

PROGRAMME

- (i). Name of the Faculty: Faculty of Physical Sciences
(ii). Programme Name: Ph.D. (Earth Science)
(iii). Course Details:

Sr. No.	Course No	Course Title	L	T	P	C
1	PHY(NGRI)-101 : 1-1-0-2	Research Methodology	1	1	0	2
2	PHY(NGRI)-201 : 4-0-0-4	Introduction to Geosciences (Geophysics, Geology, Geochemistry, GIS)	4	0	0	4
3	PHY(NGRI)-202 : 3-1-0-4	Geophysical Signal Processing , Inverse theory and Computational Methods	3	1	0	4
4	PHY(NGRI)-301 : 1-1-0-2	Geodynamics	1	1	0	2
5	PHY(NGRI)-302 : 1-1-0-2	Geophysical Inverse Theory	1	1	0	2
6	PHY(NGRI)-303 : 1-1-0-2	Geophysical Continua	1	1	0	2
7	PHY(NGRI)-304 : 1-1-0-2	Nonlinear dynamics and fractals in earth sciences	1	1	0	2
8	PHY(NGRI)-305 : 1-1-0-2	Advance seismology	1	1	0	2
9	PHY(NGRI)-306 : 1-1-0-2	Geohazards	1	1	0	2
10	PHY (NGRI)-307: 1-1-0-2	Potential field theory, Gravity and Magnetism	1	1	0	2
11	PHY (NGRI)-308 : 1-1-0-2	Geomagnetism and Paleomagnetism	1	1	0	2
12	PHY (NGRI)-310 : 2-1-2-4	Advanced Petrology, Geochemistry	2	1	2	4
13	PHY (NGRI)-309 : 2-1-0-2	Space Geodesy (GPS, Space Geodesy, Space EM)	2	1	0	2
14	PHY (NGRI)-310 : 2-1-0-2	Advanced Seismic and other geophysical techniques for energy resources	2	1	0	2
15	PHY (NGRI)-311 : 1-1-0-2	Electrical and Electromagnetic methods	1	1	0	2
18	PHY (NGRI)-314 : 2-1-0-2	Groundwater Exploration, Modeling and Water quality assessment	2	1	0	2

19	PHY (NGRI)-315 : 2-1-0-2	Planetary Geology	2	1	0	2
20	PHY(NGRI)-316 : 0-2-0-2	Advanced topics in Geophysics	0	4	0	4
21	PHY (NGRI)-401 : 0-1-6-4	Project Proposal Writing	0	1	6	4
22	PHY (NGRI)-402 : 0-0-8-4	CSIR-800 Societal Programme	0	0	8	4

1st Semester :
Mandatory Courses

PHY (NGRI)-101 : 1-1-0-2: Research Methodology

PHY (NGRI)-201: 4-0-0-4: Introduction to Geosciences (Geophysics, Geology, Geochemistry, GIS)

PHY (NGRI)-202: 3-1-0-4: Geophysical Signal Processing, Inverse theory and Computational Methods

Total 10 credits

2nd Semester:
Mandatory Courses

Total 8 credits

PHY (NGRI)-401 : 0-1-6-4: Project Proposal Writing

PHY (NGRI)-402 : 0-0-8-4: CSIR-800 Societal Programme

Elective Courses (from the above list i.e beginning from Course code PHY (NGRI)-301: 1-1-0-2 and up to PHY (NGRI)-316: 0-2-0-2)

Total 4 credits

Total credits required for the Ph.D. Course: 22 credits

The above course works will be followed by thesis research and thesis defence from the 3rd semester onwards.