

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : METHODS IN GEOGRAPHY & GEOG-H-SEC01-1-TH**

| Planned                       |                                           |                                                                  |                              | After Implementation                                                   |                      |
|-------------------------------|-------------------------------------------|------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                                    | Reference Books                                                  | No. of<br>Lecture<br>Planned | Content Delivery<br>Technique                                          | Remarks/<br>Comments |
| Unit I                        | FIELD DATA<br>COLLECTION &<br>COMPILATION | Geography of<br>Fieldwork and<br>Skills by Lenon B<br>,Cleves, P | 24                           | CHALK & TALK<br>PPT PRESENTATION<br>PRESENTATION WITH<br>TEACHING AIDS |                      |
| Unit II                       | METHODS IN<br>PHYSICAL<br>GEOGRAPHY       | Key Methods in<br>Geography by<br>Clifford, N, Cope              | 18                           |                                                                        |                      |
| Unit III                      | METHODS IN<br>HUMAN<br>GEOGRAPHY          | Fieldwork for<br>Human<br>Geography by<br>Phillips, R, John J    | 18                           |                                                                        |                      |

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : PHYSICAL GEOGRAPHY & GEOG-MD-CC0I-I-TH**

| Planned                       |                         |                                                                                    |                              | After Implementation                                                   |                      |
|-------------------------------|-------------------------|------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                  | Reference Books                                                                    | No. of<br>Lecture<br>Planned | Content Delivery<br>Technique                                          | Remarks/<br>Comments |
| Unit I                        | CARTOGRAPHY             | Fundamentals of<br>Cartography by<br>R.P. MISHRA                                   | 5                            | CHALK & TALK<br>PPT PRESENTATION<br>PRESENTATION WITH<br>TEACHING AIDS |                      |
| Unit II                       | GEOTECHTONICS           | PRINCIPLES OF<br>PHYSICAL<br>GEOGRAPHY BY<br>F.J. MONKHOUSE                        | 3                            |                                                                        |                      |
| Unit III                      | GEOMORPHOLOGY           | Introduction to<br>Geomorphology<br>by KALE, V.S,<br>GUPTA                         | 10                           |                                                                        |                      |
| Unit IV                       | CLIMETOLOGY             | Atmosphere<br>Weather and<br>Climate by<br>BARRY, R.J,<br>CHORLEY                  | 9                            |                                                                        |                      |
| Unit V                        | SOIL GEOGRAPHY          | The Nature &<br>Properties of Soil<br>by Weil, R.R<br>BRADY                        | 8                            |                                                                        |                      |
| Unit VI                       | BIOGEOGRAPHY            | Ecology &<br>Environment by<br>SHARMA, P.D                                         | 5                            |                                                                        |                      |
| Unit VII                      | GEOGRAPHY OF<br>HAZARDS | Environmental<br>Hazards :<br>Assessing Risk &<br>Reducing Disaster<br>by SMITH, K | 5                            |                                                                        |                      |

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : GEOMATICS & SPATIAL ANALYSIS & GEOG-IDC01-TH**

| Planned                       |                                                                |                                                                                     |                              | After Implementation                                                   |                      |
|-------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                                                         | Reference Books                                                                     | No. of<br>Lecture<br>Planned | Content Delivery<br>Technique                                          | Remarks/<br>Comments |
| Unit I                        | CARTOGRAPHY                                                    | Fundamentals of<br>Cartography by<br>R.P. MISHRA<br>Maps & Diagrams<br>by Monkhouse | 14                           | CHALK & TALK<br>PPT PRESENTATION<br>PRESENTATION WITH<br>TEACHING AIDS |                      |
| Unit II                       | SURVEYING                                                      | Practical<br>Geography: A<br>Systematic<br>Approach by<br>Sarkar, A                 | 12                           |                                                                        |                      |
| Unit III                      | REMOTE SENSING<br>AND<br>GEOGRAPHICAL<br>INFORMATION<br>SYSTEM | Fundamentals of<br>Remote Sensing<br>by Joseph, G,<br>Jagannathan                   | 18                           |                                                                        |                      |

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : HUMAN GEOGRAPHY & GEO-G-CC-3 03-TH**

| Planned                       |                       |                                                                                               |                              | After Implementation                                                   |                      |
|-------------------------------|-----------------------|-----------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                | Reference Books                                                                               | No. of<br>Lecture<br>Planned | Content Delivery<br>Technique                                          | Remarks/<br>Comments |
| Unit I                        | ECONOMIC<br>GEOGRPHY  | Key concept in<br>Economic<br>Geography by<br>Aoyama, A                                       | 20                           | CHALK & TALK<br>PPT PRESENTATION<br>PRESENTATION WITH<br>TEACHING AIDS |                      |
| Unit II                       | SOCIAL GEOGRAPHY      | Key Methods in<br>Geography by<br>Clifford, N, Cope                                           | 21                           |                                                                        |                      |
| Unit III                      | CULTURAL<br>GEOGRAPHY | The Cultural<br>Landscape: An<br>Introduction to<br>Human<br>Geography by<br>Rubenstein, J. M | 20                           |                                                                        |                      |

## LESSON PLAN

DEPART NAME : GEOGRAPHY ( MORNING)

NAME OF FACULTY : ALOKA MUKHOPADHYAY PAPER NAME & CODE : REGIONAL DEVELOPMENT & GEO-G-DSC-A-5- 01-TH

| Planned                                                                                                                                                                  |                                                                                                                                                                              |                        | After Implementation                                                   |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------|-------------------|
| Topics                                                                                                                                                                   | Reference Books                                                                                                                                                              | No. of Lecture Planned | Content Delivery Technique                                             | Remarks/ Comments |
| 1. Strategies/models for regional planning: growth pole model of perroux                                                                                                 | Regional planning & development by Chandana ,R.C<br><br>Regional planning in India by Chand ,M, R,M., Puri, V. K.<br><br>Regional Development:& Regional planning by Raza ,M | 5                      | CHALK & TALK<br>PPT PRESENTATION<br>PRESENTATION<br>WITH TEACHING AIDS |                   |
| 2. Growth central model in Indian context. Concept of village cluster                                                                                                    |                                                                                                                                                                              | 4                      |                                                                        |                   |
| 3. Problem regions and regional planning. Backward regions and regional plans: special area development plans in India. Damodar valley corporation: Success and failure. |                                                                                                                                                                              | 5                      |                                                                        |                   |
| 4. Changing concept of development and under development; efficiency-equity debate                                                                                       |                                                                                                                                                                              | 5                      |                                                                        |                   |
| 5. Indicators of development: Economic, demographic and environmental. Concept of human development                                                                      |                                                                                                                                                                              | 5                      |                                                                        |                   |
| 6. Regional Development Of India, regional inequality, disparity and diversity                                                                                           |                                                                                                                                                                              | 5                      |                                                                        |                   |
| 7. Development and regional disparities in India since Independence: Disparities in agricultural development                                                             |                                                                                                                                                                              | 5                      |                                                                        |                   |
| 8. Development and regional disparities in India since Independence: Disparities in industrial development                                                               |                                                                                                                                                                              |                        |                                                                        |                   |
| 9. Development and regional disparities in India since Independence: Disparities in human resource development in terms of education and health                          |                                                                                                                                                                              | 5                      |                                                                        |                   |

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : FOREST & WILDLIFE MANAGEMENT & GEO-G-SEC-A-3/5-TH**

| <b>P</b>                                                                                                                                                                             |                                                                                                                                                                                                                                               |                               |                                                                        |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------|--------------------------|
| <b>Topics</b>                                                                                                                                                                        | <b>Reference Books</b>                                                                                                                                                                                                                        | <b>No. of Lecture Planned</b> | <b>Content Delivery Technique</b>                                      | <b>Remarks/ Comments</b> |
| <b>1. Forest &amp; Wildlife Management: Importance and strategies. Role &amp; significance of stakeholders. Tangible and Intangible benefits of forest &amp; Wildlife Management</b> | <ul style="list-style-type: none"><li>Principles of Wildlife management by Bailey, J.A</li><li>Forest conservation planning &amp; management, Callisto Reference by Fisher M</li><li>Fundamentals of Wildlife Management by Gopal G</li></ul> | 7                             | CHALK & TALK<br>PPT<br>PRESENTATION<br>PRESENTATION WITH TEACHING AIDS |                          |
| <b>2 Legal framework of forest and wildlife protection in India; The Indian Forest Act 1927, Forest conservation Act 1980 Wildlife protection Act 1972 , Biodiversity Act 2002</b>   |                                                                                                                                                                                                                                               | 5                             |                                                                        |                          |
| <b>3 Forest as common property resource: Forest rights: Tribal &amp; forests. Gender dimension of forest management. Management of poaching &amp; illegal logging</b>                |                                                                                                                                                                                                                                               | 5                             |                                                                        |                          |

|                                                                                                                                                                                                  |  |    |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|--|--|
| <b>4 Principles of community participation &amp; joint forest management. Causes &amp; management of human-wildlife conflicts with special reference to Jangal Mahal, Sundarbans &amp; Duars</b> |  | 10 |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|--|--|

## LESSON PLAN

DEPART NAME : GEOGRAPHY ( MORNING)

NAME OF FACULTY : ALOKA MUKHOPADHYAY

PAPER NAME & CODE : CULTURAL & SETTLEMENT GEOGRAPHY LAB GEOG-H-CC10 /MD-CC07-5/6-P

| Planned                      |                                                                                                                          |                                                                                                                                                                                         |                        | After Implementation                                         |                   |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------|-------------------|
| Unit /Group/ Module/ Article | Topics                                                                                                                   | Reference Books                                                                                                                                                                         | No. of Lecture Planned | Content Delivery Technique                                   | Remarks/ Comments |
| 1.                           | Mapping state-wise distribution of major Indian Languages of any census year using pie graphs.                           | Advanced Practical Geography by P.Basu<br><br>Maps and Diagrams by F. J. Monkhouse<br><br>Website: Census of India: <a href="https://censusindia.gov.in">https://censusindia.gov.in</a> | 5                      | CHALK & TALK<br>PPT<br>PRESENTATION<br>WITH<br>TEACHING AIDS |                   |
| 2.                           | Cartograms representing roof materials used in rural houses of any state of India in the census years 1991,2001,and 2011 |                                                                                                                                                                                         | 5                      |                                                              |                   |
| 3.                           | Accessibility mapping using detour index from Survey of India 1:50k topographical maps                                   |                                                                                                                                                                                         | 10                     |                                                              |                   |
| 4.                           | Nearest neighbour analysis from Survey of India 1:50k topographical maps of plain region(c.5x5)                          |                                                                                                                                                                                         | 10                     |                                                              |                   |

LESSON PLAN

DEPART NAME : GEOGRAPHY ( MORNING)

NAME OF FACULTY : ALOKA MUKHOPADHYAY

PAPER NAME & CODE : HYDROLOGY & OCEANOGRAPHY & GEOG-H-CC09/-CC06-5-TH

| Planned                       |                                                                    |                                                |                              | After Implementation                                                         |                      |
|-------------------------------|--------------------------------------------------------------------|------------------------------------------------|------------------------------|------------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                                                             | Reference<br>Books                             | No. of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique                                             | Remarks/<br>Comments |
| <b>Unit -I</b>                | <b>Hydrology</b>                                                   | Physical<br>Hydrology by<br>Dingman,S.L        | 5                            | CHALK & TALK<br>PPT<br>PRESENTATION<br>PRESENTATION<br>WITH<br>TEACHING AIDS |                      |
|                               | i. System approach<br>in hydrology                                 |                                                | 5                            |                                                                              |                      |
|                               | ii. Run Off                                                        | Hydrology by<br>Raghunath<br>,H.M              | 5                            |                                                                              |                      |
|                               | iii.Drainage basin as<br>a hydrological unit                       |                                                | 5                            |                                                                              |                      |
| <b>Unit -II</b>               | iv.Groundwater                                                     |                                                | 5                            |                                                                              |                      |
|                               | <b>Oceanography</b>                                                | Invitation to<br>Oceanography<br>by Pinet, P.R | 4                            |                                                                              |                      |
|                               | <b>v.Physical &amp;<br/>Chemical properties<br/>of ocean water</b> |                                                | 4                            |                                                                              |                      |
|                               | <b>vi. Ocean<br/>temperature &amp;<br/>Salinity</b>                |                                                | 3                            |                                                                              |                      |
|                               | <b>vii. Water mass, T-S<br/>diagram</b>                            |                                                | 6                            |                                                                              |                      |
|                               | <b>viii. Ocean<br/>circulation</b>                                 |                                                | 4                            |                                                                              |                      |
|                               | <b>ix. Sea level change</b>                                        |                                                | 4                            |                                                                              |                      |
|                               | <b>x. Marine<br/>resources</b>                                     |                                                | 4                            |                                                                              |                      |

**LESSON PLAN****DEPART NAME : GEOGRAPHY ( MORNING)****NAME OF FACULTY : ALOKA MUKHOPADHYAY****PAPER NAME & CODE : HYDROLOGY & OCEANOGRAPHY LAB GEOG-H-CC09/MD-CC06-5-P**

| Planned                     |                                                                                                           |                                                                                    |                        | After Implementation                                                   |                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------|--------------------|
| Unit/Group / Module/Article | Topics                                                                                                    | Reference Books                                                                    | No. of Lecture Planned | Content Delivery Technique                                             | Remarks / Comments |
| 1.                          | Construction and interpretation of rating curves                                                          | Advanced Practical Geography by P.Basu<br><br>Maps and Diagrams by F. J. Monkhouse | 3                      | CHALK & TALK<br>PPT<br>PRESENTATION<br>PRESENTATION WITH TEACHING AIDS |                    |
| 2.                          | Construction and interpretation of hydrographs and unit hydrographs. Derivation of phi index and W index. |                                                                                    | 11                     |                                                                        |                    |
| 3.                          | Construction and interpretation of Ombrothermic graph and hyetograph                                      |                                                                                    | 10                     |                                                                        |                    |
| 4.                          | Construction of Thiessen polygon from precipitation data                                                  |                                                                                    | 6                      |                                                                        |                    |

LESSON PLAN

DEPART NAME : GEOGRAPHY ( MORNING)

NAME OF FACULTY : ALOKA MUKHOPADHYAY

PAPER NAME & CODE : HYDROLOGY & OCEANOGRAPHY & GEOG-H-CC09/-CC06-5-TH

| Planned                       |                                                                    |                                                |                              | After Implementation                                                         |                      |
|-------------------------------|--------------------------------------------------------------------|------------------------------------------------|------------------------------|------------------------------------------------------------------------------|----------------------|
| Unit/Group/<br>Module/Article | Topics                                                             | Reference<br>Books                             | No. of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique                                             | Remarks/<br>Comments |
| <b>Unit -I</b>                | <b>Hydrology</b>                                                   | Physical<br>Hydrology by<br>Dingman,S.L        | 5                            | CHALK & TALK<br>PPT<br>PRESENTATION<br>PRESENTATION<br>WITH<br>TEACHING AIDS |                      |
|                               | i. System approach<br>in hydrology                                 |                                                | 5                            |                                                                              |                      |
|                               | ii. Run Off                                                        | Hydrology by<br>Raghunath<br>,H.M              | 5                            |                                                                              |                      |
|                               | iii.Drainage basin as<br>a hydrological unit                       |                                                | 5                            |                                                                              |                      |
| <b>Unit -II</b>               | iv.Groundwater                                                     |                                                |                              |                                                                              |                      |
|                               | <b>Oceanography</b>                                                | Invitation to<br>Oceanography<br>by Pinet, P.R | 4                            |                                                                              |                      |
|                               | <b>v.Physical &amp;<br/>Chemical properties<br/>of ocean water</b> |                                                | 4                            |                                                                              |                      |
|                               | <b>vi. Ocean<br/>temperature &amp;<br/>Salinity</b>                | Oceanography<br>By Garrison,T,<br>Ellis,R      | 3                            |                                                                              |                      |
|                               | <b>vii. Water mass, T-S<br/>diagram</b>                            |                                                | 6                            |                                                                              |                      |
|                               | <b>viii. Ocean<br/>circulation</b>                                 |                                                | 4                            |                                                                              |                      |
|                               | <b>ix. Sea level change</b>                                        |                                                | 4                            |                                                                              |                      |
|                               | <b>x. Marine<br/>resources</b>                                     |                                                |                              |                                                                              |                      |

**SEMESTER 1 (MAJOR & MINOR)**  
**CCF SYLLABUS**

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Physical Geography (GEOG-H-CC01/MD-01-1/3-TH)**

| Planned                         |                                                                                     |                                                                                                                                                                  |                       |                                         |                    |
|---------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                              | Reference Books                                                                                                                                                  | No of Lecture Planned | Content Delivery Technique              | Remarks / Comments |
| Unit: I<br>Cartography          | 1. Concept of scale                                                                 | 1. Practical Geography: A Systematic Approach by A. Sarkar<br><br>2. Elements of Practical Geography by R.L. Singh<br><br>3. Maps and Diagrams by F.J. Monkhouse | 1                     | Chalk and talk                          |                    |
|                                 | 1. Types of scale                                                                   |                                                                                                                                                                  | 1                     | Chalk and talk                          |                    |
|                                 | 1. Calculation and Drawing                                                          |                                                                                                                                                                  | 1                     | Chalk and talk and teaching how to draw |                    |
|                                 | 1. Concept and significance of map projection                                       |                                                                                                                                                                  | 1                     | Chalk and talk                          |                    |
|                                 | 1. Classification and uses of map Projection                                        |                                                                                                                                                                  | 1                     | Chalk and talk                          |                    |
| Unit: VI<br>Biogeography        | 9. Plant adaptation and distribution in relation to water availability: hydrophytes | 1. Ecology and Environment by P.D. Sharma<br><br>2. Fundamentals of ecology by E.P Odum                                                                          | 2                     | Chalk and talk                          |                    |
|                                 | 9. Plant adaptation and distribution in                                             |                                                                                                                                                                  | 1                     | Chalk and talk                          |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: Physical Geography (GEOG-H-CC01/MD-01-1/3-TH)

| Planned                         |                                                                                   |                                          |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------------------|------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                            | Reference Books                          | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | relation to water availability:<br>Xerophytes                                     |                                          |                       |                            |                    |
| Unit: VI<br>Biogeography        | 9.Plant adaptation and distribution in relation to water availability: Mesophytes | 1.Ecology and Environment by P.D. Sharma | 1                     | Chalk and talk             |                    |
|                                 | 9.Plant adaptation and distribution in relation to water availability: helophytes | 2.Fundamentals of ecology by E.P Odum    | 1                     | Chalk and talk             |                    |
|                                 |                                                                                   | Total                                    | 10                    |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-Th)**

| Planned                           |                                                               |                                        |                       | After Implementation       |                    |
|-----------------------------------|---------------------------------------------------------------|----------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article   | Topics                                                        | Reference Books                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II:<br>Geotectonics          | 2a. Seismic waves                                             | 1. Physical Geography by S. Singh      | 1                     | Chalk and Talk             |                    |
|                                   | 2b. Internal structure of the earth                           | 1. Physical Geography by S. Singh      | 2                     | Chalk and Talk             |                    |
| Unit VII:<br>Geography of Hazards | 10a. Nature and classification of hazards in Indian context   | 1. Environmental Geography by S. Singh | 2                     | Chalk and Talk             |                    |
|                                   | 10b. Nature and classification of disasters in Indian context | 1. Environmental Geography by S. Singh | 2                     | Chalk and Talk             |                    |
|                                   |                                                               | Total                                  | 07                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-Th)

| Planned                         |                                                               |                                                         |                       | After Implementation       |                    |
|---------------------------------|---------------------------------------------------------------|---------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                        | Reference Books                                         | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit V: Soil Geography          | 7a. Soil formation processes                                  | 1. The Nature and Properties of Soils by Brady and Weil | 2                     | Chalk and Talk             |                    |
|                                 | 7b. Soil formation factors                                    | 1. The Nature and Properties of Soils by Brady and Weil | 2                     | Chalk and Talk             |                    |
|                                 | 8a. Evolution of an ideal soil profile                        | 2. Text Book of Soil Science by Biswas and Mukherjee    | 2                     | Chalk and Talk             |                    |
|                                 | 8b. Evolution of soil profile: Laterite, Podsal and Chernozem | 2. Text Book of Soil Science by Biswas and Mukherjee    | 2                     | Chalk and Talk             |                    |
|                                 |                                                               | Total                                                   | 08                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |                                                                                  |                                                                                                                                                                                    |                          | After Implementation          |                       |
|------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                           | Reference Books                                                                                                                                                                    | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 3<br>GEOMORPHOLOGY                 | Definition of<br>Weathering.<br>Difference<br>between<br>Weathering &<br>Erosion | 1. A Textbook of<br>Geomorphology by P.<br>Dayal.<br><br>2. Fundamentals of<br>Physical Geography by<br>Majid Husain.<br><br>3. Introduction to<br>Geomorphology by Kale,<br>Gupta | 1                        | Chalk & Talk                  |                       |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY**

| Planned                         |                              |                                                                                                                                                                  |                       | After Implementation       |                    |
|---------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                       | Reference Books                                                                                                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 3<br>GEOMORPHOLOGY              | Classification of Weathering | 1. A Textbook of Geomorphology by P. Dayal.<br><br>2. Fundamentals of Physical Geography by Majid Husain.<br><br>3. Introduction to Geomorphology by Kale, Gupta | 2                     | Chalk & Talk               |                    |
|                                 | Agents of Erosion            | 1. A Textbook of Geomorphology by P. Dayal.<br><br>2. Fundamentals of Physical Geography by Majid Husain.<br><br>3. Introduction to Geomorphology by Kale, Gupta | 2                     | Chalk & Talk               |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |                                                      |                                                                                                                                                                            |                          | After Implementation          |                       |
|------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                               | Reference Books                                                                                                                                                            | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 3<br><br>GEOMORPHOLOGY             |                                                      |                                                                                                                                                                            |                          |                               |                       |
|                                    | Fluvial<br>processes-<br>Erosion,<br>Transportation. | 1. A Textbook of<br>Geomorphology by P.<br>Dayal.<br>2. Fundamentals of<br>Physical Geography by<br>Majid Husain.<br>3. Introduction to<br>Geomorphology by Kale,<br>Gupta | 1                        | Chalk & Talk                  |                       |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |                                         |                                                                                                                                                          |                          | After Implementation          |                       |
|------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                  | Reference Books                                                                                                                                          | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 3<br><br>GEOMORPHOLOGY             | Cycle erosion of                        | 1. A Textbook of Geomorphology by P. Dayal.<br>2. Fundamentals of Physical Geography by Majid Husain.<br>3. Introduction to Geomorphology by Kale, Gupta | 1                        | Chalk & Talk                  |                       |
|                                    | Fluvial Landforms – Erosional Landforms | 1. A Textbook of Geomorphology by P. Dayal.<br>2. Fundamentals of Physical Geography by Majid Husain.<br>3. Introduction to Geomorphology by Kale, Gupta | 1                        | Chalk & Talk                  |                       |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |                                                     |                                                                                                                                                                            |                          | After Implementation          |                       |
|------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                              | Reference Books                                                                                                                                                            | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 4<br><br>CLIMATOLOGY               | Fluvial<br>Landforms –<br>Depositional<br>Landforms | 1. A Textbook of<br>Geomorphology by P.<br>Dayal.<br>2. Fundamentals of<br>Physical Geography by<br>Majid Husain.<br>3. Introduction to<br>Geomorphology by Kale,<br>Gupta | 2                        | Chalk & Talk                  |                       |
|                                    | Nature &<br>composition of<br>atmosphere            | 1. Atmosphere, Weather<br>& Climate by Barry &<br>Chorley.<br>2. General Climatology by<br>Critchfield<br>3. Climatology by D.<br>S.Lal.                                   | 2                        | Chalk & talk                  |                       |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY**

| Planned                         |                               |                                                                                                                              |                       | After Implementation       |                    |
|---------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                        | Reference Books                                                                                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4<br><b>CLIMATOLOGY</b>         |                               |                                                                                                                              |                       |                            |                    |
|                                 | Layering of the atmosphere    | 1. Atmosphere, Weather & Climate by Barry & Chorley.<br>2. General Climatology by Critchfield<br>3. Climatology by D. S. Lal | 2                     | Chalk & talk               |                    |
|                                 | Circulation in the atmosphere | 1. Atmosphere, Weather & Climate by Barry & Chorley.<br>2. General Climatology by Critchfield<br>3. Climatology by D. S. Lal | 1                     | Chalk & talk               |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |                |                                                                                                                                                  |                          | After Implementation          |                       |
|------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics         | Reference Books                                                                                                                                  | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 4<br><br>CLIMATOLOGY               | Planetary wind | 1. Atmosphere, Weather<br>& Climate by Barry &<br>Chorley.<br><br>2. General Climatology by<br>Critchfield<br><br>3. Climatology by D. S.<br>Lal | 2                        | Chalk & talk                  |                       |
|                                    | Jet Streams    | 1. Atmosphere, Weather<br>& Climate by Barry &<br>Chorley.<br><br>2. General Climatology by<br>Critchfield<br><br>3. Climatology by D. S.<br>Lal | 1                        | Chalk & talk                  |                       |
|                                    |                |                                                                                                                                                  |                          |                               |                       |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC01/1/3-TH- PHYSICAL GEOGRAPHY

| Planned                            |             |                                                                                                                                                  |                          | After Implementation          |                       |
|------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics      | Reference Books                                                                                                                                  | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 4<br><br>CLIMATOLOGY               | Index cycle | 1. Atmosphere, Weather<br>& Climate by Barry &<br>Chorley.<br><br>2. General Climatology by<br>Critchfield<br><br>3. Climatology by D. S.<br>Lal | 1                        | Chalk & talk                  |                       |
|                                    |             | TOTAL                                                                                                                                            | 19                       |                               |                       |

This theory paper is shared between Smt. Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Smt. Prakriti Das, Assistant Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Department, VIC.

