Name of the teacher: Prof. Eknath Kamalakar
B.A.B.Ed Semester – I Subject: - Geography Course Title: Physical Geography

Modules	Month
Module I. Introduction To Physical Geography	July
1.1 Definitions And Nature of Physical Geography	
1.2 Scope of Physical Geography	
1.3 Branches of Physical Geography	
1.4 Importance of Physical Geography	
Module II Atmosphere: Concepts And Components	August
2.1 Concepts: Weather And Climate	
2.2 Composition And Structure of Atmosphere	
2.3 Insolation: Factors Affecting on Distribution of Insolation	
2.4 Temperature: Vertical And Horizontal Distribution	
Module III Lithosphere	September
3 .1 Interior of The Earth	
3.2 Earth Movements And Its Classification	
3.3 Weathering: Concept And Types	
3.4 Erosional And Depositional Landforms of River	
Module IV Hydrosphere	October
4.1 Hydrosphere : Concept And Importance	
4.2 Distributional Pattern of Water Bodies- Ocean & Seas	
4.3 Inland Waterbodies - Rivers, Lakes, Canals, Tanks	
4.4 Field Visit And Preparation of The Report	
Revision of Unit I,II,III	November

Subject Teacher **Head**

Department of Geography

Name of the teacher: Prof. Eknath Kamalakar
Programme- B.A. Semester – II Subject: - Geography Course Title: Human Geography

Modules	Month
Module I : Introduction of Human Geography	December
1.1 Definitions and Nature of Human Geography	
1.2 Scope of Human Geography	
1.3 Branches of Human Geography	
1.4 Importance of Human Geography	
Module II : Population Dynamics	January
2.1 Population Growth with Special Reference to India	
2.2 Distribution of Population in India	
2.3 Factors Affecting on Growth and Distribution of Population	
2.4 Population theories : Malthus' theory of Population Growth and Demographic Transition Theory	
Module III : Rural and Urban Settlements	February
3.1 Types and patterns of rural settlements	
3.2 Functions of Rural Settlements	
3.3 Locational Arrangement of Urban Centres	
3.4 Functions of Urban Centers	
Module IV : Emerging Concepts in Agriculture	March
4.1 Agro Tourism	
4.2 Organic Farming	
4.3 Agro based industries	
4.4 Field Visit: Agro Tourism Centre / Organic Farming Centre / Agro based Industry	

Subject Teacher **Head**

Department of Geography

Name of the teacher: Dr. Shashikant Shivagonda Patil

Programme- B.Com Semester – I
Subject: - Geography Course Title: Commercial Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I : Introduction to Commercial Geography.	July
1.1 Concept of Commercial Geography	
1.2 Nature and Scope of Commercial Geography	
1.3 Significance of Commercial Geography	
Module II : Resources	August
2.1 Meaning & importance of Resources	
2.2 Classification of Resources	
2.3 Conservation of Resources & sustainable economic development.	
2.4 Major Bio-Resources & their international trade.	
Module III : Economic Activities.	September
3.1 Classification of Economic activities	
3.2 Factors affecting on Economic activities.	
3.3 Classification of World's Economy.	
3.4 Major Economic Activities in India	
Module IV : Globalization	October
4.1 Concept of Globalization	
4.2 Impact of Globalization on World Economy.	
4.3 Globalization & Indian Economy.	
4.4 Trade Organizations – WTO, OPEC, & EEC.	
4.5 Field visit- Industrial organization/ Trade organization/ APMC etc.	
Revision of Unit I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.Com Semester – II Subject: - Geography
Course Title: Marketing Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I : Introduction to Marketing Geography	December
Module I. Introduction to Marketing Geography	
1.1 Concept of Marketing Geography -	
1.2 Nature and Scope of Marketing Geography	
1.3 Basic Components of Marketing Geography	
1.4 Significance of Marketing Geography	
Module II Market System	January
2.1 Definition and Structure of Markets	
2.2 Factors affecting on Market systems.	
2.3 Classification of Markets.	
2.4 Significance of Markets	
Module III Agricultural Marketing.	February
3.1 Agricultural Marketing.	
3.2 Approaches to the study of Agricultural Marketing.	
3.3 Process and system of Agricultural Marketing.	
3.4 Functions and channels of Agricultural Marketing	
Module IV Maps and Cartographic Techniques	March
4.1 Map -: Meaning and Types	
4.2 Components of Map	
4.3 Cartographic Techniques- 4.3.1. Line Graph 4.3.2. Bar Graph 4.3.3. Divided Circle 4.3.4. Divided Rectangle	
Revision of Unit I,II,III,IV	May

