



# গড়গাঁও মহাবিদ্যালয়

## GARGAON COLLEGE

**TEACHING PLAN**  
**DEPARTMENT OF GEOLOGY**  
**JULY 2023- JUNE 2024**



গড়গাঁও মহাবিদ্যালয়  
GARGAON COLLEGE

**NAME OF THE TEACHER: DR. CHANDRADITYA GOGOI**  
**DESIGNATION: ASSISTANT PROFESSOR**  
**SESSION: JULY - DECEMBER 2023**

**TEACHING PLAN OF**  
**DR CHANDRADITYA GOGOI**  
**(Odd Semester)**  
**Session: 2023-2024**

As per recommendation of DMC meeting dated 2<sup>nd</sup> August, 2023, the following teaching plan has been adopted for curriculum completion for the odd semester 2023.

**Subject:** GEOLOGY

**Name of the Teacher:** Dr. Chandraditya Gogoi

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.



**UNIT WISE TIME PLANNING (THEORY)**

**(ODD SEMESTER 2023)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Lectures	Tutorial
1 <sup>ST</sup> SEM (NEP)	Basic Field Training	SEC121	<b>UNIT 1:</b> Orientation of Topographic maps in field, location, bearing, height and distance	10 hrs.	2 hrs.
			<b>UNIT 2:</b> Identification of rocks in the field, structures and textures, use of various field tools	8 hrs.	1 hr
			<b>UNIT 3:</b> Basic field measurement techniques, preparation of vertical profile	8 hrs.	2 hrs.
			<b>UNIT 4:</b> Field Work	25 hrs.	5 hrs.
3 <sup>RD</sup> SEM	IGNEOUS PETROLOGY	C5	<b>UNIT 1:</b> INTRODUCTION TO IGNEOUS PETROLOGY	2 hrs.	1 hr.
			<b>UNIT 2:</b> MAGMA AND LAVA	3 hrs.	1 hr.
			<b>UNIT 3:</b> THERMODYNAMIC CONSIDERATIONS	4 hrs.	1 hr.
			<b>UNIT 4:</b> EVOLUTION AND DIFFERENTIATIONS OF MAGMA	7 hrs.	1 hr.
			<b>UNIT 5:</b> IGNEOUS TEXTURE AND STRUCTURES	4 hrs.	1 hr.
			<b>UNIT 6:</b> IGNEOUS ROCKS AND PETROGENESIS	9 hrs.	1 hr.
5 <sup>TH</sup> SEM	SURVEYING AND MAPPING	DSE 2	<b>UNIT 1:</b> PRINCIPLES OF SURVEYING	6 hrs.	2 hrs.
			<b>UNIT 2:</b> SURVEYING AND LEVELLING	13 hrs.	2 hrs.
			<b>UNIT 3:</b> MAPPING	8 hrs.	2 hrs.
			<b>UNIT 4:</b> PROFILE SECTIONS	2 hrs.	2 hrs.



**UNIT WISE TIME PLANNING (PRACTICAL)**

**(ODD SEMESTER 2023)**

3 <sup>RD</sup> SEMESTER	IGNEOUS PETROLOGY	C5	PR.1: STUDY OF IGNEOUS ROCK IN HAND SPECIMENS PR.2: STUDY OF IGNEOUS ROCK IN THIN SECTION PR.3: STUDY OF TEXTURE IN THIN SECTION AND HANDSPECIMEN PR.4: STUDY OF PHASE DIAGRAMS TO UNDERSTAND MELTS COMPOSITIONS AND CRYSTALLIZATION	24 HOURS
5 <sup>TH</sup> SEMETER	SURVEYING AND MAPPING	DSE 2	PR.1: USE OF COMPASS, CHAIN, TAPE AND PLANE TABLE FOR PLANE SURVEYING PR.2: USE OF GPS AND GIS FOR SURVEYING AND MAPPING PR.3: CONSTRUCTION OF GEOLOGICAL MAPS PR.4: GEOLOGICAL MAP PROBLEMS PR.5: CONSTRUCTION OF GEOLOGICAL PROFILE SECTIONS FROM MAPS AND TRAVERSE SECTIONS	24 HOURS

  
Head of the Department  
Department of Petrology  
Gargaon College.