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-P)**

| Planned                         |                                                 |                                                            |                       | After Implementation       |                    |
|---------------------------------|-------------------------------------------------|------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                          | Reference Books                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a.Graphical construction of Plain scales       | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |
|                                 | 1b.Graphical construction of Comparative scales | 1. Practical Geography: A Systematic Approach by A. Sarkar | 1                     | Chalk and Talk             |                    |
|                                 | 1c.Graphical construction of diagonal scales    | 1. Practical Geography: A Systematic Approach by A. Sarkar | 4                     | Chalk and Talk             |                    |
|                                 | 1d.Graphical construction of Vernier scales     | 1. Practical Geography: A Systematic Approach by A. Sarkar | 4                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: Physical Geography (GEOG-H-CC-01/MD-01-1/3-P)

| Planned                         |                                                                               |                                                                                                                                                          |                       |                                                             |                    |
|---------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                        | Reference Books                                                                                                                                          | No of Lecture Planned | Content Delivery Technique                                  | Remarks / Comments |
| Practical: Topic-2              | 2. Delineation of drainage basin on a topographical map of India of 1: 50K    | 1. Practical Geography: A Systematic Approach by A. Sarkar<br>2. Elements of Practical Geography by R.L. Singh<br>3. Maps and Diagrams by F.J. Monkhouse | 4                     | Toposheet of any plateau region of India with R. F 1:50,000 |                    |
|                                 | 2. Drawing and identification of stream orders (Strahler)                     |                                                                                                                                                          | 3                     | Toposheet with R.F 1:50,000                                 |                    |
|                                 | 2. Bifurcation ratio of that drainage basin.                                  |                                                                                                                                                          | 3                     | Chalk and talk                                              |                    |
|                                 | 3. Identification of drainage and channel patterns from Survey of India 1:50K |                                                                                                                                                          | 6                     | Toposheet with R.F 1:50,000                                 |                    |
|                                 |                                                                               | Total                                                                                                                                                    | 16                    |                                                             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC01/MD-CC01-1/3-P- PHYSICAL GEOGRAPHY LAB**

| Planned                         |                                             |                                                                                        |                       | After Implementation       |                    |
|---------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                      | Reference Books                                                                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4                               | Discussion on the pattern of Wind Direction | 1. Elements of Practical Geography by R.L.Singh<br>2. Practical Geography by A. Sarkar | 1                     | Chalk & Talk               |                    |
|                                 | Discussion about Wind Rose                  | 1. Elements of Practical Geography by R.L.Singh<br>2. Practical Geography by A. Sarkar | 1                     | Chalk & Talk               |                    |
|                                 | Calculation of Wind Rose                    | 1. Elements of Practical Geography by R.L.Singh<br>2. Practical Geography by A. Sarkar | 1                     | Chalk & Talk               |                    |
|                                 | Interpretation of Wind Rose                 | 1. Elements of Practical Geography by R.L.Singh<br>2. Practical Geography by A. Sarkar | 1                     | Chalk & Talk               |                    |
|                                 |                                             | TOTAL                                                                                  | 4                     |                            |                    |

**This practical paper is shared between Smt. Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor and Dr. Rajkumar Bhattacharya, Assistant Professor, Geography Department, VIC**

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-Th)**

| Planned                         |                                             |                                                                                                                       |                       | After Implementation       |                    |
|---------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                      | Reference Books                                                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I:<br>Cartography          | 1a. Concept and applications of scales      | 1. Fundamentals of Practical Geography By Dr. L.R Singh                                                               | 2                     | Chalk and Talk             |                    |
|                                 | 1b. Concept and applications of projections | 1. Practical Geography: A Systematic Approach by A. Sarkar                                                            | 2                     | Chalk and Talk             |                    |
|                                 | 1c. Components and classification of maps   | 1. Fundamentals of Practical Geography By Dr. L.R Singh<br>2. Practical Geography: A Systematic Approach by A. Sarkar | 1                     | Chalk and Talk             |                    |
| Unit II:<br>Geotectonics        | 2a. Seismic waves                           | 1. Physical Geography by S. Singh                                                                                     | 1                     | Chalk and Talk             |                    |
|                                 | 2b. Internal structure of the earth         | 1. Physical Geography by S. Singh                                                                                     | 2                     | Chalk and Talk             |                    |
| Unit III:<br>Geomorphology      | 3a. Classification of weathering            | 1. Geomorphology by S. Singh                                                                                          | 1                     | Chalk and Talk             |                    |
|                                 | 3b. Agents of erosion                       | 1. Geomorphology by S. Singh                                                                                          | 1                     | Chalk and Talk             |                    |
|                                 | 4. Fluvial processes and landforms          | 1. Geomorphology by S. Singh                                                                                          | 2                     | Chalk and Talk             |                    |
| Unit IV:                        | 5. Nature, composition, and                 | 1. Climatology by D.S Lal                                                                                             | 1                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-Th)**

| Planned                         |                                                           |                                                                                  |                       | After Implementation       |                    |
|---------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                    | Reference Books                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Climatology                     | layering of the atmosphere                                | 2. Climatology by S. Singh                                                       |                       |                            |                    |
|                                 | 6a. Circulation in the atmosphere: Planetary winds        | 1. Climatology by D.S Lal<br>2. Climatology by S. Singh                          | 2                     | Chalk and Talk             |                    |
|                                 | 6b. Jet streams, and index cycle                          | 1. Climatology by D.S Lal<br>2. Climatology by S. Singh                          | 2                     | Chalk and Talk             |                    |
| Unit V: Soil Geography          | 7. Factors of soil formation                              | 1. Text Book of Soil Science by Daji<br>2. Ecology and Environment by P.D Sharma | 1                     | Chalk and Talk             |                    |
|                                 | 8. Evolution of an ideal soil profile                     | 1. Text Book of Soil Science by Daji<br>2. Ecology and Environment by P.D Sharma | 1                     | Chalk and Talk             |                    |
| Unit VI: Biogeography           | 9. Plant adaptation and distribution in relation to water | 1. Ecology and Environment by P.D Sharma                                         | 2                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-Th)**

| Planned                           |                                                              |                                        |                       | After Implementation       |                    |
|-----------------------------------|--------------------------------------------------------------|----------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article   | Topics                                                       | Reference Books                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                   | availability                                                 |                                        |                       |                            |                    |
| Unit VII:<br>Geography of Hazards | 10. Nature and classification of hazards in Indian context   | 1. Environmental Geography by S. Singh | 2                     | Chalk and Talk             |                    |
|                                   | 11. Nature and classification of disasters in Indian context | 1. Environmental Geography by S. Singh | 2                     | Chalk and Talk             |                    |
|                                   |                                                              | Total                                  | 25                    |                            |                    |

**This theory paper is fully taught by Dr. Raj Kumar Bhattacharya, Assistant Professor, Dept of Geography, VIC**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-P)

| Planned                         |                                                                                |                                                            |                       | After Implementation       |                    |
|---------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                         | Reference Books                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a.Graphical construction of Plain scales                                      | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |
|                                 | 1b.Graphical construction of Comparative scales                                | 1. Practical Geography: A Systematic Approach by A. Sarkar | 1                     | Chalk and Talk             |                    |
|                                 | 1c.Graphical construction of diagonal scales                                   | 1. Practical Geography: A Systematic Approach by A. Sarkar | 4                     | Chalk and Talk             |                    |
|                                 | 1d.Graphical construction of Vernier scales                                    | 1. Practical Geography: A Systematic Approach by A. Sarkar | 4                     | Chalk and Talk             |                    |
|                                 | 2a. Delineation of drainage basins on Survey of India 1:50k topographical maps | 1. Practical Geography: A Systematic Approach by A. Sarkar | 2                     | Chalk and Talk             |                    |
|                                 | 2b. Determining stream ordering (Strahler)                                     | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |
|                                 | 2c. Bifurcation ratio in a drainage basin (c. 5' x                             | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Physical Geography (GEOG-MD-CC01-1/3-P)**

| Planned                         |                                                                                      |                                                            |                       | After Implementation       |                    |
|---------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                               | Reference Books                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 5')                                                                                  |                                                            |                       |                            |                    |
|                                 | 3a. Identification of drainage pattern from Survey of India 1:50k topographical maps | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |
|                                 | 3b. Identification of channel patterns from Survey of India 1:50k topographical maps | 1. Practical Geography: A Systematic Approach by A. Sarkar | 3                     | Chalk and Talk             |                    |
|                                 | 4. Construction and interpretation of wind rose diagram                              | 1. Practical Geography: A Systematic Approach by A. Sarkar | 2                     | Chalk and Talk             |                    |
|                                 |                                                                                      | Total                                                      | 28                    |                            |                    |

**This practical paper is fully taught by Dr. Raj Kumar Bhattacharya, Assistant Professor, Dept of Geography, VIC**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

| Planned                                       |                                                                    |                                                                                                                                     |                       | After Implementation       |                    |
|-----------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                             | Reference Books                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Field Data Collection and Compilation | 1a. Designing of primary survey based on diverse research problems | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 1b. Relevance of pilot survey                                      | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 2. Sampling types and strategy based on diverse research problems  | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 3                     | Chalk and Talk             |                    |
|                                               | 3a. Preparation of questionnaire                                   | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 3b. Preparation of interview                                       | 1. Research Methodology: Methods & Techniques by                                                                                    | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

---

| Planned                            |          |                                                                                          |                          | After Implementation          |                       |
|------------------------------------|----------|------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics   | Reference Books                                                                          | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | schedule | C.R Kothari<br>2. Geospatial Techniques and<br>Research in Geography by<br>Das & Mallick |                          |                               |                       |
|                                    |          | Total                                                                                    | 11                       |                               |                       |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Methods in Geography (GEOG-H\_SEC-01/MD-SEC-1/2/3-Th)**

| Planned                                       |                                                                                |                                                                                                                                                                                                                     |                       |                            |                    |
|-----------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                                         | Reference Books                                                                                                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Field Data Collection and Compilation | 4. Data Compilation into master table                                          | 1.Statistical Methods by N.G.Das<br><br>2. An Insight into Statistics by Jaydeb Sarkhel and Santosh Kumar Dutta; Book Syndicate Private Limited<br><br>3. Statistical Methods in Geographical Studies by A. Mahmood | 2                     | Chalk and talk             |                    |
|                                               | 4. Data matrix in master table                                                 |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 5. Computer assisted field data entry- concept                                 |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 5. Tabulation of data into frequency distribution tables                       |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: measures of central tendency: Mean            |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: measures of central tendency: Median and mode |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: dispersion                                    |                                                                                                                                                                                                                     | 1                     | Chalk and talk             |                    |
|                                               |                                                                                |                                                                                                                                                                                                                     |                       |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Methods in Geography (GEOG-H\_SEC-01/MD-SEC-1/2/3-Th)**

---

| Planned                                |                                               |                                                                     |                       |                              |                    |
|----------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|-----------------------|------------------------------|--------------------|
| Unit / Group / Module / Article        | Topics                                        | Reference Books                                                     | No of Lecture Planned | Content Delivery Technique   | Remarks / Comments |
| Unit II: Methods in Physical Geography | 7.Use of minor survey Instruments: distometer | <a href="https://www.slideshare.net">https://www.slideshare.net</a> | 2                     | Distometer and demonstration |                    |
|                                        |                                               | Total                                                               | 15                    |                              |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

| Planned                                |                                                                                                     |                                                                                                                                                                                             |                       | After Implementation             |                    |
|----------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|--------------------|
| Unit / Group / Module / Article        | Topics                                                                                              | Reference Books                                                                                                                                                                             | No of Lecture Planned | Content Delivery Technique       | Remarks / Comments |
| Unit II: Methods in Physical Geography | 7a. Application of minor survey instruments in Physical Geography study Brunton Compass, distometer | <a href="https://www.jove.com/v/10086/brunton-compass-strike-and-dip-measurement-of-rock-layers">https://www.jove.com/v/10086/brunton-compass-strike-and-dip-measurement-of-rock-layers</a> | 1                     | Chalk and Talk                   |                    |
|                                        | 7b. Use of minor survey instruments: Smartphone levelling                                           | <a href="https://d-nb.info/1145331696/34">https://d-nb.info/1145331696/34</a>                                                                                                               | 3                     | Field survey and computation     |                    |
|                                        | 8. Textural analysis of grains using sieves                                                         | 1. Practical Geography: A Systematic Approach by Ashis Sakar                                                                                                                                | 4                     | Field survey and computation     |                    |
|                                        | 9a. Mapping areal extraction of flooded areas from satellite images models                          | 1. Practical Geography: A Systematic Approach by Ashis Sakar<br>2. Advanced Practical Geography by Pijushkanti Saha and Partha Basu                                                         | 3                     | Hands - on - Training & Practice |                    |
|                                        | 9b. Mapping areal extraction                                                                        |                                                                                                                                                                                             | 2                     | Hands - on - Training &          |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

| Planned                         |                                                                                                                                |                 |                       | After Implementation             |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|----------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                         | Reference Books | No of Lecture Planned | Content Delivery Technique       | Remarks / Comments |
|                                 | of flooded areas from digital elevation models                                                                                 |                 |                       | Practice                         |                    |
|                                 | 10a. Mapping areal and linear extents of riverbank and coastline shift from Survey of India 1:50kmaps and/ or satellite images |                 | 5                     | Hands - on - Training & Practice |                    |
|                                 |                                                                                                                                | Total           | 18                    |                                  |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY

| Planned                         |                                                                                |                                                                                                                                                       |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                         | Reference Books                                                                                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 3<br>TOPIC NO 11                | Dominant and distinctive functions- Basic concept                              | Statistical Methods in Geographical Studies by A. Mahmood<br><br>Practical Geography by A. Sarkar<br><br>Elements of Practical Geography by R.L.Singh | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about theory                    |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about calculation               |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about diagram and applicability |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY**

| Planned                            |                                                                                                  |                                                                                                                                                                   |                          |                               |                       |
|------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                           | Reference Books                                                                                                                                                   | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 3<br>TOPIC 12                      | Ternary diagram<br>– Basic concept                                                               | Statistical Methods in<br>Geographical Studies by A.<br>Mahmood<br><br>Practical Geography by A.<br>Sarkar<br><br>Elements of Practical<br>Geography by R.L.Singh | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational 3<br>TOPIC<br>12 patterns –<br>fundamental<br>concept |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational<br>patterns-<br>calculation                           |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational<br>patterns-<br>Diagram and<br>applicability          |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
|                                    |                                                                                                  |                                                                                                                                                                   |                          |                               |                       |
| 3                                  | Accessibility<br>Map- Basic                                                                      | Statistical Methods in<br>Geographical Studies by A.                                                                                                              | 1                        | Chalk and Talk                |                       |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY**

| Planned                         |                                  |                                                                                                                                               |                       |                            |                    |
|---------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                           | Reference Books                                                                                                                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 3<br>TOPIC 13                   | concept                          | Mahmood                                                                                                                                       |                       |                            |                    |
|                                 | Accessibility Map- types         | Practical Geography by A. Sarkar                                                                                                              | 1                     | Chalk and Talk             |                    |
|                                 | Accessibility Map- preparation   | Elements of Practical Geography by R.L.Singh                                                                                                  | 2                     | Chalk and Talk             |                    |
|                                 | Accessibility Map- applicability | Statistical Methods in Geographical Studies by A. Mahmood<br>Practical Geography by A. Sarkar<br>Elements of Practical Geography by R.L.Singh | 1                     | Chalk and Talk             |                    |
| 3<br>TOPIC 14                   | Basic concept of Flowchart       | Statistical Methods in Geographical Studies by A. Mahmood                                                                                     | 1                     | Chalk and Talk             |                    |
|                                 | Preparation of Flowchart using   | Practical Geography by A. Sarkar                                                                                                              | 2                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY**

---

| Planned                         |                                                                   |                                              |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------------|----------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                            | Reference Books                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | transportation data- calculation                                  | Elements of Practical Geography by R.L.Singh |                       |                            |                    |
|                                 | Preparation of Flowchart using transportation data- applicability |                                              | 2                     | Chalk and Talk             |                    |
|                                 |                                                                   | TOTAL                                        | 18                    |                            |                    |

This theory paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti Das, Assistant Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography**

| Planned                         |                                              |                                                  |                       |                            |                    |
|---------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                       | Reference Books                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| UNIT 1<br>Concepts in Geography | Discussion on Nature of Geography            | The nature of Geography by R. Hartshorne         | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Scope of Geography             | The Scope of Geography by R. Murphey             | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Man – environment relationship | Evolution of Geographical Thought by M. Husain   | 1                     | Chalk and Talk             |                    |
|                                 | Discussion on Determinism                    | Fundamentals of Geographical Thought by Adhikari | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Possibilism                    | Geographical Thought by Dikshit                  | 2                     | Chalk and Talk             |                    |
|                                 |                                              | Total                                            | 9                     |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th**

| Planned                                              |                                                                              |                                                                                       |                       |                            |                    |
|------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                      | Topics                                                                       | Reference Books                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II: Regional Geography of India and West Bengal | Concept of Regional classification                                           | India: A Comprehensive Geography by D.R Khullar<br><br>Geography of India by S. Singh | 1                     | Chalk and Talk             |                    |
|                                                      | Significance of regional classification                                      |                                                                                       | 1                     |                            |                    |
|                                                      | Regional classification of India (after R. L. Singh)                         |                                                                                       | 2                     |                            |                    |
|                                                      | Concepts of Physiography, climate, soil and vegetation in geographical terms |                                                                                       | 4                     |                            |                    |
|                                                      | Physiography of India and West Bengal                                        |                                                                                       | 1                     |                            |                    |
|                                                      | Climate of India and West Bengal                                             |                                                                                       | 1                     |                            |                    |
|                                                      | Soil of India and West Bengal                                                |                                                                                       | 1                     |                            |                    |
|                                                      | Natural vegetation of India and West Bengal                                  |                                                                                       | 1                     |                            |                    |
|                                                      | Significance of population distribution and its relation to                  |                                                                                       | 1                     |                            |                    |
|                                                      |                                                                              |                                                                                       |                       |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                         |                                                                       |                 |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | urbanization                                                          |                 |                       |                            |                    |
|                                 | Causes and impact of population distribution of India and West Bengal |                 | 2                     |                            |                    |
|                                 | Causes and impact urbanisation of India and West Bengal               |                 | 2                     |                            |                    |
|                                 |                                                                       | Total           | 17                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                                             |                                                                                |                                                                                     |                       |                            |                    |
|-----------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                     | Topics                                                                         | Reference Books                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit III:<br>Contemporary<br>Geographical<br>Issues | Concept of Climate Change and its impact                                       | Ecology and Environment by P.D. Sharma<br>Environmental Geography by Savindra Singh | 2                     | Chalk and Talk             |                    |
|                                                     | Climate Mitigation Strategies                                                  |                                                                                     | 1                     |                            |                    |
|                                                     | Definition and Types of Hazard and Disaster                                    |                                                                                     | 1                     |                            |                    |
|                                                     | Classification of Hazard and Disaster; Differences between Hazard and Disaster |                                                                                     | 2                     |                            |                    |
|                                                     | Deforestation: Causes, consequences and afforestation                          |                                                                                     | 1                     |                            |                    |
|                                                     | Soil Erosion: Types, factors, process, consequences and conservation           |                                                                                     | 1                     |                            |                    |
|                                                     | Loss of biodiversity: Factors and conservation                                 |                                                                                     | 1                     |                            |                    |
|                                                     | Natural vegetation of India and West Bengal                                    |                                                                                     | 1                     |                            |                    |
|                                                     |                                                                                |                                                                                     |                       |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                         |                                                                          |                 |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                   | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Significance of population distribution and its relation to urbanization |                 | 1                     |                            |                    |
|                                 | Causes and impact of population distribution of India and West Bengal    |                 | 2                     |                            |                    |
|                                 | Causes and impact urbanisation of India and West Bengal                  |                 | 2                     |                            |                    |
|                                 |                                                                          | Total           | 17                    |                            |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography/2Credits**

| Planned                                      |                              |                                                                                                                                      |                       |                            |                    |
|----------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article              | Topics                       | Reference Books                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit III<br>Contemporary Geographical Issues | Migration: Concept and types | 1.Economic Development by M.P Todaro; pub: Pearson Publication                                                                       | 1                     | Chalk and talk             |                    |
|                                              | Migration: Causes            |                                                                                                                                      | 1                     | Chalk and talk             |                    |
|                                              | Migration: Effects           | 2.An Introduction to Development and Regional Planning with special reference to India by Jayasri Ray Chaudhuri; pub: Orient Longman | 1                     | Chalk and talk             |                    |
|                                              | Displacement: Causes         |                                                                                                                                      | 1                     | Chalk and talk             |                    |
|                                              | Displacement: Consequences   |                                                                                                                                      | 1                     | Chalk and talk             |                    |
| Unit IV<br>Basics of Maps and Scales         | Maps: types                  | 1.Elements of Practical Geography by R.L. Singh                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Maps: Elements               |                                                                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Scales: concepts and types   |                                                                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Scales: applications         | 2. Practical Geography: A Systematic Approach by Ashis Sarkar                                                                        | 1                     | Chalk and talk             |                    |
|                                              |                              | Total                                                                                                                                | 12                    |                            |                    |

# **LESSON PLAN**

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography/2Credits**

---

**This theory paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC**

# LESSON PLAN

Department Name: Geography

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOD-IDC-1/2/3-PR-Introduction to Geography Lab

| Planned                         |                                                               |                                                                                                                                                                                      |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                        | Reference Books                                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 1                         | Discussion on the basic concept of Rainfall-temperature graph | Practical Geography by A. Sarkar,<br>Maps and Diagrams by Monkhouse,<br>Elements of Practical Geography by R.L. Singh,<br>Statistical Methods in Geographical Studies by A. Mahmood. | 1                     | Chalk and Talk             |                    |
|                                 | Calculation                                                   |                                                                                                                                                                                      | 1                     | Chalk and Talk             |                    |
|                                 | Diagram                                                       |                                                                                                                                                                                      | 2                     | Chalk and Talk             |                    |
|                                 | Interpretation                                                |                                                                                                                                                                                      | 2                     | Chalk and Talk             |                    |
|                                 |                                                               | Total                                                                                                                                                                                | 6                     |                            |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: GEOD-IDC-1/2/3-Pr-Introduction to Geography/2 Credits

| Planned                         |                                                                 |                                                               |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                          | Reference Books                                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Bar Diagram                     | Introduction: Concept and types                                 | 1.Elements of Practical Geography by R.L. Singh               | 1                     |                            |                    |
|                                 | Calculation and representation                                  |                                                               | 1                     |                            |                    |
|                                 | Selection of state wise crop data and its representation on map | 2. Practical Geography: A Systematic Approach by Ashis Sarkar | 2                     |                            |                    |
|                                 | Analysis and interpretation                                     |                                                               | 1                     |                            |                    |
|                                 |                                                                 | Total                                                         | 05                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography - Lab & GEOD-IDC-1/2/3 - P

| Planned                         |                                                                                                        |                                                                                                     |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                 | Reference Books                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| No. 4                           | Basic concept and significance Land use/occupational structure                                         | Practical Geography:<br>A Systematic Approach Publisher<br>Ashis Sarkar<br>Orient Blackswan Pvt Ltd | 1                     |                            |                    |
|                                 | Principle and methodology of pie graph                                                                 |                                                                                                     | 1                     |                            |                    |
|                                 | Computation Table and drawing stages of pie graph using Land use/occupational structure of West Bengal |                                                                                                     | 1                     |                            |                    |
|                                 | Construction of Proportional pie graph                                                                 |                                                                                                     | 2                     |                            |                    |
|                                 | Interpretation of diagram                                                                              |                                                                                                     | 1                     |                            |                    |
|                                 |                                                                                                        |                                                                                                     |                       |                            |                    |
|                                 |                                                                                                        | Total                                                                                               | 6                     |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Introduction to Geography - Lab & GEOD-IDC-1/2/3 - P**

| Planned                         |                                            |                 |                       |                            |                    |
|---------------------------------|--------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                     | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| No. 4                           | Concept and significance population growth | No. 4           | 1                     |                            |                    |
|                                 | Geographical concept of line graph         |                 | 1                     |                            |                    |
|                                 | Data used in drawing line graph            |                 | 1                     |                            |                    |
|                                 | Population growth of India by line graph   |                 | 2                     |                            |                    |
|                                 | Interpretation of diagram                  |                 | 1                     |                            |                    |
|                                 |                                            | Total           | 6                     |                            |                    |