Subject Teacher **Head**

Department of Geography

Programme- B.A.B.Ed Semester – III Subject: - Geography
Course Title: Soil Geography
Name of the teacher: Prof. Dr.Arun Patil

Modules	Month
Module I: Fundamentals of Soil Geography	July
1.1 Definition, Nature and Scope of Soil Geography	
1.2 Basics of Soil Geography and Pedology	
1.3 Recent trends in Soil Geography	
Module II Soils: Formation and Properties	August
2.1 Jenny's Model of Soil Formation	
2.2 Process of Soil Formation: Physical, Biotic and Chemical.	
2.3 Physical Properties of Soils: Morphology, Texture, Structure, Water, Air and Temperature.	
2.4 Chemical Properties of Soils: P^H, Organic Matter, NPK (Nitrogen, Phosphorous and Potassium) and Other Properties.	
Module III Soils: Classifications and Distribution	September
3.1 Genetic Classification of Soils.	
3.2 Characteristics and Distribution of Soils in Maharashtra.	
3.3 Soil Degradation: Concept, Causes, Consequences and Preventive Measures	
Module IV Practical (Theory Only)	October
4.1 Soil Profile	
4.2 **Soil Sample Collection and its Tools**	
4.3 Soil Analysis	
4.4 Process of Vermicompost	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**

Department of Geography

Programme- B.A.B.Ed. Semester – III Subject: - Geography
Course Title: Resource Geography
Name of the teacher: Dr. Eknath kamalakar

Modules	Month
Module I Basics of Resource Geography	July
1.1 Definition and Scope of Resource Geography	
1.2 Resource: Concept and Classification	
1.3 Importance of the Study of Resource Geography	
Module II: Major Resources: Distribution, Utilization and Problems	August
2.1 Water Resource	
2.2 Forest Resource	
2.3 Energy Resource	
2.4 Human Resource	
Module III: Sustainable Resource Development	September
3.1 Concept of Sustainable Resource Development	
3.2 Sustainable Development of Natural Resource: Water, Forest and Energy	
3.3 Sustainable Development of Human Resource	
Module IV: Practical (Theory Only)	October
4.1 Human Development Index: Indicators	
4.2 Pie Chart	
4.3 Choropleth Map	
4.4 Dot Map	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – IV Subject: - Geography
Course Title: Oceanography
Name of the teacher: Dr. Eknath kamalakar

Modules	Month
Module-1 Fundamentals of Oceanography	July
1.1 Definition, Nature and Scope of Oceanography	
1.2 Oceanography and Physical Sciences	
1.3 Branches of Oceanography	
1.4 Oceanography: Significance of the Study	
Module II Ocean: Properties and Currents	August
2.1 Oceanic Temperature: Factors Affecting on Ocean Temperature and Distribution of Oceanic Temperature	
2.2 Salinity of Ocean: Factors Affecting on Oceanic Salinity and Horizontal Distribution of Oceanic Salinity	
2.3 Oceanic Currents: i) Types of Oceanic Currents ii) Responsible Factors for Origin of Ocean Currents iii) Ocean Currents: Pacific, Atlantic and Indian Ocean	
Module III Applied Oceanography	September
3.1 Ocean or Marine Deposits: Sources and Classification	
3.2 Ocean Resources: Biotic, Mineral and Energy Resources	
3.3 Ocean Pollution: Causes, Effects and Preventive Measures	
Module IV: Practical (Theory Only)	October
4.1 Hypsographic Curve	
4.2 Wind Rose	
4.3 Data Collection, Analysis and Preparation: i) Isohalines Map ii) Isotherms Map	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A.B.Ed. Semester – IV Subject: - Geography
Course Title: Agriculture Geography
Name of the teacher: Prof.Dr. Arun Patil

