

# TEACHING PLAN DEPARTMENT OF GEOLOGY JULY 2021 - JUNE 2022

# TEACHING PLAN OF DR. CHANDRADITYA GOGOI

#### **Odd Semester**

(Session 2021-2022)

As per recommendation of DMC meeting dated 27<sup>th</sup> of July, 2021, the following teaching plan has been adopted for curriculum completion for the odd semester 2021.

Subject: Geology

Name of the Teacher: Dr. ChandradityaGogoi

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.

#### (ODD SEMESTER 2021)

| SEMESTER            | SUBJECT                           | PAPER<br>CODE | UNIT   |   | TION/<br>LOAD   |
|---------------------|-----------------------------------|---------------|--|---|---|
|                     |                                   | CODE          |  | Lectures  | Tutorials   |
| 1 <sup>ST</sup> SEM | CRYSTALLOGRAPHY<br>AND MINERALOGY | C2            | UNIT 1:<br>CRYSTALLOGRAPHY<br>UNIT 2:<br>MINERALOGY  | 23 hrs.<br>32 hrs.  | 2hrs. 3hrs.   |
| 3 <sup>RD</sup> SEM | IGNEOUS PETROLOGY                 | C5            | UNIT 1: INTRODUCTION TO IGNEOUS PETROLOGY UNIT2: MAGMA AND LAVA UNIT 3: THERMODYNAMIC CONSIDERATIONS UNIT 4: EVOLUTION AND DIFFERENTIATIONS OF MAGMA UNIT 5: IGNEOUS | <ul><li>2 hrs.</li><li>3 hrs.</li><li>4 hrs.</li><li>7 hrs.</li></ul> | 1 hr. 1 hr. 1 hr. 1 hr.   |
|                     |                                   |               | TEXTURE AND STRUCTURES UNIT 6: IGNEOUS ROCKS AND PETROGENESIS  | 9 hrs.  | 1 hr.   |
| 5 <sup>TH</sup> SEM | SURVEYING AND<br>MAPPING          | DSE 2         | UNIT 1: PRINCIPLES OF SURVEYING UNIT 2: SURVEYING AND LEVELLING UNIT 3: MAPPING UNIT 4: PROFILE SECTIONS   | 6 hrs. 13 hrs. 8 hrs. 2 hrs.  | <ul><li>2 hrs.</li><li>2 hrs.</li><li>2 hrs.</li><li>2 hrs.</li></ul> |

# UNIT WISE TIME PLANNING (PRACTICALS) (ODD SEMESTER 2021)

| SEMESTER                    | SUBJECT                           | PAPER CODE | UNIT   | DURATION/<br>WORK<br>LOAD |
|-----------------------------|-----------------------------------|------------|--|---------------------------|
| 1 <sup>ST</sup> SEMESTER    | CRYSTALLOGRAPHY<br>AND MINERALOGY | C2         | PR.1: IDENTIFICATION OF CRYSTAL MODELS PR.2: STUDY OF CRYSTALS AND SYMMETRY ELEMENTS OF CRYSTAL MODELS PR.3: STEREOGRAPHIC PROJECTIONS OF CRYSTAL MODELS OF DIFFERENT SYSYTEMS PR.4: STUDY AND IDENTIFICATION OF MINERALS IN HAND SPECIMEN | 24 HOURS                  |
| 3 <sup>RD</sup><br>SEMESTER | IGNEOUS<br>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                  |

|  | SURVEYING AND<br>MAPPING | DSE 2 | PR.1: USE OF COMPASS, CHAIN, TAPE AND PLANE TABLE FOR PLANE SURVEYINGPR.2: USE OF GPS AND GIS FOR SURVEYING AND MAPPINGPR.3: CONSTRUCTION OF GEOLOGICAL MAPSPR.4: GEOLOGICAL MAP PROBLEMS PR.5: CONSTRUCTION OF GEOLOGICAL PROFILE SECTIONS FROM MAPS AND TRAVERSE SECTIONS | 24 HOURS |
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# TEACHING PLAN OF DR. CHANDRADITYAGOGOI

#### **Even Semester**

(Session 2021-2022)

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2022, the following teaching plan has been adopted for curriculum completion for the even semester 2022.

Subject: Geology

Name of the Teacher: Dr. ChandradityaGogoi

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.

