



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Program)
2024

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME									
			THEORY			PRACTICAL			L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*					
GUCE110	GE	Earth Science and Civilization	60	20	20	0	0	4	0	0	4	

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit.

***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

The students will be able to learn scientific aspects of Earth processes and their role in Civilization.

Course Outcomes:

The student will be able to

1. To know the basics of Earth processes and features.
2. To study the dynamism of Earth.
3. To learn the importance of products of earth processes.
4. To understand the dynamic nature of Earth and its effect on Civilization.

UNIT I

12 Hrs.

The Earth as a planet of Solar system: The Big bang theory, Solar-System, Origin of Earth-Nebular Hypothesis, Evolution of Earth, Layers of Earth with special emphasis to Asthenosphere, Lithosphere, Hydrosphere, Atmosphere.

UNIT II

12 Hrs.

Physical Features of the Earth: Plate-Tectonics, Elementary knowledge of formation, evolution, migration and extinction of Mountains, Valley, Plateaus, Plains, Rivers, Glaciers, Oceans, Seas, Bays.

UNIT III

12 Hrs.

Processes on the Earth: Continental Drift, Earthquake, Volcanoes & Volcanism, Weathering, Physical Weathering, Chemical Weathering, Biological Weathering. Erosion- River Erosion, Glacial Erosion, Wind Erosion, Marine Erosion, Sedimentation, Landslides.

UNIT IV

12 Hrs.

Products of Earth processes: Minerals, Rock forming minerals, Industrial Minerals, Ore Minerals, Gemstones. Rocks, Bed stone for foundation of Civil Engineering Structures, Reservoir for Oil & Petroleum, Reservoir for Ground Water, Raw materials for Construction.

UNIT V

12 Hrs.

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Role of dynamism of Earth in Civilization: Role of Earth processes and features in Origin of life, Evolution of life, Settlement of Civilizations, Shifting of Civilizations, Modernization of Civilizations.

Text Books:

1. A Textbook of Geology, by P.K. Mukerjee, World Press Private Ltd. Thirteenth Reprint Edition 2019.
2. Earth's Dynamic Systems by W. Kenneth Hamblin, Eric H. Christiansen Pearson, Tenth Edition.
3. The Good Earth: Introduction to Earth Science by David McConnell, McGraw-hill, 2008.
4. Earth Science by Edward J. Tarbuck, Frederick K. Lutgens, Pearson Education, 2012.

Reference Books:

1. Earth's Biosphere by VACLAV SMIL, The MIT Press Cambridge, Massachusetts London, England 2002
2. Earth's Atmosphere by Dr. Kshudiram Saha, Springer-Verlag Berlin Heidelberg, 2008

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