahead of time or ASAP regarding the absence so that we may work out arrangements for any missed work. Any student informing me the next class session of the absence will not be allowed to make up the work.

Active Pursuit Statement for the Course:

Students must complete all exams and quizzes. Students who have not met the academic standards by midterm may be administratively withdrawn from the course by the instructor according to the criteria that has been set by the instructor above.

Withdrawing from the Course:

Remember you may withdraw from the course at any time up until the last student-initiated withdrawal date (see “Other Important Dates”). In order to do this, you can withdraw from the course online at <http://My.CCC.edu> or you can obtain a drop slip from the Registrar’s Office or College Advisor’s Office. A college advisor or any faculty member or administrator at the college can sign the drop slip. It is not necessary for your instructor to sign the drop slip. Also, please keep a copy of the drop slip for your records.

Important Dates:

Oct. 21, 2014 - Midterm

Nov. 17, 2014 - Last Day for Student Initiated Withdrawal

Dec. 11, 2014 – Final Exam

Classroom Etiquette:

Examinations: Exams will be closed book. You will be given necessary information (periodic table , physical constants, etc) needed to answer the questions. No extra credit work will be given. No makeup exams will be given unless you have a legitimate excuse. I should be contacted ASAP regarding the missed exam and a makeup scheduled. Documentation of the absence is necessary and will be verified in order for the exam grade to count.

Semester project: You will have to research and write a report on a topic that is related to the course material. The report needs to be typed and at least 2 pages long with an attached bibliography. It is strongly encouraged that you check the subject with me before starting.

Attendance/tardiness: Students are expected to be punctual and attend all class sessions. Excessive absences will result in the student being withdrawn from the course or failure of the course. It is the student’s

responsibility to contact me in advance of an absence or ASAP when an absence has occurred. I define tardy as being more than 5 minutes late to class. A student will not be able to perform the day's activities for credit/points when tardy more than twice within the semester.

Academic Integrity:

The City Colleges of Chicago is committed to the ideals of truth and honesty. In view of this, students are expected to adhere to high standards of honesty in their academic endeavor. Plagiarism and cheating of any kind are serious violations of these standards and will result, minimally, in the grade of "F" by the instructor.

Student Conduct:

City Colleges of Chicago students are expected to conduct themselves in a manner which is considerate of the rights of others and which will not impair the educational mission of the College. Misconduct for which students are subject to College Discipline (e.g. expulsion) may include the following: (1) all forms of dishonesty such as stealing, forgery, (2) obstruction or disruption of teaching, research, administration, disciplinary proceeding, (3) physical or verbal abuse, threats, intimidation, harassment, and/or other conduct that threatens or endangers the health or safety of any person, and (4) carrying or possession of weapons, ammunition or other explosives.

Disability Access Center:

Please note: Any student with a disability, including a temporary disability, who is eligible for reasonable accommodations should contact the Disability Access Center located in room 1401 on Daley's main campus, or call (773) 838-7578 as soon as possible.

General Responsibilities/Student Policy Manual:

Students have a great deal of responsibility. The majority of these duties and responsibilities are laid out in the *Student Policy Manual*. Each student is encouraged to view this manual when they enroll in any CCC course.

A copy may be obtained from the Admissions Office or Dean of Student Services or online at:

http://www.ccc.edu/menu/Documents/Student%20Policy%20Manual/2013_CCC_Student_Policy_Manual_090413.pdf

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Week	Dates	Sections and Topics
1	8/26	1 Introduction to Earth Science
	8/28	Unit 1 Earth Materials 2 Matter and Minerals Lab 1 Identification of Minerals
2	9/2	2 Matter and Minerals, contd
	9/4	3 Rocks: Materials of the Solid Earth Lab 2 Identification of Rocks
3	9/9	3 Rocks: Materials of the Solid Earth, contd
	9/11	Unit 2 Sculpturing Earth's Surface 4 Surface Weathering, Soil, and Mass Wasting Lab 3 Map Reading Latitude and Longitude Contour Lines
4	9/16	4 Surface Weathering, Soil, and Mass Wasting, contd
	9/18	5 Running Water and Groundwater
5	9/23	6 Glaciers, Deserts, and Wind Lab 4 Geological Models: Models 4 and 6 - Glaciers
	9/25	Unit 3 Forces Within 7 Plate Tectonics: A Scientific Revolution Unfolds
6	9/30	7 Plate Tectonics: A Scientific Revolution Unfolds, contd
	10/2	8 Earthquakes and Earth's Interior Lab 5 Earthquake Data (Computer Simulation)
7	10/7	8 Earthquakes and Earth's Interior, contd
	10/9	9 Volcanoes and Other Igneous Activity Lab 6 Geological Models - Volcanoes and Mountains
8	10/14	9 Volcanoes and Other Igneous Activity, contd
	10/16	10 Crustal Deformation and Mountain Building Lab 7 Clay Models
9	10/21	Midterm
	10/23	Unit 4 Deciphering Earth's History 11 Geologic Time Lab 8 Simulation of Radioactive Decay
10	10/28	Unit 5 The Global Ocean 13 The Ocean Floor
	10/30	14 Ocean Water and Ocean Life
11	11/4	15 The Dynamic Ocean
	11/6	Unit 6 Earth's Dynamic Atmosphere 16 The Atmosphere: Composition, Structure, and Temperature
12	11/11	16 The Atmosphere: Composition, Structure, and Temperature, contd
	11/13	17 Moisture, Clouds, and Precipitation Lab 9 Air and Air Pressure
13	11/18	17 Moisture, Clouds, and Precipitation, contd
	11/20	18 Air Pressure and Wind Lab 10 Cloud Journal
14	11/25	19 Weather Patterns and Severe Storms Lab 11 Tracking Hurricane Katrina
	11/27	Thanksgiving
15	12/2	20 World Climates and Global Climate Change Lab 12 Using the NOAA website
	12/4	Unit 7 Earth's Place in the Universe 23 Light, Astronomical Observations, and the Sun Lab 13 Relative Distance of the Planets
16	12/9	24 Beyond Our Solar System Lab 14 Night Vision
	12/11	Final Exam