Annexure-II

MANGALORE UNIVERSITY

Curriculum Framework for Three -YearB.A.Undergraduate Programme underSEP2024-25

1st and 4th Semester Syllabus
Geography Course for B.A. Programme

Submitted to
Mangalore University, Mangalagangothri-574 199

MANGALORE UNIVERSITY

GEOGRAPHY FOR B.A. PROGRAMME

SYLLABUS

(Asper State EducationPolicy–2024)

Submitted by

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Syllabus Aims:

The aims of the syllabus describe the Geography Course for B.A. These aims outline the educational context in which syllabus content should be viewed. Many of these aims may be delivered by the use of suitable case-studies, through application of geographical skills and through practical field visits.

The BA. Geography syllabus aims to enable students to:

1. Know the significance of scale in studying geography.
2. Know the processes functioning at various scales within physical and human environments.
3. Improve a sense of space, place and location.
4. Develop consciousness of the relevance of geography to understanding and solving contemporary environmental problems.
5. Realization of the main fundamentals of physical geography and human geography and the interconnectedness between them.

6. Explain the causes and effects of change over space and time on physical and human environments
7. Develop an insight into the nature, value, limitations and importance of different approaches to analyze and explanation in geography.
8. Increase the knowledge and ability to use and apply appropriate skills and techniques including fieldwork
9. Improve a logical approach in order to present a structured, coherent and evidence-based argument.
10. Develop a concern for accuracy and objectivity in extracting, recording, processing, presenting, analyzing and interpreting geographical data.

Program Outcomes (POs) By the end of the program the students will be able to:			
PO1	Geographical Knowledge	:	Give an explanation of relevant terms and concept of geography including definitions
PO2	Project Management	:	Recognize geographical principles, theories and models to manage projects and achieve its objectives.
PO3	Problem Analysis	:	Find solution to environmental and Human problems
PO4	Modern Tool	:	Application of modern tools and techniques to interpret how processes bring changes in systems, distributions and environments.
PO5	Research of Complex Problems	:	Apply research-based knowledge to provide valid conclusions and demonstrate skill of analysis and synthesis of geographical information.
PO6	Communication	:	Communicate effectively by identifying human activities and use geographical data to identify trends and patterns.
PO7	Design / development of solutions	:	Carry out investigation into the complex and interactive nature of physical and human environments.
PO8	Geography and Society	:	To inspect the environmental and societal issues and compare between the places, environments and people.
PO9	Multi-disciplinary Settings	:	Assemble geographical evidence, ideas and arguments with multi-disciplinary setting.
PO10	Ethics	:	Develop ethical principles and commit to professional ethics and responsibilities and norms of scientific practices.
PO11	Life-long Learning	:	Understand the effects of geographical processes and change on physical and human environments and life-long learning of geographical studies.
PO12	Environment and Sustainability	:	Assess how the viewpoints of different groups of people, potential conflicts of interest and other factors interact in the management of physical and human environments to bring environmental sustainability.

MANGALORE UNIVERSITY

SCHEME AND SYLLABUS
CHOICE BASED CREDIT SYSTEM
OPTIONAL SUBJECT GEOGRAPHY
FOR B.A. PROGRAMME

SEM	TITLE OF THE PAPER	Paper	Teaching Hours /Week	Duration of Exam	Evaluation Pattern I.A.	Sem. End Exam	Total	Credits
I	Theory- 1.1 Principles of Geomorphology	DSC-1.1	4	3	20	80	100	3
	Practical-1.2 Interpretation of SOI Toposheet	DSC- 1.2	4	4	10	40	50	2
II	Theory-2.1 Fundamentals of Climatology	DSC-2.1	4	3	20	80	100	3
	Practical- 2.2 Interpretation of weather maps	DSC-2.2	4	4	10	40	50	2
III	Theory-3.1 Fundamentals of Human Geography	DSC-3.1	4	3	20	80	100	3
	Practical-3.2 Techniques in Human Geography.	DSC-3.2	4	3	10	40	50	2
	Geography of Tourism	Elective	2	2	10	40	50	2
IV	Theory-4.1 Regional Geography of India	DSC-4.1	4	3	20	80	100	3
	Practical-4.2 Representation of Geographical Features of India	DSC-4.2	4	3	10	40	50	2
	Resource conservation and management	Elective	2	2	10	40	50	2
V	Theory-5.1 Population Resources and Dynamics	DSC-5.1	3	3	20	80	100	3
	Theory-5.2 Fundamentals of Remote Sensing and GIS	DSC-5.2	3	3	20	80	100	3
	Practical-5.3 Aerial Photo and Satellite image	DSC-5.3	4	3	10	40	50	2
VI	Theory-6.1 Environmental Geography	DSC-6.1	3	3	20	80	100	3
	Theory-6.2 Sustainable Soil and Water Resources	DSC-6.2	3	3	20	80	100	3
	Practical-6.3 Statistical Geography	DSC-6.3	4	3	10	40	50	2
	General Geography		2	--	10	40	50	2

1st Semester

GEOGRAPHY COURSE FOR B.A.