#### (EVEN SEMESTER 2022)

| SEMESTER                    | SUBJECT                             | PAPER<br>CODE |  |          | TION/<br>CLOAD |
|-----------------------------|-------------------------------------|---------------|--|----------|----------------|
|                             |                                     |               |  | Tutorial | Practical      |
| 2 <sup>ND</sup><br>SEMESTER | GEOCHEMISTRY AND OPTICAL MINERALOGY | C3            | UNIT 1:CONCEPT OF GEOCHEMISTRY                 | 3 hrs.   | 1 hr.          |
|                             |                                     |               | UNIT2:EARTH AND GEOCHEMISTRY                   | 4 hrs.   | 1 hr.          |
|                             |                                     |               | UNIT3:ELEMENT<br>TRANSPORT AND                 | 3 hrs.   | 1 hr.          |
|                             |                                     |               | GECHEMICAL<br>BEHAVIOUR OF                     |          |                |
|                             |                                     |               | ELEMENTS UNIT 4: NATURE IF                     | 10 hrs.  | 2 hrs.         |
|                             |                                     |               | PROPERTIES OF                                  |          |                |
|                             |                                     |               | MINERALS  UNIT 5: DESCRIPTIVE  MINERALOGY      | 9 hrs.   | 1 hr.          |
| 4 <sup>TH</sup> SEMESTER    | STRATIGRAPHIC<br>PRINCIPLES AND     | С9            | UNIT 1: PRINCIPLES OF<br>STRATIGRAPHY          | 6 hrs.   | .2 hrs.        |
|                             | STRATIGRAPHY OF<br>INDIA            |               | UNIT 2: STRATIGRAPHIC NOMENCLATURE AND         | 8 hrs.   | 2 hrs.         |
|                             |                                     |               | LAWS OF FACIES  UNIT 3: STRATIGRAPHY  OF INDIA | 15 hrs.  | 2 hrs.         |
| 6 <sup>TH</sup> SEMESTER    | GEOLOGY OF NORTHE<br>EAST INDIA     | DSE 3         | UNIT 1: PHYSIOGRAPHICAL OVERVIEW               | 4 hrs.   | 2 hrs.         |
|                             |                                     |               | UNIT 2:<br>STRATIGRAPHICAL<br>OVERVIES         | 4 hrs.   | 2 hrs.         |
|                             |                                     |               | UNIT 3: GEOLOGICAL FEATURES                    | 12 hrs.  | 3 hrs.         |
|                             |                                     |               | UNIT 4: ECONOMIC SIGNIFICANCE                  | 2 hrs.   | 1 hr.          |
|                             |                                     |               | UNIT 5: NATURAL<br>HAZARDS AND<br>DISASTERS    | 2 hrs.   | 1 hr.          |

#### **UNIT WISE TIME PLANNING (PRACTICALS)**

#### (EVEN SEMESTER 2022)

| SEMESTER                 | SUBJECT  | PAPER<br>CODE | UNIT  | DURATION/<br>WORK<br>LOAD |
|--------------------------|--|---------------|---|---------------------------|
| 2 <sup>ND</sup> SEMESTER | GEOCHEMISTRY AND OPTICAL MINERALOGY              | C3            | PR.1: IDENTIFICATION AND UNDERSTANDING OF DIFFERENT PARTS OF PETROLOGICAL MICROSCOPE PR.2: IDENTIFICATION OF ROCK FORMING MINERALS UNDER PETROLOGICAL MICROSCOPE PR.3: STUDY OF INTERFERENCE FIGURES AND DETERMINATION OF OPTIC SIGNS FROM MINERALS   | 24 HOURS                  |
| 4 <sup>TH</sup> SEMESTER | STRATIGRAPHIC PRINCIPLES AND INDIAN STRATIGRAPHY | C9            | PR.1: STUDY OF GEOLOGICAL MAP OF INDIA AND IDENTIFICATION OF MAJOR STRATIGRAPHIC UNITS PR.2: STUDY OF ROCKS IN HANDSPECIMENS FROM KNOWN INDIAN STRATIGRAPHIC HORIZONS PR.3: DRAWING VARIOUS PALEOGEOGRAPHIC MAPS OF PRECAMBRIAN TIME PR.4: STUDY OF DIFFERENT PROTEROZOIC SUPER CONTINENT RECONSTRUCTIONS | 24 HOURS                  |

| 6 <sup>TH</sup> SEMESTER | EARTH AND CLIMATE | DSE 4 | PR.1: STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM IMAGE /PHOTO /SATELLITE IMAGERY PR.2: STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM GEOMORPHIC MODELS PR.3: STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM CONTOUR MAPS PR.4: DRAWING A PROFILE AND DISCUSSION OF GEOMORPHIC FEATURES FROM TOPOGRAPHICAL MAPS | 24 HOURS |
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# TEACHING PLAN OF Ms. BONIKA BURAGOHAIN

