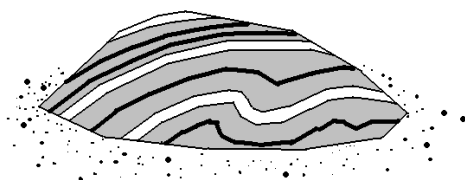




King Saud University
College of Science
Department of Geology and
Geophysics

Plate Tectonics



COURSE OUTLINE

<i>Course Title</i>	: Plate Tectonics
<i>Course Number</i>	: GEO380
<i>Course Instructor</i>	: Prof. Essam Abd El-Motaal Mohamed
<i>Credit Hours</i>	: 2 (2+0), Two hours Lecture/week
<i>Semester</i>	: First 1433-1434
<i>Office</i>	: AB 55
<i>Office Tel.</i>	: 4676342
<i>Office Hours</i>	: to be arranged, Office AB 55
<i>E. Mail</i>	: emohamed@ksu.edu.sa

Course Objectives:

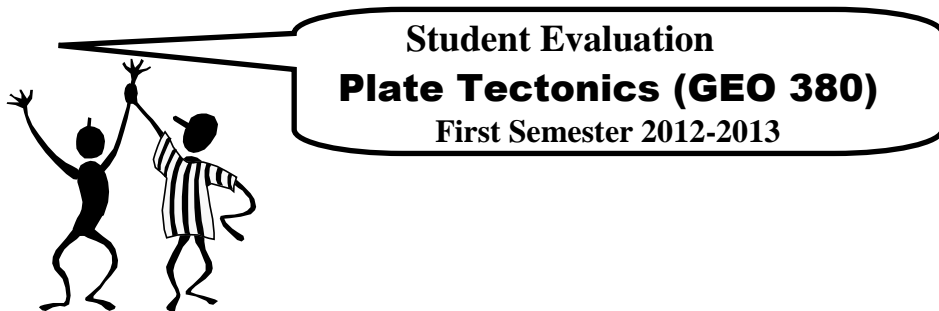
- . Summary of the main learning outcomes for students enrolled in the course.
- To familiarize students with basic knowledge of Plate Tectonics Theory.
- To develop the students' understanding of the properties of different plate boundaries.
- To understand the different concepts, properties and mechanical behavior of mineral and rocks during structural deformations and tectonic movements.
- To increase the ability of the student to imagine and visualize the real link between the theoretical background and the field practical experience.

Course description:

1 Topics to be Covered		
Topic	No of Weeks	Contact hours
1- Geophysical and geological observations related to plate tectonic theory	1	2
2- Marine magnetic.	1	2

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3- Paleomagnetic measurements.	1	2
4- Seismicity and volcanism of plate boundaries.	1	2
5- Reference frames and absolute plate motions	2	4
6- Interpretations of geologic phenomena in the context of plate tectonics	2	4
7- Ocean trenches.	1	2
8- Island arcs.	1	2
9- Plate tectonic evolution of the ocean basins.	2	4
10- Plate tectonic evolution of the continents.	2	4



Schedule of Assessment Tasks for Students During the Semester			
Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	Attendance	1-15	5%
2	Assignment	5-9-12	15 %
3	First test	6	10 %
4	Second test	14	30%
5	Final Exam	15	40%

Textbook and further reading
Plate Tectonics (GEO 380)
First Semester 2012-2013

Moore, E.M., and Twiss, R.J., 1995, *Tectonics*: W. H. Freeman & Company, New York, 415 p.

Kearey, P and. Vine, F. J, 1996, *Global Tectonics*, 2nd Edition, Blackwell Scientific Publications, Oxford, 302 p.

Other reading materials:

Cox, A. and Hart, R.B., 1991, *Plate Tectonics: How it Works*. Blackwell Scientific Publications, 416 p.

N.B.:

- ♣ *1st semester course starting date on Sat. 14/10/1433 corresponding to 1/9/2012.*
- ♣ *- Al Adha vacation starts on Wed. 1/12/1431 (17/10/2012).*
- ♣ *- Commencing the semester study session by Sat. 18/12/1433 (3/11/2012).*
- ♣ *- 1st semester exams will start on 16/2/1434 (29/12/2012).*
- ♣ *- Med year vacation will start by Wed. on 4/3/1434 (16/1/2013).*

- Commencing date of the Second semester session will be on Sat. 14/3/1434 (26/1/2013).