

## **CE/SC 10110-20110: Planet Earth**

**138 Debartolo Hall: Tu,Th 9:30-10:45**

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**Instructor:** Dr. Clive R. Neal    **Web Site:** [www.nd.edu/~cneal/PlanetEarth](http://www.nd.edu/~cneal/PlanetEarth)  
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**Office Hours:**    **MW – 8:30-9:30 AM; T-Th = 1-2 PM or other times by appointment**

**Attendance:**    If you want to do well, you must show up to class and lab  
(maximize your tuition dollars!)

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### **Required Textbook:**

Earth: Portrait of a Planet, 5<sup>th</sup> edition (ISBN: 9780393937503), Stephen Marshak.  
W.W. Norton & Company Publishers.

There will be additional readings available on the web site for specific classes

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### **Evaluation Procedure - Lecture:**

Quizzes*	(after every chapter during class)	15%
Midterm Examination 1	26 September (during class)	25%
Midterm Examination	24 October (during class)	25%
Final Examination	14 December 10:30-12:30 (138 DB)	35%

\*NOTE: The lowest score will NOT be counted in your final grade.

### **Evaluation Procedure - Laboratories:**

Midterm Lab Exam	10 – 12 October:	25%
Final Lab Exam	5 – 7 December:	25%
Laboratories:		50%

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**CEES/SC 10110-20110: Planet Earth [SUBJECT TO CHANGE]****138 Debartolo Hall: Tu,Th 9:30-10:45**

<b>Dates</b>	<b>Topics*</b>	<b>Chapter</b>
<b><i>Part 1: Earth Overview</i></b>		
8/22	Origin of the Solar System	1
8/24	Earth overview: Journey to the Center of the Earth/Plate Tectonics	2, 3
8/29	The Engine of the Earth: Plate Tectonics	3, 4
8/31	Stuff of the Earth: Minerals	5
9/5	Rock Groups, Rock Cycle, Weathering, Soils	Int. A, B, C
9/26	<b><i>Midterm Examination 1</i></b>	
<b><i>Part 2: Earth Stuff, Hazards, &amp; Resources</i></b>		
9/7	Stuff of the Earth: Igneous Rocks	6
9/12	Volcanology and Volcanic Hazards	9
9/14	Stuff of the Earth: Sediments and Sedimentary Rocks	7
9/19	Soils and Hazards	TBD
9/21	Stuff of the Earth: Metamorphism and Metamorphic Rocks	8
9/28	Energy Resources	14
10/3	Mineral Resources	15
10/5	Geologic Time	12, Int. E
10/10	Earth History	13
10/12	Earthquakes and Seismology	10, Int. D
10/24	<b><i>Midterm Examination 2</i></b>	
<b><i>Part 3: Surficial Processes</i></b>		
10/26	Deformation: Structural Geology	11
10/31	Rock Mechanics	TBD
11/2	Mass Wasting	16
11/7	Streams and Fluvial Features (Hydrologic Cycle)	17, Int. F
11/9	Oceans, Lakes and Coasts	18
11/14	Glaciers and Ice Ages	22
11/16	Groundwater	19
11/21	Contamination & Remediation	TBD
11/28	Earth's Atmosphere and Climate	20
11/30	Geology of Deserts	21
12/5	Global Change	23
12/7	Review	--
	<b><i>FINAL EXAM - TBA</i></b>	

**CEES / SC 10111-20111 Laboratory Syllabus**  
**154 Fitzpatrick: Tuesday & Wednesday 2:00-4:00**

<u><b>WEEK</b></u>	<u><b>TOPIC</b></u>
August 29 – 31:	Plate Tectonics
September 5 - 7:	Mineral Identification - 1
September 12 - 14:	Mineral Identification - 2
September 19 - 21:	Igneous Rocks
September 26 - 28:	Sedimentary Rocks
October 3 - 5:	Metamorphic Rocks
<b>October 10 - 12:</b>	<b>Laboratory Exam I</b>
<i>October 14 - 22:</i>	<i>MIDSEMESTER BREAK – NO LAB</i>
October 24 - 26:	Geologic Time
Oct 31 – Nov 2:	Structural Geology
November 7 - 9:	Surface Hydrology
November 14 - 16:	Glaciation
November 21 - 23:	<i>THANKSGIVING – NO LAB</i>
November 28 – 30:	Deserts
<b>December 5 - 7:</b>	<b>Lab Exam II</b>