#### **Odd Semester**

(Session 2021-2022)

As per recommendation of DMC meeting dated 27<sup>th</sup> of July, 2021, the following teaching plan has been adopted for curriculum completion for the odd semester 2021.

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.

#### (ODD SEMESTER 2021)

| SEMESTER            | SUBJECT                  | PAPER<br>CODE |   |                  | TION/<br>LOAD  |
|---------------------|--------------------------|---------------|---|------------------|----------------|
|                     |                          |               |   | Lectures         | Tutorials      |
| 1 <sup>ST</sup> SEM | INTRODUCTION TO GEOLOGY  | GE1           | UNIT 1: SOLAR SYSTEM & EARTH  | 3 hrs.           | 1 hr.          |
|                     |                          |               | UNIT 2: PRINCIPLES OF GEOLOGY UNIT 3: EARTH'S                                 | 3 hrs.           | 1 hr.<br>1 hr. |
|                     |                          |               | EXOGENIC PROCESSES UNIT 4: EARTH'S DYNAMIC & ENDOGENIC PROCESSES              | 5 hrs.           | 1 hr.          |
|                     |                          |               | UNIT 5: GENESIS OF ROCKS UNIT 6:  | 5 hrs.           | 1 hr.          |
|                     |                          |               | INTRODUCTION TO PALEONTOLOGY  | 5 hrs.           | 1 hr.          |
| 3 <sup>RD</sup> SEM | SEDIMENTARY<br>PETROLOGY | C6            | UNIT1: ORIGIN OF SEDIMENTS  | 4 hrs.           | 1 hr.          |
|                     | TEMOLOGI                 |               | UNIT 2: PROPERTIES OF SEDIMENTS AND SEDIMENTARY ROCKS UNIT 3: CLASSIFICATIONS | 5 hrs.           | 1 hr.          |
|                     |                          |               | UNIT 4: PROCESSES OF FORMATION OF   | 2 hrs.           | 1 hr.          |
|                     |                          |               | SEDIMENTARY ROCKS UNIT 5: DESCRIPTIVE SEDIMENTARY PETROLOGY                   | 9 hrs.           | 1 hr.          |
|                     |                          |               |   | 9 hrs.           | 1 hr.          |
| 5 <sup>TH</sup> SEM | FUEL GEOLOGY             | DSE 1         | UNIT 1: COAL UNIT 2: COAL AS A FUEL   | 6 hrs.<br>6 hrs. | 1 hr.<br>1 hr. |
|                     |                          |               | UNIT 3: PETROLEUM UNIT 4: PETROLEUM   | 6 hrs.           | 1 hr.          |
|                     |                          |               | RESERVOIRS AND<br>TRAPS<br>UNIT 5: OTHER FIELS                                | 6 hrs.           | 2 hrs.         |
|                     |                          |               |   | 5 hrs.           | 1 hr.          |

#### **UNIT WISE TIME PLANNING (PRACTICALS)**

#### (ODD SEMESTER 2021)

| SEMESTER                    | SUBJECT                    | PAPER CODE | UNIT  | DURATION/<br>WORK<br>LOAD |
|-----------------------------|----------------------------|------------|---|---------------------------|
| 1 <sup>ST</sup><br>SEMESTER | INTRODUCTION TO<br>GEOLOGY | GE 1       | PR.1: STDY OF MINERALS IN HAND SPECIMEN PR.2:STDY OF ROCKS IN HAND SPECIMENPR.3: STUDY OF GEOMORPHIC MODELSPR.4: STUDY OF GEOLOGICAL MAPS   | 24 HOURS                  |
| 3 <sup>RD</sup> SEMESTER    | SEDIMENTARY PETROLOGY      | C6         | PR.1: STUDY OF SEDIMENTARY ROCKS IN HAND SPECIMENS PR.2: STUDY OF SEDIMENTARY ROCKS IN THIN SECTIONS PR.3: STUDY OF TEXTURE IN THIN SECTIONS AND HAND SPECIMENS PR.4: 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      | PR.1: STUDY OF HAND SPECIMENS OF COALPR.2: RESERVE ESTIMATION OF COAL PR.3: SECTION CORRELATION AND IDENTIFICATION OF HYDROCARBON PROSPECTSPR.4: PANEL AND FENCE DIAGRAMS   | 24 HOURS                  |