Mangalore University

Mangalagangothri-574 199

Curriculum

Program Name	**Geography Course for B.A**	Semester	**1**
Course Title	**Principles of Geomorphology**		
Course Code:		No. of Credits	**3**
Contact hours	**56 Hours**	Duration of SEA/Exam	**3 hours**
Formative Assessment Marks	**20**	Summative Assessment Marks	**80**

Course Pre-requisite(s): No Pre-requisite(s)

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

CO1. Define the field of Geomorphology and to explain the essential principles.
CO2. To outline the mechanism of dynamic nature of the Earth's surface and it's interior.
CO3. To illustrate and explain the forces affecting the crust of the earth and its effect.
C04. To understand the conceptual and dynamic aspects of landform development.
CO5. Recognize all the geomorphic landforms

Contents	**60 hrs**
UNIT - I **Introduction**: Introduction to Physical Geography – Branches of Physical Geography, Inter Relationship between Physical and Human Geography. Geological Time Scale. Origin and evolution of the earth's crust. Earth's interior: Structure and composition. Factors Controlling landforms development. Isostasy – Pratt and Airy View.	10
UNIT-II **Order of Landforms – First Order of Landforms – Continents and Oceans -Origin and Theories:** Introduction to first order landforms. Endogenetic and exogenetic forces. Continental Drift Theory by Alfred Wegener: Geological, Biological and Climatological Evidence, Merits and Criticisms. Convectional Current Theory of Arthur Holmes -Types of Convectional currents. Fundamentals of geomagnetism.	20
UNIT-III **Second Order Landforms: Origin and Theories. (Formation of Mountains Plateau and Plains):** Plate Tectonic Theory – Major and Minor Plates., Types of Plate Movements, Plate Margins and Associated Landforms, Sea-Floor spreading. Volcanoes: Causes and Types. Earthquakes & Tsunamis: Causes and its Impact. Recent Views on Mountain Building: Folds and faults.	10
UNIT-IV **Third Order Landforms (Geomorphological Landforms):** Ten Concepts in Geomorphology. Cycle of erosion: Davis and Penck. Agents of Denudation - River, Wind, Glacial, sea Waves and Underground Water. Erosion, Transportation and Depositional landform features. Rocks - Types, Characteristics and Importance, Weathering: Meaning, Types and Controlling Factors. Soil and its formation.	20

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-15)

Course Outcomes (COs) / Program Outcomes (POs)	**Program Outcomes (POs)**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

CO1	3	1	0	0	0	1	0	2	0	0	2	0
CO2	2	2	0	0	0	1	0	2	0	0	2	0
CO3	1	1	0	0	0	1	0	2	0	0	2	0
CO4	2	1	0	0	0	2	0	2	0	0	3	0
CO5	1	3	0	0	0	1	0	1	0	0	2	0

Pedagogy: Interactive Lectures, Inquiry-based learning, Blended learning, Case Studies.

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Sessional Tests	10
Seminars / Presentations / Assignment / Case study / Field-Study / Project work etc	10
Total	**20 Marks**
Formative Assessment as per SEP guidelines are compulsory	

Program Name	**Geography Course for B.A**	Semester	**1**
Course Title	**Geomorphological Mapping Techniques**		
Course Code:		No. of Credits	**2**
Contact hours	**56 Hours**	Duration of SEA/Exam	**3 hours**
Formative Assessment Marks	**10**	Summative Assessment Marks	**40**

Course Pre-requisite(s): No Pre-requisite course(s)

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

CO1. Differentiate between various types of rocks

CO2. Construct different types of landforms with contours

CO3. Recognise different aspects of the maps

CO4. Delineate the watershed.

