

**PSC 103 – Earth Science 4 Units Fall 2016**

**PLNU Mission Statement  
To Teach ~ To Shape ~ To Send**

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

**Professor:** Dr. Heide Doss

**Office:** Rohr Science (RS) 210 **cell phone:** (619) 840-4559 **office phone:** (619) 849-2219

**E-mail:** [plnuPhysicsDoss@gmail.com](mailto:plnuPhysicsDoss@gmail.com) or [hdoss@pointloma.edu](mailto:hdoss@pointloma.edu)

**Office Hours:** T Th 8:00-9:00 AM at Liberty Station just past staff and student lounge areas;  
MF 8:30-10:30; 12-1, W 9:30-10:30, 12-1, T Th 11:30-1:00 or by appointment at RS 210

**Regular meeting times Aug 30, 2016 – December 9, 2016 (NOTE: T 8/30 is a M schedule)**

**Lecture:** T TH 9:00 am – 10:40 am (LBRT 207)

**Final Exam: Thursday, Dec 15 10:30 AM to 1:00 PM**

**Textbook:** Earth Science by Tarbuck & Lutgens, 14th edition, Pearson 2013 - WITH ACCESS  
Access to Mastering Geology; Course ID: MGEOLDOSS40471, Course Name: PSC 103 Fall 2016

**Course Description:** An introductory survey of the disciplines of geology, oceanography, meteorology, and astronomy with discussion of philosophical and societal issues. (Meets a general education requirement; does not count toward any Chemistry or Physics majors.)

**Prerequisite(s):** [MTH 099](#) or equivalent.

**Student Learning Outcomes:** In each section there are a number of smaller learning outcomes, which fit into broader course outcomes. Upon completion of this course you should be able to:

1. apply basic scientific principles to address Earth science questions and make informed decisions about scientific matters likely to confront educated citizens;
2. explain everyday observations of the natural world in terms of planetary processes;
3. apply an evidence-based, logical, scientific approach to ask and address questions about our planet and solar system;
4. articulate the relevance of Earth Science to individuals and to society;
5. solve problems relevant to introductory Earth Science and interpret solutions.

**Pre-class Assignments:** Reading and pre-class questions are due by 8:00 AM the day of class, except for the first class. The pre-class questions are on our class site in Mastering Geology/Earth Science 14/E at [www.masteringgeology.com](http://www.masteringgeology.com). These usually consist of questions and simple problems related to each section of the reading assignment. Pre-class assignments are 5% of the overall grade.

**Homework:** Weekly homework assignments, besides the readings and pre-class questions, can be found on our class site in Mastering Geology at [www.masteringgeology.com](http://www.masteringgeology.com). Homeworks consist of chapter problem sets in Mastering Geology at [www.masteringgeology.com](http://www.masteringgeology.com). These chapter problem sets are worth 15% of your overall grade and are due by 11:59 PM as on the

date noted in the syllabus and in mastering geology. Points earned during class and class projects that might come up during the semester will also be included in the homework grade.

**Late Work:** Late work will not be accepted unless there is a documented emergency.

Assignments are due as noted on the syllabus and on Mastering Geology. Incompletes are only assigned in extremely unusual circumstances.

*You must take ALL the exams and the final in order to pass the class.*

**Quizzes:** There will be 12 quizzes throughout the semester, each covering about two chapters of the course work. These will be equally weighted and total 12% of your overall grade. Quizzes will be on our class site in Mastering Geology at [www.masteringgeology.com](http://www.masteringgeology.com). Quizzes are due by 11:59 PM on the dates listed in the syllabus and in mastering geology.

**Exams and Papers:** There will be four in-class exams and three “exam” papers (a take home portion of an exam) during the semester comprising 48% of your grade. There is also a final exam (worth 20% of your overall grade), which includes a final exam paper due the day of the final. Partial credit for non-multiple choice problems will be given for correct reasoning at any step of a problem, but only if it is communicated clearly enough for me to understand. For problems that call for solution or explanation, no credit will be given for an answer alone; the method or reasoning must also be shown.

**Missed Exam Policy:** No make-up exams are allowed except for warranted circumstances. Arrangements must be made with me as soon as possible.

**Final Exam: Date and Time:** The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. This schedule can be found on the university website and in the course calendar. No requests for early examinations will be approved. Only in the case that a student is required to take three exams during the same day of finals week, is an instructor authorized to consider changing the exam date and time for that particular student.