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**NAME OF THE TEACHER: DR. CHANDRADITYA GOGOI**  
**DESIGNATION: ASSISTANT PROFESSOR**  
**SESSION: JAN - JUNE 2024**

**TEACHING PLAN OF**  
**DR. CHANDRADITYA GOGOI**

**(Even Semester)**

**Session: 2023-2024**

As per recommendation of DMC meeting dated 17<sup>th</sup> January, 2024, the following teaching plan has been adopted for curriculum completion for the even semester 2024.

**Subject:** GEOLOGY

**Name of the Teacher:** Dr. Chandraditya Gogoi

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.





## UNIT WISE TIME PLANNING (THEORY)

### (EVEN SEMESTER 2024)

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Lectures	Tutorial
2 <sup>nd</sup> SEM (NEP)	Mineralogy and Crystallography	C2	<b>UNIT 1:</b> Crystallography: Crystal characteristics, Crystal symmetry elements	18 hrs.	2 hrs.
			<b>UNIT 2:</b> Mineralogy : Mineral classification, Physical Properties, Atomic Substitutions	16 hrs.	2 hrs.
			<b>UNIT 3:</b> Optical Mineralogy :Nature of light, Ordinary and polarized light	6 hrs.	1 hr.
			<b>UNIT 4 PRACTICALS:</b> Identification of crystal models. Study of symmetry elements. Study of identification of rock forming	22 hrs.	Nil
4 <sup>th</sup> SEMESTER	STRATIGRAPHIC PRINCIPLES AND STRATIGRAPHY OF INDIA	C9	<b>UNIT 1:</b> PRINCIPLES OF STRATIGRAPHY	6 hrs.	.2 hrs.
			<b>UNIT 2:</b> STRATIGRAPHIC NOMENCLATURE AND LAWS OF FACIES	8 hrs.	2 hrs.
			<b>UNIT 3:</b> STRATIGRAPHY OF INDIA	15 hrs.	2 hrs.
6 <sup>th</sup> SEMESTER	GEOLOGY OF NORTHEAST INDIA	DSE 3	<b>UNIT 1:</b> PHYSIOGRAPHICAL OVERVIEW	4 hrs.	2 hrs.
			<b>UNIT 2:</b> STRATIGRAPHICAL OVERVIEWS	4 hrs.	2 hrs.
			<b>UNIT 3:</b> GEOLOGICAL FEATURES	12 hrs.	3 hrs.
			<b>UNIT 4:</b> ECONOMIC SIGNIFICANCE	2 hrs.	1 hr.
			<b>UNIT 5:</b> NATURAL HAZARDS AND DISASTERS	2 hrs.	1 hr.



## UNIT WISE TIME PLANNING (PRACTICAL)

### (EVEN SEMESTER 2024)

<b>4<sup>TH</sup> SEMESTER</b>	STRATIGRAPHIC PRINCIPLES AND INDIAN STRATIGRAPHY	C9	<b>PR.1:</b> STUDY OF GEOLOGICAL MAP OF INDIA AND IDENTIFICATION OF MAJOR STRATIGRAPHIC UNITS <b>PR.2</b> : STUDY OF ROCKS IN HANDSPECIMENS FROM KNOWN INDIAN STRATIGRAPHIC HORIZONS <b>PR.3:</b> DRAWING VARIOUS PALEOGEOGRAPHIC MAPS OF PRECAMBRIAN TIME <b>PR.4:</b> STUDY OF DIFFERENT PROTEROZOIC SUPER CONTINENT RECONSTRUCTIONS	24 HOURS
<b>6<sup>TH</sup> SEMESTER</b>	EARTH AND CLIMATE	DSE 4	<b>PR.1:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM IMAGE /PHOTO /SATELLITE IMAGERY <b>PR.2:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM GEOMORPHIC MODELS <b>PR.3:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM CONTOUR MAPS <b>PR.4:</b> DRAWING A PROFILE AND DISCUSSION OF GEOMORPHIC FEATURES FROM TOPOGRAPHICAL MAPS	24 HOURS

  
Head of the Department  
Department of Geology  
Gargaon College



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GARGAON COLLEGE

**NAME OF THE TEACHER: MS. BONIKA BURAGOHAIN**  
**DESIGNATION: ASSISTANT PROFESSOR**  
**SESSION: JULY - DECEMBER 2023**

**TEACHING PLAN OF**  
**Ms. BONIKA BURAGOHAIN**  
**Odd Semester**  
**(Session 2023-2024)**

As per recommendation of DMC meeting dated 2<sup>nd</sup> August, 2023, the following teaching plan has been adopted for curriculum completion for the odd semester 2023.