CO5. Analyse the shape of the landforms

Contents **Hrs 60**

1. Collection of Rock types and Rock Samples: Igneous, Sedimentary and Metamorphic rock Samples, (Granite, Basalt, limestone. Sandstone, Quartzite, Marble and Shale).
2. Soil Profile: Preparation of Soil profile layers Such as Oo, Ao, A, B, C and D soil layers.
3. Construction of Land forms through Contour–Conical Hill, Plateau, Uniform, Convex, and Concave Slope.
4. Marginal Information of Topographical Maps. Extraction of Contour Lines, Form Lines, Spot Heights, Bench-Mark from topographical maps.
5. Profile drawing using contour from top sheet. Profiles –serial, superimposed, projected and composite.
6. Delineation of watershed using Topographical sheets or Google map by marking water divide line and Identification of stream orders.
7. **Field Activity:** Students have to visit nearby stream and submit report regarding stream order.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-15)

Course Outcomes (COs) / Program Outcomes (POs)	**Program Outcomes (POs)**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
CO1	3	1	3	-	1	-	1	1	-	2	2	-
CO2	3	1	1	-	1	-	2	-	2	-	1	-
CO3	3	1	1	1	-		1	1	-	-	2	-
CO4	3	1	1	1	1	-	2	-	2	-	2	-
CO5	3	1	2	2	2	1	3	-	2	-	3	-

Pedagogy: Interactive Lectures, case studies, Discussion-b1ased, Inquiry-based

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Sessional Tests-1	05
Seminars / Presentations / Assignment / Case study / Field-Study / Project work etc.	05
Total	**10 Marks**
Formative Assessment as per SEP guidelines are compulsory	

References	
1	Ahmed E. (1985) Geomorphology, Kalyani Publishers, New Delhi.
2	Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York
3	Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley International Edn. & Wiley Eastern Reprints 1984.
4	Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Development, Elsevier, Amsterdam
5	Woodridge S.W and R.S. Morgan (1991) An Outline of Geomorphology, The Physical Basis of Geography, Orient Longman, Kolkata.
6	Dayal P. (1995) A Text Book of Geomorphology 2nd Edition. Sukla Book/Dept. Patna.
7	Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn.
8	Goudie Anrew et.al. (1981) Geomorphological Techniques, George Allen &Unwin, London.
9	Bloom A.L. (1978) Geomorphology: A Systematic Analysis of Late Cenozoic Landforms Prentice – Hall of India, New Delhi.
10	Brunsden D. (1985) Geomorphology in the Service of Man: The Future of Geography, Methnen, U.K.
11	Worcester P.G. (1965), A Text Book of Geomorphology, Can North and 2nd Edition, East West Edn. New Delhi.
12	Board Shaw M.J. Et. Al. (1979) The Earth's Changing Surface, Hodder & Stoughton London.
13	William D. Thornbury (2004). Principles of Geomorphology, 2nd Edition, CBS Publisher and Distributor Pvt. Ltd, New Delhi
14	Vishwas S. Kale, Avijit Gupta (2018), Introduction to Geomorphology, Universities Press.
	Websites Resources:
1	http://www.solarviews.com/eng/earth.htm
2	http://www.moorlandschool.co.uk/earth/tectonic.htm
3	https://www.mines.gov.in/
4	https://www.surveyofindia.gov.in/

2nd Semester

GEOGRAPHY COURSE FOR B.A.

Mangalore University

Mangalagangothri-574 199

Curriculum

Program Name	**Geography Course for B.A**	Semester	**2**
Course Title	**Fundamentals of Climatology**		
Course Code:		No. of Credits	**3**
Contact hours	**56 Hours**	Duration of SEA/Exam	**3 hours**
Formative Assessment Marks	**20**	Summative Assessment Marks	**80**

Course Pre-requisite(s): No Pre-requisite course(s)

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

CO1. Define various phenomenon related to the atmosphere.
CO2. Understand the various atmospheric processes.
CO3. Illustrate the relationship between temperature and pressure.
CO4. Examine the precipitation process
CO5.Collect climatic data based on the theoretical knowledge

Contents	60 Hrs
UNIT-I **Composition and Structure of the Atmosphere:** Climatology and Meteorology. Nature and Scope of Climatology; Structure: Troposphere, Stratosphere, Mesosphere, Ionosphere, Exosphere and their characteristics.Composition of the atmosphere. Weather and Climate – Elements and controlling factors.	10
UNIT-II **Atmospheric Temperature:** Insolation: Definition, Mechanism, Solar Constant.Factors affecting the Insolation: Heating and cooling process of the atmosphere-Radiation, Conduction, convection, and advection. Temperature Distribution: Influencing factors.Vertical, Horizontal distribution, and Inversion of temperature. Atmospheric stability and instability. Global Heat Budget: Terrestrial radiation, albedo. Net Radiation and Latitudinal Heat Balances.	20
UNIT-III **Atmospheric Pressure and Winds:** Atmospheric Pressure: Influencing factors, Vertical and Horizontal Distribution, Pressure Belts, Pressure Gradient. Tri-cellular - Hadley, Ferrel'sand Polar Cells. Atmospheric Circulation, Winds - Influencing factors, Types - planetary, seasonal, Monsoons and jet streams, Local. Variable winds – Cyclones and anti-cyclones.	10
UNIT-IV **Atmospheric Moisture:**Sources, influencing factors and types -Absolute, Relative and Specific. Hydrological cycle: process of evaporation, condensation. Precipitation-Forms, Rainfall and its types, Climate Classifications: Koppen's.Global Climate Change**:** Causes and consequences, role and response of man.	20