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# TEACHING PLAN OF Ms. BONIKA BURAGOHAIN

Even Semester, 2022

(Session 2021-2022)

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2022, the following teaching plan has been adopted for curriculum completion for the even semester 2022.

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.

#### (EVEN SEMESTER 2022)

| SEMESTER                    | SUBJECT                                 | PAPER<br>CODE | UNIT                                     |                  | ATION/<br>X LOAD |
|-----------------------------|---|---------------|--|------------------|------------------|
|                             |   | CODE          |  | Tutorial         | Practical        |
| 2 <sup>ND</sup> SEMESTER    | PALEONTOLOGY                            | GE2           | UNIT 1: INTRODUCTION TO                  | 28 hrs.          | 2 hrs.           |
|                             |   |               | PALEONTOLOGYUNIT2:<br>NOMENCLATURE OF    | 28 hrs.          | 2 hrs.           |
|                             |   |               | FOSSILS UNIT3: VERTEBRATE                | 28 hrs.          | 2 hrs.           |
|                             |   |               | FOSSILS UNIT 4: INVERTEBRATE             |                  |                  |
|                             |   |               | FOSSILSUNIT 5:<br>GONDWANA FLORA         | 28 hrs.          | 2 hrs.           |
|                             |   |               | UNIT 6: APPLICATION OF PALEONTOLOGY      | 28 hrs.          | 2 hrs.           |
| 4 <sup>TH</sup><br>SEMESTER | PALAEONTOLOGY                           | C8            | UNIT 1: INTRODUCTION TO PALEONTOLOGY     | 3 hrs.           | 1 hr.            |
|                             |   |               | UNIT 2: FOSSIL NOMENCLATURE AND          | 3 hrs.           | 2 hrs.           |
|                             |   |               | TAXONOMY 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,<br>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 UNIT 6: PETROLEUM           | 4 hrs.<br>4 hrs. | 1 hr.<br>2 hrs   |
|                             |   |               | UNIT D. PETKULEUN                        | 4 1115.          | 2 1115           |

#### **UNIT WISE TIME PLANNING (PRACTICALS)**

#### (EVEN SEMESTER 2022)

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

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### TEACHING PLAN OF DR. CHIRANTAN BHAGAWATI

**Odd Semester, 2021** 

(Session 2021-2022)

As per recommendation of DMC meeting dated 27<sup>th</sup> of July, 2021, the following teaching plan has been adopted for curriculum completion for the odd semester 2021.

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.

#### (ODD SEMESTER 2021)

| SEMESTER            | SUBJECT                                 | PAPER<br>CODE | UNIT   | WORK             | TION/ LOAD      |
|---------------------|---|---------------|--|------------------|-----------------|
|                     |   |               |  | Lectures         | Tutorials       |
| 1 <sup>ST</sup> SEM | EARTH SYSTEM<br>SCIENCE                 | C1            | UNIT 1:<br>UNIVERSE AND<br>SOLAR SYSTEM<br>UNIT 2: EARTH<br>SYSTEM | 4 hrs.<br>8 hrs. | 1 hr.<br>2 hrs. |
|                     |   |               | UNIT3:<br>INTRODUCTION<br>TO GEOLOGY                               | 18 hrs.          | 2 hrs.          |
| 3 <sup>RD</sup> SEM | STRUCTURAL<br>GEOLOGY &                 | GE3           | UNIT 1:<br>STRUCTURAL  | 18 hrs.          | 2 hrs.          |
|                     | TECTONICS                               |               | GEOLOGYUNIT2:<br>TECTONICS   | 14 hrs.          | 1 hr.           |
| 5 <sup>TH</sup> SEM | SURVEYING AND<br>ENGINEERING<br>GEOLOGY | C11           | UNIT 1:<br>INTRODUCTION<br>TO SURVEYING                            | 3 hrs.           | 1 hr.           |
|                     |   |               | UNIT 2: PLANE<br>SURVEYING   | 4 hrs.           | 2 hrs.          |
|                     |   |               | UNIT 3:<br>LEVELING  | 4 hrs.           | 2 hrs.          |
|                     |   |               | UNIT 4:<br>INTRODUCTION<br>TO<br>ENGINEERING                       | 3 hrs.           | 1 hr.           |
|                     |   |               | GEOLOGY UNIT 5: GEOTECHNICAL IDEA ABOUT ENGINEERING STRUCTURES     | 3 hrs.           | 2 hrs.          |