**Subject:** GEOLOGY

**Name of the Teacher:** MS. BONIKA BURAGOHAIN

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.





## UNIT WISE TIME PLANNING (THEORY)


### (ODD SEMESTER 2023)

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Lectures	Tutorials
1 <sup>ST</sup> SEM	MINERALS, ROCKS AND ORES	GECGEO1 A	UNIT 1: MINERALS	12 hrs.	12 hrs.
			UNIT 2: ROCKS	15 hrs.	15 hrs.
			UNIT 3: ORES	12 hrs.	12 hrs.
			UNIT 4: USE OF ROCKS, MINERALS AND ORES IN DIFFERENT MINERAL INDUSTRIES, REFRACTORY, CERAMIC, CEMENT, FERTILIZER, CHEMICAL INDUSTRIES ETC.	6 hrs.	6 hrs.
3 <sup>RD</sup> SEM	SEDIMENTARY PETROLOGY	C6	UNIT 1: ORIGIN OF SEDIMENTS	4 hrs.	1 hr.
			UNIT 2: PROPERTIES OF SEDIMENTS AND SEDIMENTARY ROCKS	5 hrs.	1 hr.
			UNIT 3: CLASSIFICATIONS	2 hrs.	1 hr.
			UNIT 4: PROCESSES OF FORMATION OF SEDIMENTARY ROCKS	9 hrs.	1 hr.
			UNIT 5: DESCRIPTIVE SEDIMENTARY PETROLOGY	9 hrs.	1 hr.
5 <sup>TH</sup> SEM	FUEL GEOLOGY	DSE 1	UNIT 1: COAL	6 hrs.	1 hr.
			UNIT 2: COAL AS A FUEL	6 hrs.	1 hr.
			UNIT 3: PETROLEUM	6 hrs.	1 hr.
			UNIT 4: PETROLEUM RESERVOIRS AND TRAPS	6 hrs.	2 hrs.
			UNIT 5: OTHER FIELDS	5 hrs.	1 hr.



**UNIT WISE TIME PLANNING (PRACTICALS)**  
**(ODD SEMESTER 2023)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD
3 <sup>RD</sup> SEMESTER	SEDIMENTARY PETROLOGY	C6	<b>PR.1:</b> STUDY OF SEDIMENTARY ROCKS IN HAND SPECIMENS <b>PR.2:</b> STUDY OF SEDIMENTARY ROCKS IN THIN SECTIONS <b>PR.3:</b> STUDY OF TEXTURE IN THIN SECTIONS AND HAND SPECIMENS <b>PR.4:</b> GENERAL OVERVIEW ON DEPOSITIONAL CONDITIONS AND PROVENANCE FROM THE STUDY OF FRAME WORK , CEMENT AND MATRIX OF GIVEN SEDIMENTARY ROCK IN THIN SECTIONS	24 HOURS
5 <sup>TH</sup> SEMETER	FUEL GEOLOGY	DSE 1	<b>PR.1:</b> STUDY OF HAND SPECIMENS OF COAL <b>PR.2:</b> RESERVE ESTIMATION OF COAL <b>PR.3:</b> SECTION CORRELATION AND IDENTIFICATION OF HYDROCARBON PROSPECTS <b>PR.4:</b> PANEL AND FENCE DIAGRAMS	24 HOURS

  
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## TEACHING PLAN OF

Ms. BONIKA BURAGOHAIN

**Even Semester**

**(Session 2023-2024)**

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2024, the following teaching plan has been adopted for curriculum completion for the even semester 2024.

**Subject:** GEOLOGY

**Name of the Teacher:** MS. BONIKA BURAGOHAIN

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.



