

## Department of Applied Geophysics

### Details of Departmental Compulsory (DC) Courses

Departmental Compulsory (DC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">GPC201</a>	Introduction to Rock Physics	3-0-0	Theory
2	<a href="#">GPC202</a>	Self-Potential Method: Theory and Application	3-0-0	Theory
3	<a href="#">GPC203</a>	Lab on Rock Physics	0-0-2	Practical
4	<a href="#">GPC204</a>	Self-Potential Method Theory & Application Practical	0-0-2	Practical
5	<a href="#">GPC205</a>	Oceanography	3-0-0	Theory
6	<a href="#">GPC206</a>	Mathematical Geophysics	3-1-0	Theory
7	<a href="#">GPC207</a>	Radiometric Method	3-0-0	Theory
8	<a href="#">GPC208</a>	Radiometric Method Practical	0-0-2	Practical
9	<a href="#">GPC501</a>	Solid Earth Geophysics	3-0-0	Theory
10	<a href="#">GPC502</a>	Gravity Method	3-0-0	Theory
11	<a href="#">GPC503</a>	Remote Sensing Principles	3-0-0	Theory
12	<a href="#">GPC504</a>	Mathematical Functional Analysis	3-0-0	Theory
13	<a href="#">GPC505</a>	Gravity Method Practical	0-0-2	Practical
14	<a href="#">GPC506</a>	Remote Sensing Principles Practical	0-0-2	Practical
15	<a href="#">GPC507</a>	Mathematical Functional Analysis Practical	0-0-2	Practical
16	<a href="#">GPC508</a>	Earthquake Seismology	3-0-0	Theory
17	<a href="#">GPC509</a>	Geoelectrical Method	3-0-0	Theory
18	<a href="#">GPC510</a>	Well Logging	3-0-0	Theory
19	<a href="#">GPC511</a>	Seismic Data Acquisition	3-0-0	Theory
20	<a href="#">GPC512</a>	Seismic Data Acquisition Practical	0-0-2	Practical
21	<a href="#">GPC513</a>	Geoelectrical Methods Practical	0-0-2	Practical
22	<a href="#">GPC515</a>	Earthquake Seismology and Well Logging Practical	0-0-2	Practical
23	<a href="#">GPC516</a>	Geophysical Inversion	3-0-0	Theory
24	<a href="#">GPC517</a>	Seismic Data Processing and Interpretation	3-0-0	Theory
25	<a href="#">GPC518</a>	Geophysical Inversion Practical	0-0-2	Practical
26	<a href="#">GPC519</a>	Seismic Data Processing and Interpretation Practical	0-0-2	Practical
27	<a href="#">GPC520</a>	Magnetic Method	3-0-0	Theory
28	<a href="#">GPC521</a>	Geoelectromagnetic Method	3-0-0	Theory
29	<a href="#">GPC522</a>	Magnetic Method Practical	0-0-2	Practical
30	<a href="#">GPC523</a>	Geoelectromagnetic Method Practical	0-0-2	Practical
31	<a href="#">GPC530</a>	Seismology	3-0-0	Theory
32	<a href="#">GPC531</a>	Geotechnical Modelling	3-0-0	Theory
33	<a href="#">GPC532</a>	Hydrology	3-0-0	Theory
34	<a href="#">GPC533</a>	Seismic Hazard Zonation	3-0-0	Theory
35	<a href="#">GPC534</a>	Finite Element Analysis	3-0-0	Theory
36	<a href="#">GPC535</a>	Geotechnical Modelling Practical	0-0-2	Practical
37	<a href="#">GPC536</a>	Seismology Practical	0-0-2	Practical
38	<a href="#">GPC537</a>	Remote Sensing: Principles and Data Acquisition System	3-0-0	Theory
39	<a href="#">GPC538</a>	Advanced Numerical Methods	3-0-0	Theory
40	<a href="#">GPC539</a>	Remote Sensing: Principles and Data Acquisition System Practical	0-0-3	Practical
41	<a href="#">GPC540</a>	Advanced Numerical Methods Practical	0-0-3	Practical
42	<a href="#">GPC541</a>	Numerical Analysis and Data Structure	3-0-0	Theory
43	<a href="#">GPC542</a>	Geophysical Field Theory	3-0-0	Theory
44	<a href="#">GPC551</a>	Petroleum Geophysics	3-0-0	Theory
45	GPC555	Research Methodology and Statistics	3-0-0	Theory
46	GPC597	Thesis	0-0-0 (36)	Non-Contact
47	GPC598	Thesis	0-0-0 (18)	Non-Contact
48	GPC599	Thesis	0-0-0 (S/X)	Audit
49	GPS501	Winter Geophysical Field Training	0-0-0 (S/X)	Audit
50	GPS502	Industrial Training/Summer Training	0-0-0 (S/X)	Audit
51	GPS555	Internship	0-0-0 (S/X)	Audit

### Details of Engineering Science Option (ESO) Courses

Engineering Science Option (ESO) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">GPE201</a>	Earth and Planetary System	3-0-0	Theory
2	<a href="#">GPE202</a>	Geophysical Prospecting	3-0-0	Theory
3	<a href="#">GPE203</a>	Geophysical Prospecting Practical	0-0-2	Practical

### Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">GPD501</a>	Geothermics and Geodynamics	3-0-0	Theory
2	<a href="#">GPD502</a>	Formation Evaluation	3-0-0	Theory
3	<a href="#">GPD503</a>	Image Processing and Geographic Information System	3-0-0	Theory
4	<a href="#">GPD504</a>	Airborne Geophysics	3-0-0	Theory
5	<a href="#">GPD505</a>	Near Surface Geophysics and Geotechnical Modelling	3-0-0	Theory
6	<a href="#">GPD506</a>	Geoelectromechanism for Crustal and Lithospheric Architecture	3-0-0	Theory
7	<a href="#">GPD507</a>	Geophysics for Mineral Exploration	3-0-0	Theory
8	<a href="#">GPD508</a>	Seismological Data Analysis	3-0-0	Theory
9	<a href="#">GPD509</a>	Well Log and Electrofacies Analysis	3-0-0	Theory
10	<a href="#">GPD510</a>	Reservoir Geophysics and Deep Water Imaging	3-0-0	Theory
11	<a href="#">GPD520</a>	Earthquake Statistics and Hazard	3-0-0	Theory
12	<a href="#">GPD521</a>	Time Series Analysis in Geosciences	3-0-0	Theory
13	GPD522	Computational Seismology	3-0-0	Theory
14	GPD550	Geophysical Methods for Coal Exploration	3-0-0	Theory
15	GPD551	Engineering Geophysics	3-0-0	Theory
16	GPD552	Geophysical Methods for Groundwater Exploration	3-0-0	Theory

### Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">GPO501</a>	Groundwater Geophysics	3-0-0	Theory
2	<a href="#">GPO502</a>	Geostatistical Modeling for Oil and Gas Field Development	3-0-0	Theory
3	<a href="#">GPO503</a>	Artificial Intelligence and Machine Learning in Geosciences	3-0-0	Theory
4	<a href="#">GPO504</a>	Advanced Seismic Data Interpretation	3-0-0	Theory
5	<a href="#">GPO510</a>	Strong Motion Seismology and Structural Responses	3-0-0	Theory
6	<a href="#">GPO511</a>	Satellite Image Processing and Geographic Information System	3-0-0	Theory
7	GPO512	Seismic Refraction Technology	3-0-0	Theory