Successful completion of this class requires taking the final examination on its scheduled day, **Thursday December 15, 2016, 10:30 AM – 1:00 PM**. The final examination schedule is posted on the [Class Schedules](#) site. No requests for early examinations or alternative days will be approved. The final exam is worth 20% of your grade.

**Final Course Grade:** The points you receive during the course are weighted accordingly:

<b>Component</b>	<b>Weight</b>
Pre-Class	5%
Homework	15%
Quizzes (12)	12% (equally weighted)
Tests (4)	48% (equally weighted)
Final Exam	20%

The grade you earn in this course is based on the following scale:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-
S $\geq$ 91.5	91.5 >S $\geq$ 89.5	89.5 >S $\geq$ 86.5	86.5 >S $\geq$ 82.5	82.5 >S $\geq$ 79.5	79.5 >S $\geq$ 76.5	76.5 >S $\geq$ 72.5	72.5 >S $\geq$ 69.5	69.5 >S $\geq$ 66.5	66.5 >S $\geq$ 62.5	62.5 >S $\geq$ 59.5

**Department Mission:**

The Physics and Engineering Department at PLNU provides strong programs of study in the fields of Physics and Engineering. Our students are well prepared for graduate studies and careers in scientific and engineering fields. We emphasize a collaborative learning environment, which allows students to thrive academically, build personal confidence, and develop interpersonal skills. We provide a Christian environment for students to learn values and judgment, and pursue integration of modern scientific knowledge and Christian faith.

**PLNU Attendance and Participation Policy:**

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report, which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See [http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class\\_Attendance](http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class_Attendance) in the Undergraduate Academic Catalog.

**Class Enrollment:**

It is the student’s responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

**Academic Accommodations:**

If you have a diagnosed disability, please contact PLNU’s Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at [DRC@pointloma.edu](mailto:DRC@pointloma.edu). See [Disability Resource Center](#) for additional information. For more details see the PLNU catalog: [http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic\\_Accommodations](http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic_Accommodations)

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

## Point Loma Nazarene University

Syllabus PSC 103 – Earth Science Fall 2016 T Th 9:00 – 10:45 AM (LBRT 207)

### **Credit Hour:**

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for any 4 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

### **Copyright Protected Materials:**

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

### **PLNU Academic Honesty Policy:**

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See

[http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic\\_Honesty](http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic_Honesty) for definitions of kinds of academic dishonesty and for further policy information.

**FERPA Policy:** In compliance with federal law, neither PLNU student ID nor social security number should be used in publicly posted grades or returned sets of assignments without student written permission. This class will meet the federal requirements by distributing grades and papers individually. Also, in compliance with FERPA, you will be the only person given information about your progress in this class unless you have designated others to receive it in the "Information Release" section of the student portal. See Policy Statements in the undergrad academic catalog.

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**Tentative Course Schedule – subject to updates.** Unless otherwise noted: Pre-class assignments are due by 8:00 AM on day of class. HWs and Quizzes are due by 11:59 PM.

<b>Date</b>	<b>Topics</b>	<b>Assignments</b>
<b>8/30/16</b> <b>T =</b> <b>Monday</b> <b>schedule</b>	<b>NO MEETING</b>  <b>Monday schedule</b>	<i>All chapter readings are to be done prior to the class they are discussed in.</i>
9/1/16 Th	Introduction to Earth Science Chapter 1  <i>All chapter readings are to be done prior to the class they are discussed in</i>	Chapter 1 pre-class 1 due 9/3 by 8 AM HW Intro to Mastering Geology (MG) due 9/3 MG ch 1 due 9/4
9/6/16 T	Minerals Ch 2.1-2.6	2.1-2.6 pre-class 2 due MG ch 2 due 9/7
9/8/16 Th	Rocks Ch 3.1-3.5	3.1-3.5 pre-class 3 due MG ch 3 due 9/9 Quiz 1 (ch 1,2) due 9/10
9/13/16 T	Weathering Ch 4.1-4.3, 4.9-4.13	4.1-4.3, 4.9-4.13 pre-class 4 due MG ch 4 due 9/14
9/15/16 Th	Running Water Ch 5.1-5.8	5.1-5.8 pre-class 5 due MG ch 5 due 9/21 Quiz 2 (ch 3,4) due 9/17
9/20/16 T	Ground Water and Glaciers 5.9-5.12, 6.1-6.7	5.9-5.12, 6.1-6.7 pre-class 6 due MG ch 5 due 9/21 MG ch 6 due 9/23
9/22/16 Th	Deserts and Wrap-Up 6.9-6.11	6.9-6.11 pre-class 7 due MG ch 6 due 9/23 Quiz 3 (ch 5,6) due 9/24
<b>9/27/16</b> <b>T</b>	<b>Exam 1 Chapters 2-6</b> <b>Take Home Exam Paper 1 due</b>	pre-class 8 due 7.1-7.11 MG ch 7 due 9/30
9/29/16 Th	Plate Tectonics 7.1-7.11	7.1-7.11 pre-class 9 due MG ch 7 due 9/30
10/4/16 T	Plate Tectonics; Earthquakes 8.1-8.8	8.1-8.8 pre-class 10 due MG ch 8 due 10/5
10/6/16 Th	Earthquakes; Volcanoes 9.1-9.7	9.1-9.7 pre-class 11 due MG ch 9 due 10/12 Quiz 4 (ch 7,8) due 10/8