This practical paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

**SEMESTER 3 (MAJOR & MINOR)**  
**CCF SYLLABUS**

## LESSON PLAN

**Department Name: Dr. Raj Kumar Bhattacharya**

**Name of Faculty: Geography**

**Paper Name & Code: Geotectonics GEOG-H-CC03-3-Th**

| Planned                                  |                                                                                                         |                                                                                                                                                               |                             |                                  |                       |
|------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                                                                  | Reference Books                                                                                                                                               | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 1a.Relative<br>dating of rocks                                                                          | 1.Structural Geology by H, Fossen<br>2.Fundamentals of Historical Geology and<br>Stratigraphy of India by Ravindra Kumar (New<br>Age International Publisher) | 2                           | Chalk and<br>talk                |                       |
|                                          | 1b. Absolute<br>dating of rocks                                                                         |                                                                                                                                                               | 2                           | Chalk and<br>talk                |                       |
|                                          | 2a. Basic<br>concept of the<br>geological time<br>scale                                                 |                                                                                                                                                               | 2                           | Chalk and<br>talk                |                       |
|                                          | 2b. The<br>geological time<br>scale with<br>special<br>reference to the<br>events of the<br>Pleistocene |                                                                                                                                                               | 2                           | Chalk and<br>talk                |                       |

## LESSON PLAN

**Department Name: Dr. Raj Kumar Bhattacharya**

**Name of Faculty: Geography**

**Paper Name & Code: Geotectonics GEOG-H-CC03-3-Th**

| Planned                                  |                                                                                   |                                                                                                    |                             |                                  |                       |
|------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                                            | Reference Books                                                                                    | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 3a. Formation of the Earth                                                        | 1.Fundamentals of Geophysics by William Lowrie<br>2. Introducing Physical Geography by A. Strahler | 1                           | Chalk and talk                   |                       |
|                                          | 3b. Structural differentiation of the Earth                                       |                                                                                                    | 1                           | Chalk and talk                   |                       |
|                                          | 7a. Major relief features of the ocean floor: Characteristics                     | 1.Oceanography by Savindra Singh<br>2.Oceanography For Geographers by M. Vatal, R.C. Sharma        | 2                           | Chalk and talk                   |                       |
|                                          | 7b. Major relief features of the ocean floor: Origin according to Plate Tectonics |                                                                                                    | 3                           | Chalk and talk                   |                       |

## LESSON PLAN

**Department Name: Dr. Raj Kumar Bhattacharya**

**Name of Faculty: Geography**

**Paper Name & Code: Geotectonics GEOG-H-CC03-3-Th**

| Planned                         |                                                                                                   |                                                                                                                                      |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                            | Reference Books                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 10a. Significance of morphometric indices of the tectonic activity                                | 1. Advanced Practical Geography by Pijishkanti Saha and Partha Basu<br>2. Practical Geography: A Systematic Approach by Ashis Sarkar | 1                     | Chalk and talk             |                    |
|                                 | 10b. Basin asymmetry factor, transverse topographic symmetry factor, and mountain front sinuosity |                                                                                                                                      | 3                     | Chalk and talk             |                    |
|                                 |                                                                                                   | Total                                                                                                                                | 21                    |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H- CC 03-3-TH- GEOTECTONICS**

| Planned                         |                                      |                                                                                       |                       |                            |                    |
|---------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                               | Reference Books                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4                               | Basic concept of Isostasy            | Tectonic Geomorphology by Burbank,<br>Essentials of Geology by Lutgens, Tarbuck, Tasa | 1                     | Chalk & talk               |                    |
|                                 | Model of Airy and its applicability  |                                                                                       | 2                     | Chalk & talk               |                    |
|                                 | Model of Pratt and its applicability |                                                                                       | 2                     | Chalk & talk               |                    |
| 5                               | Basic concept of Plate Tectonics     | Plate Tectonics by Firsch,                                                            | 2                     | Chalk & talk               |                    |
|                                 | Processes at Plate margins           | Global Tectonics by Kearey,                                                           | 2                     | Chalk & talk               |                    |
|                                 | Landforms at Plate margins           | A Brief History of Earth by Knoll,                                                    | 2                     | Chalk & talk               |                    |
|                                 | Discussion about Hotspots            |                                                                                       | 1                     | Chalk & talk               |                    |
| 6                               | Genetic classification of mountains  | A Brief History of Earth by Knoll,<br>Introducing Physical Geography by Strahler,     | 2                     | Chalk & talk               |                    |
|                                 | Types of volcanic eruptions          | Global Geomorphology by Summerfield                                                   | 2                     | Chalk & talk               |                    |
| 8                               | Formation of                         | Structural Geology by                                                                 | 2                     | Chalk & talk               |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H- CC 03-3-TH- GEOTECTONICS**

| Planned                         |                          |                                           |                       |                            |                    |
|---------------------------------|--------------------------|-------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                   | Reference Books                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Folds                    | Billings,<br>Structural Geology by Fossen |                       |                            |                    |
| 8                               | Classification of Folds  | Same as above                             | 2                     | Chalk & talk               |                    |
| 9                               | Formation of Faults      | Structural Geology by<br>Billings,        | 2                     | Chalk & talk               |                    |
|                                 | Classification of Faults | Structural Geology by Fossen              | 2                     | Chalk & talk               |                    |
|                                 |                          | TOTAL                                     | 24                    |                            |                    |

This theory paper is shared by Pubali Ghosh, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC03-3-TH-GEOTECTONICS**

| Planned                               |                                                                                        |                                                                                                                                                                             |                          |                               |                       |
|---------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics                                                                                 | Reference Books                                                                                                                                                             | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 1                                     | Concept of Dip<br>and Strike                                                           | Advanced Practical<br>Geography by P. Basu,<br><br>Practical Geography by A.<br>Sarkar.                                                                                     | 1                        | Chalk & Talk                  |                       |
|                                       | Basic concept<br>about<br>Clinometer                                                   |                                                                                                                                                                             | 1                        | Chalk & Talk                  |                       |
|                                       | Measurement of<br>dip and strike<br>by Clinometer                                      |                                                                                                                                                                             | 3                        | Chalk & Talk                  |                       |
| 2                                     | Basic concept<br>about<br>identification of<br>rocks and<br>minerals                   | The Illustrated Guide to<br>Rocks and Minerals by<br>Farndon,<br><br>Smithsonian Handbooks:<br>Rocks and Minerals by<br>Pillent,<br><br>Practical Geography by A.<br>Sarkar | 1                        | Chalk & Talk                  |                       |
|                                       | Megascopic<br>identification of<br>mineral samples<br>as prescribed in<br>the syllabus |                                                                                                                                                                             | 2                        | Chalk & Talk                  |                       |
|                                       | Megascopic<br>identification of<br>rock samples as                                     |                                                                                                                                                                             | 3                        | Chalk & Talk                  |                       |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC03-3-TH-GEOTECTONICS**

---

| Planned                               |                               |                 |                          |                               |                       |
|---------------------------------------|-------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics                        | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                       | prescribed in the<br>syllabus |                 |                          |                               |                       |
|                                       |                               | TOTAL           | 11                       |                               |                       |

## LESSON PLAN

**Department Name: Dr. Raj Kumar Bhattacharya**

**Name of Faculty: Geography**

**Paper Name & Code: Geotectonics Lab & GEOG-H-CC-03-3-P**

| Planned                         |                                                                                                                   |                                                                                                                                            |                       |                                       |                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                            | Reference Books                                                                                                                            | No of Lecture Planned | Content Delivery Technique            | Remarks / Comments |
|                                 | 3a. Analysis of tectonic activity from Survey of India topographical maps: Basin asymmetry factor                 | 1. Practical Geography: A Systematic Approach by A. Sarkar<br>2. Practical Geography - A Modern Approach by S. Mukhopadhyay and M. Bardhan | 2                     | Practical work with Topographical Map |                    |
|                                 | 3b. Analysis of tectonic activity from Survey of India topographical maps: Transverse topographic symmetry factor |                                                                                                                                            | 2                     | Practical work with Topographical Map |                    |
|                                 | 4a. Basic concept of Geological map and its different types                                                       |                                                                                                                                            | 2                     | Chalk and Talk                        |                    |

## LESSON PLAN

**Department Name: Dr. Raj Kumar Bhattacharya**

**Name of Faculty: Geography**

**Paper Name & Code: Geotectonics Lab & GEOG-H-CC-03-3-P**

| Planned                         |                                                 |                 |                       |                                    |                    |
|---------------------------------|-------------------------------------------------|-----------------|-----------------------|------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                          | Reference Books | No of Lecture Planned | Content Delivery Technique         | Remarks / Comments |
|                                 | 4b.<br>Interpretation of uniclinal structure    |                 | 3                     | Practical work with Geological Map |                    |
|                                 | 4c. Interpretation of folds structure           |                 | 3                     | Practical work with Geological Map |                    |
|                                 | 4d.<br>Interpretation of unconformity structure |                 | 4                     | Practical work with Geological Map |                    |
|                                 | 4e.<br>Interpretation of intrusions structure   |                 | 3                     | Practical work with Geological Map |                    |
|                                 |                                                 | Total           | 19                    |                                    |                    |

This practical paper is shared by Pubali Ghosh, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Economic Geography- GEOG-H-CC04/ MD-CC03TH**

| Planned                         |                                                                  |                                                    |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------|----------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                           | Reference Books                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-1                          | 1.a) Economic Geography: Scope                                   | Economic Geography: A study of resources by P. Roy | 2                     | Chalk and Talk             |                    |
|                                 | 1.b) Economic Geography: approach                                |                                                    | 2                     | Chalk and Talk             |                    |
| Unit-II                         | 3. a) Classification of economic activities: Primary             | Economic Geography by Dr. Y.I Singh                | 1                     | Chalk and Talk             |                    |
|                                 | b)Classification of economic activities: Secondary and Tertiary  | Economic Geography by K. Siddhartha                | 2                     | Chalk and Talk             |                    |
|                                 | c) Classification of economic activities: Quaternary and quinary | Economic Geography by H.M Saxena                   |                       |                            |                    |
|                                 |                                                                  |                                                    | 1                     |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Economic Geography- GEOG-H-CC04/ MD-CC03TH**

| Planned                         |                                                                    |                                                                                        |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                             | Reference Books                                                                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 4. Location of economic activities: Agriculture (after Von Thunen) | 1. Economic and Social geography by R. Knowles and J. Wareing.                         | 3                     | Chalk and Talk             |                    |
|                                 | 4. Location of economic activities: Industry (after Weber)         | 2. An Introduction to Regional Planning Concepts, Theory and Practice by John Glasson. | 3                     |                            |                    |
|                                 | 5. Primary activities: Agriculture                                 | Economic Geography: A study of resources by P. Roy                                     | 2                     | Chalk and Talk             |                    |
|                                 | 5. Primary activities: Forestry & Fishing                          | Economic Geography by Dr. Y.I Singh                                                    | 2                     |                            |                    |
|                                 | 5. Primary activities: Mining                                      | Economic Geography by H.M Saxena                                                       | 2                     |                            |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: Economic Geography- GEOG-H-CC04/ MD-CC03TH

| Planned                                  |                                                         |                                                                                                                                                    |                             |                                  |                       |
|------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                  | Reference Books                                                                                                                                    | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 10. Emergence of<br>economic blocs (Post<br>WW-II)      | <a href="http://www.econstor.eu">http://www.econstor.eu</a>                                                                                        | 2                           | Chalk and Talk                   |                       |
|                                          | 10.Emergence of<br>BRICS: evolution and<br>significance | <a href="https://www.drishtiiias.com">https://www.drishtiiias.com</a><br><a href="http://cuts-international.org">http://cuts-international.org</a> | 2                           | Chalk and Talk                   |                       |
|                                          |                                                         | Total                                                                                                                                              | 24                          |                                  |                       |

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography & GEOG-H-CC04/Th**

| Planned                         |                                                             |                                                    |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------|----------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                      | Reference Books                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit 1: Concepts                | 2a.Acquaintance with various concepts in Economic geography | Economic Geography: A study of resources by P. Roy | 1                     | Chalk and talk             |                    |
|                                 | 2b. Concept of Goods and services                           | Economic Geography by Dr. Y.I Singh                | 2                     | Chalk and talk             |                    |
|                                 | 2c. Concept of production and Exchange and consumption      | Economic Geography by K. Siddhartha                | 2                     | Chalk and talk             |                    |
|                                 | 2d.Concept of economic man                                  | Economic Geography by H.M Saxena                   | 2                     | Chalk and talk             |                    |
|                                 |                                                             | Advanced Economic Geography by Dr. Alka Gautam     | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography & GEOG-H-CC04/Th**

| Planned                         |                                                       |                                                                                                                                                           |                       |                            |                    |
|---------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                | Reference Books                                                                                                                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II:<br>Economic Activities | 6a. Concept of Secondary activities                   | Economic Geography: A study of resources by P.Roy<br><br>Advanced Economic Geography by Dr.. Alka Gautam<br><br>International trade by Francis Cherunilam | 1                     | Chalk and talk             |                    |
|                                 | 6b. Classification of manufacturing industries        |                                                                                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | 6c. Concept and types of special economic zones       |                                                                                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | 6d. Concept of technology parks                       |                                                                                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | 7a. Concept and classification of Tertiary activities | Transport Geography by H.M Saxena<br><br>Advanced Economic Geography by Dr. Alka                                                                          | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography & GEOG-H-CC04/Th**

| Planned                                  |                                                            |                                                                                                                                                                                         |                             |                                  |                       |
|------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                     | Reference Books                                                                                                                                                                         | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          |                                                            | Gautam                                                                                                                                                                                  |                             |                                  |                       |
|                                          | 7b. Transport                                              | Geography of Transport Development in India by<br>B.C Vaidya                                                                                                                            | 2                           | Chalk and<br>talk                |                       |
|                                          | 7c. Trade and<br>services                                  | International trade by Francis Cherunilam                                                                                                                                               | 2                           | Chalk and<br>talk                |                       |
|                                          | 8a. Concept of<br>Economic<br>Globalisation                | <a href="https://www.un.org/en/development/desa/policy/cdp/cdp_background_papers/bp2000_1.pdf">https://www.un.org/en/development/desa/policy/cdp/cdp_background_papers/bp2000_1.pdf</a> | 1                           | Chalk and<br>talk                |                       |
|                                          | 8b. Contemporary<br>issues of<br>economic<br>globalization |                                                                                                                                                                                         | 2                           | Chalk and<br>talk                |                       |
|                                          | 9a. International<br>trade                                 | International trade by Francis Cherunilam                                                                                                                                               | 2                           | Chalk and<br>talk                |                       |

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography & GEOG-H-CC04/Th**

| Planned                                  |                                                      |                                                   |                             |                                  |                       |
|------------------------------------------|------------------------------------------------------|---------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                               | Reference Books                                   | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 9b. WTO:<br>Evolution,<br>structure and<br>functions | Advanced Economic Geography by Dr. Alka<br>Gautam | 2                           | Chalk and<br>talk                |                       |
|                                          |                                                      | Total                                             | 22                          |                                  |                       |

This theory paper is shared by Dr. Saswati Nayak, Associate Professor, and Prakriti Das, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography Lab & GEOG-H-CC04/P**

| Planned                         |                                                                  |                                                                                  |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                           | Reference Books                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a.Work participation rate: Definition, concept and significance | Maps and Diagrams: Their Compilation and Construction by Monkhouse and Wilkinson | 2                     | Chalk and Talk             |                    |
|                                 | 1b. Construction of gender-wise bar diagram showing WPR          |                                                                                  | 3                     | Chalk and Talk             |                    |
|                                 | 1c.Interpretation                                                |                                                                                  | 1                     | Chalk and Talk             |                    |
|                                 | 3a. Crop calender: Definition, concept and uses                  | Practical Geography: A Systematic Approach by A. Sarkar                          | 2                     | Chalk and Talk             |                    |
|                                 | 3b.Construction of Ergograph                                     |                                                                                  | 3                     | Chalk and Talk             |                    |
|                                 | 3c. Interpretation                                               |                                                                                  | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: Prakriti Das**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography Lab & GEOG-H-CC04/P**

---

| Planned                               |        |                 |                          |                               |                       |
|---------------------------------------|--------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                       |        | Total           | 12                       |                               |                       |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Saswati Nayak**

**Paper Name & Code: Economic Geography (GEOG-H-CC-04/MD-CC03-3/5-P)**

| Planned                                                                                                                                              |                                                                                         |                                                                                                                                       |                       |                            |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                                                                                                                      | Topics                                                                                  | Reference Books                                                                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Economic Geography Lab:<br>2. Construction and interpretation of proportional divided circles showing state-wise variation in occupational structure | 1.Calculation of proportional divided circles                                           | 1. Maps and diagrams: their compilation and construction by F.J. Monkhouse and H.R.Wilkinson.<br><br>2.Statistical Methods by N.G.Das | 1                     | Lecture using Laptop       |                    |
|                                                                                                                                                      | 2.Construction of proportional divided circles                                          |                                                                                                                                       | 1                     | Chalk and talk             |                    |
|                                                                                                                                                      | 3. Collection of state-wise data on occupational structure in India and its calculation |                                                                                                                                       | 2                     | Chalk and talk             |                    |
|                                                                                                                                                      | 4. Interpretation and analysis of the diagram represented                               |                                                                                                                                       | 1                     | Chalk and talk             |                    |
|                                                                                                                                                      | 5. Checking and completion of final sheet for Practical Lab book                        |                                                                                                                                       | 3                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Saswati Nayak**

**Paper Name & Code: Economic Geography (GEOG-H-CC-04/MD-CC03-3/5-P)**

| Planned                                                                        |                                                                                               |                                                                                                                                            |                       |                            |                    |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                                                | Topics                                                                                        | Reference Books                                                                                                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4. Time series analysis of industrial production of India using moving average | 1.Collection of industrial production data of India and introduction of Time series analysis. | 1. Statistical techniques by N.G Das.<br><br>2. Maps and diagrams: their compilation and construction by F.J. Monkhouse and H.R.Wilkinson. | 1                     | Lecture using Laptop       |                    |
|                                                                                | 2. Types of Time series analysis using moving average                                         |                                                                                                                                            | 2                     | Chalk and talk             |                    |
|                                                                                | 3. Calculation and representation of graph on time series analysis on the selected data       |                                                                                                                                            | 2                     | Chalk and talk             |                    |
|                                                                                | 4. Analysis of data and interpretation                                                        |                                                                                                                                            | 1                     | Chalk and talk             |                    |
|                                                                                | 5. Checking and prepare for the final sheet                                                   |                                                                                                                                            | 2                     |                            |                    |
|                                                                                |                                                                                               | Total                                                                                                                                      | 16                    |                            |                    |

# **LESSON PLAN**

**Department Name: Geography**

**Name of Faculty: Saswati Nayak**

**Paper Name & Code: Economic Geography (GEOG-H-CC-04/MD-CC03-3/5-P)**

---

This practical paper is shared by Dr. Saswati Nayak, Associate Professor, and Prakriti Das, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-SEC 02-3-TH-ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PLANNING

| Planned                                       |                                                                 |                                                                                  |                       |                            |                    |
|-----------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                          | Reference Books                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| <u>UNIT1</u><br><br>Conceptual framework<br>1 | Definition and scope of Environmental Impact Assessment (EIA)   | Environmental Impact by Gilpin,                                                  | 2                     | Chalk & Talk               |                    |
|                                               | Definition and scope of Environmental Management Planning (EMP) | Environmental Management Plans by Tinsley                                        | 2                     | Chalk & Talk               |                    |
| 2                                             | Legal and Policy Framework for Management-Air                   | Environmental Impact by Gilpin,<br><br>Environmental Management Plans by Tinsley | 1                     | Chalk & Talk               |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 02-3-TH-ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PLANNING**

| Planned                         |                                                                            |                                                                       |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                     | Reference Books                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Legal and Policy Framework for Management-Water                            | Environmental Impact Assessment Methodologies by Yerramill & Manickam | 1                     | Chalk & Talk               |                    |
| 2                               | Legal and Policy Framework for Management-Forest                           |                                                                       | 1                     | Chalk & Talk               |                    |
|                                 | Legal and Policy Framework for Management-Environment Protection Act (EPA) |                                                                       | 2                     | Chalk & Talk               |                    |
| 3                               | Structure of governance                                                    | Example of an EIA report- Bengaluru Metro Rail Project                | 2                     | Chalk & Talk               |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 02-3-TH-ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PLANNING**

| Planned                                    |                                     |                                                                                                                                                                                         |                       |                            |                    |
|--------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article            | Topics                              | Reference Books                                                                                                                                                                         | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                            | Implementation of strategies        | <a href="https://www.adb.org/sites/default/files/project-documents/53326/53326-001-ela-en.pdf">https://www.adb.org/sites/default/files/project-documents/53326/53326-001-ela-en.pdf</a> | 2                     | Chalk & Talk               |                    |
| <u>UNIT 2</u><br><u>Processes</u><br><br>4 | Environmental Appraisal: Concept    | Environmental Impact Assessment Methodologies by Yerramill & Manickam                                                                                                                   | 2                     | Chalk & Talk               |                    |
|                                            | Environmental Appraisal: Objectives |                                                                                                                                                                                         | 2                     | Chalk & Talk               |                    |
|                                            |                                     | TOTAL                                                                                                                                                                                   | 17                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code:

**Environmental Impact Assessment and Environmental Management Planning  
& GEOG-H-SEC02-3-Th**

| Planned                         |                                                                                      |                                                                                                                                                                                                                                                                                                                  |                       | After Implementation       |                    |
|---------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                               | Reference Books                                                                                                                                                                                                                                                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II: Processes              | 4a. Stages of conducting EIA: Scoping using Environmental Information System (EIS)   | <a href="https://www.iitr.ac.in/wfw/web_u_a_water_for_welfare/education/Teachers_Manual/Teacher_manual_master_EIA.pdf">https://www.iitr.ac.in/wfw/web_u_a_water_for_welfare/education/Teachers_Manual/Teacher_manual_master_EIA.pdf</a>                                                                          | 2                     | Chalk & Talk               |                    |
|                                 | 4b. Stages of conducting EIA: Screening using Environmental Information System (EIS) | <a href="https://www.iisd.org/learning/eia/eia-7-steps/">https://www.iisd.org/learning/eia/eia-7-steps/</a><br><a href="https://www.fao.org/4/V8350E/v8350e06.htm">https://www.fao.org/4/V8350E/v8350e06.htm</a>                                                                                                 | 2                     |                            |                    |
|                                 | 6a. Stages and principle of the preparation of inventory                             | <a href="https://www.slideshare.net/slideshow/basic-inventory-principles/25654896#3">https://www.slideshare.net/slideshow/basic-inventory-principles/25654896#3</a><br><a href="https://ebooks.inflibnet.ac.in/esp12/chapter/eia-methodology/">https://ebooks.inflibnet.ac.in/esp12/chapter/eia-methodology/</a> | 2                     | Chalk & Talk               |                    |
|                                 | 6b. Matrices of prepared inventory                                                   |                                                                                                                                                                                                                                                                                                                  | 2                     |                            |                    |
|                                 | 7a. Methodologies of EIA: Impact assessment                                          | <a href="https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000014ER/P000282/M027483/ET/1519194976Paper12_Module13_etext.pdf">https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000014ER/P000282/M027483/ET/1519194976Paper12_Module13_etext.pdf</a>                                          | 2                     | Chalk & Talk               |                    |
|                                 | 7b. Methodologies of EIA: Risk assessment                                            | <a href="https://wikis.ec.europa.eu/display/ExactExternalWiki/Environmental+impact+assessment+and+environmental+management+plan">https://wikis.ec.europa.eu/display/ExactExternalWiki/Environmental+impact+assessment+and+environmental+management+plan</a>                                                      | 2                     |                            |                    |
|                                 | 7c. Methodologies of EIA: Cost-benefit analysis                                      | <a href="https://gacbe.ac.in/pdf/ematerial/18MEC42C-U4.pdf">https://gacbe.ac.in/pdf/ematerial/18MEC42C-U4.pdf</a><br><a href="https://doi.org/10.1016/0195-9255(90)90006-L">https://doi.org/10.1016/0195-9255(90)90006-L</a>                                                                                     | 2                     | Chalk & Talk               |                    |
|                                 |                                                                                      | Total                                                                                                                                                                                                                                                                                                            | 14                    |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Saswati Nayak**