Modules	Month
Module-1 Basics of Agriculture Geography	December
1.1 Definition, Nature and Scope of Agricultural Geography	
1.2 Approaches to the Study of Agricultural Geography	
1.3 Determinants of Agriculture: Physical and Human	
1.4 Agricultural Geography: Significance of Study	
Module II Agriculture Systems and Land-use Theory	January
2.1 Agricultural Systems: Nomadic Herding, Livestock Ranching, Sifting Cultivation, Intensive Subsistence Farming, Commercial Farming and Horticulture.	
2.2 Von Thunen's Theory of Agricultural Land Use	
Module III Agriculture: Regionalization, Problems and Modern Concept	February
3.1 Methods of Agricultural Regionalization: Crop Combination and Crop Diversification	
3.2 Agricultural Problems: Physical and Non-Physical (Economic, Social, Cultural, Political and Administrative)	
3.3 Modern Concepts: i) Vertical Farming ii) Urban Terrace Farming iii) Sustainable Agriculture	
Module IV: Practical (Theory Only)	March
4.1 Line Graphs	
4.2 Bar Graphs	
4.3 Ergograph	
4.4 Agricultural Land Record	
Revision of Unit –I,II,III,IV	April

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – V Subject: - Geography

Course Title: Population Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I: Introduction to Population Geography	July
1.1.Definition of Population Geography	
1.2.Nature and Scope of Population Geography	
1.3 Significance of Population Geography	
1.4 Sources of Population Data	
Module II: Population Growth and Distribution	August
2.1. World Population Growth and Distribution	
2.2. Factors Affecting on the Population Distribution	
2.3. Population Concepts: Under Population, Optimum Population and Over population	
2.4 Recent Population Policies: India and China	
Module III: Population Dynamics	September
3.1. Concept of Population Dynamics	
3.1.1 Fertility: Concept and Types	
3.1.2. Fertility: Causes, Effects and Measures	
3.1.3. Mortality: Concept and Types	
Module IV: Migration	October
4.1.Concept of Migration	
4.2. Types of Migration	
4.3. Causes and effects of Migration	
4.4. Recent trends in Migration	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – VI Subject: - Geography

Course Title: Economic Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

C) Course Syllabi: (CR = Credits / IH: Instructional Hours)	
Modules	**Month**
Module – I Introduction to Economic Geography	December
1.1 Meaning and Definition of Economic Geography	
1.2 Nature and Scope of Economic Geography	
1.3 Branches of Economic Geography	
1.4 Significance of Economic Geography and Approaches to the study of Economic Geography	
Module – II Economic Activity	January
2.1 Concept and Classification of Economic Activity	
2.2 Factors Affecting on Location of Agricultural Activity	
2.3 Factors Affecting on Location of Industrial Activity	
2.4 Alfred Weber's Theory of Industrial Location	
Module – III Major Industries	February
3.1 Agro-based Industries i) Cotton Textile Industry with special reference to India ii) Sugar Industry with special reference to India	
3.2 Non- agricultural Industries i) Iron and Steel Industry – USA ii) Automobile Industry – India	
3.3 Service Industries i) Tourism Industries ii) Geo-spatial Industries	
Module – IV Transport and Trade	March
4.1 Significance of Transportation	
4.2 Major Transport Routs: Roadway, Railway, Airway and Ocean Routs	
4.3 International Trade: India and USA	
4.4 Trade Policies: India and USA	
Revision of Unit –I,II,III,IV	April