**UNIT WISE TIME PLANNING (PRACTICALS)** 

#### (ODD SEMESTER 2021)

| SEMESTE<br>R                    | SUBJECT                              | PAPER CODE | UNIT   | DURATION<br>/ WORK<br>LOAD |
|---------------------------------|--------------------------------------|------------|--|----------------------------|
| 1 <sup>ST</sup><br>SEMESTE<br>R | EARTH SYSTEM SCIENCE                 | C1         | PR. 1: STUDY OF MAJOR GEOMORPHIC FEATURES FROM PHYSIOGRAPHICA L MODELS PR. 2: STUDY OF TOPOGRAPHIC SHEETS/CONTOUR MAPS AND DESCRIPSTION OF PHYSIOGRAPHY PR. 3: STUDY OF SOIL PRO FILE OF ANY SPECIFIC AREA PR. 4: STUDY OF EARTHQUAKE AND VOCANIC BELTS OF THE WORLD PR. 5: STUDY OF MAJOR OCEANCURRENT OF THE WORLD | 24 HOURS                   |
| 3 <sup>RD</sup> SEMESTE R       | STRUCTURAL<br>GEOLOGY &<br>TECTONICS | GE3        | PR.1: STUDY OF<br>STRUCTURAL<br>MAPSPR.2: USE OF<br>COMPASSPR.3: 3<br>POINTS PROBLEMS<br>OF STRUCTURAL<br>GEOLOGYPR.4:<br>STEREO<br>PROJECTIONS OF<br>BEDS, FOLD,<br>FAULT, LINEATION<br>ETC.  | 24 HOURS                   |

| 5 <sup>TH</sup> | SURVEYING AND | C11 | PR.1: USE OF      | 24 HOURS  |
|-----------------|---------------|-----|-------------------|-----------|
| SEMETER         | ENGINEERING   | CII | COMPASS FOR       | 211100115 |
| <b>DEWILTER</b> | GEOLOGY       |     | DETERMINING       |           |
|                 | GLOLOGI       |     | FORWARD,          |           |
|                 |               |     | BACKWARD,         |           |
|                 |               |     | BEARING AND       |           |
|                 |               |     | AZIMUTHS          |           |
|                 |               |     | PR.2: USE OF GPS  |           |
|                 |               |     | FOR DETERMINING   |           |
|                 |               |     |                   |           |
|                 |               |     | LATITUDE,         |           |
|                 |               |     | LONGITUDE AND     |           |
|                 |               |     | ELEVATION         |           |
|                 |               |     | VALUES            |           |
|                 |               |     | PR.3: USE OF      |           |
|                 |               |     | CHAIN, COMPASS    |           |
|                 |               |     | AND PLANE TABLE   |           |
|                 |               |     | FOR               |           |
|                 |               |     | COMPUTATION OF    |           |
|                 |               |     | AREA AND LAND     |           |
|                 |               |     | PR.4:             |           |
|                 |               |     | COMPUTATION OF    |           |
|                 |               |     | RESERVOIR AREA,   |           |
|                 |               |     | CATCHMENT AREA    |           |
|                 |               |     | , RESERVOIR       |           |
|                 |               |     | CAPACITY AND      |           |
|                 |               |     | RESERVOIR LIFE    |           |
|                 |               |     | PR.5:             |           |
|                 |               |     | COMPUTATION OF    |           |
|                 |               |     | RQD, RMR, AND 'Q' |           |

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# TEACHING PLAN OF DR. CHIRANTAN BHAGAWATI

Even Semester, 2022

(Session 2021-2022)

As per recommendation of DMC meeting dated 17<sup>th</sup> of January, 2022, the following teaching plan has been adopted for curriculum completion for the even semester 2022.

