

CHOICE BASED CREDIT SYSTEM

P.G. Syllabus
First Semester



**P.G. Department of Geography, Utkal University,
Vani Vihar, Bhubaneswar**

1st Semester
(500 Marks, 20 Credits)

<u>THEORY</u>	<u>TITLE OF THE PAPER</u>	<u>MARKS</u>	<u>CREDITS</u>
GEOG1 C01	GEOGRAPHICAL THOUGHT	100	04
GEOG1 C02	GEOMORPHOLOGY	100	04
GEOG1 C03	GEOGRAPHY OF INDIA	100	04
GEOG1 C04	ECONOMIC GEOGRAPHY	100	04
<u>PRACTICAL</u>			
GEOG1 C05	QUANTITATIVE & STATISTICAL TECHNIQUES (P)	100	04

1st Semester (500 Marks, 20 Credits)
GEOGRAPHICAL THOUGHT (GEOG1-C01)
(100 Marks) 4 Credit

Objective:

To make students to understand about the past, present and future of Geography.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Distinguish the paradigms in geography discipline through time
2. Understand the geographical thinking in different regions of world
3. Appreciate the past and future trends of world geography in general and Indian geography in particular

GEOMORPHOLOGY (GEOG1-C02)
(100 Marks) - 4 Credits

Objective:

To provide knowledge on the processes going on the surface of the Earth.

Learning Outcome

After the completion of course, the students will have ability to:

1. Understand the functioning of Earth systems in real time and analyze how the natural and anthropogenic operating factors affects the development of landforms
2. Distinguish between the mechanisms that control these processes
3. Assess the roles of structure, stage and time in shaping the landforms, interpret geomorphological maps and apply the knowledge in geographical research.

GEOGRAPHY OF INDIA (GEOG1-C03)
(100 Marks)- 4 Credits

Objective:

To teach the students about the geography of India about the physical, climatological, demography and mineral reserves and utilities for sustainable development.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the physical profile of the country
2. Study the resource endowment and its spatial distribution and utilization for sustainable

development

3. Synthesise and develop the idea of regional dimensions.

ECONOMIC GEOGRAPHY (GEOG1-C04)
(100 Marks) - 4 Credits

Objectives:

To introduce various dimensions of economic geography with respect to global record.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. The students will be acquainted with various dimension of economic geography.
2. Students will dig into resource geography, agricultural geography, industrial geography and transport geography.

STATISTICAL METHODS IN GEOGRAPHY (GEOG1-C05) (Practical)
(100 Marks) - 4 Credits

Objective:

To introduce inferential and descriptive statistics with uses in research methodology.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the basics of data collection and processing for the meaningful outcomes.
2. Comprehend the representation and interpretation of the results.
3. Put into practice results obtained in representation as well as day-to-day life.

CHOICE BASED CREDIT SYSTEM

P.G. Syllabus
Second Semester



**P.G. Department of Geography, Utkal University,
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2nd Semester
(500 Marks, 20 Credits)

<u>THEORY</u>	<u>TITLE OF THE PAPER</u>	<u>MARKS</u>	<u>CREDITS</u>
GEOG2 CO1	CLIMATOLOGY	100	04
GEOG2 CO2	HUMAN & SETTLEMENT GEOGRAPHY	100	04
GEOG2 CO3	ENVIRONMENTAL GEOGRAPHY	100	04
GEOG2 FE04	REGIONAL GEOGRAPHY OF ODISHA	100	04
<u>PRACTICAL</u>			
GEOG2 C05	CARTOGRAPHY (P)	100	04

Members Board of Studies, Geography

Chairman, BOS, Geography

CLIMATOLOGY (GEOG2-C01)

(100 Marks) - 4 Credits

Objectives:

To establish a strong foundation on climatology with focusing on all the elements of atmosphere and resultant processes.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the elements of weather and climate and its impacts at different scales.
2. Comprehend the climatic aspects and its bearing on planet earth.
3. Understand the mechanisms and genesis of various climatological disasters

HUMAN & SETTLEMENT GEOGRAPHY

(GEOG2-C02) (100 Marks) - 4 Credits

Objectives:

To recognize various aspects of human life and interrelation with geography.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Know the changing human and cultural landscape at different levels.
2. Understand patterns and processes of population growth and its implications.
3. Appreciate the nature and quality of human landscapes.

