

## Course Specifications (2011 - 2012)

### A. Basic Information

Course Title	Engineering Geology			Course Code:	GEN 151		
Lecture:	2	Tutorial:	2	Practical	0	Total	4
Programme (s) on which this course is given:	B.Sc. Civil Engineering (General)						
Major or minor element of program:	Minor						
Department offering the program:	Surveying Engineering						
Department offering the course:	Surveying Engineering						
Academic Year of program:	First	Level of program:	First Semester				
Date of specifications approval:	16/3/2010						

### B. Professional Information

#### 1. Overall aims of course

By the end of the course the students will be able to:

To have enough knowledge about principles of geology. Plate tectonics, minerals, igneous rocks, sedimentary and metamorphic rocks, earthquakes, structural geology, underground and surface water, dams and materials for construction.

#### 2. Intended Learning outcomes of Course (ILOs)

##### a. Knowledge and Understanding:

- a.1) Recognize concepts and theories of mathematics and sciences, appropriate to the discipline.
- a.5) Recognize methodologies of solving engineering problems, data collection interpretation.
- a.3) Understand characteristics of engineering materials related to discipline.
- a.13) Apply Engineering principles in the fields of reinforced concrete and metallic structures analysis and design, geo-
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##### b. Intellectual Skills

- b.4) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.

b.9) Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.


**c. Professional and Practical Skills**

c.1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice to


**d. General and Transferable Skills**

d.7) Search for information and engage in life-long self learning discipline.

d.6) Effectively manage tasks, time, and resources.


**3. Contents**

Week #	Topics	No. of Hours	ILOS	Teaching / learning methods and	Assessment method
1	Introduction to the course	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam

2	Introduction to the course	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
3	Plate and global tectonics	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
4	Minerals 1	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
5	Minerals 2	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
6	Igneous rocks and volcanoes	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
7	Igneous rocks and weathering	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
8	Midterm Exam	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
9	Sedimentary rocks	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
			a1, a3, a5, a13	Lectures	Assignments

10	Metamorphic rocks	2	b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
11	Earthquakes	2	a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
12	Structural geology	2		Tutorial	Final exam
			a1, a3, a5, a13	Lectures	Assignments
			b4, b9	Case study	Quiz
13	Underground water and surface water	2	c1	Class activity	Mid-term exam
				Tutorial	Final exam
			a1, a3, a5, a13	Lectures	Assignments
14	Materials for construction	2	b4, b9	Case study	Quiz
			c1	Class activity	Mid-term exam
				Tutorial	Final exam
15	Final Exam		a1, a3, a5, a13		
			b4, b9		
			c1		
<b>Total</b>		<b>28</b>			

#### 4- Teaching and Learning Methods:

Check using the symbol ✓

✓	Lectures
✓	Practical training / laboratory
	Seminar / workshop
✓	Class activity
✓	Case study
	Project work
✓	Tutorial

Computer based work
Other :

**5- Student Assessment Methods:**

Check using the symbol  $\checkmark$

$\checkmark$	Assignments	to assess
$\checkmark$	Quiz	to assess
$\checkmark$	Mid-term exam	to assess
	Oral exam	to assess
$\checkmark$	Final exam	to assess
	Design Project	to assess
	Report	to assess
	Experimental write up	to assess
	Informally assessment	to assess
	Other	to assess

a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1
a1	b1	c1	d1

**6. Assessment schedule**

- Assessment 1 Assignments on weeks
- Assessment 2 Quizzes on weeks
- Assessment 3 Mid-term exam on week
- Assessment 4 Oral Exam on week
- Assessment 5 Final exam on week
- Assessment 6 Design Project on weeks
- Assessment 7 Report on weeks
- Assessment 8 Experimental write up on weeks
- Assessment 9 Informally assessment

2 to 14
4, 6, 10, 12
8
15

**7. Weighting of Assessments**

Assignments	10%
Quiz	10%
Mid-term exam	20%
Oral exam	
Final exam	60%
Design Project	
Report	
Experimental write up	
Informally assessment	
Other	

Total

100%

**8. List of References**

8.1 Course Notes

Introduction to engineering geology

8.2 Essential Books (Text Books)


8.3 Recommended Books


8.4 Periodicals Web sites, etc


9. Facilities Required for Teaching and learning

Lectures room equipped with overhead projector

Presentation board


Course Coordinator:

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Course instructor:

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Head of department:

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Signature:

Date:

D	M	Y
7	1	2012