Subject Teacher **Head**
Department of Geography

Course Title: Evolution of Geographical thought
Name of the teacher: Prof. Eknath Kamalakar

C) Course Syllabi: (CR = Credits / IH: Instructional Hours)	
Modules	**Month**
Module – I Geography in Ancient Period	July
1.1 Indian Geographical Thoughts	
1.2 Contribution of Greeks	
1.3 Contribution of Romans	
1.4 Arab Geographical Thoughts	
Module – II Schools of Geography	August
2.1 German School of Geography – Alexander von Humboldt	
2.2 French School of Geography – Vedal de la Blache	
2.3 American School of Geography – William Moris Davis	
2.4 British School of Geography – Halford J. Mackinder	
Module – III Dualisms in Geography	September
3.1 Determinism Vs Possibilism	
3.2 Systematic Vs Regional geography	
3.3 Physical Vs Human geography	
3.4 Ideographic Vs Nomothetic	
Module – IV Trends in Geography	October
4.1 Quantitative Revolution	
4.2 Paradigm in Geography	
4.3 Man-nature relationship: Radicalism, Behaviourlism and Humanism	
4.4 Recent trends in Geography	

Subject Teacher **Head**
Department of Geography

Course Title: Evolution of Geographical thought
Name of the teacher: Prof. Eknath Kamalakar

Modules	Month
Module I Introduction to Political Geography	Novembar
1.1 Definition of Political Geography	
1.2 Nature and Scope of Political Geography	
1.3 Approaches of Political Geography	
1.4 Significance of Political Geography	
Module II Concepts in Political Geography	Decembar
2.1 State	
2.2 Nation	
2.3 Boundary	
2.4 Frontiers	
Module III Geopolitics and Theories in Political Geography	January
3.1 Geopolitics : Concept and Definition	
3.2 Hartland Theory - Halford J. Mackinder	
3.3 Rimland Theory – Nicholas J. Spykeman	
Module IV Border Disputes and Resource Conflicts	Feruary
4.1 Border dispute of India- China, Pakistan and Nepal	
4.2 Water sharing dispute - Krishna, Godavari and Cauvery	
4.3Rehabilitation issues of water project: Koyana and Dudhganga Project	

Subject Teacher

Head
Department of Geography

Course Title: Practical-I Map and Map Making
Name of the teacher: Prof. Eknath Kamalakar

Modules	Month
Module – I: Introduction to Map and Scales	July
1.1 Map 1.1.1 Map: Definition and Elements 1.1.2 Classification of Maps: Based on Scale and Purpose	
1.2 Scale 1.2.1 Meaning and Definition, 1.2.3 Methods of Representation of scale - Verbal, Numerical and Graphical. 1.1.3 Scale Conversion 1.1.4 Construction of Graphical Scale – i) Simple (Plane Scale) ii) Time and Distance Scale iii) Diagonal Scale	
Module II: Map Projection	August
2.1 Definition, Classification of Projections: a) Based on the methods of Construction: Perspective and Non-perspective b) Based on Developable Surface used: Conical, Cylindrical, Zenithal, Conventional. c) Based on Position of Tangent Surfaces: Polar, Equatorial (normal), Oblique. d) Based on Position of view point or light: Gnomonic, Stereographic, Orthographic e) Based on Preserved qualities i) Equal area projection (Homolographic) ii) Orthographic Projection	