**Paper Name & Code: EIA and EMP (GEOG-H-SEC02-3 Th)**

| Planned                         |                                                             |                                                                                                                            |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                      | Reference Books                                                                                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit: III- Methods              | 8.a) Stakeholders prediction: local bodies                  | <a href="http://www.iied.org">http://www.iied.org</a>                                                                      | 2                     | Lecture using Laptop       |                    |
|                                 | 8.b) Stakeholders prediction: Citizens and relevant experts | <a href="http://www.researchgate.net">http://www.researchgate.net</a><br><a href="http://jstore.org">http://jstore.org</a> | 2                     | Chalk and talk             |                    |
|                                 | 9.a) Prediction scenarios and mitigation                    | <a href="http://www.researchgate.net">http://www.researchgate.net</a>                                                      | 2                     | Chalk and talk             |                    |
|                                 | 9.b) Assessing alternatives                                 |                                                                                                                            | 2                     | Chalk and talk             |                    |
|                                 | 10.a) Environmental Impact assessing                        |                                                                                                                            | 2                     | Chalk and talk             |                    |
|                                 | 10.b) Environmental Impact reporting                        |                                                                                                                            | 2                     | Lecture using Laptop       |                    |
|                                 |                                                             | Total                                                                                                                      | 08                    |                            |                    |

# **LESSON PLAN**

**Department Name: Geography**

**Name of Faculty: Saswati Nayak**

**Paper Name & Code: EIA and EMP (GEOG-H-SEC02-3 Th)**

---

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code:

**Environmental Impact Assessment and Environmental Management Planning  
& GEOG-H-SEC02-3-Th**

| Planned                         |                                                  |                                                                                                                                                                                                                                                        |                       | After Implementation       |                    |
|---------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                           | Reference Books                                                                                                                                                                                                                                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit III: Methods               | 11a. EI monitoring: Definition & concept         | <a href="https://egyankosh.ac.in/bitstream/123456789/9176/1/Unit-16.pdf">https://egyankosh.ac.in/bitstream/123456789/9176/1/Unit-16.pdf</a>                                                                                                            | 2                     | Chalk & Talk               |                    |
|                                 | b. EI monitoring: Significance                   |                                                                                                                                                                                                                                                        | 1                     |                            |                    |
|                                 | c. EI review & concept                           |                                                                                                                                                                                                                                                        | 1                     |                            |                    |
|                                 | d. EI review: merits & demerits                  |                                                                                                                                                                                                                                                        | 1                     |                            |                    |
|                                 | 12a. Environmental audit: Definition and concept | <a href="https://penpoin.com/environmental-audit/">https://penpoin.com/environmental-audit/</a><br><a href="https://www.egyankosh.ac.in/bitstream/123456789/86573/1/Unit-2.pdf">https://www.egyankosh.ac.in/bitstream/123456789/86573/1/Unit-2.pdf</a> | 2                     | Chalk & Talk               |                    |
|                                 | b. Relevance and process of Environmental audit  |                                                                                                                                                                                                                                                        | 2                     |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code:

**Environmental Impact Assessment and Environmental Management Planning  
& GEOG-H-SEC02-3-Th**

| Planned                         |                                                |                                                                                                                                                                                                                                                                                                                          |                       | After Implementation       |                    |
|---------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                         | Reference Books                                                                                                                                                                                                                                                                                                          | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 13a. Selecting a metro rail project from India | <a href="https://www.aiib.org/en/projects/details/2023/download/India/Final-EIA_Phase-II_14112020.pdf">https://www.aiib.org/en/projects/details/2023/download/India/Final-EIA_Phase-II_14112020.pdf</a>                                                                                                                  | 2                     | Chalk & Talk               |                    |
|                                 | b. EIA/EMP case study of a metro rail project  |                                                                                                                                                                                                                                                                                                                          | 2                     |                            |                    |
|                                 | 14a. Selection of a highway project            | <a href="https://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/highways-10_may.pdf">https://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/highways-10_may.pdf</a><br><a href="https://morth.nic.in/sites/default/files/NH_516E.pdf">https://morth.nic.in/sites/default/files/NH_516E.pdf</a> | 2                     | Chalk & Talk               |                    |
|                                 | b. EIA/EMP case study of highway project       |                                                                                                                                                                                                                                                                                                                          | 2                     |                            |                    |
|                                 |                                                | Total                                                                                                                                                                                                                                                                                                                    | 17                    |                            |                    |

This theory paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti Das, Assistant Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography**

| Planned                         |                                              |                                                  |                       |                            |                    |
|---------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                       | Reference Books                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| UNIT 1<br>Concepts in Geography | Discussion on Nature of Geography            | The nature of Geography by R. Hartshorne         | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Scope of Geography             | The Scope of Geography by R. Murphey             | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Man – environment relationship | Evolution of Geographical Thought by M. Husain   | 1                     | Chalk and Talk             |                    |
|                                 | Discussion on Determinism                    | Fundamentals of Geographical Thought by Adhikari | 2                     | Chalk and Talk             |                    |
|                                 | Discussion on Possibilism                    | Geographical Thought by Dikshit                  | 2                     | Chalk and Talk             |                    |
|                                 |                                              | Total                                            | 9                     |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th**

| Planned                                              |                                                                              |                                                                                       |                       |                            |                    |
|------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                      | Topics                                                                       | Reference Books                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II: Regional Geography of India and West Bengal | Concept of Regional classification                                           | India: A Comprehensive Geography by D.R Khullar<br><br>Geography of India by S. Singh | 1                     | Chalk and Talk             |                    |
|                                                      | Significance of regional classification                                      |                                                                                       | 1                     |                            |                    |
|                                                      | Regional classification of India (after R. L. Singh)                         |                                                                                       | 2                     |                            |                    |
|                                                      | Concepts of Physiography, climate, soil and vegetation in geographical terms |                                                                                       | 4                     |                            |                    |
|                                                      | Physiography of India and West Bengal                                        |                                                                                       | 1                     |                            |                    |
|                                                      | Climate of India and West Bengal                                             |                                                                                       | 1                     |                            |                    |
|                                                      | Soil of India and West Bengal                                                |                                                                                       | 1                     |                            |                    |
|                                                      | Natural vegetation of India and West Bengal                                  |                                                                                       | 1                     |                            |                    |
|                                                      | Significance of population distribution and its relation to                  |                                                                                       | 1                     |                            |                    |
|                                                      |                                                                              |                                                                                       |                       |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                            |                                                                             |                 |                          |                               |                       |
|------------------------------------|-----------------------------------------------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                      | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | urbanization                                                                |                 |                          |                               |                       |
|                                    | Causes and impact of<br>population distribution of<br>India and West Bengal |                 | 2                        |                               |                       |
|                                    | Causes and impact<br>urbanisation of India and<br>West Bengal               |                 | 2                        |                               |                       |
|                                    |                                                                             | Total           | 17                       |                               |                       |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                                             |                                                                                |                                                                                     |                       |                            |                    |
|-----------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                     | Topics                                                                         | Reference Books                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit III:<br>Contemporary<br>Geographical<br>Issues | Concept of Climate Change and its impact                                       | Ecology and Environment by P.D. Sharma<br>Environmental Geography by Savindra Singh | 2                     | Chalk and Talk             |                    |
|                                                     | Climate Mitigation Strategies                                                  |                                                                                     | 1                     |                            |                    |
|                                                     | Definition and Types of Hazard and Disaster                                    |                                                                                     | 1                     |                            |                    |
|                                                     | Classification of Hazard and Disaster; Differences between Hazard and Disaster |                                                                                     | 2                     |                            |                    |
|                                                     | Deforestation: Causes, consequences and afforestation                          |                                                                                     | 1                     |                            |                    |
|                                                     | Soil Erosion: Types, factors, process, consequences and conservation           |                                                                                     | 1                     |                            |                    |
|                                                     | Loss of biodiversity: Factors and conservation                                 |                                                                                     | 1                     |                            |                    |
|                                                     | Natural vegetation of India and West Bengal                                    |                                                                                     | 1                     |                            |                    |
|                                                     |                                                                                |                                                                                     |                       |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography & GEOD-IDC-1/2/3 - Th

| Planned                         |                                                                          |                 |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                   | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Significance of population distribution and its relation to urbanization |                 | 1                     |                            |                    |
|                                 | Causes and impact of population distribution of India and West Bengal    |                 | 2                     |                            |                    |
|                                 | Causes and impact urbanisation of India and West Bengal                  |                 | 2                     |                            |                    |
|                                 |                                                                          | Total           | 17                    |                            |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography/2Credits**

| Planned                                      |                              |                                                                                                                                      |                       |                            |                    |
|----------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article              | Topics                       | Reference Books                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit III<br>Contemporary Geographical Issues | Migration: Concept and types | 1.Economic Development by M.P Todaro; pub: Pearson Publication                                                                       | 1                     | Chalk and talk             |                    |
|                                              | Migration: Causes            |                                                                                                                                      | 1                     | Chalk and talk             |                    |
|                                              | Migration: Effects           | 2.An Introduction to Development and Regional Planning with special reference to India by Jayasri Ray Chaudhuri; pub: Orient Longman | 1                     | Chalk and talk             |                    |
|                                              | Displacement: Causes         |                                                                                                                                      | 1                     | Chalk and talk             |                    |
|                                              | Displacement: Consequences   |                                                                                                                                      | 1                     | Chalk and talk             |                    |
| Unit IV<br>Basics of Maps and Scales         | Maps: types                  | 1.Elements of Practical Geography by R.L. Singh                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Maps: Elements               |                                                                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Scales: concepts and types   |                                                                                                                                      | 2                     | Chalk and talk             |                    |
|                                              | Scales: applications         | 2. Practical Geography: A Systematic Approach by Ashis Sarkar                                                                        | 1                     | Chalk and talk             |                    |
|                                              |                              | Total                                                                                                                                | 12                    |                            |                    |

# **LESSON PLAN**

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOD-IDC-1/2/3-TH-Introduction to Geography/2Credits**

---

**This theory paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC**

# LESSON PLAN

Department Name: Geography

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOD-IDC-1/2/3-PR-Introduction to Geography Lab

| Planned                         |                                                               |                                                                                                                                                                                      |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                        | Reference Books                                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 1                         | Discussion on the basic concept of Rainfall-temperature graph | Practical Geography by A. Sarkar,<br>Maps and Diagrams by Monkhouse,<br>Elements of Practical Geography by R.L. Singh,<br>Statistical Methods in Geographical Studies by A. Mahmood. | 1                     | Chalk and Talk             |                    |
|                                 | Calculation                                                   |                                                                                                                                                                                      | 1                     | Chalk and Talk             |                    |
|                                 | Diagram                                                       |                                                                                                                                                                                      | 2                     | Chalk and Talk             |                    |
|                                 | Interpretation                                                |                                                                                                                                                                                      | 2                     | Chalk and Talk             |                    |
|                                 |                                                               | Total                                                                                                                                                                                | 6                     |                            |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: GEOD-IDC-1/2/3-Pr-Introduction to Geography/2 Credits

| Planned                         |                                                                 |                                                               |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                          | Reference Books                                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Bar Diagram                     | Introduction: Concept and types                                 | 1.Elements of Practical Geography by R.L. Singh               | 1                     |                            |                    |
|                                 | Calculation and representation                                  |                                                               | 1                     |                            |                    |
|                                 | Selection of state wise crop data and its representation on map | 2. Practical Geography: A Systematic Approach by Ashis Sarkar | 2                     |                            |                    |
|                                 | Analysis and interpretation                                     |                                                               | 1                     |                            |                    |
|                                 |                                                                 | Total                                                         | 05                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Introduction to Geography - Lab & GEOD-IDC-1/2/3 - P

| Planned                         |                                                                                                        |                                                                                                     |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                 | Reference Books                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| No. 4                           | Basic concept and significance Land use/occupational structure                                         | Practical Geography:<br>A Systematic Approach Publisher<br>Ashis Sarkar<br>Orient Blackswan Pvt Ltd | 1                     |                            |                    |
|                                 | Principle and methodology of pie graph                                                                 |                                                                                                     | 1                     |                            |                    |
|                                 | Computation Table and drawing stages of pie graph using Land use/occupational structure of West Bengal |                                                                                                     | 1                     |                            |                    |
|                                 | Construction of Proportional pie graph                                                                 |                                                                                                     | 2                     |                            |                    |
|                                 | Interpretation of diagram                                                                              |                                                                                                     | 1                     |                            |                    |
|                                 |                                                                                                        | Total                                                                                               | 6                     |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Introduction to Geography - Lab & GEOD-IDC-1/2/3 - P**

| Planned                         |                                            |                 |                       |                            |                    |
|---------------------------------|--------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                     | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| No. 4                           | Concept and significance population growth | No. 4           | 1                     |                            |                    |
|                                 | Geographical concept of line graph         |                 | 1                     |                            |                    |
|                                 | Data used in drawing line graph            |                 | 1                     |                            |                    |
|                                 | Population growth of India by line graph   |                 | 2                     |                            |                    |
|                                 | Interpretation of diagram                  |                 | 1                     |                            |                    |
|                                 |                                            | Total           | 6                     |                            |                    |

This practical paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                         |                                                             |                                                    |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------|----------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                      | Reference Books                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit 1: Concepts                | 1.a) Economic Geography: Scope                              | Economic Geography: A study of resources by P. Roy | 2                     | Chalk and talk             |                    |
|                                 | 1.b) Economic Geography: approach                           |                                                    | 2                     | Chalk and talk             |                    |
|                                 | 2a)Acquaintance with various concepts in Economic geography | Economic Geography by Dr. Y.I Singh                | 1                     | Chalk and talk             |                    |
|                                 | 2b. Concept of Goods and services                           | Economic Geography by K. Siddhartha                |                       |                            |                    |
|                                 | 2c. Concept of production and Exchange and consumption      | Economic Geography by H.M Saxena                   | 2                     | Chalk and talk             |                    |

**Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)**

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                         |                                                                          |                                                                                               |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                   | Reference Books                                                                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II:<br>Economic Activities | 2d) Concept of economic man                                              | Advanced Economic Geography by Dr. Alka Gautam                                                | 1                     | Chalk and talk             |                    |
|                                 | 3.a)<br>Classification of economic activities:<br>Primary                | Economic Geography: A study of resources by P. Roy<br><br>Economic Geography by Dr. Y.I Singh | 2                     | Chalk and talk             |                    |
|                                 | 3.b)<br>Classification of economic activities:<br>Secondary and tertiary | Advanced Economic Geography by Dr. Alka Gautam                                                | 2                     |                            |                    |

**Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)**

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                                  |                                                                    |                                                                                                                                                    |                             |                                  |                       |
|------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                             | Reference Books                                                                                                                                    | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 3.c) Economic activities: quaternary and quinary                   | Economic Geography by Dr. Y.I Singh<br><br>Advanced Economic Geography by Dr. Alka Gautam                                                          | 2                           | Chalk and talk                   |                       |
|                                          | 4. Location of economic activities: Agriculture (after Von Thunen) | 1.Regional Planning in India by M. Chand and V.K. Puri.<br><br>2 Regional Planning: Concepts, Techniques, Policies and Case Studies by R.P. Misra. | 3                           | Chalk and talk                   |                       |

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                                  |                                                            |                                                                                                                                                     |                             |                                  |                       |
|------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                     | Reference Books                                                                                                                                     | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 4. Location of economic activities: Industry (after Weber) | 3. Economic and Social Geography by Knowles and J.Wareing                                                                                           | 3                           | Chalk and talk                   |                       |
|                                          | 5.a) Primary activities: Agriculture                       | Economic Geography: A study of resources by P. Roy<br><br>Economic Geography by Dr. Y.I Singh<br><br>Advanced Economic Geography by Dr. Alka Gautam | 2                           | Chalk and talk                   |                       |
|                                          | 5.b) Primary activities: Forestry                          |                                                                                                                                                     | 2                           | Chalk and talk                   |                       |
|                                          | 5.c) Primary activities: Fishing                           |                                                                                                                                                     | 1                           | Chalk and talk                   |                       |

**Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)**

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                                  |                                                 |                                                   |                             |                                  |                       |
|------------------------------------------|-------------------------------------------------|---------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                          | Reference Books                                   | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 5.d) Primary activities:<br>Mining              |                                                   | 1                           |                                  |                       |
|                                          | 6a. Concept of Secondary activities             | Economic Geography: A study of resources by P.Roy | 1                           | Chalk and talk                   |                       |
|                                          | 6b. Classification of manufacturing industries  |                                                   | 1                           | Chalk and talk                   |                       |
|                                          | 6c. Concept and types of special economic zones | International trade by Francis Cherunilam         | 1                           | Chalk and talk                   |                       |
|                                          | 6d. Concept of                                  |                                                   | 1                           | Chalk and talk                   |                       |

**Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)**

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                                  |                                                        |                                                                                                                                                                                         |                             |                                  |                       |
|------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                 | Reference Books                                                                                                                                                                         | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | technology parks                                       |                                                                                                                                                                                         |                             |                                  |                       |
|                                          | 7.a. Concept and classification of Tertiary activities | Transport Geography by H.M Saxena<br><br>Advanced Economic Geography by Dr. Alka Gautam                                                                                                 | 1                           | Chalk and talk                   |                       |
|                                          | 7b. Transport                                          | Geography of Transport Development in India by B.C Vaidya                                                                                                                               | 2                           | Chalk and talk                   |                       |
|                                          | 7c. Trade and services                                 | International trade by Francis Cherunilam                                                                                                                                               | 2                           | Chalk and talk                   |                       |
|                                          | 8a. Concept of Economic Globalisation                  | <a href="https://www.un.org/en/development/desa/policy/cdp/cdp_background_papers/bp2000_1.pdf">https://www.un.org/en/development/desa/policy/cdp/cdp_background_papers/bp2000_1.pdf</a> | 1                           | Chalk and talk                   |                       |
|                                          | 8b.                                                    |                                                                                                                                                                                         | 2                           | Chalk and                        |                       |

**Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)**

## LESSON PLAN

Department Name: Dr. Saswati Nayak

Name of Faculty: Geography

Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)

| Planned                         |                                               |                                                             |                       |                            |                    |
|---------------------------------|-----------------------------------------------|-------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                        | Reference Books                                             | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Contemporary issues of economic globalization |                                                             |                       | talk                       |                    |
|                                 | 9a. International trade                       | International trade by Francis Cherunilam                   | 2                     | Chalk and talk             |                    |
|                                 | 9b. WTO: Evolution, structure and functions   | Advanced Economic Geography by Dr. Alka Gautam              | 2                     | Chalk and talk             |                    |
|                                 | 10. Emergence of economic blocs (Post WW-II)  | <a href="http://www.econstor.eu">http://www.econstor.eu</a> | 2                     | Chalk and talk             |                    |

Subject Name/Code: Economic Geography (GEOG-H-CC04/MD-CC03-3/5 Th)

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography (GEOG-H-CC04/MD-cc-03-3/5 Th)**

| Planned                                  |                                                            |                                                                                                                                                  |                             |                                  |                       |
|------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                     | Reference Books                                                                                                                                  | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 10.Emergence of<br>BRICS:<br>evolution and<br>significance | <a href="https://www.drishtiias.com">https://www.drishtiias.com</a><br><a href="http://cuts-international.org">http://cuts-international.org</a> | 2                           | Chalk and<br>talk                |                       |
|                                          |                                                            | Total                                                                                                                                            | 45                          |                                  |                       |

This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Dept of Geography, VIC

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography Lab & GEOG-H-CC04/P**

| Planned                         |                                                                                            |                                                                                  |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                     | Reference Books                                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a. Work participation rate: Definition, concept and significance                          | Maps and Diagrams: Their Compilation and Construction by Monkhouse and Wilkinson | 2                     | Chalk and Talk             |                    |
|                                 | 1b. Construction of gender-wise bar diagram showing WPR                                    |                                                                                  | 3                     | Chalk and Talk             |                    |
|                                 | 1c. Interpretation                                                                         |                                                                                  | 1                     | Chalk and Talk             |                    |
|                                 | 2.a). Calculation of proportional divided circles                                          |                                                                                  | 2                     |                            |                    |
|                                 | 2.b) Construction of proportional divided circles                                          |                                                                                  | 1                     |                            |                    |
|                                 | 2.c). Collection of state-wise data on occupational structure in India and its calculation |                                                                                  | 2                     |                            |                    |
|                                 | 2.d) Interpretation and analysis of the diagram represented                                | Practical Geography: A Systematic Approach by A. Sarkar                          | 1                     |                            |                    |
|                                 | 2.e) Checking and completion of final sheet for Practical Lab book                         |                                                                                  | 2                     |                            |                    |
|                                 | 3a. Crop calender: Definition, concept and uses                                            |                                                                                  | 2                     | Chalk and Talk             |                    |
|                                 | 3b. Construction of Ergograph                                                              |                                                                                  | 3                     | Chalk and Talk             |                    |

**Subject Name/Code: Economic Geography Lab & GEOG-H-CC04/P**

## LESSON PLAN

**Department Name: Dr. Saswati Nayak**

**Name of Faculty: Geography**

**Paper Name & Code: Economic Geography Lab & GEOG-H-CC04/P**

| Planned                         |                                                                                                     |                                       |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                              | Reference Books                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 3c. Interpretation                                                                                  |                                       | 1                     | Chalk and Talk             |                    |
|                                 | 4.a) Collection of data on industrial production of India and introduction of Time series analysis. | 1. Statistical techniques by N.G Das. | 2                     |                            |                    |
|                                 | 4.b) Types of Time series analysis using moving average                                             |                                       | 2                     |                            |                    |
|                                 | 4.c) Calculation and representation of graph on time series analysis on the selected data           |                                       | 2                     |                            |                    |
|                                 | 4.d) Analysis of data and interpretation and checking and prepare for the final sheet               |                                       | 2                     |                            |                    |
|                                 |                                                                                                     | Total                                 | 30                    |                            |                    |

**This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Dept of Geography, VIC**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

| Planned                                       |                                                                    |                                                                                                                                     |                       | After Implementation       |                    |
|-----------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                             | Reference Books                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Field Data Collection and Compilation | 1a. Designing of primary survey based on diverse research problems | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 1b. Relevance of pilot survey                                      | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 2. Sampling types and strategy based on diverse research problems  | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 3                     | Chalk and Talk             |                    |
|                                               | 3a. Preparation of questionnaire                                   | 1. Research Methodology: Methods & Techniques by C.R Kothari<br>2. Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                               | 3b. Preparation of interview                                       | 1. Research Methodology: Methods & Techniques by                                                                                    | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