**UNIT WISE TIME PLANNING (THEORY)**  
**(EVEN SEMESTER 2024)**


SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Tutorial	Practical
2 <sup>ND</sup> SEMESTER	EARTHQUAKE STUDIES	GECGEO2A	UNIT 1: TYPES OF ELASTICITY, GENERALIZED HOOKE'S LAW, DIFFERENT TYPES OF ELASTIC WAVES	11 hrs.	Nil
			UNIT 2: EARTHQUAKES, CAUSES AND EFFECTS, VARIOUS MAGNITUDE AND INTENSITY SCALES, ELASTIC REBOUND THEORY.	11 hrs	Nil
			UNIT3: CLASSIFICATION OF EARTHQUAKES, SEISMIMETERS, ANALYSIS OF SEISMOGRAMS, SEISMIC NETWORKS AND ARRAYS, EARTHQUAKE PREDICTION AND FORECASTING, BASICS OF PALEOSEISMOLOGY	14 hrs	Nil
			UNIT 4: SEISMICITY AND SEISMOTECTONICS OF INDIA, SEISMIC HAZARD MAP OF INDIA.	09 hrs.	Nil
4 <sup>TH</sup> SEMESTER	PALAEONTOLOGY	C8	UNIT 1: INTRODUCTION TO PALEONTOLOGY	3 hrs.	1 hr.
			UNIT 2: FOSSIL NOMENCLATURE AND TAXONOMY	3 hrs.	2 hrs.
			UNIT 3: VERTEBRATE FOSSILS	4 hrs.	2 hrs.
			UNIT 4: INVERTEBRATE FOSSILS	10 hrs.	2 hrs.
			UNIT 5: PALAEOBOTANY	3 hrs.	2 hrs.
			UNIT 6: APPLICATION OF FOSSILS	3 hrs.	1 hr.
6 <sup>TH</sup> SEMESTER	ECONOMIC GEOLOGY, COAL AND PETROLEUM	C13	UNIT 1: INTRODUCTION TO ECONOMIC GEOLOGY	2 hrs.	1 hrs.
			UNIT 2: ORE GENESIS	7 hrs.	3 hrs.
			UNIT 3: MINERAL EXPLORATION	4 hrs.	2 hrs.
			UNIT 4: METALLIC AND NON-METALLIC ORES	4 hrs.	2 hrs.
			UNIT 5: COAL	4 hrs.	1 hr.
			UNIT 6: PETROLEUM	4 hrs.	2 hrs



## UNIT WISE TIME PLANNING

### (PRACTICALS) (EVEN SEMESTER 2024)

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD
2 <sup>ND</sup> SEMESTER	PALEONTOLOGY	GE2	<b>PR.1:</b> STUDY OF MODE OF PRESERVATION OF FOSSILS <b>PR.2:</b> STUDY OF DIAGNOSTIC MORPHOLOGICAL CHARACTERS, SYSTEMATIC POSITION & STRATIGRAPHIC AGE OF FOSSILS	24 HOURS
4 <sup>TH</sup> SEMESTER	PALEONTOLOGY	C8	<b>PR.1:</b> STUDY OF FOSSILS SHOWING VARIOUS MODES OF PRESERVATION <b>PR.2:</b> STUDY OF DIAGONESTIC MORPHOLOGICAL CHARACTERS, SYSTEMATIC POSITIONS, STRATIGRAPHIC POSITIONS AND AGE OF VARIOUS INVERTEBRATE, VERTEBRATE AND PLANT FOSSILS	24 HOURS
6 <sup>TH</sup> SEMESTER	ECONOMIC GEOLOGY, COAL AND PETROLEUM	C13	<b>PR.1:</b> MEGASCOPIC IDENTIFICATION OF ECONOMIC MINERALS <b>PR.2:</b> STUDY OF MICROSCOPIC PROPERTIES OF ORE MINERALS /RESERVOIR ROCKS LIKE/SOURCE ROCK SLIDES <b>PR.3:</b> ORE RESERVE ESTIMATION BY USING EXTENDED, INCLUDED AND CHANNEL METHOD OF ESTIMATION <b>PR.4:</b> PREPARATIONS OF MAPS: DISTRIBUTION OF IMPROTANT ORES AND OTHER ECONOMIC MINERALS IN INDIA	24 HOURS

  
Head of the Department  
Department of geology  
Gargaon College





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GARGAON COLLEGE

**NAME OF THE TEACHER: DR. CHIRANTAN BHAGAWATI**  
**DESIGNATION: ASSISTANT PROFESSOR**  
**SESSION: JULY - DECEMBER 2023**

**TEACHING PLAN OF**

**DR CHIRANTAN BHAGAWATI**

**(Odd Semester)**

**Session: 2023-2024**

As per recommendation of DMC meeting dated 2<sup>nd</sup> August, 2023, the following teaching plan has been adopted for curriculum completion for the odd semester 2023.