ENVIRONMENTAL GEOGRAPHY

(GEOG2-C03)

(100 Marks) - 4 Credits

Objectives:

To recognize human and environmental interactions with global and national initiatives for sustainable future.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the dynamic interactive relationship between man and environment.
2. Have sound understanding on distribution, utilization and proper management of natural resources at global level.
3. Make assessment and review of planning and policies related to environment and natural resources
4. Understand the fundamental concepts of coupled human-environment system.

REGIONAL GEOGRAPHY OF ODISHA
(GEOG2-FE04)
(100 Marks) - 4 Credits

Objectives:

To study the physical, economical and social geography of Odisha. .

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Students will learn in to the physiography, drainage, climate and agricultural scenario of Odisha
2. Know the industrial and mineral availability in Odisha with knowing the natural vegetation intensity.
3. Students will understand the natural hazards and vulnerability of Odisha against the multi-hazards (Covid-19 included)
4. Understand the demography and spatial distribution of various tribes in Odisha.

CARTOGRAPHY
(GEOG2-C05) (Practical)
(100 Marks) - 4 Credits

Objective:

To involve students with practical understanding on cartography.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Read and prepare maps.
2. Comprehend locational and spatial aspects of the earth surface.
3. Use and importance of maps for regional development and decision making.

CHOICE BASED CREDIT SYSTEM

P.G. Syllabus
Third Semester



**P.G. Department of Geography, Utkal University,
Vani Vihar, Bhubaneswar**

3rd Semester
(500 Marks, 20 Credits)

PRACTICAL	TITLE OF THE PAPER	MARKS	CREDITS
GEOG3 CO1	Quantitative & Spatial Methods (P)	100	04
<u>THEORY</u>			
GEOG3 CO2	Oceanography	100	04
GEOG3 CO3	Basics of Remote Sensing & GIS	100	04
GEOG3 FE04	Research Methodology	100	04
GEOG3 FE05	Natural Hazards & Disaster Management	100	04

QUANTITATIVE & SPATIAL MODELS
(GEOG3-C01) (P)
(100 Marks)-4 Credits

Objectives:

To orient students with quantitative and spatial models used in Geographical analysis.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Have sound knowledge regarding the classification and elements of maps.
2. Have proper utilization of maps for the development.
3. Appreciate the preparation of various thematic maps with the application of various techniques.
4. Put into practice the results obtained for spatial analysis of results and to apply various statistical software for the study.

OCEANOGRAPHY
(GEOG3-C02)
(100 Marks) - 4 Credits

Objective:

To create a deeper understanding on oceanic landforms and processes with their global distribution keeping challenges encountered in the past and future scenario of the ocean lives.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the oceanic process and availability of resources
2. Understand the evolution of various oceanic topography and features.
3. Know various process related to oceanic circulation and effect on globe.

BASICS OF REMOTE SENSING AND GIS
(GEOG3-C03)
(100 Marks) - 4 Credits

Objectives:

To create a basic understanding on remote sensing and Geographical Information System (GIS)

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Know the concept and history of remote sensing
2. Understand various components and principles of GIS

3. Appreciate the strength and application of remote sensing
4. Develop the skill so as to use digital satellite data using software
5. Prepare the maps based with satellite data to compare with the ground realities.

RESEARCH METHODOLOGY

(GEOG3-FE04)

(100 Marks) - 4 Credits

Objective:

To strengthen the understanding of research methods applied in social sciences among the students.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Know the fundamentals of social science research and research process model
2. Understand various aspect of conducting preliminaries of a scientific research
3. Grasp the techniques of data collection and compilation
4. Prepare systematic literature review and plagiarism

NATURAL HAZARDS & DISASTER MANAGEMENT

(GEOG3-FE05)

(100 Marks) - 4 Credits

Objectives:

Making students to understand all the dimensions of natural and man-made disasters and disaster management framework.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand processes and impact of disaster
2. Understand both the natural and man-made disaster and human negligence in context of environment
3. Gain a perspective of disasters and various dimensions of disaster management
4. Have comprehensive knowledge of various natural and manmade disasters in India
5. Examine the response and mitigation measures of disasters