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.

#### (EVEN SEMESTER 2022)

| SEMESTER                    | SUBJECT                                | PAPER<br>CODE | UNIT   |          | ATION/<br>X LOAD |
|-----------------------------|--|---------------|--|----------|------------------|
|                             |  |               |  | Tutorial | Practical        |
| 2 <sup>ND</sup><br>SEMESTER | STRUCTURAL<br>GEOLOGY AND<br>TECTONICS | C4            | UNIT 1:GEOLOGICAL<br>STRUCTURES AND<br>TOPOGRAPHY      | 2 hrs.   | Nil              |
|                             |  |               | UNIT 2:STRESS AND STRAIN                               | 4 hrs.   | 1 hr.            |
|                             |  |               | UNIT 3:<br>DEFORMATIONAL<br>STRUCTURES                 | 18 hrs.  | 2 hrs.           |
|                             |  |               | UNIT 4: TECTONICS AND GEODYNAMICS                      | 6 hrs.   | 2 hrs            |
| 4 <sup>TH</sup> SEMESTER    | GEOMORPHOLOGY,<br>REMOTE SENSING &     | GE4           | UNIT 1:<br>GEOMORPHOLOGY                               | 19 hrs.  | 1 hr.            |
| SEWIESTER                   | GIS                                    |               | UNIT 2: REMOTE<br>SENSINGUNIT 3:                       | 9 hrs.   | 1 hr.            |
|                             |  |               | GEOGRAPHIC<br>INFORMATION<br>SYSTEM                    | 8 hrs.   | 2 hrs.           |
| 6 <sup>TH</sup><br>SEMESTER | EARTH AND<br>CLIMATE                   | DSE 4         | UNIT 1: CLIMATE<br>SYSTEM FORCING<br>AND RESPONSE      | 4 hrs.   | 2 hrs.           |
|                             |  |               | UNIT 2: HEAT<br>BUDGET OF EARTH                        | 4 hrs.   | 2 hrs.           |
|                             |  |               | UNIT 3:<br>ATMOSPHERE -<br>HYDROSPHERE                 | 4 hrs.   | 2 hrs.           |
|                             |  |               | UNIT 4: RESPONSE<br>OF BIOSPHER TO<br>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 2022)

| SEMESTER                 | SUBJECT                                   | PAPER<br>CODE | UNIT  | DURATION/<br>WORK<br>LOAD |
|--------------------------|---|---------------|---|---------------------------|
| 2 <sup>ND</sup> SEMESTER | STRUCTURAL<br>GEOLOGY AND<br>TECTONICS    | C4            | PR.1: USE OF CLINOMETER AND BRUNTON COMPASS FOR STRUCTURAL MEASUREMENTS PR.2: STUDY OF CONTOUR MAPS,STRUCTURAL MAPS AND SUB- SURFACE GRAPHICAL PROBLEMS PR.3: THREE POINT STRUCTURAL PROBLEM AND STRUCTURAL PROJECTIONS PR.4: RECONSTRUCTION OF STRUCTURE FROM GIVEN PROFILES | 24 HOURS                  |
| 4 <sup>TH</sup> SEMESTER | GEOMORPHOLOGY,<br>REMOTE SENSING &<br>GIS | GE4           | PR.1: STUDY OF<br>LANDFORMS FROM<br>GIVEN GEOMORPHIC<br>MODEL<br>/IMAGE/MAPPR.2:<br>INTERPRETATION OF<br>AERIAL<br>PHOTO/SATELLITE<br>IMAGE   | 24 HOURS                  |
| 6 <sup>TH</sup> SEMESTER | EARTH AND CLIMATE                         | DSE 4         | PR.1: STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM IMAGE /PHOTO /SATELLITE IMAGERY PR.2: STUDY AND IDENTIFICATION OF GEOMORPHIC FEATURES FROM GEOMORPHIC MODELS PR.3: STUDY AND IDENTIFICATION OF GEOMORPHIC  | 24 HOURS                  |

| CON<br>PR.4<br>PRO<br>DISC<br>GEO<br>FEA | ATURES FROM NTOUR MAPS 4: DRAWING A DFILE AND CUSSION OF OMORPHIC ATURES FROM POGRAPHICAL PS |
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