**Subject:** GEOLOGY

**Name of the Teacher:** Dr. Chirantan Bhagawati

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.



## UNIT WISE TIME PLANNING (THEORY)


### (ODD SEMESTER 2023)

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Lectures	Tutorial
1 <sup>ST</sup> SEM (NEP)	Earth & Climate	MINGEO1	<b>UNIT 1:</b> Climate system: Forcing & response	10 hrs.	2 hrs.
			<b>UNIT 2:</b> Atmosphere - Hydrosphere	12 hrs.	3 hrs.
			<b>UNIT 3:</b> Orbital cyclicity and climate	14 hrs.	4 hrs.
			<b>UNIT 4:</b> Practical	15 hrs.	Nil
3 <sup>RD</sup> SEM	STRUCTURAL GEOLOGY & TECTONICS	GE3	<b>UNIT 1:</b> STRUCTURAL GEOLOGY	18 hrs.	2 hrs.
			<b>UNIT 2:</b> TECTONICS	14 hrs.	1 hr.
5 <sup>TH</sup> SEM	SURVEYING AND ENGINEERING GEOLOGY	C11	<b>UNIT 1:</b> INTRODUCTION TO SURVEYING	3 hrs.	1 hr.
			<b>UNIT 2:</b> PLANE SURVEYING	4 hrs.	2 hrs.
			<b>UNIT 3:</b> LEVELING	4 hrs.	2 hrs.
			<b>UNIT 4:</b> INTRODUCTION TO ENGINEERING GEOLOGY	3 hrs.	1 hr.
			<b>UNIT 5:</b> GEOTECHNICAL IDEA ABOUT ENGINEERING STRUCTURES	3 hrs.	2 hrs.



**UNIT WISE TIME PLANNING (PRACTICALS)**  
**(ODD SEMESTER 2023)**

3 <sup>RD</sup> SEMESTER	STRUCTURAL GEOLOGY & TECTONICS	GE3	<b>PR.1:</b> STUDY OF STRUCTURAL MAPS <b>PR.2:</b> USE OF COMPASS <b>PR.3:</b> 3 POINTS PROBLEMS OF STRUCTURAL GEOLOGY <b>PR.4:</b> STEREO PROJECTIONS OF BEDS, FOLD, FAULT, LINEATION ETC.	24 HOURS
5 <sup>TH</sup> SEMESTER	SURVEYING AND ENGINEERING GEOLOGY	C11	<b>PR.1:</b> USE OF COMPASS FOR DETERMINING  FORWARD , BACKWARD BEARING AND AZIMUTHS <b>PR.2:</b> USE OF GPS FOR DETERMINING LATITUDE , LONGITUDE AND ELEVATION VALUES <b>PR.3:</b> USE OF CHAIN, COMPASS AND PLANE TABLE FOR COMPUTATION OF AREA AND LAND <b>PR.4:</b> COMPUTATION OF RESERVOIR AREA , CATCHMENT AREA , RESERVOIR CAPACITY AND RESERVOIR LIFE <b>PR.5:</b> COMPUTATION OF RQD, RMR, AND 'Q'	24 HOURS

  
Head of the Department  
Department of Geology  
Gargaon College



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GARGAON COLLEGE

**NAME OF THE TEACHER: DR. CHIRANTAN BHAGAWATI**  
**DESIGNATION: ASSISTANT PROFESSOR**  
**SESSION: JAN - JUNE 2024**

**TEACHING PLAN OF**  
**Dr. CHIRANTAN BHAGAWATI**  
**Even Semester**  
**(Session 2023-2024)**

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2024, the following teaching plan has been adopted for curriculum completion for the even semester 2024.

**Subject:** GEOLOGY

**Name of the Teacher:** Dr. Chirantan Bhagawati

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.



