

# Geophysics Study Plan



## Geology and Geophysics Department

2017-1439H

**College of Science**  
**Vice Dean Academic Affairs**  
**Study Plans**



1 <sup>st</sup> Semester (Common First Year)				
Course Code	Course Title	Requisite		Credits
		Pre.	Syn.	
ENG 104 Or ENG 105 Or ENG 106	English Language	-	-	6
MATH 101	Differential Calculus	-	-	3
ENT 101	Entrepreneurship	-	-	1
CHEM 101	General Chemistry	-	-	4
ARAB 100	Written skills	-	-	2
<b>Total of Credit Hours</b>				<b>16</b>

2 <sup>nd</sup> Semester (Common First Year)				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
ENG 111 Or ENG 112 Or ENG 113	English Language	-	-	6
CI 101	University skills	-	-	3
CT 101	Computer Skills	-	-	3
STAT 101	Introduction to Statistics	-	-	3
CHS 101	Fitness and healthy culture	-	-	1
<b>Total of Credit Hours</b>				<b>16</b>

3 <sup>rd</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
GEO 100	General Geology			4 (3+0+2)
PHYS 101	General Physics(1)		-	4 (3+0+2)
MATH 111	Calculus	MATH 101	-	4 (3+2+0)
GPH 201	Principles of Geophysics	MATH 101	Phy101	3 (2+0+2)
xxx IC University requirement (group C)				2 (2+0+0)
<b>Total of Credit Hours</b>				<b>17</b>

4 <sup>th</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
PHYS 102	General Physics (2)	-	-	4 (3+0+2)
MATH 209	Differential Equations	MATH 111	-	4 (3+2+0)
GPH 211	Gravity and Magnetic Exploration	GPH 201	-	3 (2+0+2)
GEO 221	Mineralogy	GEO 100	GEO 237	3 (2+0+2)
GEO 237	Stratigraphy and Sedimentation	GEO 100	GEO 221	3 (2+0+2)
<b>Total of Credit Hours</b>				<b>17</b>

5 <sup>th</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
PHYS 201	Mathematical Physics (1)	MATH 111	-	3 (2+2+0)
GPH 221	Seismic Exploration	GPH 201	-	3 (2+0+2)
GEO 320	Petrology	GEO 221	-	3 (2+0+2)
GEO 381	Structural Geology	GEO 237	-	3 (2+0+2)
GEO 382	Geographical information systems	-	GEO 381	3 (2+0+2)
xxx IC University requirement (group C)				2 (2+0+0)
<b>Total of Credit Hours</b>				<b>17</b>

6 <sup>th</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
PHYS 221	Electromagnetism (1)	PHYS 101	-	3 (3+0+0)
GPH 231	Geoelectric and Electromagnetic Exploration	GPH 201	-	3 (2+0+2)
GPH 313	Seismology	GPH 201	-	3 (2+0+2)
GPH 381	Geophysical Reports	GPH 211 GPH 221	-	1(1+0+0)
GEO 385	Sedimentary cover of Saudi Arabia	GEO 237 GEO 381	-	2 (1+0+2)
GEO 386	Geology of Arabian Shield	GEO381 GEO320	-	2 (1+0+2)
Elective course from group A				3 (2+0+2)
<b>Total of Credit Hours</b>				<b>17</b>

Summer Semester				
Course Code	Course Title	Pre.	Syn.	Credits (Lect.- Exer.-Pract.)
GPH 393	Field Geophysics	GPH211, GPH221, GPH 231, GEO 237, GEO320, GEO381		6 (0+0+12 )
<b>Total of Credit Hours</b>				<b>6</b>

7 <sup>th</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
GPH 410	Geophysical Well Logging	GPH 201	-	3 (2+0+2)
GPH 411	Geophysical Data Processing	GPH 211 GPH 221	-	2(2+0+0)
GEO 452	Petroleum Geology	GEO 237 GEO 381	-	3 (2+0+2)
GPH 496	Graduation Project (1)	GPH 393	-	3(0+0+6)
Elective course from group B				2(2+0+0)
xxx IC University requirement (group C)				2 (2+0+0)
<b>Total of Credit Hours</b>				<b>15</b>

8 <sup>th</sup> Semester				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
GPH 390	Radiometric and Geothermal methods	GPH 201	-	2(2+0+0)
GPH 401	Physics of the Earth	GPH 313	-	2(2+0+0)
GPH 412	Engineering Seismology		-	2(2+0+0)
GPH 421	Mining Geophysics	GPH 211 GPH 231	-	2(2+0+0)
GPH 431	Seismic stratigraphy	GPH 221 GEO 237	-	2(2+0+0)
GPH 497	Graduation Project (2)	GPH 496	-	3(0+0+6)
xxx IC University requirement (group C)				2 (2+0+0)
<b>Total of Credit Hours</b>				<b>15</b>

**College of Science**  
**Vice Dean Academic Affairs**  
**Study Plans**



(Lect.– Exer. – Pract.) = (Lecture – Exercise – Practical)

**List of the Elective Courses**

<b>Group A - Elective courses(Student selects 1 course – 3 credit hours)</b>				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
GEO 383	Remote Sensing	GEO237 GEO381	-	3 (2+0+2)
GPH 417	Hydrogeophysics	-	GPH 231	3 (2+0+2)
GEO 455	Hydrology	GEO237 GEO381	-	3 (2+0+2)

<b>Group B - Elective courses(Student selects 1 course –2 credit hours)</b>				
Course Code	Course Title	Requisite		Credits (Lect.- Exer.-Pract.)
		Pre.	Syn.	
GPH 317	Time series analysis	PHYS 102	-	2 (2+0+0)
GPH 319	Petrophysics	GEO 100 GEO 237 GEO 320	-	2 (2+0+0)
GPH 320	Natural Hazards	GPH 201 GPH 313	-	2 (2+0+0)
GPH 419	Earthquake Geology	GPH 313	-	2 (2+0+0)
GPH 424	Environmental and Engineering Geophysics	GPH 211 GPH 221 GPH 231	-	2 (2+0+0)
GPH 444	Marine Geophysics	GPH 201	-	2 (2+0+0)
GEO 463	Plate Tectonics	GEO 381	-	2 (2+0+0)

<b>Group C - University Requirement: Student chooses 4 courses (8 credit hours)</b>			
Course Code	Course Title	Pre-requisite	Credits (Lect. – Exer. - Pract.)
IC 100	Studies in the Biography of the Prophet	-	2 (2+0+0)
IC 101	Introduction of Islamic Culture	-	2 (2+0+0)
IC 102	Islam and Building up the Society	-	2 (2+0+0)
IC 103	Economic System in Islam	-	2 (2+0+0)
IC 104	Political system in Islam	-	2 (2+0+0)
IC 105	Human Rights	-	2 (2+0+0)
IC 106	Islamic Jurisprudence	-	2 (2+0+0)
IC 107	Ethics of Occupation	-	2 (2+0+0)
IC 108	Contemporary Issues	-	2 (2+0+0)
IC 109	Woman and Her Developmental Role	-	2 (2+0+0)

**College of Science**  
**Vice Dean Academic Affairs**  
**Study Plans**



**List of service courses to other Specialization**

Course Code	Course Title	Requisite		Requisite
		Pre.	Syn.	
<b>GPH 301</b>	<b>Geophysical Exploration</b>	GPH 201	-	<b>3 (2+0+2)</b>