

Format (Please use separate sheet for each programme)

Programme Objectives	Title of the Programme: M.Sc	Applied Geophysics
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Programme Specific Outcome	<p>1. The geophysical methods of exploration have a leading role in studying the deep structure of the earth's crust, in prospecting for oil and gas in regional structural studies related to the prospecting and exploration of Minerals.</p> <p>2. Students who have chosen this special course will obtain solid knowledge in fields such as Seismic methods of Geophysics, Gravity prospecting, Magnetic prospecting, Electrical method in Geophysics, Radiometry and Nuclear Geophysics, Fundamentals of Geophysical Exploration, Physical Field Theory, Analysis and processing of Geophysical Signals, Remote Sensing, Environmental Geotechnology and Geohazards.</p> <p>3. Students who have completed this programme will be employed in mineral and oil industry and other R& D institutions & Higher Education sector.</p>
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Course outcome

Sl.No	Title of Subject / Course	Course Outcome
1	Principles of Geophysics and Electronic Instrumentation	This paper focuses an understanding of the principles of Geophysics and Electronic instrumentation and learners are expected to know the different types of electronic instrumentation and its principle.
2	Electrical and Electromagnetic prospecting	This paper focuses an understanding of the Electrical and Electromagnetic prospecting and students are expected to know the electrical and electromagnetic prospecting influence in various fields like oil, minerals, etc.
3	Remote sensing and GIS	This paper focuses an understanding of Remote sensing and GIS and its applications. And also describes the advantages and disadvantages of Remote sensing and GIS.
4	Computer programming and	This paper focuses on Computer programming and

	software application in geosciences	software application in geosciences. This paper also describes the basic statistics and various analyses.
5	Geology or Mineral exploration (Elective Major)	This paper explains about geology and its fundamentals. And also describe about sediments and various types of rocks. This paper describes about mineral exploration. And also explains the various geophysical techniques used in mineral exploration.
6	Practical – Geology or Mineral exploration / Electrical and Electromagnetic prospecting / Remote sensing and GIS	This practical paper gives the knowledge about Geological and mineral exploration, Electrical and Electro Magnetic prospecting problems.
7	Elective-GPS Technology (Non major)	This paper describes about GPS Technology and its application. This paper is very much useful to students who are in the survey field.
8	Geophysical Signal Processing and inversion	This paper describe about Geophysical Signal Processing and Inversion. This paper is very much useful for students to interpret the geophysical data.
9	Ground water Geophysics	This paper describe about Groundwater Geophysics. This paper elaborately discuss about type of water and its flow. And also describe the geological and hydrogeological methods in groundwater exploration.
10	Seismic Prospecting	This paper describes the basics of Seismic data acquisition, Seismic data processing and interpretation.
11	Gravity and Magnetic Prospecting	This paper describes about Gravity and magnetic prospecting and elaborates the Gravity prospecting instruments and interprets the gravity and magnetic data in oil/gas, mineral and groundwater exploration.
12	Tectonics and Seismology or Disaster management - (Elective Major)	This paper explains about Tectonics and Seismology and elaborates the concept of tectonics and seismology. This is very much helpful to identify the earthquake intensity. This paper explains about various disaster Management and its concepts and elaborately discussed the disasters and Environmental impacts on disaster. And also describe the Disaster law and policy.
13	Practical - Gravity and Magnetic prospecting / Seismic Prospecting/ Geophysical Signal Processing and inversion	This practical paper describes about solving the problems and data interpretation about Gravity, Magnetic, Seismic and Geophysical signal processing and inversion.

14	Elective – Remote sensing (Non major)	This paper describes about fundamentals of Remote Sensing and GIS. This paper is very much useful to the students for using of Remote sensing and GIS concept in various fields.
15	Well logging	This paper describes the various types of Logging and its interpretation in various field like groundwater, mineral and oil/gas industry.
16	Marine Geophysics	This paper describes the ocean, waves, tides and currents and also explains the physio-chemical characteristic of sea water and navigation in ocean.
17	Environmental GeoTechnology	This paper describes the environmental aspects with reference to Soil and its structure, Beach and beach erosion and Radioactive decay. This paper is very much helpful to know the environmental conditions around the world.
18	Energy Resources	This paper describes the energy resources like Coal, Petroleum and atomic fuel. This paper is very much helpful to the students about the energy resources and its uses.
19	Practical – Marine Geophysics / Well logging	This practical paper describes the solving the problems and analysis in the field of Marine geology and Marine Geophysics and well logging methods.
20	*Industrial training & Dissertation and Viva Voce**	This Project and Viva-Voce gives very much exposure to students who are studying M.Sc Applied Geophysics. They have to do the project work in various R&D laboratories / institutions NGRI, WIHG, ISR, IIG and ONGC, etc.