---

| Planned                            |          |                                                                                          |                          | After Implementation          |                       |
|------------------------------------|----------|------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics   | Reference Books                                                                          | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | schedule | C.R Kothari<br>2. Geospatial Techniques and<br>Research in Geography by<br>Das & Mallick |                          |                               |                       |
|                                    |          | Total                                                                                    | 11                       |                               |                       |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Methods in Geography (GEOG-H\_SEC-01/MD-SEC-1/2/3-Th)**

| Planned                                       |                                                                                |                                                                                                                                                                                                                     |                       |                            |                    |
|-----------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                                         | Reference Books                                                                                                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Field Data Collection and Compilation | 4. Data Compilation into master table                                          | 1.Statistical Methods by N.G.Das<br><br>2. An Insight into Statistics by Jaydeb Sarkhel and Santosh Kumar Dutta; Book Syndicate Private Limited<br><br>3. Statistical Methods in Geographical Studies by A. Mahmood | 2                     | Chalk and talk             |                    |
|                                               | 4. Data matrix in master table                                                 |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 5. Computer assisted field data entry- concept                                 |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 5. Tabulation of data into frequency distribution tables                       |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: measures of central tendency: Mean            |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: measures of central tendency: Median and mode |                                                                                                                                                                                                                     | 2                     | Chalk and talk             |                    |
|                                               | 6. Statistical analysis of data: dispersion                                    |                                                                                                                                                                                                                     | 1                     | Chalk and talk             |                    |
|                                               |                                                                                |                                                                                                                                                                                                                     |                       |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Methods in Geography (GEOG-H\_SEC-01/MD-SEC-1/2/3-Th)**

---

| Planned                                |                                               |                                                                     |                       |                              |                    |
|----------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|-----------------------|------------------------------|--------------------|
| Unit / Group / Module / Article        | Topics                                        | Reference Books                                                     | No of Lecture Planned | Content Delivery Technique   | Remarks / Comments |
| Unit II: Methods in Physical Geography | 7.Use of minor survey Instruments: distometer | <a href="https://www.slideshare.net">https://www.slideshare.net</a> | 2                     | Distometer and demonstration |                    |
|                                        |                                               | Total                                                               | 15                    |                              |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY

| Planned                                |                                                                                                     |                                                                                                                                                                                             |                       | After Implementation             |                    |
|----------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------|--------------------|
| Unit / Group / Module / Article        | Topics                                                                                              | Reference Books                                                                                                                                                                             | No of Lecture Planned | Content Delivery Technique       | Remarks / Comments |
| Unit II: Methods in Physical Geography | 7a. Application of minor survey instruments in Physical Geography study Brunton Compass, distometer | <a href="https://www.jove.com/v/10086/brunton-compass-strike-and-dip-measurement-of-rock-layers">https://www.jove.com/v/10086/brunton-compass-strike-and-dip-measurement-of-rock-layers</a> | 1                     | Chalk and Talk                   |                    |
|                                        | 7b. Use of minor survey instruments: Smartphone levelling                                           | <a href="https://d-nb.info/1145331696/34">https://d-nb.info/1145331696/34</a>                                                                                                               | 3                     | Field survey and computation     |                    |
|                                        | 8. Textural analysis of grains using sieves                                                         | 1. Practical Geography: A Systematic Approach by Ashis Sakar                                                                                                                                | 4                     | Field survey and computation     |                    |
|                                        | 9a. Mapping areal extraction of flooded areas from satellite images models                          | 1. Practical Geography: A Systematic Approach by Ashis Sakar<br>2. Advanced Practical Geography by Pijushkanti Saha and Partha Basu                                                         | 3                     | Hands - on - Training & Practice |                    |
|                                        | 9b. Mapping areal extraction                                                                        |                                                                                                                                                                                             | 2                     | Hands - on - Training &          |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY**

| Planned                         |                                                                                                                                |                 |                       | After Implementation             |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|----------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                         | Reference Books | No of Lecture Planned | Content Delivery Technique       | Remarks / Comments |
|                                 | of flooded areas from digital elevation models                                                                                 |                 |                       | Practice                         |                    |
|                                 | 10a. Mapping areal and linear extents of riverbank and coastline shift from Survey of India 1:50kmaps and/ or satellite images |                 | 5                     | Hands - on - Training & Practice |                    |
|                                 |                                                                                                                                | Total           | 18                    |                                  |                    |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY

| Planned                         |                                                                                |                                                                                                                                                       |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                         | Reference Books                                                                                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 3<br>TOPIC NO 11                | Dominant and distinctive functions- Basic concept                              | Statistical Methods in Geographical Studies by A. Mahmood<br><br>Practical Geography by A. Sarkar<br><br>Elements of Practical Geography by R.L.Singh | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about theory                    |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about calculation               |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |
|                                 | Dominant and distinctive functions- Discussion about diagram and applicability |                                                                                                                                                       | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY**

| Planned                            |                                                                                                 |                                                                                                                                                                   |                          |                               |                       |
|------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                          | Reference Books                                                                                                                                                   | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| 3<br>TOPIC 12                      | Ternary diagram<br>– Basic concept                                                              | Statistical Methods in<br>Geographical Studies by A.<br>Mahmood<br><br>Practical Geography by A.<br>Sarkar<br><br>Elements of Practical<br>Geography by R.L.Singh | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational 3<br>TOPIC<br>12patterns –<br>fundamental<br>concept |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational<br>patterns-<br>calculation                          |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
|                                    | Ternary diagram<br>showing<br>occupational<br>patterns-<br>Diagram and<br>applicability         |                                                                                                                                                                   | 1                        | Chalk and Talk                |                       |
| 3                                  | Accessibility<br>Map- Basic                                                                     | Statistical Methods in<br>Geographical Studies by A.                                                                                                              | 1                        | Chalk and Talk                |                       |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-SEC 01-TH-METHODS IN GEOGRAPHY**

| Planned                         |                                  |                                                                                                                                               |                       |                            |                    |
|---------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                           | Reference Books                                                                                                                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 3<br>TOPIC 13                   | concept                          | Mahmood                                                                                                                                       |                       |                            |                    |
|                                 | Accessibility Map- types         | Practical Geography by A. Sarkar                                                                                                              | 1                     | Chalk and Talk             |                    |
|                                 | Accessibility Map- preparation   | Elements of Practical Geography by R.L.Singh                                                                                                  | 2                     | Chalk and Talk             |                    |
|                                 | Accessibility Map- applicability | Statistical Methods in Geographical Studies by A. Mahmood<br>Practical Geography by A. Sarkar<br>Elements of Practical Geography by R.L.Singh | 1                     | Chalk and Talk             |                    |
| 3<br>TOPIC 14                   | Basic concept of Flowchart       | Statistical Methods in Geographical Studies by A. Mahmood                                                                                     | 1                     | Chalk and Talk             |                    |
|                                 | Preparation of Flowchart using   | Practical Geography by A. Sarkar                                                                                                              | 2                     | Chalk and Talk             |                    |

**SEMESTER V (MAJOR &  
MINOR)**

**CCF SYLLABUS**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Hydrology and Oceanography - GEOH-CC09 Th

| Planned                         |                                                           |                                                             |                       | After Implementation                                 |                    |
|---------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|-----------------------|------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                    | Reference Books                                             | No of Lecture Planned | Content Delivery Technique                           | Remarks / Comments |
| Unit I: Hydrology               | 1a. Concept of System approach in hydrology               | 1. Fundamentals of Hydrology by Savindra Singh              | 2                     | 1. Chalk and talk<br><br>2. Powerpoint presentations |                    |
|                                 | b. Global hydrological cycle: Definition & concept        |                                                             | 1                     |                                                      |                    |
|                                 | c. Physical role of hydrological cycle & its importance   |                                                             | 1                     |                                                      |                    |
|                                 | d. Biological role of hydrological cycle & its importance | 2. Hydrology: Principles, Analysis, Design by H.M Raghunath | 1                     |                                                      |                    |
|                                 | 2a. Runoff: Definition & concept                          |                                                             | 1                     |                                                      |                    |
|                                 | b. Controlling factors for runoff generation              |                                                             | 1                     |                                                      |                    |
|                                 | c. Infiltration: Significance and role                    | A Textbook of Hydrology by P.J.R Reddy                      | 1                     |                                                      |                    |
|                                 |                                                           |                                                             |                       |                                                      |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Hydrology and Oceanography - GEOH-CC09 Th**

|  |                                              |                                         |   |                             |  |
|--|----------------------------------------------|-----------------------------------------|---|-----------------------------|--|
|  | c. Evapotranspiration: Significance and role |                                         | 1 |                             |  |
|  | d. Run off cycle: concept and implications   |                                         | 2 |                             |  |
|  | 3a. Concept of Drainage basin                |                                         | 1 |                             |  |
|  | b. Drainage basin as a hydrological unit     |                                         | 1 |                             |  |
|  | c. Water harvesting: its concept             |                                         | 1 |                             |  |
|  | d. Principles of water harvesting            |                                         | 1 |                             |  |
|  | e. Watershed management: Need and effects    |                                         | 1 |                             |  |
|  | 4a. Groundwater: definition & concept        | Groundwater Hydrology by Todd and Larry | 1 | 1. Chalk and talk           |  |
|  | b. Occurrence and storage of groundwater     |                                         | 1 | 2. Powerpoint presentations |  |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Hydrology and Oceanography - GEOH-CC09 Th**

|                                 |                                                              |                                   |   |                                                      |  |
|---------------------------------|--------------------------------------------------------------|-----------------------------------|---|------------------------------------------------------|--|
|                                 | c. Concepts of groundwater recharge, discharge, and movement |                                   | 1 |                                                      |  |
|                                 | d. Factors controlling groundwater recharge                  |                                   | 1 |                                                      |  |
|                                 | e. Factors controlling groundwater discharge                 |                                   | 1 |                                                      |  |
|                                 | f. Factors controlling groundwater movement                  |                                   | 1 |                                                      |  |
| <b>Unit 2:<br/>Oceanography</b> | 5a. Properties of ocean water                                | 1. Oceanography by D.S Lal        | 1 | 1. Chalk and talk<br><br>2. Powerpoint presentations |  |
|                                 | b. Physical properties of ocean water                        |                                   | 1 |                                                      |  |
|                                 | c. Chemical properties of ocean water                        | 2. Oceanography by Savindra Singh | 1 |                                                      |  |
|                                 | 6a. Ocean temperature: Distribution and determinants         |                                   | 2 |                                                      |  |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Hydrology and Oceanography - GEOH-CC09 Th**

|  |                                                          |                                                                                               |          |  |  |
|--|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------|--|--|
|  | <b>6b. Ocean salinity: Distribution and determinants</b> | <b>3. Invitation to Oceanography by P.R Pinet</b><br><br><b>Oceanography by K. Siddhartha</b> | <b>2</b> |  |  |
|  | <b>7a. Water mass: Concept and significance</b>          |                                                                                               | <b>2</b> |  |  |
|  | <b>b. T-S diagram: Concept and significance</b>          |                                                                                               | <b>1</b> |  |  |
|  | <b>8a. Ocean circulation: cause and effects</b>          |                                                                                               | <b>2</b> |  |  |
|  | <b>b. Wave: types and effect</b>                         |                                                                                               | <b>2</b> |  |  |
|  | <b>c. Tide: types and effect</b>                         |                                                                                               | <b>2</b> |  |  |
|  | <b>9a. Concept and types of Sea Level change</b>         |                                                                                               | <b>2</b> |  |  |
|  | <b>b. Causes of Sea Level change</b>                     |                                                                                               | <b>1</b> |  |  |
|  | <b>c. Implications of Sea Level change</b>               |                                                                                               | <b>1</b> |  |  |
|  | <b>10a. Marine resources: concept and classification</b> |                                                                                               | <b>1</b> |  |  |
|  | <b>b. Sustainable utilisation of marine resources</b>    |                                                                                               | <b>1</b> |  |  |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Hydrology and Oceanography - GEOH-CC09 Th**

---

|  |                                       |               |    |  |  |
|--|---------------------------------------|---------------|----|--|--|
|  | c. Causes of marine pollution         |               | 1  |  |  |
|  | d. Issues related to marine pollution |               | 1  |  |  |
|  |                                       | Total lecture | 45 |  |  |

**This theory paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Department, VIC**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Hydrology and Oceanography Lab - GEOH-CC09 P

| Planned                         |                                               |                                                                  |                       | After Implementation                                         |                    |
|---------------------------------|-----------------------------------------------|------------------------------------------------------------------|-----------------------|--------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                        | Reference Books                                                  | No of Lecture Planned | Content Delivery Technique                                   | Remarks / Comments |
|                                 | 1a. Rating curve: concept                     | 1. Advanced Practical Geography — a Laboratory Manual by P. Basu | 1                     | 1. Chalk and Talk<br><br>2. Collecting of data from websites |                    |
|                                 | b. Construction of rating curves              |                                                                  | 1                     |                                                              |                    |
|                                 | c. Interpretation of rating curves            |                                                                  | 1                     |                                                              |                    |
|                                 | 2a. Concept of Hydrograph and Unit Hydrograph |                                                                  | 2                     |                                                              |                    |
|                                 | b. Construction of Hydrograph                 |                                                                  | 1                     |                                                              |                    |
|                                 | c. Interpretation of Hydrograph               |                                                                  | 1                     |                                                              |                    |
|                                 | d. Construction of Unit Hydrograph            |                                                                  | 3                     |                                                              |                    |
|                                 | e. Interpretation of Unit Hydrograph          |                                                                  | 2                     |                                                              |                    |
|                                 | f. Phi Index: concept and derivation          |                                                                  | 1                     |                                                              |                    |
|                                 | g. W index: concept and derivation            |                                                                  | 1                     |                                                              |                    |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Hydrology and Oceanography Lab - GEOH-CC09 P

|  |                                                             |                                                             |    |                                       |  |
|--|-------------------------------------------------------------|-------------------------------------------------------------|----|---------------------------------------|--|
|  | 3a. Concept of Ombrothermic graph                           | 1. Practical Geography: A systematic Approach by A. Sarkar  | 1  | 3. Hands-on practice with assignments |  |
|  | b. Construction of Ombrothermic graph                       |                                                             | 2  |                                       |  |
|  | c. Interpretation of Ombrothermic graph                     |                                                             | 2  |                                       |  |
|  | d. Concept of hyetograph                                    |                                                             | 1  |                                       |  |
|  | e. Construction of hyetograph                               | 2. Hydrology: Principles, Analysis, Design by H.M Raghunath | 2  |                                       |  |
|  | f. Interpretation of hyetograph                             |                                                             | 2  |                                       |  |
|  | 4a. Thiessen polygon: concept                               |                                                             | 2  |                                       |  |
|  | b. Usefulness of precipitation data                         |                                                             | 2  |                                       |  |
|  | c. Construction of Thiessen polygon from precipitation data |                                                             | 2  |                                       |  |
|  |                                                             | Total lectures                                              | 30 |                                       |  |

This practical paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Department, VIC

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

| Planned                         |                                                                                  |                                                                                                                                                                     |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                           | Reference Books                                                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| <u>UNIT 1</u><br>TOPIC 1        | Definition of Cultural geography                                                 | Cultural Geography by S.D.Maurya,<br>A Textbook of Social and Cultural Geography by J. Sen,<br>An Introduction to Social and Cultural Geography by Saikia and Medhi | 1                     | Chalk & Talk               |                    |
| TOPIC 1                         | Scope of Cultural Geography                                                      | Same as above                                                                                                                                                       | 1                     | Chalk & Talk               |                    |
| TOPIC 1                         | Content of Cultural Geography                                                    | Same as above                                                                                                                                                       | 1                     | Chalk & Talk               |                    |
| TOPIC 2                         | Discussion about Components of Culture                                           | Same as above                                                                                                                                                       | 1                     | Chalk & Talk               |                    |
| TOPIC 2                         | Discussion about Structure of Culture                                            | Same as above                                                                                                                                                       | 2                     | Chalk & Talk               |                    |
| TOPIC 3                         | Discussion about Cultural hearths and realms                                     | Same as above                                                                                                                                                       | 1                     | Chalk & Talk               |                    |
| TOPIC 3                         | Discussion about distribution and characteristics of Cultural hearths and realms | Same as above                                                                                                                                                       | 2                     | Chalk & Talk               |                    |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                         |                                           |                                                                                                                                                            |                       |                            |                    |
|---------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                    | Reference Books                                                                                                                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 4                         | Definition of Cultural diffusion          |                                                                                                                                                            | 1                     | Chalk & Talk               |                    |
| TOPIC 4                         | Discussion on types of Cultural diffusion | The Dictionary of Human Geography by Johnston,<br><br>Models in Geography by M. Hussain,<br><br>Cultural Geography: A Critical Introduction by D. Mitchell | 1                     | Chalk & Talk               |                    |
|                                 | Discussion on Innovation diffusion        | Same as above                                                                                                                                              | 2                     | Chalk & Talk               |                    |
| TOPIC 4                         | Discussion on Hagerstrand's model         | Same as above                                                                                                                                              | 2                     | Chalk & Talk               |                    |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                         |                                                      |                                                                                              |                       |                            |                    |
|---------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                               | Reference Books                                                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 5                         | Discussion about major world religions and languages | c, Cultural Geography: A Critical Introduction by D. Mitchell,<br><br>Human Mosaic by Jordan | 2                     | Chalk & Talk               |                    |
| TOPIC 5                         | Discussion about diffusion of major world religions  | Same as above                                                                                | 2                     | Chalk & Talk               |                    |
| TOPIC 5                         | Discussion about diffusion of major world languages  | Same as above                                                                                | 2                     | Chalk & Talk               |                    |
| TOPIC 6                         | Discussion about Cultural segregation                | Cultural Geography by S.D.Maurya,<br>A Textbook of Social and Cultural Geography by J. Sen,  | 2                     | Chalk & Talk               |                    |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                            |                                             |                                                                                                                                                                 |                          |                               |                       |
|------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                      | Reference Books                                                                                                                                                 | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    |                                             | An Introduction to Social and<br>Cultural Geography by Saikia<br>and Medhi                                                                                      |                          |                               |                       |
| TOPIC 6                            | Discussion about<br>Cultural diversity      | Same as above                                                                                                                                                   | 1                        | Chalk & Talk                  |                       |
| TOPIC 6                            | Discussion about<br>Cultural<br>integration | Same as above                                                                                                                                                   | 1                        | Chalk & Talk                  |                       |
| <u>UNIT 2</u><br>TOPIC 7           | Discussion about<br>Rural settlements       | The study of Human<br>Geography by Carter,<br><br>Introduction to Settlement<br>Geography by S. Ghosh,<br><br>The Dictionary of Human<br>Geography by Johnston, | 1                        | Chalk & Talk                  |                       |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                         |                                                            |                                                   |                       |                            |                    |
|---------------------------------|------------------------------------------------------------|---------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                     | Reference Books                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 7                         | Discussion about evolution of Rural settlements            | Same as above                                     | 2                     | Chalk & Talk               |                    |
| TOPIC 7                         | Discussion about morphology of Rural settlements           | Same as above                                     | 2                     | Chalk & Talk               |                    |
| TOPIC 8                         | Discussion about rural house types with reference to India | Same as above                                     | 3                     | Chalk & Talk               |                    |
| TOPIC 8                         | Discussion about social segregation in rural areas         | Same as above                                     | 2                     | Chalk & Talk               |                    |
| TOPIC 9                         | Discussion about Evolution of Urban settlements            | The study of Human Geography by Carter,           | 1                     | Chalk & Talk               |                    |
|                                 |                                                            | Introduction to Settlement Geography by S. Ghosh, |                       |                            |                    |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                            |                                                                        |                                                                                                 |                          |                               |                       |
|------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                 | Reference Books                                                                                 | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    |                                                                        | The Dictionary of Human<br>Geography by Johnston,<br><br>Settlement Geography by<br>S.D. Maurya |                          |                               |                       |
| TOPIC 9                            | Discussion about<br>the concept of<br>Metropolis,<br>Megalopolis       | Same as above                                                                                   | 1                        | Chalk & Talk                  |                       |
| Topic 9                            | Discussion about<br>the concept of<br>Conurbation and<br>agglomeration | Same as above                                                                                   | 1                        | Chalk & Talk                  |                       |
| TOPIC 10                           | Discussion about<br>Urban<br>morphology                                | Same as above                                                                                   | 1                        | Chalk & Talk                  |                       |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-TH-CUTURAL & SETTLEMENT GEOG**

---

| Planned                            |                                                 |                 |                          |                               |                       |
|------------------------------------|-------------------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                          | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| TOPIC 10                           | Discussion about<br>model of Burgess            | Same as above   | 2                        | Chalk & Talk                  |                       |
| TOPIC 10                           | Discussion about<br>model of Hoyt               | Same as above   | 2                        | Chalk & Talk                  |                       |
| TOPIC 10                           | Discussion about<br>model of Harris<br>& Ullman | Same as above   | 2                        | Chalk & Talk                  |                       |
|                                    |                                                 | TOTAL           | 45                       |                               |                       |

**This theory paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC**

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG THEORY**

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-P-CULTURAL AND SETTLEMENT GEOGRAPHY  
LAB**

| Planned                            |                                                                                                       |                                                                                                                                           |                          |                               |                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                                | Reference Books                                                                                                                           | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| TOPIC 1                            | Basic discussion about major Indian language                                                          | Advanced Practical Geography by P.Basu, Maps and Diagrams by Monkhouse, Practical Geography by A. Sarkar,                                 | 1                        | Chalk & Talk                  |                       |
|                                    | Discussion about pie graph                                                                            |                                                                                                                                           | 1                        | Chalk & Talk                  |                       |
|                                    | Discussion about technique of mapping state-wise distribution of major Indian languages               |                                                                                                                                           | 2                        | Chalk & Talk                  |                       |
|                                    | Interpretation                                                                                        |                                                                                                                                           | 1                        | Chalk & Talk                  |                       |
| TOPIC 2                            | Discussion about roof materials used in rural houses of any state of India                            | Advanced Practical Geography by P.Basu, Maps and Diagrams by Monkhouse, Practical Geography by A. Sarkar, Census of India- 1991,2002,2011 | 1                        | Chalk Talk                    |                       |
|                                    | Discussion about Cartograms representing roof materials used in rural houses of any state of India in |                                                                                                                                           | 3                        | Chalk Talk                    |                       |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG PRAC.**

1

**This practical paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC**

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-P-CULTURAL AND SETTLEMENT GEOGRAPHY  
LAB**

| Planned                            |                                                                                                 |                                                                                                                          |                          | Content Delivery<br>Technique | Remarks /<br>Comments |
|------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                          | Reference Books                                                                                                          | No of Lecture<br>Planned |                               |                       |
|                                    | the Census years<br>1991,2001,2011                                                              | Advanced Practical<br>Geography by P.Basu,<br>Maps and Diagrams by<br>Monkhouse,<br>Practical Geography by A.<br>Sarkar, |                          |                               |                       |
| TOPIC 2                            | Interpretation                                                                                  |                                                                                                                          | 1                        | Chalk & Talk                  |                       |
| TOPIC 3                            | Basic discussion<br>about<br>Accessibility<br>mapping                                           |                                                                                                                          | 1                        | Chalk & Talk                  |                       |
|                                    | Basic discussion<br>about Detour<br>Index                                                       |                                                                                                                          | 1                        | Chalk & Talk                  |                       |
|                                    | Technique of<br>Accessibility<br>mapping using<br>Detour Index<br>from Survey of<br>India 1:50k |                                                                                                                          | 6                        | Chalk & Talk                  |                       |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG PRAC.**

**This practical paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-P-CULTURAL AND SETTLEMENT GEOGRAPHY  
LAB**

| Planned                            |                                                                                                            |                                                                                                                          |                          |                               |                       |
|------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                                     | Reference Books                                                                                                          | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | topographical<br>maps                                                                                      |                                                                                                                          |                          |                               |                       |
|                                    | Interpretation                                                                                             |                                                                                                                          | 2                        | Chalk & Talk                  |                       |
| TOPIC 4                            | Basic discussion<br>about Nearest<br>Neighbour<br>Analysis                                                 | Advanced Practical<br>Geography by P.Basu,<br>Maps and Diagrams by<br>Monkhouse,<br>Practical Geography by A.<br>Sarkar, | 2                        |                               |                       |
|                                    | Technique of<br>Nearest<br>Neighbour<br>Analysis from<br>Survey of India<br>1:50k<br>topographical<br>maps |                                                                                                                          | 6                        |                               |                       |

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG PRAC.**

**This practical paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC10/MD-CC07-5/6-P-CULTURAL AND SETTLEMENT GEOGRAPHY  
LAB**

---

| Planned                            |                |                 |                          |                               |                       |
|------------------------------------|----------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics         | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | Interpretation |                 | 2                        |                               |                       |
|                                    |                | TOTAL           | 30                       |                               |                       |
|                                    |                |                 |                          |                               |                       |
|                                    |                |                 |                          |                               |                       |
|                                    |                |                 |                          |                               |                       |
|                                    |                |                 |                          |                               |                       |
|                                    |                | Total           |                          |                               |                       |