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10/11/16 T	Volcanoes 9.8-9.12	9.8-9.12 pre-class 12 due MG ch 9 due 10/12
10/13/16 Th	Crustal Deformation 10.1-10.7	10.1-10.7 pre-class 13 due MG ch 10 due 10/14 Quiz 5 (ch 9,10) due 10/15
10/18/16 T	Geologic Time 11.1-11.7	11.1-11.7 pre-class 14 due MG ch 11 due 10/19
<b>10/20/16 Th</b>	<b>Exam 2 Chapter 7-11 Take Home Exam Paper 2 due</b>	pre-class 15 due MG ch 13 due 10/26
10/25/16 T	The Ocean Floor 13.1-13.7	13.1-13.7 pre-class 16 due MG ch 13 due 10/26
10/27/16 Th	Ocean Water and Tides 14.1-14.5, 15.9	14.1-14.5, 15.9 pre-class 17 due MG ch 14 due 10/28 Quiz 6 (ch 13,14) due 10/29
11/1/16 T	Dynamic Ocean 15.1-15.8	15.1-15.8 pre-class 18 due MG ch 15 due 11/2
11/3/16 Th	The Atmosphere 16.1-16.9	16.1-16.9 pre-class 19 due MG ch 16 due 11/4 Quiz 7 (ch 15,16) due 11/5
11/8/16 T	Clouds 17.1-17.10	17.1-17.10 pre-class 20 due MG ch 17 due 11/9
11/10/16 Th	Wind 18.1-18.8	18.1-18.8 pre-class 21 due MG ch 18 due 11/11 Quiz 8 (ch 17,18) due 11/12
11/15/16 T	Global Temperature and Climate; Wrap Up 20.8-20.11	20.8-20.11 pre-class 22 due MG ch 20 due 11/16 Quiz 9 (ch 20) due 11/16
<b>11/17/16 Th</b>	<b>Exam 3 Chapters 13-18, 20 Take Home Exam 3 Paper due</b>	pre-class 23 due MG ch 21 due 11/27

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<b>Date</b>	<b>Topics</b>	<b>Assignments</b>
11/22/16 T	Astronomy Basics 21.1-21.6	21.1-21.6 pre-class 24 due MG ch 21 due 11/27
11/24/16 Th	<b>No Classes 11/23-24 Thanksgiving recess (Happy Thanksgiving!)</b>	MG ch 21 due 11/27
11/29/16 T	The Solar System 22.1-22.5	22.1-22.5 pre-class 25 due MG ch 22 due 11/30 Quiz 10 (21,22) due 12/3
12/1/16 Th	Light 23.1-23.7	23.1-23.7 pre-class 26 due MG ch 23 due 12/2
12/6/16 T	Beyond our Solar System 24.1-24.7	24.1-24.7 pre-class 27 MG ch 24 due 12/7 Quiz 11 (ch 23,24) due 12/7
<b>12/8/16 Th</b>	<b>Exam 4 Chapters 21-24</b>	pre-class 28 <b>Quiz 12 due 12/10 (all chapters)</b>
<b>12/15/16 Th</b>	<b>FINAL EXAM 10:30 am - 1:00 pm Take Home Final Exam Paper due</b>	
	Grades turned in by Dec 25	