iii) Azumuthal Projection (True Bearing Projection)	
2.2 Graphical Construction of the following Projections with Properties and Use: i) Zenithal Polar Gnomonic Projection ii) Zenithal Polar Equal Area Projection iii) Simple Conical Projection with one standard Parallel iv) Cylindrical Equal Area Projection v) Mercator's Projection and Reference to Universal Transverse Mercator (UTM) Projection	September
Identification, Mapping of Slope, Relief Features and Profiles	
3.1 Slope and Gradient 3.1.1 Types of Slope: Gentle, Steep, Even, Uneven, Convex Concave,Terraced. 3.1.2 Representation of Relief by Contours: Hill, Mountain, Ridge, Cliff, Saddle, Plateau, Knoll, Spur, Col or Pass, Volcanic Col or Crater, Gorge,'V' Shaped Valley, Waterfall, 'U' Shaped Valley, Cirque, Hanging Valley, Ria Coast, Fiord Coast, Sea cliff. 3.1.3 Expression of Slopes: a) Gradient b) Degree c) Per Cent d) Mills	October
3.2 Profiles 3.2.1Superimposed Profile 3.2.2 Composite Profile 3.2.3 Projected Profile	

3.2.4 Longitudinal Profil	
Module – IV : Topographical Maps	Novembar
4.1 Indexing of S.O.I. Topographical Map	
4.2 Signs, Symbols and Colors used in SOI Toposheet	
4.1 Interpretation of S.O.I.'s Topographical Maps a) Marginal Information b) Physical environment: Relief, Drainage and Vegetation c) Cultural environment: Settlements, transportation and Communication,Irrigation.	
Module V: Weather Instruments and IMD Maps	Decembar
5.1 Study of weather Instruments with reference to Principle, Mechanism, and Function a) Thermograph b) Barograph c) Dry and Wet Bulb Thermometer d) Cup Anemometer e) Rain Gauge	
5.2 Isobaric Patterns: Cyclone, Anticyclone, Col, Ridge, Secondary Depression	
5.3 Signs and Symbols used in Indian Daily Weather Maps	
5.4 Interpretation of Indian Daily Weather Maps Marginal Information, Pressure, Winds, Clouds, Rainfall, Other Conditions, Sea Condition, Temperature departure from normal	
Module VI : Representation Techniques of Statistical Data a) Divided Rectangle b) Proportional Circle c) Proportional Sphere d) Choropleth Map e) Dot Map f) Isopleths	January
Module VII: Journal and Viva Voce	

Course Title- Practical-II Advanced Tools, Techniques & Field Work in Geography
Teacher Name- Prof Dr. Arun Patil

Modules	Month
Module – I: Introduction to Map a **nd Scales**	July
1.1 Definition and Characteristics of Computer	
1.2 Application of computer in geography 1.2.1. Construction of Line Graphs, Bar Graphs 1.2.2 Construction of Pie Diagram and Scatter Diagram	
1.3 Application of Excel for Data Analysis 1.3.1. Calculation of Mean,Median,mode For simple data) 1.3.2 Calculation of Standard Deviation For simple data)	
Module:-II: Remote Sensing	August
2.1 Definition of Remote Sensing	
2.2 Fundamentals of Remote Sensing: EMR, Sensors and Platforms	
2.3 Application of Remote Sensing in Geography	
2.4 Aerial photographs and Satellite imagery: Definition, types and difference	
2.5 Determination of Photo Scale	
2.6 Elements of image interpretation	
2.7 Identification of Physical and cultural features from Aerial Photographs or Satellite Imagery	
Module-III: GIS and GNSS	Sepetember
3.1 Geographical Information System (GIS) 3.1.1 Definition and components 3.1.2 GIS Data Structure: spatial and non-spatial data 3.1.3 Georeferencing, Digitization, Map Layout Preparation 3.1.1 Application of GIS in Geography	
3.2 Global Navigation Satellite System 3.1.1 Definition and components 3.2.2 GPS applications in Geography 3.3.3 Determining latitude, longitude and altitude with the	

