A.D.M. COLLEGE FOR WOMEN
(Autonomous)
Affiliated to Bharathidasan University
(Nationally Accredited with "A" Grade by NAAC – 4th Cycle)
NAGAPATTINAM 611 001.

LOCAL/NATIONAL/REGIONAL/GLOBAL RELEVANCE

DEPARTMENT OF GEOLOGY

Programme: B.Sc Geology **Year: 2022-2023**

Course Code	Title of the Course	Local/Regional/ National /Global	Rationale	Course Outcomes	PSOs Addressed	Cognitive Level
GUA	The Dynamic Earth	Global	Gain a better understanding of the Planets, Moons and other objects of our solar system in addition to their distribution and dynamical relationships.	• CO1:Gain a better understanding of the Planets, Moons and other objects of our solar system in addition to their distribution and dynamical relationships.	PSO1, PSO4	Un
				• CO2: Understanding the geological origins of especially important natural hazards including Earthquakes, Tsunami, Volcanic eruptions and L and	PSO2	An

				slides.		
				• O3: Understand Plate tectonics and its central role as the unifying theory of geology.	PSO2	Un
				• CO4: Articulate the relationship between Volcanoes, Earthquakes, Mountain belts and Tectonic plate boundaries.	PSO2	An
				• CO5: Articulate the relationship between Volcanoes, Earthquakes, Mountain belts and Tectonic plate boundaries.	PSO2	An
GUC	Structural Geology	National	Understand elastic and viscous strain in role behaviour, the effects of temperature, pressure and strain	• CO 1: Understand the concepts of stress and force, normal and shear stresses and hydrostatic stresses.	PSO1, PSO2	Un

			rate on rock strength and the mechanism of rock deformation	• CO 2: Understand elastic and viscous strain in role behavior, the effects of temperature, pressure and strain rate on rock strength and the mechanism of rock deformation.	PSO1, PSO2	An
				• CO 3: Know the classification of fold, joints and fault systems, the terminology used to describe them.	PSO1	Ap
				• CO 4: Know the types of foliation and lineation, their origin, and their relationship to folding.	PSO1	Un
				• CO 5: Determining the same of fault movement from structures associated with faults.	PSO1	An

UD	Physical Geology	Global	Understand the concepts of weathering the process and features formed due to running water. Know the weathering process of glaciers and ice age.	• CO1: Understand the concepts of weathering.	PSO1, PSO2, PSO3	Un
				• CO2: Understand the process and features formed due to running water	PSO1, PSO2	Un
				• CO 3: Know the sources of groundwater and its features.	PSO1, PSO2	An
				• CO4: Know the weathering process of glaciers and ice age.	PSO2	Un
				• CO5: Determining the ocean features and tsunami.	PSO2	Un
GUF	Paleontology and Crystallography	National	Demonstrate their understanding of how life has evolved through geologic time. Identify and explain the morphological	• CO1: Demonstrate their understanding of how life has evolved through geologic time.	PSO2	An

			characters of fossils.	• CO 2: Identify and explain the morphological characters of fossils.	PSO2	Un
				• CO3: Explain th evolutionary trends fossils.	PSO2	An
				• CO4: Understand the concepts origin of crystal.	PSO1	Ap
				• CO5: Know the forms and faces of crystals.	PSO1	Ap
GUG	Stratigraphy	Global	The course then adds larger geological principles to the foundation stratigraphy, effects of sedimentary processes and sedimentation rates on interpretation of	• CO 1: It focus specifically on settings and time periods that the students will encounter on our field trips, emphasizing the combined use of sediment logical characteristics and fossil content	PSO1, PSO2, PSO3	An

			evolution in the fossil record	• CO 2: Student would understand the Indian Stratigraphy and its age related problems.	PSO1, PSO2	Un
				• CO 3: Utilizes both forward reasoning and inverse reasoningto construct one or more hypotheses for the paleogeo graphic and environmental histories that produced a series of strata.	PSO3	Ap
				• CO 4: The course then adds larger geological principles to the foundation stratigraphy, effects of sedimentary processes and sedimentation rates on interpretation of evolution in the fossil record.	PSO1, PSO2	An