**UNIT WISE TIME PLANNING (THEORY)**

**(EVEN SEMESTER 2024)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Tutorial	Practical
2 <sup>ND</sup> SEMESTER	GEOPHYSICS	MINGEO 2	UNIT 1: Geology & Geophysics	12 hrs.	3 hrs.
			UNIT 2: Geophysical field operations	14 hrs.	4 hrs.
			UNIT3: Geophysical anomalies	10 hrs.	2 hrs.
			UNIT 4: Practical	15 hrs.	Nil
4 <sup>TH</sup> SEMESTER	GEOMORPHOLOGY, REMOTE SENSING & GIS	GE4	UNIT 1: GEOMORPHOLOGY	19 hrs.	1 hr.
			UNIT 2: REMOTE SENSING	9 hrs.	1 hr.
			UNIT 3: GEOGRAPHIC INFORMATION SYSTEM	8 hrs.	2 hrs.
6 <sup>TH</sup> SEMESTER	EARTH AND CLIMATE	DSE 4	UNIT 1: CLIMATE SYSTEM FORCING AND RESPONSE	4 hrs.	2 hrs.
			UNIT 2: HEAT BUDGET OF EARTH	4 hrs.	2 hrs.
			UNIT 3: ATMOSPHERE - HYDROSPHERE	4 hrs.	2 hrs.
			UNIT 4: RESPONSE OF BIOSPHER TO EARTHS'S CLIMATE	4 hrs.	2 hrs.
			UNIT 5: ORBITAL CYCLICITY AND CLIMATE	4 hrs.	2 hrs.
			UNIT 6: MONSOON	1 hr.	1 hr.






## UNIT WISE TIME PLANNING

### (PRACTICALS) (EVEN SEMESTER 2024)

4 <sup>TH</sup> SEMESTER	GEOMORPHOLOGY, REMOTE SENSING & GIS	GE4	<b>PR.1:</b> STUDY OF LANDFORMS FROM GIVEN GEOMORPHIC MODEL /IMAGE/MAP <b>PR.2:</b> INTERPRETATION OF AERIAL PHOTO/SATELLITE IMAGE	24 HOURS
6 <sup>TH</sup> SEMESTER	EARTH AND CLIMATE	DSE 4	<b>PR.1:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM IMAGE /PHOTO /SATELLITE IMAGERY <b>PR.2:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM GEOMORPHIC MODELS <b>PR.3:</b> STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM CONTOUR MAPS <b>PR.4:</b> DRAWING A PROFILE AND DISCUSSION OF GEOMORPHIC FEATURES FROM TOPOGRAPHICAL MAPS	24 HOURS

  
Head of the Department  
Department of Geography  
Gargaon College



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**TEACHING PLAN OF**  
**DR. DIPANKAR BURAGOHAİN**

**Odd Semester**

**(Session 2023-2024)**

As per recommendation of DMC meeting dated 2<sup>nd</sup> of August, 2023, the following teaching plan has been adopted for curriculum completion for the Odd semester 2023.

**Subject:** GEOLOGY

**Name of the Teacher:** DR. DIPANKAR BURAGOHAİN

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.




**UNIT WISE TIME PLANNING (THEORY)**  
**(ODD SEMESTER 2023)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Lectures	Tutorials
1 <sup>ST</sup> SEM	Earth System Science	GEOC1	UNIT 1: Universe and the Solar System	12 hrs.	4 hrs.
			UNIT 2: Earth System	15 hrs.	5 hrs.
			UNIT 3: Introduction to Geology	18 hrs.	6 hrs.
			UNIT 4: Practical	30 hrs.	2 hrs.
3 <sup>RD</sup> SEM	Metamorphic Petrology	GEOH303T4 (C-7)	UNIT1: Introduction of Metamorphism	5 hrs.	1 hrs.
			UNIT 2: Thermodynamic Considerations in Metamorphism	4 hrs.	1 hrs.
			UNIT 3: Metamorphic Structure and Texture	9 hrs.	1 hrs.
			UNIT 4: Metasomatism and Migmatites	7 hrs.	1 hrs.
			UNIT 5: Descriptive Metamorphic Petrology	9 hrs.	1 hrs.
5 <sup>TH</sup> SEM	Surveying and Mapping	DSE-2 (GEOHDSE502BT4)	UNIT1: Principles of Survey	8 hrs.	3 hrs.
			UNIT 2: Surveying and Levelling	15 hrs.	9 hrs.
			UNIT 3: Mapping	10 hrs.	5 hrs.
			UNIT 4: Profile Section	4 hrs.	1 hr.