---

**Subject Name/Code: CULTURAL & SETTLEMENT GEOG PRAC.**

**This practical paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC**

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-H- CC11-5-TH)

| Planned                         |                                                               |                 |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                        | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Concepts                | 1a. Approaches to hazard study: Risk perception               |                 | 2                     | Chalk and talk             |                    |
|                                 | 1b. Approaches to hazard study: vulnerability assessment      |                 | 2                     | Chalk and talk             |                    |
|                                 | 1c. Hazard paradigms                                          |                 | 2                     | Chalk and talk             |                    |
|                                 | 1d. Hazard continuum                                          |                 | 1                     |                            |                    |
|                                 | 2a. Responses to hazards: Preparedness, trauma, and aftermath |                 | 4                     | Chalk and talk             |                    |
|                                 | 2b. Resilience, capacity building                             |                 | 3                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-H- CC11-5-TH)

| Planned                             |                                                                      |                                                                                                                      |                       |                                                |                    |
|-------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                               | Reference Books                                                                                                      | No of Lecture Planned | Content Delivery Technique                     | Remarks / Comments |
|                                     | 3a. Basic concept of Hazards mapping: Data and geospatial techniques | Environmental Hazards: Assessing Risk and Reducing Disaster by K. Smith<br><br>Disaster Management by Savindra Singh | 1                     | Chalk and talk                                 |                    |
|                                     | 3b. Earthquake Hazards mapping                                       | Environmental Hazards: Assessing Risk and Reducing Disaster by K. Smith                                              | 1                     | Practical work with secondary database         |                    |
|                                     | 3c. Landslide Hazards mapping                                        |                                                                                                                      | 1                     | Practical work with secondary database         |                    |
|                                     |                                                                      | Total                                                                                                                | 17                    |                                                |                    |
| Unit II: Hazard-specific Study with | 1. Earthquake: Factors, vulnerability,                               |                                                                                                                      | 4                     | Chalk and talk & Practical work with secondary |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-H- CC11-5-TH)

| Planned                         |                                                                          |                                                                                                                                                                                                              |                       |                                                         |                    |
|---------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                   | Reference Books                                                                                                                                                                                              | No of Lecture Planned | Content Delivery Technique                              | Remarks / Comments |
| Focus on West Bengal and India  | consequences, and management                                             | USGS Earthquake Hazards Programme: <a href="http://www.earthquake.usgs.gov">www.earthquake.usgs.gov</a><br><br>AGU landslide Blog: <a href="http://blogs.agu.org/landslide">blogs.agu.org/landslide</a> blog |                       | database                                                |                    |
|                                 | 2. Landslide: Factors, vulnerability, consequences, and management       |                                                                                                                                                                                                              | 4                     | Chalk and talk & Practical work with secondary database |                    |
|                                 | 3. Land subsidence: Factors, vulnerability, consequences, and management |                                                                                                                                                                                                              | 4                     | Chalk and talk & Practical work with secondary database |                    |
|                                 | 4. Tropical cyclone: Factors,                                            | India Meteorological Department Cyclone Page: <a href="http://www.rsmcnewdelhi.imd.gov.in/index.php?lang=en">www.rsmcnewdelhi.imd.gov.in/index.php?lang=en</a>                                               | 4                     | Chalk and talk & Practical work with secondary          |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-H- CC11-5-TH)

| Planned                         |                                                                                        |                 |                       |                                                         |                    |
|---------------------------------|----------------------------------------------------------------------------------------|-----------------|-----------------------|---------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                 | Reference Books | No of Lecture Planned | Content Delivery Technique                              | Remarks / Comments |
|                                 | vulnerability, consequences, and management                                            |                 |                       | database                                                |                    |
|                                 | 5. Riverbank and coastal erosion: Factors, vulnerability, consequences, and management |                 | 4                     | Chalk and talk & Practical work with secondary database |                    |
|                                 | 6. Fire: Factors, vulnerability, consequences, and management                          |                 | 4                     | Chalk and talk & Practical work with secondary database |                    |
|                                 | 7. Biohazard:                                                                          |                 | 4                     | Chalk and talk &                                        |                    |

Subject Name/Code: Hazard Management Theory

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Hazard Management (GEO-H- CC11-5-TH)**

---

| Planned                               |                                                                         |                 |                          |                                              |                       |
|---------------------------------------|-------------------------------------------------------------------------|-----------------|--------------------------|----------------------------------------------|-----------------------|
| Unit / Group<br>/ Module /<br>Article | Topics                                                                  | Reference Books | No of Lecture<br>Planned | Content<br>Delivery<br>Technique             | Remarks /<br>Comments |
|                                       | Classification,<br>vulnerability,<br>consequences,<br>and<br>management |                 |                          | Practical work<br>with secondary<br>database |                       |
|                                       |                                                                         | Total           | 28                       |                                              |                       |

**This theory paper is fully taught by Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Department, VIC**

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Hazard Management Lab (GEO-H-CC11-5-Tu)**

| Planned                         |                                  |                                                                                                                                                                                                                 |                       |                                        |                    |
|---------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                           | Reference Books                                                                                                                                                                                                 | No of Lecture Planned | Content Delivery Technique             | Remarks / Comments |
| Group-A                         | Landslide susceptibility mapping | AGU landslide Blog:<br><a href="https://blogs.agu.org/landslide-blog/">blogs.agu.org/landslide blog</a>                                                                                                         | 10                    | Practical work with secondary database |                    |
| Group-B                         | River bank erosion               | River bank erosion news:<br><a href="https://www.newsclick.in/river-bank-erosion-break-havoc-bengal-maldaha-murshidabad">https://www.newsclick.in/river-bank-erosion-break-havoc-bengal-maldaha-murshidabad</a> | 10                    | Practical work with secondary database |                    |
| Group-C                         | Flood susceptibility mapping     | Dartmouth Flood Observatory:<br><a href="https://floodobservatory.colorado.edu">floodobservatory.colorado.edu</a>                                                                                               | 10                    | Practical work with secondary database |                    |
|                                 |                                  | Total                                                                                                                                                                                                           | 30                    |                                        |                    |

**This practical paper is fully taught by Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                            |                                                                                                                                                                 |                       |                            |                    |
|---------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                     | Reference Books                                                                                                                                                 | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1.a) Concept of rounding and Scientific Notation           | Statistics by M.R. Spiegel and L.J Stephens, Pub: McGraw-Hill International Editions.                                                                           | 1                     | Chalk and talk             |                    |
|                                 | 1.b) Logarithm and anti-logarithm                          |                                                                                                                                                                 | 2                     | Chalk and talk             |                    |
|                                 | 1.c) Natural and Log Scale                                 |                                                                                                                                                                 | 1                     | Chalk and talk             |                    |
|                                 | 2.a) Preparation of Geological map: parallel               | 1. Geological Survey of India:<br><a href="http://www.gsi.gov.in">www.gsi.gov.in</a><br>2. Practical Geography: A Systematic Approach by A. Sarkar, Pub: Orient | 1                     | Chalk and talk             |                    |
|                                 | 2.b) Preparation and interpretation of Uniclinal Structure |                                                                                                                                                                 | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                              |                                                                                                                   |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                       | Reference Books                                                                                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 2.c) Preparation and interpretation of Folded Structure      | Longman<br><br>3. Advanced Practical Geography- a Laboratory Manual by P. Basu; Pub: Books and Allied             | 1                     | Chalk and talk             |                    |
|                                 | 2.d) Preparation of Different structure with Unconformities. |                                                                                                                   | 2                     | Chalk and Talk             |                    |
|                                 | 3.a) Preparation of land use maps                            | 1. Maps and Diagrams: Their Compilation and Construction by Monkhouse, F.J and Wilkinson, H.R; Pub: Alphaneumera. | 2                     |                            |                    |
|                                 | 3.b) Preparation of land cover maps                          |                                                                                                                   | 2                     |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

---

| Planned                                  |                                                                                                           |                                                                                                                                                                                          |                             |                                  |                       |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                                                                    | Reference Books                                                                                                                                                                          | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | 4.a) Preparation of Socio-economic maps: based on Language, Educational attainment, Women empowerment etc | 2. Maps and Diagrams: Their Compilation and Construction by Monkhouse, F.J and Wilkinson, H.R; Pub: Alphaneumera<br>3. Elements of Practical Geography by R.L Singh; Kalyani Publishers. | 3                           | Chalk and Talk                   |                       |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH

| Planned                         |                                                                                                        |                                                                                                 |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                 | Reference Books                                                                                 | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 4.b) Preparation of Socio-economic maps: based on Work participation rate, Occupational Structure etc. | 4. Practical Geography: A Systematic Approach by A. Sarkar, Pub: Orient Longman                 | 2                     |                            |                    |
|                                 | 5. a) Principal National Agencies producing Thematic Maps in India: NATMO<br>5. b) Principal           | 1. ISRO Bhuvan 2D Platform: <a href="https://bhuvan.nrsc.gov.in">https://bhuvan.nrsc.gov.in</a> | 2                     | Chalk and Talk             |                    |

Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th

This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                               |                                                                                                                                                                                                                                                                                                             |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                        | Reference Books                                                                                                                                                                                                                                                                                             | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | National Agencies producing Thematic Maps in India: GSI, NBSSLUP.             | 2. National Atlas and Thematic Mapping Organisation:<br><a href="https://portal.natmo.gov.in">https://portal.natmo.gov.in</a><br>3. <a href="https://www.surveyofindia.gov.in">https://www.surveyofindia.gov.in</a><br>4. Geological Survey of India:<br><a href="http://www.gsi.gov.in">www.gsi.gov.in</a> | 2                     | Chalk and talk             |                    |
|                                 | 5. c) Principal National Agencies producing Thematic Maps in India: NHO, NRSC | 5. National Remote Sensing Centre:<br><a href="https://www.nrsc.gov.in">https://www.nrsc.gov.in</a>                                                                                                                                                                                                         | 2                     | Chalk and talk             |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                                                                                            |                                                                                                                                                                                                                                        |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                                                     | Reference Books                                                                                                                                                                                                                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 6.a) Basic concept of surveying and survey equipment - Prismatic Compass: Concept of Open Traverse and Closed Traverse, Bearing and application of Polar Coordinate System | 1. Surveying and Levelling, Part-I, by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison | 1                     | Chalk and talk             |                    |
|                                 | 6.b) Basic concept of surveying and survey equipment- Prismatic Compass: how to measure                                                                                    |                                                                                                                                                                                                                                        | 2                     | Chalk and talk             |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

6

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                                                                                                |                                                              |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                                                         | Reference Books                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Closed Traverse and concept of different types of Bearing.                                                                                                                     |                                                              |                       |                            |                    |
|                                 | 6.c) Basic concept of surveying and survey equipment- Prismatic Compass: Introduction to different parts of Prismatic Compass and Method of Error Adjustment, included angles. |                                                              | 2                     | Chalk and talk             |                    |
|                                 | 7.a) Basic concept of surveying and                                                                                                                                            | 1. Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. | 1                     | Chalk and talk             |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                                               |                                                                                                                                                                                                                                                                             |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                        | Reference Books                                                                                                                                                                                                                                                             | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | survey equipment-<br>Introduction to the instrument -Dumpy<br>Level: Concept of Datum and Geoid                               | Kulkarni; Pune Vidyarthi Griha Prakashan.<br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley.<br>4. Practical Geography: A Systematic Approach by A. Sarkar; Pub; Orient Blackswan. |                       |                            |                    |
|                                 | 7.b) Basic concept of surveying and survey equipment-<br>Dumpy Level: Method of taking reading from Dumpy and its calculation |                                                                                                                                                                                                                                                                             | 2                     | Chalk and talk             |                    |
|                                 | 7.c) Basic concept of surveying and                                                                                           |                                                                                                                                                                                                                                                                             | 2                     | Chalk and talk             |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                                                                |                                                                 |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                         | Reference Books                                                 | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | survey equipment-<br>Dumpy Level: Error Adjustment and<br>Different types of errors.                                                           |                                                                 |                       |                            |                    |
|                                 | 8. Basic concept of surveying and survey equipment-<br>Theodolite:<br>Introduction to the instrument<br>Theodolite and its parts and function. | 1. Surveying and Levelling, Part-I<br>by T.P. Kanetkar and S.V. | 1                     | Chalk and talk             |                    |
|                                 | 8.b) Basic concept of surveying and                                                                                                            |                                                                 | 2                     | Chalk and talk and laptop  |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| <b>Planned</b>                         |                                                                                                                   |                                                                                                             |                              |                                   |                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------|---------------------------|
| <b>Unit / Group / Module / Article</b> | <b>Topics</b>                                                                                                     | <b>Reference Books</b>                                                                                      | <b>No of Lecture Planned</b> | <b>Content Delivery Technique</b> | <b>Remarks / Comments</b> |
|                                        | survey equipment-<br>Theodolite:<br>Methods of triangulation,<br>Calculation of Base accessible.                  | Kulkarni; Pune Vidyarthi Griha Prakashan.<br><br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press. |                              |                                   |                           |
|                                        | 8.c) Basic concept of surveying and survey equipment-<br>Theodolite: concept and calculation of base inaccessible | 3. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley.                                  | 2                            | Chalk and talk and laptop         |                           |
|                                        | 9.a) Basic concept of surveying and survey equipment-                                                             | 1. Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha                 | 1                            | Chalk and talk and laptop         |                           |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                           |                                                                              |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                    | Reference Books                                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Abney Level: introduction to the instruments and its parts as well as functions.                          | Prakashan.<br><br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press. |                       |                            |                    |
|                                 | 9.b) Calculation of measuring slope and angles and plotting.                                              | 3. Elements of Cartography by A.H. Robinson and J.L. Morrison, Pub: Wiley.   | 1                     | Chalk and talk and laptop  |                    |
|                                 | 10.a) Basic concept of surveying and survey equipment- Total Station and Echosounder: Introduction to the |                                                                              | 2                     | Chalk and talk and laptop  |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

| Planned                         |                                                                                                    |                                                                                                                                                                                                                                                                   |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                             | Reference Books                                                                                                                                                                                                                                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | instrument Total Station and its parts as well as functions                                        | 1. Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br><br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br><br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison;<br><br>Pub : WILEY |                       |                            |                    |
|                                 | 10.b) Basic concept of surveying and survey equipment- Total Station: calculation for plotting it. |                                                                                                                                                                                                                                                                   | 2                     | Chalk and talk and laptop  |                    |
|                                 | 10.c) Basic concept of surveying and survey equipment- Echosounder: its function and               |                                                                                                                                                                                                                                                                   | 1                     | Chalk and talk and laptop  |                    |

**Subject Name/Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-Th**

**This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC**

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: Thematic Mapping and Surveying: GEOG-H-CC12-5-TH**

---

| Planned                                  |            |                 |                             |                                  |                       |
|------------------------------------------|------------|-----------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics     | Reference Books | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | utilities. |                 |                             |                                  |                       |
|                                          |            | Total           | 45                          |                                  |                       |

## LESSON PLAN

Department Name: Geography

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Thematic Mapping and Surveying Lab (GEOG-H-CC-12-5-P)

| Planned                         |                                                                                                                     |                                                                                                                                                                                                                                                                    |                       |                                                                   |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                              | Reference Books                                                                                                                                                                                                                                                    | No of Lecture Planned | Content Delivery Technique                                        | Remarks / Comments |
|                                 | 1.a) Traverse Survey using Prismatic Compass: Preparation of Field book and learn to take readings from instrument. | 1. Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley.<br>4. Practical | 2                     | Chalk and talk and Field survey with respective Prismatic Compass |                    |
|                                 | 1.b) Closed Traverse survey by Prismatic Compass: Clock wise                                                        |                                                                                                                                                                                                                                                                    | 2                     | Chalk and talk and Field survey with Prismatic Compass            |                    |
|                                 | 1.c) Closed Traverse survey by Prismatic Compass: Anti-clockwise                                                    |                                                                                                                                                                                                                                                                    | 2                     | Chalk and talk and Field survey with Prismatic Compass            |                    |
|                                 | 1.d) Plotting of                                                                                                    |                                                                                                                                                                                                                                                                    | 2                     | Chalk and talk and                                                |                    |

Subject Name: Thematic Mapping and Surveying Lab GEOG-H-CC12-5-P

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

## LESSON PLAN

Department Name: Geography

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Thematic Mapping and Surveying Lab (GEOG-H-CC-12-5-P)

| Planned                         |                                                                                                                   |                                                                                                                                                                                                                                                           |                       |                                                                         |                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                            | Reference Books                                                                                                                                                                                                                                           | No of Lecture Planned | Content Delivery Technique                                              | Remarks / Comments |
|                                 | Traverse on Field book and error adjustment.                                                                      | Geography: A Systematic Approach by A. Sarkar; Pub; Orient Blackswan.                                                                                                                                                                                     |                       | Field survey with respective instrument                                 |                    |
|                                 | 2.a) Profile survey using Dumpy Level: how to level it and introduction of Back Sight, Inter Sight and Fore Sight | 1.Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br><br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br><br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley. | 2                     | Chalk and talk and Field survey with respective instrument: Dumpy Level |                    |
|                                 | 2.b) Profile Survey without Change Point                                                                          |                                                                                                                                                                                                                                                           | 2                     | Chalk and talk and Field survey with respective instrument: Dumpy Level |                    |
|                                 | 2.c) Profile Survey with Change Point                                                                             |                                                                                                                                                                                                                                                           | 4                     | Chalk and talk and Field survey with respective                         |                    |

Subject Name: Thematic Mapping and Surveying Lab GEOG-H-CC12-5-P

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

## LESSON PLAN

Department Name: Geography

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Thematic Mapping and Surveying Lab (GEOG-H-CC-12-5-P)

| Planned                         |                                                                         |                                                                                                                                                                                          |                       |                                                                         |                    |
|---------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                  | Reference Books                                                                                                                                                                          | No of Lecture Planned | Content Delivery Technique                                              | Remarks / Comments |
|                                 | and Drawing.                                                            | 4. Practical Geography: A Systematic Approach by A. Sarkar; Pub; Orient Blackswan.                                                                                                       |                       | instrument; Dumpy Level                                                 |                    |
|                                 | 3.a) Profile Survey using Abney Level: Introduction to the Instrument   | 1. Surveying and Levelling, Part-I by T.P. Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br><br>2. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley. | 2                     | Chalk and talk and Field survey with respective instrument: Abney level |                    |
|                                 | 3.b) Profile Survey using Abney Level: how to take reading and plotting |                                                                                                                                                                                          | 2                     | Chalk and talk and Field survey with respective instrument: Abney Level |                    |
|                                 | 4.a) Height determination of any                                        | 1. Surveying and Levelling, Part-I by T.P.                                                                                                                                               | 2                     | Chalk and talk and Field survey with                                    |                    |

Subject Name: Thematic Mapping and Surveying Lab GEOG-H-CC12-5-P

3

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

## LESSON PLAN

Department Name: Geography

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Thematic Mapping and Surveying Lab (GEOG-H-CC-12-5-P)

| Planned                         |                                                                                                                      |                                                                                                                                                                                                                                                                                               |                       |                                                                        |                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                               | Reference Books                                                                                                                                                                                                                                                                               | No of Lecture Planned | Content Delivery Technique                                             | Remarks / Comments |
|                                 | object by accessible method: Introduction of the instrument and levelling, Vernier reading etc.                      | Kanetkar and S.V. Kulkarni; Pune Vidyarthi Griha Prakashan.<br>2. Plane and Geodetic Surveying by Aylmer, pub: CRC Press.<br>3. Elements of Cartography by A.H. Robinson and J.L. Morrison; Pub: Wiley.<br>4. Practical Geography: A Systematic Approach by A. Sarkar; Pub; Orient Blackswan. |                       | respective instrument: Theodolite                                      |                    |
|                                 | 4.b) Height determination of any object by inaccessible method: how to take reading and complete the field Book.     |                                                                                                                                                                                                                                                                                               | 3                     | Chalk and talk and Field survey with respective instrument: Theodolite |                    |
|                                 | 4.c) Height determination of any object by accessible method: inaccessible objects in respect to same vertical plane |                                                                                                                                                                                                                                                                                               | 2                     | Chalk and talk and Field survey with respective instrument: Theodolite |                    |

Subject Name: Thematic Mapping and Surveying Lab GEOG-H-CC12-5-P

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

## LESSON PLAN

Department Name: Geography

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Thematic Mapping and Surveying Lab (GEOG-H-CC-12-5-P)

| Planned                               |                                                          |                 |                          |                                                                                    |                       |
|---------------------------------------|----------------------------------------------------------|-----------------|--------------------------|------------------------------------------------------------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics                                                   | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique                                                      | Remarks /<br>Comments |
|                                       | method.                                                  |                 |                          |                                                                                    |                       |
|                                       | 4.d) Calculation and<br>drawing of different<br>methods. |                 | 3                        | Chalk and talk and<br>Field survey with<br>respective<br>instrument:<br>Theodolite |                       |
|                                       |                                                          | Total           | 30                       |                                                                                    |                       |

Subject Name: Thematic Mapping and Surveying Lab GEOG-H-CC12-5-P

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

**SEMESTER VII (MAJOR)**  
**CCF SYLLABUS**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY

| Planned                                        |                                                                      |                                                                                                                                                                                                                                      |                       |                            |                    |
|------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                | Topics                                                               | Reference Books                                                                                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| UNIT 01<br>NATURE OF GEOGRAPHY<br><br>TOPIC 01 | Development of Ancient Geography: Contribution of Greek geographers  | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical Thought by M. Husain</li> </ul> | 2                     | Chalk and Talk             |                    |
|                                                | Development of Ancient Geography: Contribution of Roman geographers  |                                                                                                                                                                                                                                      | 1                     | Chalk and Talk             |                    |
|                                                | Development of Ancient Geography: Contribution of Indian geographers |                                                                                                                                                                                                                                      | 2                     | Chalk and Talk             |                    |
| TOPIC 02                                       | Development of Medieval Geography                                    | <ul style="list-style-type: none"> <li>Evolution of Geographical Thought by M. Husain</li> <li>Geographic Thought: A Critical</li> </ul>                                                                                             | 1                     | Chalk and Talk             |                    |
|                                                | Discussion about European and Arab                                   |                                                                                                                                                                                                                                      | 4                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                           |                                                                                                                                                                                                                                      |                       |                            |                    |
|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                    | Reference Books                                                                                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Geographers               | Introduction by Cresswell                                                                                                                                                                                                            |                       |                            |                    |
| TOPIC 03                        | Contributions of Varenus  | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical Thought by M. Husain</li> </ul> | 2                     | Chalk and Talk             |                    |
|                                 | Contributions of Kant     |                                                                                                                                                                                                                                      | 2                     |                            |                    |
| TOPIC 04                        | Contributions of Humboldt | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> </ul>                                                         | 1                     | Chalk and Talk             |                    |
|                                 |                           |                                                                                                                                                                                                                                      |                       |                            |                    |
|                                 | Contributions of Ritter   |                                                                                                                                                                                                                                      | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                                     |                                                                                                                                                                                                                                                                                           |                       |                            |                    |
|---------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                              | Reference Books                                                                                                                                                                                                                                                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 |                                     | <ul style="list-style-type: none"> <li>Evolution of Geographical Thought by M. Husain</li> <li>The Makers of Modern Geography by Dickinson</li> </ul>                                                                                                                                     |                       | Chalk and Talk             |                    |
| TOPIC 05                        | Contributions of Richthofen         | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical Thought by M. Husain</li> <li>The Makers of Modern Geography by Dickinson</li> </ul> | 1                     | Chalk and Talk             |                    |
|                                 | Contributions of Ratzel             |                                                                                                                                                                                                                                                                                           | 1                     | Chalk and Talk             |                    |
|                                 | Contributions of Hettner            |                                                                                                                                                                                                                                                                                           | 1                     | Chalk and Talk             |                    |
|                                 | Contributions of Vidal de la Blache |                                                                                                                                                                                                                                                                                           | 1                     | Chalk and Talk             |                    |
|                                 | Contributions of Hartshorne         |                                                                                                                                                                                                                                                                                           | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                                                    |                                                                      |                                                                                                                                                                                                                                                                                                                                                                |                       |                            |                    |
|------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                            | Topics                                                               | Reference Books                                                                                                                                                                                                                                                                                                                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 06                                                   | Discussion about Dualism & Dichotomies                               | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical Thought by M. Husain</li> <li>The Makers of Modern Geography by Dickinson</li> <li>The Dictionary of Human Geography by Gregore, Johnston, etc</li> </ul> | 1                     | Chalk and Talk             |                    |
|                                                            | General vs Particular                                                |                                                                                                                                                                                                                                                                                                                                                                | 1                     | Chalk and Talk             |                    |
|                                                            | Physical vs Human                                                    |                                                                                                                                                                                                                                                                                                                                                                | 1                     | Chalk and Talk             |                    |
|                                                            | Regional vs Systematic                                               |                                                                                                                                                                                                                                                                                                                                                                | 1                     | Chalk and Talk             |                    |
|                                                            | Determinism vs Possibilism                                           |                                                                                                                                                                                                                                                                                                                                                                | 1                     | Chalk and Talk             |                    |
| UNIT 02<br>GEOGRAPHY<br>IN THE 20 <sup>TH</sup><br>CENTURY | Discussion about trends of Geography in the post-World War II period | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> </ul>                                                                                                                                                                                                                                                           | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                                                         |                                                                                                                                                                                                                                                                                                    |                       |                            |                    |
|---------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                  | Reference Books                                                                                                                                                                                                                                                                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 07                        | Discussion about Positivism                             | <ul style="list-style-type: none"> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical Thought by M. Husain</li> <li>The Makers of Modern Geography by Dickinson</li> <li>The Dictionary of Human Geography by Gregore, Johnston, etc</li> </ul> | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about Hartshorne – Schaefer Debate           |                                                                                                                                                                                                                                                                                                    | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about Quantitative revolution                |                                                                                                                                                                                                                                                                                                    | 2                     | Chalk and Talk             |                    |
| TOPIC 08                        | Discussion about Radicalism and its philosophical basis | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> <li>Evolution of Geographical</li> </ul>                                                                                    | 2                     | Chalk and Talk             |                    |
|                                 | Discussion about Historical & Dialectical Materialism   |                                                                                                                                                                                                                                                                                                    | 2                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                                                    |                                                                                                                                                                                 |                       |                            |                    |
|---------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                             | Reference Books                                                                                                                                                                 | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Discussion about Structuralism                     | Thought by M. Husain<br>• The Makers of Modern Geography by Dickinson<br>• The Dictionary of Human Geography by Gregore, Johnston, etc<br>• Modern Geographical Thought by Peet | 1                     | Chalk and Talk             |                    |
| TOPIC 09                        | Discussion about Behavioural Approach in Geography | • Fundamentals of Geographical Thought by S Adhikari<br>• Geographical Thought: A Contextual History of Ideas by Dikshit                                                        | 2                     | Chalk and Talk             |                    |
|                                 | Discussion about Humanistic Approach in            |                                                                                                                                                                                 | 2                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                                                 |                                                                                                                                                                                                                                                                         |                       |                            |                    |
|---------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                          | Reference Books                                                                                                                                                                                                                                                         | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Geography                                       | <ul style="list-style-type: none"> <li>Evolution of Geographical Thought by M. Husain</li> <li>The Makers of Modern Geography by Dickinson</li> <li>The Dictionary of Human Geography by Gregore, Johnston, etc</li> <li>Modern Geographical Thought by Peet</li> </ul> |                       |                            |                    |
|                                 | Discussion about Critical Approach in Geography |                                                                                                                                                                                                                                                                         | 3                     | Chalk and Talk             |                    |
| TOPIC 10                        | Discussion about Concept of Space               | <ul style="list-style-type: none"> <li>Fundamentals of Geographical Thought by S Adhikari</li> <li>Geographical Thought: A Contextual History of Ideas by Dikshit</li> </ul>                                                                                            | 2                     | Chalk and Talk             |                    |
|                                 | Discussion about Absolute Space                 |                                                                                                                                                                                                                                                                         | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about                                |                                                                                                                                                                                                                                                                         | 1                     | Chalk and Talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-TH-PHILOSOPHY OF GEOGRAPHY**

