

St. Xavier's College,

Ranchi

***(An Autonomous College of Ranchi
University)***

Syllabi

Department of Geology

B.SC. (GEOLOGY HONOURS)

The College offers Geology as an honours subject for B.Sc. students with Mathematics and Physics/Chemistry as subsidiary (elective) subjects. It is a professional course that prepares our graduates for immediate employment in Oil, Petrochemical and Mining sectors. It also provides them with a strong theoretical and practical foundation to enable them to pursue an academic career in Earth Science (M.Sc or M. Tech in Geology and Mining) in recognized Universities across the country.

This course is a full time course. The duration is for **three years** programme leads to the award of the degree of Bachelor in Geology. **(B.A. Geology Honours)**. The structure of this Programme is given in the following table.

	PAPER I - THEORY	MARKS
SEMESTER I	1. Introduction to Geology 2. Earth's Physics & Dynamics 3. Physical Geology	75
	PAPER II – THEORY	
	1. Geomorphology 2. Crystallography 3. Introduction to Structural Geology	75
	PAPER III - PRACTICAL	50
SEMESTER II	Paper IV – THEORY	75
	1. Structural Geology 2. Optical Mineralogy	
	Paper V – Theory	75
	1. Descriptive Mineralogy 2. Fundamentals Of Stratigraphy	
	Paper VI – Practical	50
SEMESTER III	Paper VII – Theory	75
	1. Petrology 2. Igneous Petrology	
	Paper VIII – Theory	
	1. Sedimentary Petrology 2. Metamorphic Petrology	75
	Paper IX – Practical	50
SEMESTER IV	Paper X – Theory	75
	1. Geochemistry 2. Palaeontology	
	Paper XI – Theory	75
	1. Stratigraphy	
	Paper XII – Practical	50
SEMESTER V	PAPER XIII – THEORY	100
	1. Economic Geology	
	PAPER XIV – THEORY	100
	1. Mineral Economics 2. Geoexploration and Prospecting	
	PAPER XV – THEORY	100
	1. Environmental Geology 2. Hydrogeology	

	PAPER XVI – PRACTICAL	100
SEMESTER VI	1. Applied Structural Geology 2. Field Geology	
	PAPER XVIII – THEORY	100
	3. Fossil Fuels 4. Geology and Economic resources of Jharkhand	
	PAPER XIX – THEORY	100
	5. Engineering Geology 6. Remote Sensing and G.I.S. Basics	
	PAPER XX – PRACTICAL	100

B.SC. SUBSIDIARY COURSE IN GEOLOGY

SEMESTER I	PAPER IA (THEORY)	
	2. Introductory Geology 3. Physical Geology 4. Earth's physics and Dynamics 5. Crystallography 6. Introduction to Structural Geology	
SEMESTER II	PAPER II – A (THEORY) 7. Structural Geology 8. Optical Mineralogy 9. Descriptive Mineralogy	
SEMESTER III	PAPER IIB (PRACTICAL)	
	1. Petrology 2. Igneous Petrology 3. Sedimentary Petrology 4. Metamorphic Petrology 5. Petrographic Description of following rocks	
	PAPER IIIB (PRACTICAL)	
SEMESTER IV	PAPER IVA (THEORY)	
	1. Palaeontology 2. Economic Geology 3. Stratigraphy	
	PAPER IV (PRACTICAL)	
	Geological Field Training	