DEPARTMENT OF GEOLOGY, INSITUTE OF EARTH SCIENCES, BUNDELKHAND UNIVERSITY, JHANSI

The Department of Geology was established in 1 November 1999 and is running B.Sc. (Hons), M.Sc. (Geology) and Ph.D. courses. The main objective of the department is to impart knowledge in the field of Structural Geology, Tectonics, Precambrian Geology, Sedimentology, Geomorphology, Remote Sensing and Environmental Geology. The department is recognized as Centre of Excellence of U.P. Government and is sponsored by FIST program of DST, Government of India. Bundelkhand is blessed with great geological diversity and consists of different rocks of Archean to recent times. The department endeavors to train and promote students in various disciplines of geology and is encouraging them to develop skill and abilities to get employment in various organizations**.**

Vision:

Be an internationally acclaimed institute of the university. Recognized for excellence in teaching and has potential to produce academician, researchers and professionals of national and international fame in the field of Earth Sciences. To promote growth of intellectual citizens for exploring placement in the various reputed organizations. The main objective is to strive, achieve, and maintain a worthy and commendable position in the field of geology. To endeavor and accomplish this in our students by imparting, disseminating, participating, and contributing knowledge, skills, and rational values with a local, national, and global perspective, to them.

Mission:

Promote advance and innovative teaching and to improve the quality of research in various disciplines of geological sciences. To create innovative and original research programs to students through multi-faceted education and for recognition of the department at national and international level.

Program outcome (POs):

The Master program in geology running at Department of Geology, Bundelkhand University facilitates the knowledge of various branches of geology to students. The students will also learn about tectonics, mineral resources, landscapes, rocks, fossils, water resources, engineering structures, economic and atomic minerals, fuels, Natural hazards and the dynamics, structure, origin, and evolution of the Earth and Solar System. It develops skill and train students to explore the theoretical and practical knowledge for building their carrier and getting jobs in various organizations related to Earth Science. The students will also learn the courses of geological sciences with other comprehensive/ interdisciplinary courses (physics, chemistry, ecology, biology, Environmental science, archaeology, and climatology,) to build their carrier in interdisciplinary research and academic institutes and universities.

The students obtained master degree in Geology are able to get rewarding career opportunities as geologists, scientists, academician, researchers and consultants in government and nongovernment organizations. Since last twenty years the most of the students passed master degree in geology from Bundelkhand University have got jobs in various organizations. Most of the alumni of the department are serving in Geological Survey of India (GSI), Mineral Exploration Corporation (MECL), Atomic Mineral Division, Oil and Natural Gas Commission (ONGC), National Geophysical Research, Geotechnical Companies, Central ground water board, Mining areas, Coal India Limited, WAPCOS, CIMFR etc.

Programme Specific Outcomes (PSOs):

The subject Geology has significant interdisciplinary and applied approaches and links with other scientific and technical programs such as geophysics, geochemistry, remote sensing, environmental sciences, climatology, meteorology, atmospheric sciences, paleobiology, paleobotany, geoarchaeology and other branches. These interdisciplinary programs will provide brighter future to students to build

their carrier in different organizations and institutes. The broad course objectives and teaching methodology are outlined under the appropriate courses and papers.

Syllabus: Course Structure for M.Sc. Geology Program

Semester I			
Paper Code	Course title	Credit	Remarks
1	General Geology and Remote Sensing	4	Core Course
2	Structural Geology and Tectonics	4	Core Course
3	Mineralogy and Crystallography	4	Core Course
4	Igneous Petrology and Geochemistry	4	Core Course
5	Practical- I (Related to paper 1&2)	2	Related to paper 1&2
	Practical- I (Related to paper 3&4)	2	Related to paper 3&4
6	Minor Paper from Table 1	4	
7	Field Training/Field Tour/Industrial Visit	4	Core Course
	Total credit	28	
Total Credit of Semester I			
Semester II			
8	Sedimentology	4	Core Course
9	Palaeobiology and Stratigraphy	4	Core Course
10	Economic Geology	4	Core Course
11	Metamorphic Petrology	4	Core Course
12	Field Training/Field Tour/Industrial Visit	4	Core Course
13	Practical- II (Related to paper 8&9)	2	Related to paper 8&9
	Practical- II (Related to paper 10&11)	2	Related to paper 10&11
	Total credit ot first Semester	24	
Total Credit of First YEAR		**52**	
Semester III	**Note: Any two from elective courses**		
14	Exploration and Mining Geology	4	Core Course
15	Environmental Geology	4	Core Course
16	(i) Hydrogeology / (ii) Hydrogeological Modeling and Management	4	Elective Course- I
17	(i) Fuel Geology/ (ii) Petroleum Geology	4	Elective Course-II
18	Field Tour/Training	4	
19	Practical III (Related to paper 14-15)	2	(Related to any two of 14-15)
	Practical III (Related to paper 16-17)	2	Related to paper 16&17
	Total Credit of Semester III	24	
Semester IV	**Note: Any two from elective courses**		
20	Engineering Geology	4	Core Course
21	Disaster Management	4	Core Course
22	(i) Medical Geology/ (ii) Earth Energy Resources	4	Elective Course-III
23	(i) Quaternary Geology/ (ii) Advance Geomorphology	4	Elective Course-IV
24	Dissertation/Project Work	4	Master Thesis
25	Practical-IV (Related to 20 & 21)	2	Related to 22 & 21
	Practical-IV (Related to 22-23)	2	Related to 22-23
Total Credit of Semester IV		24	
Total Credit of I, II, III and IV Semester		**100**	