| Planned                         |                                                                      |                                                                                                                                                                                                                                                                            |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                               | Reference Books                                                                                                                                                                                                                                                            | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Relative Space                                                       | <ul style="list-style-type: none"><li>• Evolution of Geographical Thought by M. Husain</li><li>• The Makers of Modern Geography by Dickinson</li><li>• The Dictionary of Human Geography by Gregore, Johnston, etc</li><li>• Modern Geographical Thought by Peet</li></ul> | 2                     | Chalk and Talk             |                    |
|                                 | Discussion about Relational Space with special reference to Lefebvre |                                                                                                                                                                                                                                                                            |                       |                            |                    |
|                                 |                                                                      | TOTAL                                                                                                                                                                                                                                                                      | 50                    |                            |                    |

**This theory paper is fully thought by Pubali Ghosh, Associate Professor, Department of Geography, VIC**

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-P-PHILOSOPHY OF GEOGRAPHY LAB**

| Planned                         |                                                                     |                                                                                                                                                                                                                     |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                              | Reference Books                                                                                                                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| TOPIC 01                        | Discussion about Changing perception of Maps of the World           | <ul style="list-style-type: none"> <li>Visions of the World: - A History of Mapps by Black</li> <li>A Student's Introduction to Geographical Thought by Couper</li> </ul>                                           | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about Changing perception of Maps of the World: Ptolemy  |                                                                                                                                                                                                                     | 2                     | Chalk and Talk             |                    |
|                                 | Discussion about Changing perception of Maps of the World: Mercator |                                                                                                                                                                                                                     | 2                     | Chalk and Talk             |                    |
| TOPIC 02                        | Discussion about Mapping Voyages                                    | <ul style="list-style-type: none"> <li>Visions of the World: - A History of Mapps by Black</li> <li>A Student's Introduction to Geographical Thought by Couper</li> <li>Charting the Oceans by Whitfield</li> </ul> | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about Mapping Voyages: Columbus                          |                                                                                                                                                                                                                     | 1                     | Chalk and Talk             |                    |
|                                 | Discussion about Mapping Voyages: Vasco Da Gama                     |                                                                                                                                                                                                                     | 1                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC16-7-P-PHILOSOPHY OF GEOGRAPHY LAB

| Planned                         |                                                                                                                                                         |                 |                       |                                   |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|-----------------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                                  | Reference Books | No of Lecture Planned | Content Delivery Technique        | Remarks / Comments |
|                                 | Discussion about Mapping Voyages: Magellan                                                                                                              |                 | 1                     | Chalk and Talk                    |                    |
|                                 | Discussion about Mapping Voyages: James Cook                                                                                                            |                 | 1                     | Chalk and Talk                    |                    |
| TOPIC 03                        | Group presentation of 5-10 students on any selected paradigm in Geographical Thought by using Poster. Detailed discussion about the selected paradigms. |                 | 10                    | Chalk and Talk                    |                    |
| TOPIC 04                        | A book review within 1000 words. Selected book: The                                                                                                     |                 | 10                    | Thorough book reading and writing |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC16-7-P-PHILOSOPHY OF GEOGRAPHY LAB**

---

| Planned                            |                                                        |                 |                          |                               |                       |
|------------------------------------|--------------------------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                 | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | Makers of<br>Modern<br>Geography by R.<br>E. Dickinson |                 |                          |                               |                       |
|                                    |                                                        | TOTAL           | 30                       |                               |                       |

**This practical paper is fully taught by Pubali Ghosh, Associate Professor, Department of Geography, VIC**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th

| Planned                         |                                                      |                                                  |                       |                            |                    |
|---------------------------------|------------------------------------------------------|--------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                               | Reference Books                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I: Resource & Development  | 1a. Concept of natural resources                     | Geography: A Study of Resources by Prithwish Roy | 1                     | Chalk and talk             |                    |
|                                 | b. Significance of natural resources                 |                                                  | 1                     | Chalk and talk             |                    |
|                                 | c. Classification of natural resources               |                                                  | 2                     | Chalk and talk             |                    |
|                                 | 2a. Concept of resource utilization                  |                                                  | 1                     | Chalk and talk             |                    |
|                                 | b. Utilitarian approach of resource utilization.     |                                                  | 1                     | Chalk and talk             |                    |
|                                 | c. Conservational approach of resource utilization   |                                                  | 1                     | Chalk and talk             |                    |
|                                 | d. Community based approach of resource utilization  |                                                  | 1                     | Chalk and talk             |                    |
|                                 | e. Adaptive approach of resource utilization         |                                                  | 1                     | Chalk and talk             |                    |
|                                 | 3a. Understanding of crisis of resource availability |                                                  | 2                     | Chalk and talk             |                    |
|                                 | 3b. Global scenario of                               |                                                  | 1                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th

| Planned                                   |                                                          |                              |                       |                            |                    |
|-------------------------------------------|----------------------------------------------------------|------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article           | Topics                                                   | Reference Books              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                           | forest                                                   | Resource studies by A. Mitra |                       |                            |                    |
|                                           | c. Global scenario of water                              |                              | 1                     | Chalk and talk             |                    |
|                                           | 4a. Concept of conservation                              |                              | 2                     | Chalk and talk             |                    |
|                                           | b. conservation of forest resources and its significance |                              | 1                     | Chalk and talk             |                    |
|                                           | c. conservation of water resources and its significance  |                              | 1                     | Chalk and talk             |                    |
| Unit II: Resource conflict and management | 5a. Concept of agricultural resource conflicts           |                              | 1                     | Chalk and talk             |                    |
|                                           | b. Understanding the different problems of productivity  |                              | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th**

| Planned                         |                                                                        |                                                                                      |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                 | Reference Books                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | c. Concept of resilience of indigenous species, types and significance | Geography: A Study of Resources by Prithwish Roy<br><br>Resource studies by A. Mitra | 2                     | Chalk and talk             |                    |
|                                 | d. Concept of genetically modified crops, types and significance       |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | 6a. Concept of metallic mineral resources and its types                |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | b. Distribution, utilisation, problems, and management of iron ore     |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | c. Distribution, utilisation, problems, and management of              |                                                                                      | 1                     | Chalk and talk             |                    |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th

| Planned                         |                                                                     |                                                                                      |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                              | Reference Books                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | iron                                                                | Geography of Resources: Exploitation, Conservation and Management by Dr. Alka Gautam |                       |                            |                    |
|                                 | d. Distribution, utilisation, problems, and management of bauxite   |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | e. Distribution, utilisation, problems, and management of copper    |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | 7a. Concept of non-metallic mineral resources and its types         |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | b. Distribution, utilisation, problems, and management of limestone |                                                                                      | 1                     | Chalk and talk             |                    |
|                                 | c. Distribution, utilisation, problems,                             |                                                                                      | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th**

| Planned                         |                                                                                               |                 |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                        | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | and management of mica                                                                        |                 |                       |                            |                    |
|                                 | c. Distribution, utilisation, problems, and management of gypsum                              |                 | 1                     | Chalk and talk             |                    |
|                                 | 8a. Concept of non-energy resources and its types                                             |                 | 2                     | Chalk and talk             |                    |
|                                 | b. Distribution, utilisation, problems, and management of conventional energy resources       |                 | 1                     | Chalk and talk             |                    |
|                                 | c. Distribution, utilisation, problems, and management of non - conventional energy resources |                 | 1                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th

| Planned                         |                                                    |                                                                                           |                       |                            |                    |
|---------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                             | Reference Books                                                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 9a. Concept of human resource and its significance | Natural Resource Conservation: Management for a sustainable future by Chiras and Reganold | 1                     | Chalk and talk             |                    |
|                                 | b. Concept of capability development               |                                                                                           | 2                     | Chalk and talk             |                    |
|                                 | c. Problems related to capability development      |                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | 10a. Concept of Limits to growth                   |                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | b. Concept of sustainable use of resources         |                                                                                           | 1                     | Chalk and talk             |                    |
|                                 | c. Concept of sustainable development goals        |                                                                                           | 2                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Resource Geography & GEOM-DSCC-17-Th**

---

| Planned                            |                                                                                       |                 |                          |                               |                       |
|------------------------------------|---------------------------------------------------------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | d. Practising<br>sustainable use of<br>resources with<br>reference to relevant<br>SDG |                 | 2                        | Chalk and talk                |                       |
|                                    |                                                                                       | Total           | 45                       |                               |                       |

**This theory paper is entirely taught by Prakriti das, Associate Professor, Department of Geography, Victoria Institution (College)**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography Lab & GEOM-DSCC-17-Lab

| Planned                         |                                                                              |                                                             |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                       | Reference Books                                             | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a.Necessity of understanding the changes in forest cover of any area        | Practical Geography: A systematic approach by Dr. A. Sarkar | 1                     | Chalk and talk             |                    |
|                                 | b.Mapping of changes in forest cover from maps and/or satellite images       |                                                             | 4                     | Chalk and talk             |                    |
|                                 | c.Area estimate of changes in forest cover from maps and/or satellite images |                                                             | 3                     | Chalk and talk             |                    |
|                                 | 2a. Necessity of understanding the changes in water bodies of any area       |                                                             | 1                     | Chalk and talk             |                    |
|                                 | b. Mapping of                                                                |                                                             | 4                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Resource Geography Lab & GEOM-DSCC-17-Lab**

| Planned                         |                                                                                 |                                              |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------|----------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                          | Reference Books                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | changes in water bodies from maps and/or satellite images                       | Maps and Diagrams by Monkhouse and Wilkinson |                       |                            |                    |
|                                 | c. Number estimate of changes in water bodies from maps and/or satellite images |                                              | 3                     | Chalk and talk             |                    |
|                                 | 3a. Concept of Crop combination by Weaver's method                              |                                              | 1                     | Chalk and talk             |                    |
|                                 | b. Understanding the calculation of crop combination by Weaver's method         |                                              | 3                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Resource Geography Lab & GEOM-DSCC-17-Lab

| Planned                         |                                                                                       |                                               |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                | Reference Books                               | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | b. Comparison of any two contrasting districts from West Bengal using Weaver's method | Advanced Practical Geography by Saha and Basu | 3                     | Chalk and talk             |                    |
|                                 | c. Interpretation of the result                                                       |                                               | 1                     | Chalk and talk             |                    |
|                                 | 4a. Concept of decadal change in production                                           |                                               | 1                     | Chalk and talk             |                    |
|                                 | b. Graphical representation of decadal changes in state-wise production of coal       |                                               | 2                     | Chalk and talk             |                    |
|                                 | c. Graphical representation of decadal changes in                                     |                                               | 2                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Resource Geography Lab & GEOM-DSCC-17-Lab**

---

| Planned                            |                                         |                 |                          |                               |                       |
|------------------------------------|-----------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                  | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | state-wise<br>production of iron<br>ore |                 |                          |                               |                       |
|                                    | d. Interpretation of<br>the result      |                 | 1                        | Chalk and talk                |                       |
|                                    |                                         | Total           | 32                       |                               |                       |

**This practical paper is entirely taught by Prakriti das, Associate Professor, Department of Geography, Victoria Institution (College)**

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                         |                                                   |                                       |                       |                            |                    |
|---------------------------------|---------------------------------------------------|---------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                            | Reference Books                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a. Concept of environmental studies              | Ecology and Environment by P.D Sharma | 1                     | Chalk and talk             |                    |
|                                 | b. Significance of environmental studies          |                                       | 1                     | Chalk and talk             |                    |
|                                 | c. Geographers' approach to environmental studies |                                       | 1                     | Chalk and talk             |                    |
|                                 | 2a. Concept of holistic environment               |                                       | 1                     | Chalk and talk             |                    |
|                                 | b. Concept of systems approach                    |                                       | 1                     | Chalk and talk             |                    |
|                                 | c. Importance of systems approach                 |                                       | 1                     | Chalk and talk             |                    |
|                                 | 3a. Concept of ecosystems                         |                                       | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th**

| Planned                         |                                                                                    |                                        |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------------------------|----------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                             | Reference Books                        | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | b. Ecosystems and their relationship with habitats                                 | Environmental Geography by R.C Chandna | 2                     | Chalk and talk             |                    |
|                                 | c. Explanation of such relationships with examples                                 |                                        | 2                     | Chalk and talk             |                    |
|                                 | 4a. Concept of Wetland ecosystem                                                   |                                        | 1                     | Chalk and talk             |                    |
|                                 | b. Understanding Wetland ecosystem with special reference to East Kolkata Wetlands |                                        | 2                     | Chalk and talk             |                    |
|                                 | c. Present issues in East Kolkata Wetlands                                         |                                        | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th**

---

| Planned                         |                                                   |                                     |                       |                            |                    |
|---------------------------------|---------------------------------------------------|-------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                            | Reference Books                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 5a. Concept of rural environmental issues         | Environmental Geography by S. Singh | 1                     | Chalk and talk             |                    |
|                                 | b. Significance of rural environmental issues     |                                     | 1                     | Chalk and talk             |                    |
|                                 | c. Issues related to sanitation in rural areas    |                                     | 2                     | Chalk and talk             |                    |
|                                 | d. Issues related to public health in rural areas |                                     | 2                     | Chalk and talk             |                    |
|                                 |                                                   | Total                               | 21                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                         |                                                             |                                                                                                                                                                                                                                              |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                      | Reference Books                                                                                                                                                                                                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 6a. Addresses of major Urban environmental issues           | <a href="https://swm.cpcb.gov.in/?utm_source=chatgpt.com">https://swm.cpcb.gov.in/?utm_source=chatgpt.com</a><br><br>Tchobanoglous, G., & Kreith, F. (2002). <i>Handbook of Solid Waste Management</i> (2nd Edition). McGraw-Hill, New York. | 1                     | Chalk and talk             |                    |
|                                 | b. Causes and consequences of various solid waste pollution |                                                                                                                                                                                                                                              | 1                     | Chalk and talk             |                    |
|                                 | c. Different processes with forms of solid waste pollution  |                                                                                                                                                                                                                                              | 1                     | Chalk and talk             |                    |
|                                 | d. Strategies of Solid waste Management                     |                                                                                                                                                                                                                                              | 1                     |                            |                    |
|                                 | 7a. Major Ocean environmental issues                        |                                                                                                                                                                                                                                              | 1                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                         |                                                                                                        |                                                                                                                                                                                                                                                                                                                                                   |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                 | Reference Books                                                                                                                                                                                                                                                                                                                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | b. Sources and causes of plastic pollution                                                             | Bharucha, E. (2019). <i>Textbook of Environmental Studies for Undergraduate Courses</i> . Universities Press, Hyderabad.<br><br>Kaushik, A., & Kaushik, C. P. (2021). <i>Perspectives in Environmental Studies</i> (7th Edition). New Age International Publishers, New Delhi.<br><br>Clark, R. B. (2018). <i>Marine Pollution</i> (5th Edition). | 1                     | Chalk and talk             |                    |
|                                 | c. Processes and forms of plastic pollution                                                            |                                                                                                                                                                                                                                                                                                                                                   | 1                     | Chalk and talk             |                    |
|                                 | c. Consequences and management of plastic pollution                                                    |                                                                                                                                                                                                                                                                                                                                                   | 2                     | Chalk and talk             |                    |
|                                 | 8a. Names and significance of major Environmental policies: Objective and significance of Club of Rome |                                                                                                                                                                                                                                                                                                                                                   | 1                     | Chalk and talk             |                    |
|                                 | b. Objective and significance of earth summits:                                                        |                                                                                                                                                                                                                                                                                                                                                   | 1                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                         |                                                                                            |                                                                                                                                                                                                                                                   |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                     | Reference Books                                                                                                                                                                                                                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | Stockholm                                                                                  | Oxford University Press.<br><br><a href="https://www.unep.org/events/conference/united-nations-conference-human-environment-stockholm-1972">https://www.unep.org/events/conference/united-nations-conference-human-environment-stockholm-1972</a> |                       |                            |                    |
|                                 | c. Objective and significance of earth summits: Rio                                        |                                                                                                                                                                                                                                                   | 1                     | Chalk and talk             |                    |
|                                 | d. Objective and significance of earth summits: Johannesburg                               |                                                                                                                                                                                                                                                   | 1                     | Chalk and talk             |                    |
|                                 | e. National Action Plan on Climate Change                                                  | <a href="https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop?utm_source">https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop?utm_source</a>                                                 | 1                     | Chalk and talk             |                    |
|                                 | 9a. Introduction of the Conference of the Parties and its role in shaping post-2020 global | <a href="https://www.unfccc.int/process-and-meetings/the-paris-agreement?utm_source">https://www.unfccc.int/process-and-meetings/the-paris-agreement?utm_source</a>                                                                               | 2                     | Chalk and talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                                  |                                                                                                                     |                 |                             |                                  |                       |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                                                                              | Reference Books | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | climate action.:<br>Global initiatives<br>for environmental<br>management                                           |                 |                             |                                  |                       |
|                                          | b. Explain the core<br>goals, structure,<br>and significance<br>Montreal Protocol:<br>Ozone Layer<br>Protection     |                 | 1                           | Chalk and talk                   |                       |
|                                          | c. Explain the core<br>goals, structure,<br>and significance<br>the Kyoto<br>Protocol: Binding<br>Emissions Targets |                 | 1                           | Chalk and talk                   |                       |
|                                          | d. Critically assess<br>its role in shaping<br>post-2020 global<br>climate action for<br>Paris Agreement:           |                 | 1                           | Chalk and talk                   |                       |

## LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography & GEOM-DSCC-18-Th

| Planned                                  |                                                                                             |                                                                                                                                                                                                                                                                                                |                             |                                  |                       |
|------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------|
| Unit /<br>Group /<br>Module /<br>Article | Topics                                                                                      | Reference Books                                                                                                                                                                                                                                                                                | No of<br>Lecture<br>Planned | Content<br>Delivery<br>Technique | Remarks /<br>Comments |
|                                          | A New Global<br>Climate<br>Architecture                                                     |                                                                                                                                                                                                                                                                                                |                             |                                  |                       |
|                                          | 10a. Overview of<br>Principal<br>Environment-<br>Related<br>Regulations of<br>India         | Bharucha, E. (2019). <i>Textbook of Environmental<br/>Studies for Undergraduate Courses</i> . Universities<br>Press, Hyderabad.<br><br>Kaushik, A., & Kaushik, C. P. (2021).<br><i>Perspectives in Environmental Studies</i> (7th<br>Edition). New Age International Publishers, New<br>Delhi. | 2                           |                                  |                       |
|                                          | 10b. Review of the<br>Achievements of<br>Environment-<br>Related<br>Regulations in<br>India |                                                                                                                                                                                                                                                                                                | 3                           |                                  |                       |
|                                          |                                                                                             | Total                                                                                                                                                                                                                                                                                          | 24                          |                                  |                       |

This theory paper is shared by Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Prakriti Das**

**Paper Name & Code: Environmental Issues in Geography Lab & GEOM-DSCC-18-P**

| Planned                         |                                                                                 |                                                                  |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                          | Reference Books                                                  | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 1a. Concept of questionnaire, its types, merits and demerits                    | Geospatial Techniques and Research in Geography by Das & Mallick | 2                     | Chalk and Talk             |                    |
|                                 | b. Steps of preparing a good questionnaire                                      |                                                                  | 1                     | Chalk and Talk             |                    |
|                                 | c. Concept of perception survey                                                 |                                                                  | 1                     | Chalk and Talk             |                    |
|                                 | d. Preparation of questionnaire for perception survey on environmental problems |                                                                  | 3                     | Chalk and Talk             |                    |
|                                 |                                                                                 | Total                                                            | 7                     |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography Lab & GEOM-DSCC-18-P

| Planned                         |                                                                                                       |                                                                                                                                                                                           |                       |                            |                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                | Reference Books                                                                                                                                                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 2a. Introduction to Environmental Impact Assessment (EIA) and the Role of Checklists                  | Geospatial Techniques and Research in Geography by Das & Mallick<br><br>Gilpin, A., 1994. Environmental Impact Assessment: Cutting Edge for the 21st Century, Cambridge University Press. | 1                     | Chalk and Talk             |                    |
|                                 | 2b. Preparation of check-list for Environmental Impact Assessment for urban projects                  |                                                                                                                                                                                           | 4                     | Chalk and Talk             |                    |
|                                 | 2b. Preparation of check-list for Environmental Impact Assessment for industrial development projects |                                                                                                                                                                                           | 4                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography Lab & GEOM-DSCC-18-P

| Planned                         |                                                                                   |                                                                                                                     |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                            | Reference Books                                                                                                     | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 2c. Review, Evaluation and Best Practices                                         | Canter, L. W. (1996). <i>Environmental Impact Assessment</i> (2nd Edition). McGraw-Hill, New York                   | 2                     | Chalk and Talk             |                    |
|                                 | 3a. Methodological procedure on quality assessment of water using portable tester | Central Pollution Control Board:<br><a href="https://cpcb.nic.in/indexeng.php">https://cpcb.nic.in/indexeng.php</a> | 1                     |                            |                    |
|                                 | 3b. Quality assessment of water using portable tester: pH                         | West Bengal Pollution Control Board:<br><a href="https://www.wbpcb.gov.in">https://www.wbpcb.gov.in</a>             | 3                     |                            |                    |
|                                 | 3c. Quality assessment of water using portable tester: salinity                   |                                                                                                                     | 3                     |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Environmental Issues in Geography Lab & GEOM-DSCC-18-P

| Planned                         |                                                                                                                            |                 |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                     | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 3d. Quality assessment of water using portable tester: Hardness                                                            |                 | 3                     |                            |                    |
|                                 | 4a. Collection, Compilation, and Visualization of Air Quality Data from CPCB and WBPCB for different seasons and locations |                 | 1                     |                            |                    |
|                                 | 4b. Spatial and Seasonal Interpretation of Air Quality Changes                                                             |                 | 3                     |                            |                    |
|                                 | 4c. Comparative Assessment and Preparation of an Air Quality                                                               |                 | 2                     |                            |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Environmental Issues in Geography Lab & GEOM-DSCC-18-P**

