

# B. Sc. Geology

## Syllabus

### AFFILIATED COLLEGES

Program Code:

2022 – 2023 onwards



## BHARATHIAR UNIVERSITY

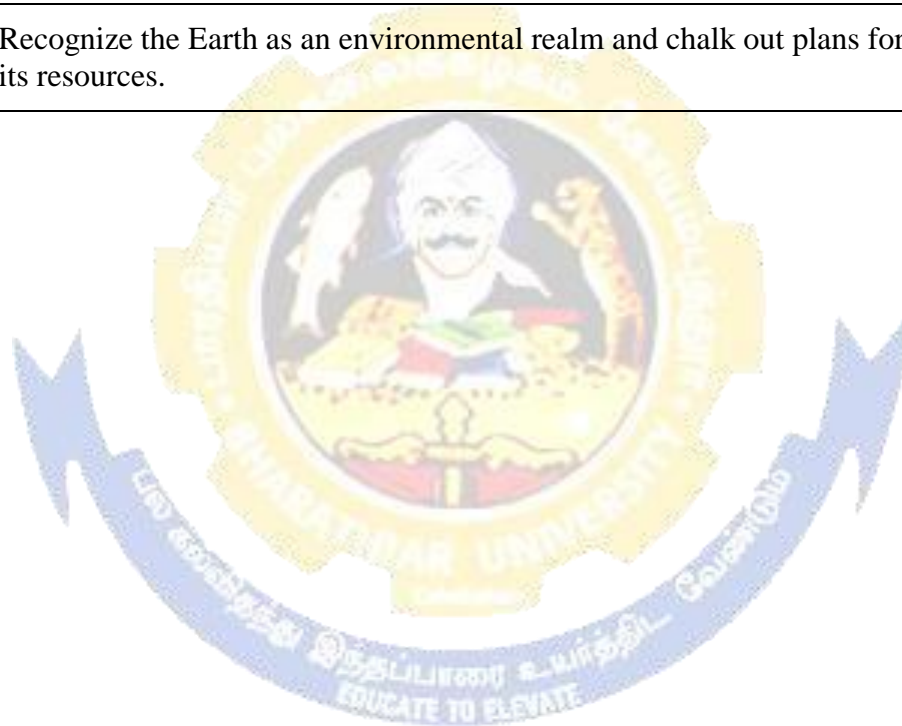
(A State University, Accredited with “A” Grade by NAAC,  
Ranked 13<sup>th</sup> among Indian Universities by MHRD-NIRF,  
World Ranking: Times -801-1000, Shanghai -901-1000, URAP - 982)

Coimbatore - 641 046, Tamil Nadu, India

## Program Educational Objectives (PEOs)

The **B.Sc. Geology** students program educational objectives are as follows

PEO1	Provide basic knowledge of different branches of Geology at graduate level.
PEO2	Understand the Earth and its various processes, both external and internal that shape it.
PEO3	Assess the Earth as source of natural resources such as water, minerals, rocks, ores, coal and oil and devise ways and means to extract these for benefit of mankind.
PEO4	Realize the threat of natural disasters and and work out ways to mitigate its effects.
PEO5	Recognize the Earth as an environmental realm and chalk out plans for conserving its resources.



**Program Specific Outcomes (POs)**

On successful completion of the B Sc. Geology program

PSO1	The student gains insight into both subjects by combining theory with practical observation.
PSO2	This expertise may be used in field geology and laboratory studies of minerals The student gains insight into the principles of Stratigraphy and Indian Geology.
PSO3	This knowledge is useful for field geology, mineral exploration, oil exploration, and tectonics
PSO4	The student gains useful insight into the methods of mineral identification..



**Program Outcomes (POs)**

After the successful completion of B.Sc. Geology program, the students are expected to

PO1	To familiarize students with the concepts of physical geology and also to learn about various processes operational in and on the earth
PO2	The student gains useful insight and understanding of the earth's surface and the structures it contains through geomorphology and structural geology.
PO3	The student is introduced to the basic knowledge relevant to geological maps. Practical exercises emphasize the use of compasses
PO4	The student gains insight and an informed awareness of natural disasters for future safety measures and preparedness
PO5	The student gains insight into the basic principles of hydrogeology
PO6	Map drawing exercises emphasize the use of completed geological maps to decipher the underlying structure and different methods of solving them.
PO7	The student gains knowledge in Palaeontology ,
PO8	The student gains insight into the methods of gemstone identification and exploration. This expertise may be useful in the particular field of gemmology the student wishes to pursue for employment.
PO9	The student gains insight into the basic principles of economic geology and mineral economics and gains insight into the basic principles of mining geologyThe student gains insight into the basic principles of exploration and mineral fuels.
PO10	The student gains insight into the basic principles of engineering geology, computer application in geology, and geostatisticsMegascopic Identification of rock forming silicate on the basis of their physical propertie

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**B. Sc. GEOLOGY Course Title (CBCS PATTERN)**