CHOICE BASED CREDIT SYSTEM

P.G. Syllabus
Fourth Semester
Special Paper
Urban and Regional Planning



**P.G. Department of Geography, Utkal University,
Vani Vihar, Bhubaneswar**

SPECIAL PAPER **1. URBAN AND REGIONAL PLANNING**
2. REMOTE SENSING AND GIS

THEORY	TITLE OF THE PAPER	MARKS	CREDITS
GEOG4 CO1	1. Urban Planning 2. Cartography	100	04
GEOG4 CO2	1. Regional Planning 2. Remote Sensing And Its Applications	100	04
GEOG4 CO3	1. Rural Development Planning 2. GIS Applications	100	04
GEOG4 CO4	1. Urban And Regional Planning (P) 2. Aerial Photography Remote Sensing GPS And GIS (P)	100	04
GEOG4 CO5	Dissertation	100	04

Members Board of Studies, Geography

Chairman, BOS, Geography

M.A/M.Sc. Geography Syllabus Fourth Semester

2021-2022

**P.G Department of Geography,
Utkal University, Vani Vihar,
Bhubaneswar**

The Course shall comprise Three Theory papers each of these hours duration carrying 100 Marks one dissertation with presentation and viva-voce carrying 100 marks and one Practical Paper of not less than six hours duration carrying 100 marks. The students have to opt for one special paper offered in the department.

Semester-IV

Special Paper

- (A) Urban and Regional Planning
- (B) Remote Sensing And GIS

Title of the paper

Marks

Theory

Paper-Geog4 C01

100 Marks -4 Credits

- (A) Urban Planning
- (B) Cartography

Paper-Geog4 C02

100 Marks -4 Credits

- (A) Regional Planning
- (B) Remote Sensing and Its Applications

Paper-Geog4 C03

100 Marks -4 Credits

Practical

Paper-Geog4 C04

- (A) Urban and Regional Planning Practical
- (B) Aerial Photography Remote Sensing, GPS and GIS Practical

Paper-Geog4 C05 Dissertation

100 Marks -4 Credits

Special Paper
URBAN AND REGIONAL PLANNING
GEOG4-CO1 (A)
Urban Planning
100 Marks, -4 Credits

Objective:

To deeply analyze the process of urbanization and urban dynamicity in world and India.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Learn the role of urbanization and urban studies as a distinct fields of human geography
2. Have sound knowledge of key concept, different components of urbanization along with its drivers
3. Examine dynamics of urbanization and characteristic with contemporary issues
4. Understand the fundamentals and patterns of urbanization process
5. Learn the functional classification of cities and Central Place Theory
6. Know contemporary problems of Delhi, Mumbai, Kolkata and Chennai

Special Paper
URBAN AND REGIONAL PLANNING
GEOG4-C02 (A)
REGIONAL PLANNING
100 Marks, 4 Credits.

Objective:

To introduce various aspects of a region and regional planning processes with prioritizing the planning initiatives implemented in India.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Identify notable lagging regions and solutions for their overall development
2. Have comprehensive understanding regarding the different regions and application of different models and theories for integrated regional development.
3. Select appropriate indicators for the measurement of socio-economic regional development.

Special Paper
URBAN AND REGIONAL PLANNING
Paper -GEOG4-C03 (A)
Rural Development Planning
100 Marks, 4 Credits.

Objective:

To implement a broad framework in grassroot level of planning in India and the challenges encountered.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Appreciate the concepts, needs and various approaches to rural development;
2. Understand the strong economic bases of rural areas of India;
3. Appreciate the area based and target group based approaches and provision of services to rural development.

Special Paper
URBAN AND REGIONAL PLANNING
GEOG4-CO4 (A)
Urban and Regional Planning Practical
100 Marks, 4 Credits.

Objective:

To make students acquainted with the practical aspect of regional planning.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the basics of data collection and, processing for the meaningful outcomes
2. Understand the selection of proper sampling techniques for the collection of data

Special Paper
URBAN AND REGIONAL PLANNING
GEOG4-CO5 (A)
Urban and Regional Planning Practical
100 Marks, 4 Credits.