---

| Planned                            |        |                 |                          |                               |                       |
|------------------------------------|--------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | Report |                 |                          |                               |                       |
|                                    |        | Total           | 23                       |                               |                       |

This practical paper is shared by Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                                              |                                                                                                                     |                                                                                                                                                                      |                       |                            |                    |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                      | Topics                                                                                                              | Reference Books                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit- I<br>Frequency<br>Distribution and<br>Sampling | 1.a) Types of Data: Discrete and continuous, Qualitative and quantitative data, Primary data and secondary data etc | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br><br>2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993. | 1                     | Chalk and talk             |                    |
|                                                      | 1.b) Population and Sample                                                                                          | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999                                                                                       | 1                     | Chalk and talk             |                    |
|                                                      | 1.c). Scales of measurement (nominal, ordinal, interval and ratio)                                                  | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                       | 2                     | Chalk and talk             |                    |
|                                                      | 2.a) Collection of data.                                                                                            | 1.Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                        | 2                     | Chalk and talk             |                    |
|                                                      | 2.b) Preparation of statistical tables                                                                              |                                                                                                                                                                      | 2                     | Chalk and talk             |                    |
|                                                      | 3.a) Sampling: needs and                                                                                            | 1. Statistical Tools and                                                                                                                                             | 1                     | Chalk and talk             |                    |
|                                                      |                                                                                                                     |                                                                                                                                                                      |                       |                            |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                                        |                                                                |                                                                                                                                                         |                       |                            |                    |
|------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                | Topics                                                         | Reference Books                                                                                                                                         | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit- I<br>Frequency Distribution and Sampling | significance                                                   | Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                                   |                       |                            |                    |
|                                                | b) Types and explanation                                       |                                                                                                                                                         | 1                     | Chalk and talk             |                    |
|                                                | c)Methods of random sampling                                   | 2. Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                                                                                       | 2                     | Chalk and talk             |                    |
|                                                | 4.a) Theoretical distribution: Frequency, cumulative frequency | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br><br>2. Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999 | 1                     | Chalk and talk             |                    |
|                                                | 4.b) Probability: Concept, theory and calculation.             |                                                                                                                                                         | 3                     | Chalk and talk             |                    |
| Unit-II:<br>Numerical Data                     | 5.a) Mean: Types, calculation and                              | 1.Statistics by Murray.R. Spiegel and Larry J. Stephens,                                                                                                | 1                     | Chalk and talk             |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                             |                                                                                     |                                                                                                                                                                      |                       |                            |                    |
|-------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                                              | Reference Books                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-II:<br>Numerical Data Analysis | advantage-disadvantages                                                             | pub: McGRAW-HILL,1999                                                                                                                                                |                       |                            |                    |
|                                     | 5.b) Median: Concept, calculation, plotting on graphs and advantages-disadvantages. | 2.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br><br>3.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993. | 1                     | Chalk and talk             |                    |
|                                     | 5.c) Median: Concept, calculation, plotting on graphs and advantages-disadvantages. | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                       | 1                     | Chalk and talk             |                    |
|                                     | 5.b) Median: Concept, calculation, plotting on graphs and advantages-disadvantages. |                                                                                                                                                                      | 1                     | Chalk and talk             |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                             |                                                                                           |                                                                                                                                                                    |                       |                            |                    |
|-------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                                                    | Reference Books                                                                                                                                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-II:<br>Numerical Data Analysis | 6.a) Measures of dispersion:concept of absolute dispersion and relative dispersion.       | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br>2. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025 | 1                     | Chalk and talk             |                    |
|                                     | 6.b) Concept of range and mean deviation- their calculation, analysis and interpretation. | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br>2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.   | 1                     | Chalk and talk             |                    |
|                                     | 6.c) Concept of Standard deviation and calculation.                                       | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999                                                                                     | 2                     | Chalk and talk             |                    |
|                                     | 6.d) Relative dispersion:                                                                 | 4. Statistical Tools and Techniques by P.K. Giri and                                                                                                               | 2                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                             |                                                                                             |                                                                                                                                                                                |                       |                            |                    |
|-------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                                                      | Reference Books                                                                                                                                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-II:<br>Numerical Data Analysis | concept of coefficient of variation and calculation, analysis and interpretation.           | J. Banerjee, pub;Academic Publishers,2025                                                                                                                                      |                       |                            |                    |
|                                     | 9.a) Time series analysis: concept.                                                         | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                                                                                                               | 1                     | Chalk and talk             |                    |
|                                     | 9.b) Time series analysis: 3 year-moving average, calculation, plotting and interpretation  | 2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.<br>3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999 | 1                     | Chalk and talk             |                    |
|                                     | 9.c) Time series analysis: 4- year-moving average, calculation, plotting and interpretation | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                                 | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH- Statistical Methods in Geography-75 Marks/3 Credits**

| Planned                            |                                                                                                         |                 |                          |                               |                       |
|------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module / Article | Topics                                                                                                  | Reference Books | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                    | 9.d) Time series<br>analysis: least<br>square method,<br>calculation,<br>plotting and<br>interpretation |                 | 1                        | Chalk and talk                |                       |
|                                    |                                                                                                         | Total           | 31                       |                               |                       |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75 marks/3 Credits

| Planned                             |                                                                                     |                                                                                                                                                                                    |                       |                            |                    |
|-------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                                              | Reference Books                                                                                                                                                                    | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-II:<br>Numerical Data Analysis | 7.a) Association and correlation: concept and types.                                | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                                                                                                                   | 2                     | Chalk and talk             |                    |
|                                     | 7.b) Product Moment Correlation: concept, calculation, analysis and interpretation. | 2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.<br><br>3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999 | 2                     | Chalk and talk             |                    |
|                                     | 7.c) Rank correlation: concept, calculation, analysis and interpretation.           | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                                     | 2                     | Chalk and talk             |                    |
|                                     | 8.a) Regression: concept and theory.                                                | 1.Statistical Methods by N.G.Das, pub: N.G.Das for                                                                                                                                 | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75 marks/3 Credits**

| Planned                             |                                                                                |                                                                                                                   |                       |                            |                    |
|-------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article     | Topics                                                                         | Reference Books                                                                                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit-II:<br>Numerical Data Analysis | 8.b) Linear Regression: concept, calculation, plotting and interpretation.     | M.Das and Co.<br><br>2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993. | 1                     | Chalk and talk             |                    |
|                                     | 8.c) Non-linear regression: concept, calculation, plotting and interpretation. | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999                                    | 1                     | Chalk and talk             |                    |
|                                     | 8.d) Residuals: concept, calculation, drawing and interpretation.              | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                    | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75 marks/3 Credits**

| Planned                         |                                                                |                                                                                                                |                       |                            |                    |
|---------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                         | Reference Books                                                                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 10. a) Hypothesis testing: concept and theory.                 | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                                               | 1                     | Chalk and talk             |                    |
|                                 | 10.b) Chi-square test: concept, calculation and interpretation | 2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.                   | 1                     | Chalk and talk             |                    |
|                                 | 10.c) T-test: concept, calculation and interpretation.         | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999<br><br>4. Statistical Tools and | 2                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75 marks/3 Credits**

---

| Planned                               |        |                                                                                |                          |                               |                       |
|---------------------------------------|--------|--------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics | Reference Books                                                                | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
|                                       |        | Techniques by P.K. Giri<br>and J. Banerjee,<br>pub;Academic<br>Publishers,2025 |                          |                               |                       |
|                                       |        | Total                                                                          | 14                       |                               |                       |

This theory paper is shared by Dr. Saswati Nayak, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75Marks/3 Credits**

| Planned                                                                |                                                                                           |                                                                                              |                       |                            |                    |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article                                        | Topics                                                                                    | Reference Books                                                                              | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 1.Construction of data Matrix                                          | 1.a) Selection of a district with C.D blocks and its attributes.                          | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                             | 2                     | Chalk and talk             |                    |
|                                                                        | 1.b) Drawing of District with C.D blocks                                                  | 2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993. | 1                     | Chalk and talk             |                    |
|                                                                        | 1.c) Preparation of data matrix                                                           |                                                                                              | 1                     | Chalk and talk             |                    |
| 2. Representation of relevant graphs on the basis of above data matrix | 2.a) Drawing and interpretation of histogram                                              | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.                             | 1                     | Chalk and talk             |                    |
|                                                                        | 2.b) Drawing and interpretation of normal frequency curve and cumulative frequency curve. | 2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993. | 2                     | Chalk and talk             |                    |
|                                                                        | 2.c) Calculation and plotting of Median on graph                                          | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999               | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75Marks/3 Credits**

| Planned                         |                                                                                                                                                               |                                                                                                |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                                        | Reference Books                                                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | and interpretation.                                                                                                                                           | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025 |                       |                            |                    |
|                                 | 2.d) Calculation and plotting of Mode on graph and interpretation.                                                                                            |                                                                                                | 1                     | Chalk and talk             |                    |
|                                 | 2.e) Computation and interpretation of dispersion:<br>i) mean deviation,<br>ii) Quartile deviation<br>iii) Standard deviation<br>iv) Coefficient of variation |                                                                                                | 4                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75Marks/3 Credits**

| Planned                                       |                                                                                                                                                |                                                                                                                                                                                                                                                            |                       | Content Delivery Technique | Remarks / Comments |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article               | Topics                                                                                                                                         | Reference Books                                                                                                                                                                                                                                            | No of Lecture Planned |                            |                    |
| 3. Random, Systematic and Stratified sampling | 3.a) Calculation and selection of C.D Blocks on the basis of Random Sampling and its representation on map. Lastly analysis and interpretation | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br><br>2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.<br><br>3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999 | 3                     | Chalk and talk             |                    |
|                                               | 3.b) Calculation and selection of C.D Blocks on the basis of Systematic Sampling and its representation on map. Lastly analysis and            | 4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025                                                                                                                                                             | 3                     | Chalk and talk             |                    |
|                                               |                                                                                                                                                |                                                                                                                                                                                                                                                            |                       |                            |                    |

## LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: GEOG-H-CC19-7-TH-Statistical Methods in Geography-75Marks/3 Credits

| Planned                         |                                                                                                                                                    |                 |                       | Content Delivery Technique | Remarks / Comments |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                                                             | Reference Books | No of Lecture Planned |                            |                    |
|                                 | interpretation                                                                                                                                     |                 |                       |                            |                    |
|                                 | 3.c) Calculation and selection of C.D Blocks on the basis of Stratified sampling and its representation on map. Lastly analysis and interpretation |                 | 4                     | Chalk and talk             |                    |
|                                 |                                                                                                                                                    | Total           | 23                    |                            |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: GEOG-H-CC19-7-TH-Statistical methods in Geography**

| Planned                                 |                                                                                                                                  |                                                                                                                                                                                      |                       |                            |                    |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article         | Topics                                                                                                                           | Reference Books                                                                                                                                                                      | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4.Scatter diagram and Linear regression | 4.a) Selection and collection of one independent and one dependent attribute to represent scatter diagram and linear regression. | 1.Statistical Methods by N.G.Das, pub: N.G.Das for M.Das and Co.<br><br>2.Statistical Methos in Geographical Studies by Aslam Mahmood, pub: Rajesh Publication.1993.                 | 1                     | Chalk and talk             |                    |
|                                         | 4.b) Computation and plotting of Scatter diagram and Linear regression and its interpretation                                    | 3.Statistics by Murray.R. Spiegel and Larry J. Stephens, pub: McGRAW-HILL,1999<br><br>4. Statistical Tools and Techniques by P.K. Giri and J. Banerjee, pub;Academic Publishers,2025 | 3                     | Chalk and talk             |                    |
|                                         | 4.c) Computation and representation of Residual map and its interpretation                                                       |                                                                                                                                                                                      | 3                     | Chalk and talk             |                    |
|                                         |                                                                                                                                  | Total                                                                                                                                                                                | 7                     |                            |                    |

This practical paper is shared by Dr. Saswati Nayak, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC25-8-TH-REGIONAL DEVELOPMENT AND PLANNING**

| Unit / Group / Module / Article                   | Topics                                  | Reference Books                                                                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|---------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| UNIT 1<br><br>REGIONAL DEVELOPMENT<br><br>TOPIC 1 | Concept of Regions                      | Regional Planning in India by Chand and Puri<br><br>Regional Planning and Development by R.C. Chandana,        | 1                     | Chalk and Talk             |                    |
|                                                   | Types of Regions                        |                                                                                                                | 1                     | Chalk and Talk             |                    |
|                                                   | Delineation of Regions                  |                                                                                                                | 2                     | Chalk and Talk             |                    |
| TOPIC 2                                           | Concepts of growth and development      | Regional Planning in India by Chand and Puri                                                                   | 1                     | Chalk and Talk             |                    |
|                                                   | Economic indicators of development      |                                                                                                                | 1                     | Chalk and Talk             |                    |
|                                                   | Demographic indicators of development   | Regional Planning and Development by R.C. Chandana,<br><br>Contemporary Issues in Regional Planning by Glasson | 1                     | Chalk and Talk             |                    |
|                                                   | Environmental indicators of development |                                                                                                                | 1                     | Chalk and Talk             |                    |
| TOPIC 3                                           | Theories and models for regional        | Regional Planning in India by Chand and Puri                                                                   | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC25-8-TH-REGIONAL DEVELOPMENT AND PLANNING

| Unit / Group / Module / Article | Topics                                                                                | Reference Books                                                                                                                                       | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|---------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
|                                 | development:<br><br>Cumulative causation (after Myrdal)                               | Regional Planning and Development by R.C. Chandana,<br><br>Contemporary Issues in Regional Planning by Glasson<br><br>Regional Planning by R.P. Misra |                       |                            |                    |
|                                 | Theories and models for regional development:<br>Stages of development (after Rostow) |                                                                                                                                                       | 2                     | Chalk and Talk             |                    |
| TOPIC 3                         | Theories and models for regional                                                      |                                                                                                                                                       | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC25-8-TH-REGIONAL DEVELOPMENT AND PLANNING

| Unit / Group / Module / Article | Topics                                                       | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|---------------------------------|--------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
|                                 | development:<br><br>Growth Pole model<br><br>(after Perroux) |                 |                       |                            |                    |
|                                 |                                                              | TOTAL           | 14                    |                            |                    |
|                                 |                                                              |                 |                       |                            |                    |

# LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOM-DSCC20-TH-Regional Development and Planning/3 credits**

| Planned                         |                                                               |                                                                                                                                                             |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                        | Reference Books                                                                                                                                             | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit I:<br>Regional Development | 4.a) Underdevelopment: concept and paradigm change            | 1.Growth and Development by A.P. Thirlwall; pub: Lynne Rienner publishers, fifth edition.<br>2.Economic Development by M.P Todaro; pub: Pearson Publication | 1                     | Chalk and talk             |                    |
|                                 | 4.b) Underdevelopment: Causes- social, economic and political |                                                                                                                                                             | 1                     | Chalk and talk             |                    |
|                                 | 5.a) Regional disparities in India: concept and evolution     | 1.Regional Planning: Concept, Techniques, Policies and Case Studies by R.P Misra; Pub: Concept publishers                                                   | 1                     | Chalk and talk             |                    |
|                                 | 5.b) Regional disparities in India: temporal and spatial.     |                                                                                                                                                             | 1                     | Chalk and talk             |                    |
|                                 | 5.c) Regional disparities: Social                             | 2.Regional Planning in India by Chand, M.Puri,V.K.2000, pub: Allied Publishers Ltd                                                                          | 1                     | Chalk and talk             |                    |
|                                 | 5.d) Regional disparities: economic dimension                 |                                                                                                                                                             | 1                     | Chalk and talk             |                    |

## LESSON PLAN

**Department Name: Geography**

**Name of Faculty: Dr. Saswati Nayak**

**Paper Name & Code: GEOM-DSCC20-TH-Regional Development and Planning/3 credits**

| Planned                               |                                       |                                                                                                                                                        |                          |                               |                       |
|---------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|-----------------------|
| Unit / Group /<br>Module /<br>Article | Topics                                | Reference Books                                                                                                                                        | No of Lecture<br>Planned | Content Delivery<br>Technique | Remarks /<br>Comments |
| Unit II<br>Regional<br>Planning       | 6.a) Regional Planning:<br>Principles | 3.An Introduction to<br>Development and<br>Regional Planning with<br>special reference to India<br>by Jayasri Ray<br>Chaudhuri; pub: Orient<br>Longman | 2                        | Chalk and talk                |                       |
|                                       | 6.b) Regional Planning:<br>Objectives |                                                                                                                                                        | 2                        | Chalk and talk                |                       |
|                                       |                                       | Total                                                                                                                                                  | 10                       |                               |                       |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Regional Development and Planning & GEOM-DSCC-20-Th

| Planned                         |                                                         |                                                   |                       |                            |                    |
|---------------------------------|---------------------------------------------------------|---------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                  | Reference Books                                   | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II: Regional Planning      | 7a. Types of planning                                   | Regional Planning and Development by R.C Chandana | 2                     | Chalk and Talk             |                    |
|                                 | b. Concept of temporal planning and its significance    |                                                   | 1                     | Chalk and Talk             |                    |
|                                 | c. Concept of sectoral planning and its significance    |                                                   | 1                     | Chalk and Talk             |                    |
|                                 | d. Concept of spatial planning and its significance     |                                                   | 1                     | Chalk and Talk             |                    |
|                                 | e. Concept of non-spatial planning and its significance |                                                   | 1                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Regional Development and Planning & GEOM-DSCC-20-Th

| Planned                         |                                                          |                 |                       |                            |                    |
|---------------------------------|----------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                   | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 9a. Concept of planning issues in different context      |                 | 1                     | Chalk and Talk             |                    |
|                                 | b. Concept of formal and functional region               |                 | 1                     | Chalk and Talk             |                    |
|                                 | c. Planning issues in hill area (as formal region)       |                 | 1                     | Chalk and Talk             |                    |
|                                 | d. Planning issues in city region (as functional region) |                 | 1                     | Chalk and Talk             |                    |
|                                 |                                                          | Total           | 10                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Regional Development and Planning & GEOM-DSCC-20-Th

| Planned                         |                                                                                                               |                                                                                                                                         |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                        | Reference Books                                                                                                                         | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| Unit II: Regional Planning      | 8a. Objectives and stages of Centralised planning and its structure with advantages and disadvantages         | Regional Planning and Development by R.C Chandana<br><br>Chand, M., Puri, V.K. 2000. Regional Planning In India, Allied Publishers Ltd. | 2                     | Chalk and Talk             |                    |
|                                 | b. Objectives and stages of decentralised planning and its structure with advantages and disadvantages        |                                                                                                                                         | 2                     | Chalk and Talk             |                    |
|                                 | c. Objectives and stages of multi-level planning in India and its structure with advantages and disadvantages |                                                                                                                                         | 3                     | Chalk and Talk             |                    |
|                                 | 9a. Explain various planning                                                                                  |                                                                                                                                         | 2                     | Chalk and Talk             |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Regional Development and Planning & GEOM-DSCC-20-Th

| Planned                         |                                                                          |                 |                       |                            |                    |
|---------------------------------|--------------------------------------------------------------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                   | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | strategies before independence and post-independence                     |                 |                       |                            |                    |
|                                 | b. Concept of participatory planning and governance                      |                 | 2                     | Chalk and Talk             |                    |
|                                 | c. Advantages and disadvantages of participatory planning and governance |                 | 1                     | Chalk and Talk             |                    |
|                                 |                                                                          | Total           | 12                    |                            |                    |

This theory paper is shared by Pubali Ghosh, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC

## LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: PUBALI GHOSH**

**Paper Name & Code: GEOG-H-CC 25-8-P – REGIONAL DEVELOPMENT AND PLANNING LAB**

|         |                                                        |                                                                                                             |   |                |  |
|---------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---|----------------|--|
| TOPIC 1 | Discussion about Formal Region                         | Contemporary issues in Regional Planning by Glasson                                                         | 1 | Chalk and Talk |  |
|         | Discussion about Weighted index method                 |                                                                                                             | 1 | Chalk and Talk |  |
|         | Delineation of formal regions by weighted index method | Statistical Methods in Geographical Studies by A. Mahmood,<br><br>Maps and Diagrams by Monkhouse, Wilkinson | 6 | Chalk and Talk |  |
|         |                                                        | Total                                                                                                       | 8 |                |  |
|         |                                                        |                                                                                                             |   |                |  |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

Paper Name & Code: Regional Development and Planning Lab & GEOM-DSCC-20-P

| Planned                         |                                                                 |                                                           |                       |                            |                    |
|---------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                          | Reference Books                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 2a. Concept of breaking point analysis                          | Statistical Methods in Geographical Studies by A. Mahmood | 2                     | Chalk and talk             |                    |
|                                 | b. Steps of breaking point analysis method                      |                                                           | 2                     | Chalk and talk             |                    |
|                                 | c. Delineation of functional regions by breaking point analysis |                                                           | 2                     | Chalk and talk             |                    |
|                                 | d. Interpretation                                               |                                                           | 2                     | Chalk and talk             |                    |
|                                 |                                                                 | Total                                                     | 8                     |                            |                    |

# LESSON PLAN

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

Paper Name & Code: GEOM-DSCC-20-P-Regional Development and Planning lab/1 credit

| Planned                         |                                                                  |                                                                |                       |                            |                    |
|---------------------------------|------------------------------------------------------------------|----------------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                           | Reference Books                                                | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
| 4. Measurement of Inequalities  | 4.a) Concept on measurement of inequalities by Location quotient | 1.Statistical Methods in Geography Studies by Aslam Mahmood    | 1                     | Chalk and talk             |                    |
|                                 | 4.b) Calculation and collection of relevant data                 |                                                                | 2                     | Chalk and talk             |                    |
|                                 | 4.c) Representation on map                                       | 2.Statistical Geography-Methods and applications by Zamir Alvi | 2                     | Chalk and talk             |                    |
|                                 | 4.d) Analysis and interpretation                                 |                                                                | 1                     | Chalk and talk             |                    |
|                                 |                                                                  | Total                                                          | 06                    |                            |                    |

# LESSON PLAN

Department Name: GEOGRAPHY

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Regional Development and Planning Lab & GEOM-DSCC-20-P

| Planned                         |                                                                                                         |                                                           |                       |                            |                    |
|---------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics                                                                                                  | Reference Books                                           | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | 4a. Introduction to Interview Schedule and Rural Development                                            | Statistical Methods in Geographical Studies by A. Mahmood | 1                     | Chalk and talk             |                    |
|                                 | b. Selection of Development Issue, Designing the Interview Schedule and Preparation of Questions        |                                                           | 1                     | Chalk and talk             |                    |
|                                 | c. Collection of databases regarding one Gram Panchayat member on a relevant development issue based on |                                                           | 4                     | Chalk and talk             |                    |

# LESSON PLAN

**Department Name: GEOGRAPHY**

**Name of Faculty: Dr. Raj Kumar Bhattacharya**

**Paper Name & Code: Regional Development and Planning Lab & GEOM-DSCC-20-P**

---

| Planned                         |                   |                 |                       |                            |                    |
|---------------------------------|-------------------|-----------------|-----------------------|----------------------------|--------------------|
| Unit / Group / Module / Article | Topics            | Reference Books | No of Lecture Planned | Content Delivery Technique | Remarks / Comments |
|                                 | interview method  |                 |                       |                            |                    |
|                                 | d. Interpretation |                 | 2                     | Chalk and talk             |                    |
|                                 |                   | Total           | 8                     |                            |                    |

This practical paper is shared by Pubali Ghosh, Associate Professor, Dr. Saswati Nayak, Associate Professor, Prakriti das, Associate Professor, and Dr. Raj Kumar Bhattacharya, Assistant Professor, Department of Geography, VIC