*(For the students admitted from the academic year 2022-2023 and onwards)*

**Scheme of Examination**

Part	Title of the Course	Hours/ Week	Examination				Credits
			Duration in Hours	Maximum Marks			
				CIA	CEE	Total	
<b>Semester I</b>							
I	Language - I	6	3	50	50	100	4
II	English - I	6	3	50	50	100	4
III	Core Paper I Physical Geology	6	3	50	50	100	4
III	Core Practical I Structural Geology and Surveying	3	-	--	--	--	--
III	Allied A: Paper I Chemistry	5	3	50	50	100	4
III	Allied Practical I Chemistry (Practical)	2	--	--	--	--	--
IV	Environmental Studies*	2	3	--	50	50	2
<b>Total</b>		<b>30</b>		<b>200</b>	<b>250</b>	<b>450</b>	<b>18</b>
<b>Semester II</b>							
I	Language – II	6	3	50	50	100	4
II	English – II	6	3	50	50	100	4
III	Core Paper II Geomorphology and Structural Geology	6	3	50	50	100	4
III	Core Practical I Structural Geology and Surveying	3	3	50	50	100	4
III	Allied A: Paper I Chemistry	5	3	30	45	75	3
III	Allied Practical I Chemistry (Practical)	2	3	30	45	75	3
IV	Value Education – Human Rights*	2	3	--	50	50	2
<b>Total</b>		<b>30</b>		<b>260</b>	<b>340</b>	<b>600</b>	<b>24</b>
<b>Semester III</b>							
I	Language – III	5	3	50	50	100	4
II	English – III	5	3	50	50	100	4
III	Core Paper III Palaeontology	5	3	50	50	100	4
III	Core Practical II Palaeontology and crystallography	2	--	-	--	--	--
III	Allied B: Paper I Physics	4	3	30	45	75	3
III	Allied Practical I Physics (Practical)	2	--	--	--	--	--
IV	Skill based Subject: Field Geology	3	3	30	45	75	3
IV	Tamil** / Advanced Tamil* (OR) Non-major elective - I (Yoga for Human Excellence)* / Women's Rights*	2	3	--	50	50	2
	<u>Nanmudhalvan Subject</u> Digital Skills for employability	2	3	25	75	100	2
<b>Total</b>		<b>30</b>		<b>235</b>	<b>365</b>	<b>600</b>	<b>22</b>
<b>Semester IV</b>							
I	Language – IV	6	3	50	50	100	4
II	English – IV	6	3	50	50	100	4
III	Core Paper IV Crystallography and optical mineralogy	5	3	50	50	100	4
III	Core Practical II Palaeontology and crystallography	2	3	50	50	100	4

III	Allied B: Paper I Physics	4	3	30	45	75	3
III	Allied Practical Physics	2	3	30	45	75	3
IV	Skill based Subject 2:Natural Disaster management	3	3	30	45	75	3
IV	Tamil**/Advanced Tamil* (OR) Non-major elective -II (General Awareness*)	2	3	--	50	50	2
	<b>Total</b>	<b>30</b>		<b>290</b>	<b>385</b>	<b>675</b>	<b>27</b>
	<b>Semester V</b>						
III	Core Paper V Mineralogy	5	3	50	50	100	4
III	Core Paper VI Stratigraphy and Indian Geology	5	3	50	50	100	4
III	Core Paper VII Igneous and metamorphic petrology	4	3	50	50	100	4
III	Core Paper VIII Hydrogeology	4	3	50	50	100	4
III	Core Practical III Mineralogy and Petrology	3	--	--	--	--	--
III	Elective I Remote Sensing	4	3	50	50	100	4
IV	Skill based Subject 3: Gemmology	3	3	30	45	75	3
	Nanmudhalvan Subject Marketing and Design tools	2	3	25	75	100	2
	<b>Total</b>	<b>30</b>		<b>305</b>	<b>370</b>	<b>675</b>	<b>25</b>
	<b>Semester VI</b>						
III	Core Paper IX Sedimentary petrology and environmental geology	4	3	50	50	100	4
III	Core Paper X Economic geology	5	3	50	50	100	4
III	Core Practical III Mineralogy and Petrology	3	3	50	50	100	4
III	Elective II Mining Geology and Ore Dressing	5	3	50	50	100	4
III	Elective III Exploration geology and mineral fuels	5	3	50	50	100	4
III	Core Practical -economic minerals and field geology practicals	3	3	30	45	75	3
IV	Skill Based Subject 4 Engineering Geology, Computer applications in Geology and Geostatistics	5	3	30	45	75	3
V	Extension Activities**	--	--	50	--	50	2
	<b>Total</b>	<b>30</b>		<b>360</b>	<b>340</b>	<b>700</b>	<b>28</b>
	<b>Grand Total</b>			<b>1650</b>	<b>2050</b>	<b>3700</b>	<b>144</b>

**Note**

\* No Continuous Internal Assessment (CIA). Only University Examinations.

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