Objective:

To encourage students for pursuing research in the post-Graduation level.

Learning Outcome:

1. While preparing their dissertation students will be advised regularly by the Guides and will be submitting their collected data and analysis.
2. This dissertation will show a student's knowledge on research methodology and application of remote sensing and GIS in real world.

CHOICE BASED CREDIT SYSTEM

P.G. Syllabus
Fourth Semester

Special Paper
Remote Sensing and GIS



**P.G. Department of Geography, Utkal University,
Vani Vihar, Bhubaneswar**

Members Board of Studies, Geography

Chairman, BOS, Geography

M.A/M.Sc. Geography Syllabus Fourth Semester-2021-2022
P.G. Department of Geography
Utkal University Vani Vihar, Bhubaneswar

The course shall comprise three theory Papers each of three hours duration carrying 100 Marks , one dissertation with presentation and Viva-voce carrying 100 marks and one Practical Paper of not less than six hours duration carrying 100 marks . The students have to opt for one special paper offered in the department

Semester-

IV (B) Remote sensing And GIS
 Special paper

Title of the paper	Marks
 <u>Theory</u>	
Paper-Geog4CO1 (B) Cartography	100 Marks-4Credits
Paper-Geog4CO2 (B) Remote Sensing and its Applications	100 Marks-4Credits
Paper-Geog4CO3 (B) GIS & its Applications	100 Marks-4Credits
 <u>Practical</u>	
Paper-Geog4CO4 (B) Aerial Photography Remote Sensing, GPS and GIS Practical	100 Marks-4Credits
Paper-Geog4CO5 (B) Dissertation	100 Marks-4Credits

Special Paper
REMOTE SENSING AND GIS
Cartography
GEOG4 C01 (B)-100 Marks-4 Credits.

Objective:

To make students understand the modern ways of cartography and techniques.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Students will understand the science behind cartography.
2. Know coordination system used in mapping with digital map making.
3. Know various mapping techniques (compilation, map production).

Special paper
REMOTE SENSING AND GIS
GEOG4 CO2 (B)-100 Marks-4 Credits
Remote sensing and Applications

Objective:

To align the students with the modern ways of capturing remotely sensed data and techniques to use in real life.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Know the concept and history of remote sensing
2. Understand the aspects related to satellites and digital image processing (image enhancement, contrast manipulation, image classification) with the application of SLAR, SAR and Lidar data.
3. Know about remote sensing satellites and sensors.
4. Understand the fundamentals of aerial photography and their application in in Land Use Landcover (LULC), mapping of vegetation and agriculture.

Special Paper
REMOTE SENSING AND GIS
GEOG4 CO3 (B)100 Marks-4 Credits
GIS and its applications

Objectives:

To familiarize students with the GIS and its application in Geographical analysis.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand various components and principles of GIS
2. Construct the thematic maps using different digital layers
3. Have comprehensive understand of GIS for the construction of maps and their use the development planning

Special Paper
REMOTE SENSING AND GIS
GEOG4 CO4 (B) 100 Marks-4 Credits
Aerial Photography, Remote Sensing, GPS and GIS Practical

Section I: Practical Exercises on the following problems -80 Marks

Objective:

To encourage students to understand and carryout practical applications of GIS, Remote sensing.

Learning Outcomes:

After the completion of course, the students will have ability to:

1. Appreciate the strength and application of remote sensing
2. Map the resources, their location and availability
3. Develop the skill so as to use digital satellite data using software
4. Prepare the maps based with satellite data to compare with the ground realities.
5. Classify digital data for the land use/land cover and urban studies
6. Apply GIS in various geographical studies

Paper-GEOG4-CO5 - Internship Project on RS & GIS Application Areas

Dissertation -100 Marks-4 Credits

Objective:

To encourage students for pursuing research in the post-Graduation level.

Learning Outcomes:

1. While preparing their dissertation students will be advised regularly by the Guides and will be submitting their collected data and analysis.
2. This dissertation will show a student's knowledge on research methodology and application of remote sensing and GIS in real world.