**UNIT WISE TIME PLANNING (PRACTICALS)**  
**(ODD SEMESTER 2023)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD
3 <sup>RD</sup> SEMESTER	Metamorphic Petrology	GEOH303P2 (C-7)	<b>PR.1:</b> Study of metamorphic rocks in hand specimens <b>PR.2:</b> Study of metamorphic rocks in thin sections <b>PR.3:</b> Study of texture in thin sections and hand specimens <b>PR.4:</b> Study of metamorphic phase diagrams	24 HOURS
5 <sup>TH</sup> SEMETER	Surveying and Mapping	DHE 2 (GEOHDSE502BP2)	<b>PR.1:</b> Use of compass, chain, tape and plane table for plane surveying <b>PR.2:</b> Use of GPS and GIS for surveying and mapping <b>PR.3:</b> Construction of Geological Maps <b>PR.4:</b> Geological Map Problems <b>PR.5:</b> Construction of Geological Profile Sections form map and traverse sections	24 HOURS

  
Head of the Department  
Department of Petrology  
Gargaon College



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**TEACHING PLAN OF**  
**DR. DIPANKAR BURAGOHAIN**  
**Even Semester**  
**(Session 2023-2024)**

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2024, the following teaching plan has been adopted for curriculum completion for the even semester 2024.

**Subject:** GEOLOGY

**Name of the Teacher:** DR. DIPANKAR BURAGOHAIN

**Methods to be applied:** Lectures on theory and practical aspects, implementation of skill development and analytical activities, interaction and discussion focusing on development of critical thinking.

**Teaching Materials:** Laptop/PC Projector, Green/White Board, Chalk Pencil, Duster, Book, Journal, Newspaper, Magazine, Periodicals.






**UNIT WISE TIME PLANNING (THEORY)**  
**(EVEN SEMESTER 2024)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD	
				Tutorial	Tutorial
2 <sup>ND</sup> SEMESTER	Geological Mapping	SEC22 1	UNIT 1: Geological mapping, Identification and field documentation of primary (scalars and vectors) and secondary structures (linear and planar); Stratigraphic correlation	12 hrs.	4 hrs.
			UNIT 2: Trend, plunge, Rake/Pitch	8 hrs	2 hrs.
			UNIT3: Stereo plots of linear and planar structures, Orientation analyses	10 hrs	2 hrs.
			UNIT 4: Field work	30 hrs.	NA
4 <sup>TH</sup> SEMESTER	Hydrogeology and Oceanography	C10 (GEOH 403T4)	UNIT 1: Introduction to Hydrogeology	3 hrs.	1 hr.
			UNIT 2: Groundwater and Aquifers	8 hrs.	2 hrs.
			UNIT 3: Groundwater Exploration	7 hrs.	2 hrs.
			UNIT 4: Groundwater management	4 hrs.	1 hr.
			UNIT 5: Fundamentals of Oceanography	3 hrs.	2 hrs.
			UNIT 6: Marine Physics	5 hrs.	1 hr.
			UNIT 7: Marine geology	5 hrs.	1 hr.
6 <sup>TH</sup> SEMESTER	Remote Sensing, GIS and GPS	C14 (GEOH 602T4)	UNIT 1: Photo geology	2 hrs.	1 hrs.
			UNIT 2: Remote Sensing	12 hrs.	3 hrs.
			UNIT 3: Geographic Information System	13 hrs.	4 hrs.
			UNIT 4: GPS	5 hrs.	2 hrs.



**UNIT WISE TIME PLANNING  
(PRACTICALS) (EVEN SEMESTER 2024)**

SEMESTER	SUBJECT	PAPER CODE	UNIT	DURATION/ WORK LOAD
4 <sup>TH</sup> SEMESTER	Hydrogeology and Oceanography	C10 (GEOH403P2)	<b>PR.1:</b> Aerial Photo/Satellite Imagery interpretation, identification of sedimentary, igneous and metamorphic rocks and various aeolian, glacial, fluvial and marine landforms <b>PR.2:</b> STUDY OF DIAGONESTIC MORPHOLOGICAL CHARACTERS, SYSTEMATIC POSITIONS, STRATIGRAPHIC POSITIONS AND AGE OF VARIOUS INVERTEBRATE, VERTEBRATE AND PLANT FOSSILS	24 HOURS
6 <sup>TH</sup> SEMESTER	Remote Sensing, GIS and GPS (Practical)	C14 (GEOH602P2)	<b>PR.1:</b> Aerial Photo/Satellite Imagery interpretation, identification of sedimentary, igneous and metamorphic rocks and various aeolian, glacial, fluvial and marine landforms <b>PR.2:</b> DEM analysis: generating slope map, aspect map and drainage network map and its applications <b>PR.3:</b> GPS mapping	24 HOURS

  
Head of the Department  
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