				• CO 5: Student would understand world physiographic divisions and rock formation.	PSO1	Ap
GUH	Mineralogy	Global	Understand the basic crystal-chemical properties of minerals and how variability in these properties relates to physical and optical characteristics as well as the formation and stability of minerals in igneous, metamorphic, and sedimentary environments.	• CO 1: Student thoroughly understands the various crystal structures and megascopic and optical characters of various minerals.	PSO1	Ap
				• CO 2: Understand the basic crystal-chemical properties of minerals and how variability in these properties relates to physical and optical characteristics as well as the formation and stability of minerals in igneous, metamorphic, and sedimentary environments.	PSO1	Ap
				• CO 3:Recognize and	PSO1	An

				quantify the physical and optical properties of minerals.		
				• CO 4: Microscopic thin section study and identity characterize common rock-forming minerals.	PSO1, PSO3	An
				• CO 5: Extract information about the conditions of formation and subsequent history of a mineral from its properties and its presence in a rock.	PSO1	Un
GUJ	Igneous Petrology	National	After successful completion of this course you will have an integrated understanding of the range, composition and petro genesis of the	• CO 1: Student would understand the paragenesis of minerals of the Igneous rocks.	PSO1, PSO3	An
				• CO 2: This course	PSO1,	Ap

			major igneous rock groups and will be able to identify them in thin section and deduce their tectonic association and mode of origin.	presents a broad review of igneous rocks, emphasizing their tectonic associations, interrelationships and petro genesis.	PSO2	
				• CO 3: After successful completion of this course you will have an integrated understanding of the range, composition and petro genesis of the major igneous rock groups and will be able to identify them in thin section and deduce their tectonic association and mode of origin.	PSO2, PSO3	An
				• CO 4: Students will become familiar with	PSO3	Un

				the key skills used to aid the interpretation of igneous rocks.		
				• CO 5: Students will become major igneous rock groups and will be able to identify megascopic and microscopic studies.	PSO3	An
GUK	Sedimentary Petrology and Metamorphic Petrology	National	Interpret the processes responsible for the deposition of the sediment from the nature of the sediment and sedimentary structures present within the sedimentary rock	• CO 1: Student would understand the weathering, provenance, depositional environments, climate and tectonics of the sedimentary rocks.	PSO1, PSO2	An
				• CO 2: Demonstrate proficiency in common	PSO1	Ap

				practical skills in Sedimentary Geology.		
				• CO 3: Interpret the processes responsible for the deposition of the sediment from the nature of the sediment , and sedimentary structures present within the sedimentary rock.	PSO1 PSO3	Un
				• CO 4: Understand the depositional environment of a sedimentary rock package based on recognition of facies associations.	PSO1, PSO4	An
				• CO 5: Student would understand the petro logical studies in	PSO1	Ap

				megascopic and microscopic		
GUL	Economic Geology	National	Diagnosis of clinical disorders by estimating biomarkers	• CO 1: An understanding of the socio-economic drivers for mining and exploration activities.	PSO1, PSO2	An
				• CO 2: Detailed knowledge and the ability to interpret the strength, of the various genetic models associated with each class of mineralization; with emphasis on the mineralogy, geology and geochemical controls on mineralization of ore deposits.	PSO1, PSO2, PSO3	Ap
				• CO 3: An understanding of the roles of a geologist in the mining and	PSO4	An

				exploration industries.		
				• CO 4: Students able to understand the ore minerals in the field.	PSO1	Un
				• CO 5: An understanding of the overall ore minerals various eco nominal value in the field.	PSO4	Ap
ZVPY	Fisheries Administration and Legislation	National	After Successful completion of this course work students will able to Fisheries Administration's tasks have shifted from general authority in fisheries to technical support to decentralized institutions, but this is	• CO1: Fisheries Administration's tasks have shifted from general authority in fisheries to technical support to decentralized institutions, but this is not generally reflected in the actual functioning of the	PSO 1,2,3,4	An

			not generally reflected in the actual functioning of the administration	administration.		
				• CO2: The fisheries administration and decentralized authorities suffer from financial constraints and a lack of specialized personal at community level.	PSO 1,2,4	Ap
				• CO3: Views of fisheries staff on fisheries management differ between the national and the local level.	PSO 1,2,4	Ap
				• CO4: Continuous reorganization and decentralization processes have reduced transparency and complicated	PSO 1,4	Un

				communication line (both horizontal and vertical)		
				• CO5: A multitude of non-fisheries institutues increasingly have key roles to play in fisheries management fisheries legislation, with as one result that procedures are becoming long and complicated and the outcomes unsure.	PSO 1,2,3,4	Ap
ZVQY	Marine Biotechnology	National	After successful completion of this course students will able to the Marine Ecosystem has Rich Biodiversity, and the organism themselves contain vital	• CO1: After successfu completion of this cours students will able to th Marine Ecosystem has Rich Biodiversity, and th organism themselve contain vital biochemica compounds.	PSO 1,2,3,4	An

			biochemical compounds	• CO 2: Identify the components of a wide array of uses in medicine, environment, and other industries.	PSO 1,2,4	Ap
				• CO 3: Collection of fish, molluscs and crustacean from adjacent fishing harbours to study identification, anatomy and record keeping of Relevant Data.	PSO 1,2,4	Ap
				• CO 4: Traditional method of fish preservation	PSO 1,4	Un
				• CO 5: Methods of fish drying: Natural, Solar, Artificial, Mechanical dryer. Preparation of extruded products using single screw and twin screw extruder.	PSO 1,2,3,4	Ap