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-15)

Course Outcomes (COs) / Program Outcomes (POs)	**Program Outcomes (POs)**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
CO1	3	-	-	-	-	1	-	-	1	-	3	-
CO2	3	-	-	-	-	1	-	-	2	-	2	-

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
CO3	2	-	-	-	-	1	-	-	2	-	1	-
CO4	2	-	1	1	-	1	2	-	2	-	1	-
CO5	2	2	1	2	3	-	3	-	2	-	1	-

Pedagogy: Interactive Lectures, Inquiry-based learning, Blended learning, Case Studies.

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Sessional Tests	10
Seminars / Presentations / Assignment / Case study / Field-Study / Project work etc.	10
Total	**20 Marks**

Formative Assessment as per SEP guidelines are compulsory

Program Name	**Geography Course for B.A.**	Semester	**2**
Course Title	**Interpretation of Weather Maps**		
Course Code:		No. of Credits	**2**
Contact hours	**60 Hours**	Duration of SEA/Exam	**3hours**
Formative Assessment Marks	**10**	Summative Assessment Marks	**40**

Course Pre-requisite(s): No Pre-requisite course(s)

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

CO1. Know about the Indian Metrological Department.

CO2.Construct various types of climatic maps

CO3.Demonstrate how various weather instruments works.

CO4. Interpret the daily weather charts.

CO5.Investigate the water balance and runoff.

Contents	**60 Hrs**

1. Understanding functions of the Indian Meteorological Department (IMD) and Acquisition of Climate Variables.
2. Plotting of variables using graphical methods: Climograph, hythergraph. (Manual and Automated).
3. Elementary Instrumental Observation: Centigrade and Fahrenheit thermometer for measuring temperature.
4. Mercurial Barometer and Aneroid Barometer for measuring atmospheric pressure.
5. Windvane, Anemometer, Rain gauge.
6. Interpretation of Indian Daily Weather charts. (Download weather charts of any two seasons).
7. **Field Activity**: Visit to nearest Meteorological Station.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-15)

Course Outcomes (COs) / Program Outcomes (POs)	**Program Outcomes (POs)**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
CO1	3	-	-	-	-	1	-	-	-	-	3	-
CO2	1	-	2	1	-	1	-	-	1	-	1	-
CO3	1	-	-	3	-	2	1	-	2	-	1	-
CO4	1	-	-	1	-	2	2	-	2	-	2	-
CO5	1	2	2	1	3	2	3	1	2	1	1	-

Pedagogy: Interactive Lectures, case studies, Discussion-based, Inquiry-based

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Sessional Tests	05
Seminars / Presentations / Assignment / Case study / Field-Study / Project work etc.	05
Total	**10 Marks**
Formative Assessment as per SEP guidelines are compulsory	

References	
1	Lutgens, Frederic K. & Tarbuck, Edward J. (2010).The Atmosphere: An Introduction to Meteorology. New Jersey: Pearson Prentice Hall.
2	Oliver, John E. &Hidore, John J.(2003).Climatology: An Atmospheric Science. Delhi: Pearson Education.
3	Singh, S. (2005).Climatology - Allahabad: PrayagPustakBhawan.
4	Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
5	Critchfield, H.J., (1975): General Climatology, Prentice Hall, New Jersey.
6	Mather, J.R. (1974): Climatology: Fundamentals and Applications; McCraw Hill Book Co.USA.
7	Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
8	Trewartha, G.T.(1980):An Introduction to Climate; McGraw Hill, New York, 5th edition, (International Student Edition)
	Websites Resources:
1	https://earthobservatory.nasa.gov/
2	https://mausam.imd.gov.in/
3	https://www.weatheronline.in/
4	https://earthexplorer.usgs.gov/

Question Paper Pattern

Theory

Part – A 10X2=20

Part – B 4X5=20

Part – C 4X10=40

Practical

1. Practical examination can have 30 marks with minimum of 4 questions.
2. Viva-voce and practical record maintenance can have 10 marks.
3. Internal Assessment 10 marks