Sant Gadge Baba Amravati University

Department of Geology

Key indicator 2.6: Students Performance and Learning Outcomes

KI 2.6.1: The institution has stated learning outcomes (generic and programme specific)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents. Upload COs for all courses

CO's (Course outcomes) of the courses:

Name of the Department:-	**Geology**
Name of the Program:-	**M.Sc. Geology**
PSO of the Program:-	The Master of Science program in Geology in the Department of Geology offers an interdisciplinary Post-Graduate degree in Geology with the objective of educating students for success as a geo-scientist in government sector, public sector, private sector, research institutes, or further pursuit of Doctoral studies. Graduates of the Master of Science Program will be well prepared to: 1) Assume responsible positions in industry or in government agencies; 2) Serve as instructors in secondary-school or community college classrooms; or 3) Enter Ph.D. programs at other universities. At the time of graduation, they will be able to: 1) Demonstrate content knowledge appropriate to professional career goals; 2) Frame novel questions or problems in geology and determine the data required to answer them; 3) Collect high-quality geologic data using standard techniques and begin to develop state-of-the-art methods; 4) Apply theoretical, conceptual and observational knowledge to the analysis and interpretation of geologic data; 5) Compile and critique geologic literature pertinent to

	original research; and 6) Communicate geologic knowledge, findings and interpretations in reports, both written and oral, that are well-organized, well-illustrated and professionally presented.
PO of the Program:-	During the two-year program, students identify, examine and understand different geological materials and also carry out their characterization using geological, geophysical, geochemical, and numerical-modelling techniques. The students learn geologic field mapping, statistical analysis of the data, computer techniques and software, microscopy, fossil identification, groundwater behaviour and environmental issues related to Planet Earth. At the end of the program student will be able to understand the spatial and temporal relationships between Earth processes and products, and development and evolution of Earth spheres (Lithosphere, Hydrosphere, Atmosphere and Biosphere).Exploration for economically useful Earth material is another important outcome of the present program. The student will be able to assess Geo-hazards including earthquakes, floods, landslides, tsunamis and volcanic eruptions and mechanisms for mitigating the damages. Submission of Dissertation based on their project work is an important component of Masters Program in Geology. Students take-up a geologic problem and utilize theoretical, analytical or experimental approach to solve the problem through their dissertation work. The students will be able to defend their thesis in an open forum. It is strongly encouraged to publish the thesis in reputed research journals
Name of the Program:-	**P.G. Diploma in Watershed Technology and Management**
PSO of the Program:-	The Programme Specific outcomes (PSO) are prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables multi-cropping and

	the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area
PO of the Program:-	The Programme Outcomes will leads to scientific conservation of soil and water thereby increasing Biomass production. It helps in increasing the income of the people living in the watershed community and lessens the occurrence of drought and flood leading to an increase in the life of the downstream dam and reservoirs

1.	**M.Sc Geology**	
	M.Sc Geology Sem 1:	
	Mineralogy	Understand the nature, scope and significance of rock forming minerals and fundamental concepts in subject
	Structural Geology and Tectonics	Understand the nature, scope and significance of Structural Geology and Tectonics and fundamental concepts in subject
	Geochemistry and Analytical Techniques	Understand the nature, scope and significance of Geochemistry and Analytical Techniques and fundamental concepts in subject
	Paleobiology	Understand the nature, scope and significance of Paleobiology and fundamental concepts in subject
	M.Sc Geology Sem 2:	
	Igneous Petrology	Understand the nature, scope and significance of Igneous Petrology and fundamental concepts in subject
	Metamorphic Petrology	Understand the nature, scope and significance of Metamorphic Petrology and fundamental concepts in subject
	Sedimentalogy	Understand the nature, scope and significance of Sedimentalogy and

		fundamental concepts in subject
	Geomorphology and Field Geology	Understand the nature, scope and significance of Geomorphology and Field Geology and fundamental concepts in subject
	M.Sc Geology Sem 3:	
	Stratigraphy	Understand the nature, scope and significance of Stratigraphy and fundamental concepts in subject
	Ore Geology and Mining Geology	Understand the nature, scope and significance of Ore Geology and Mining and fundamental concepts in subject
	Hydrogeology	Understand the nature, scope and significance of Hydrogeology and fundamental concepts in subject
	Exploration Methods	Understand the nature, scope and significance of Exploration Methods and fundamental concepts in subject
	M.Sc Geology Sem 4:	
	Remote Sensing and GIS	1. Understand the nature, scope and significance of Remote Sensing in Geosciences and GIS and fundamental concepts in subject 2. Understand the modern techniques in remote sensing and aerial photography. 3. Examining the history, basic theories of EMR, and other concepts. 4. Understand and get the knowledge about fundamental concept, types of aerial photography characteristics of aerial photographs and aerial camera. 5. Review on development of Indian remote sensing and functions of IRS. 6. Understand the types of remote sensing, and types of platforms in remote sensing. 7. Gain knowledge about satellite sensor and types of sensors, and their functions

		and characteristics 8. Understand the data product, types of data product and its applications and uses in remote sensing
	Environmental Geology and Engineering	Understand the nature, scope and significance of Environmental Geology and Engineering and fundamental concepts in subject
	Indian Mineral Deposits and Mineral Economics	Understand the nature, scope and significance of Indian Mineral Deposits and Mineral Economics and fundamental concepts in subject
	Petroleum and Coal Geology	1. Understand the nature, scope and significance of Petroleum and Coal Geology and fundamental concepts in subject 2. Understand the origin of oil, gas and coal and their exploration techniques along with applications and distribution
2	**PGDWTM**	
	PGDWTM Sem 1:	
	Fundamentals of Geology and Watershed	Understand the nature, scope and significance of Fundamentals of Geology and Watershed and fundamental concepts in subject
	Remote Sensing in Geosciences and GIS	Understand the nature, scope and significance of Remote Sensing in Geosciences and GIS and fundamental concepts in subject Understand the modern techniques in remote sensing and aerial photography.
	Groundwater Hydrology and Geophysical Exploration	Understand the nature, scope and significance of Groundwater Hydrology and Geophysical Exploration and fundamental concepts in subject
	Introduction to	Understand the nature, scope and

	Watershed Technology and Management	significance of Introduction to Watershed Technology and Management and fundamental concepts in subject
	PGDWTM Sem 2:	
	Basics of Information Technology and Digital Image Processing	Understand the nature, scope and significance of Basics of Information Technology and Digital Image Processing and fundamental concepts in subject
	Advance Hydrogeology	Understand the nature, scope and significance of Advance Hydrogeology and fundamental concepts in subject
	Remote Sensing in Water Resource Management	Understand the nature, scope and significance of Remote Sensing in Water Resource Management and fundamental concepts in subject
	GIS Applications in Water Resource Management	Understand the nature, scope and significance of GIS Applications in Water Resource Management and fundamental concepts in subject