help of GPS	
3.3 Exercise with Google earth Program (Point, Line and Polygon)	
Module-IV: Statistical methods and techniques	October
4.1 Measures of Central Tendency: Mean, Median and Mode	
4.2 Dispersion: Mean Deviation and Standard Deviation	
4. 3 Association and Correlation: Karl Pearson's Method (Product Moment)	
4.4 Analysis of Time Series: Semi-average Method	
Module-V: Surveying	
5.1 Introduction to Survey: Meaning and types	November
5.2 Preparation of plans of the given area with any one of the following survey method A- Plane Table survey (Radial, Intersection, and Traverse method) B- Dumpy Level survey C- Theodolite survey D- Total Station E- Abony Level Survey	
5.3 Preparation of plans Prismatic compass survey 5.1.1 Radial, Intersection and Traverse method 5.1.2 Types and conversion of bearings 5.1.3 Correction of bearing	
Module-VI: Project work based on field work any one of following	December
Resource survey, Population survey, Agricultural survey, Settlement Survey, Environmental issues, Industrial visit, Health survey, Natural Hazard or Disaster 1. Project Report must be content of following points: Introduction – Aims – Objectives - Review of the literature – Data collection – Methodology - Data Analysis – Interpretation - Findings – Suggestions - Bibliography 2. The duration of the field work should not exceed than 20 days 3. The word count of the report should be about 8000 to 12,000 excluding figures, tables, photographs, maps, references and appendices 4. One copy per student of the report as per research standard should be Submitted at the timeof examination.	
Module- VII: Study Tour Maximum 15 days of Study Tour and preparation of Tour Report. The Study Tour Report must be content of following points:Introduction – Necessity – Importance - Route map –	January

Objectives – Methodology - Geographical Profile (Natural, Socio-economic and Cultural) - Geographical importance of visited tourist places – Conclusion – References	

Programme- B.A. Semester – I Subject: - Geography Course Title: Physical Geography

Modules	Month
Module I. Introduction To Physical Geography	July
1.1 Definitions And Nature of Physical Geography	
1.2 Scope of Physical Geography	
1.3 Branches of Physical Geography	
1.4 Importance of Physical Geography	
Module II Atmosphere: Concepts And Components	August
2.1 Concepts: Weather And Climate	
2.2 Composition And Structure of Atmosphere	
2.3 Insolation: Factors Affecting on Distribution of Insolation	
2.4 Temperature: Vertical And Horizontal Distribution	
Module III Lithosphere	September
3 .1 Interior of The Earth	
3.2 Earth Movements And Its Classification	
3.3 Weathering: Concept And Types	
3.4 Erosional And Depositional Landforms of River	
Module IV Hydrosphere	October
4.1 Hydrosphere : Concept And Importance	
4.2 Distributional Pattern of Water Bodies- Ocean & Seas	
4.3 Inland Waterbodies - Rivers, Lakes, Canals, Tanks	
4.4 Field Visit And Preparation of The Report	
Revision of Unit I,II,III	November

Subject Teacher **Head**

Department of Geography

Name of the teacher: Dr. Shashikant Shivagonda Patil

Programme- B.A. Semester – II Subject: - Geography Course Title: Human Geography

Modules	Month
Module I : Introduction of Human Geography	December
1.1 Definitions and Nature of Human Geography	
1.2 Scope of Human Geography	
1.3 Branches of Human Geography	
1.4 Importance of Human Geography	
Module II : Population Dynamics	January
2.1 Population Growth with Special Reference to India	
2.2 Distribution of Population in India	
2.3 Factors Affecting on Growth and Distribution of Population	
2.4 Population theories : Malthus' theory of Population Growth and Demographic Transition Theory	
Module III : Rural and Urban Settlements	February
3.1 Types and patterns of rural settlements	
3.2 Functions of Rural Settlements	
3.3 Locational Arrangement of Urban Centres	
3.4 Functions of Urban Centers	
Module IV : Emerging Concepts in Agriculture	March
4.1 Agro Tourism	
4.2 Organic Farming	
4.3 Agro based industries	
4.4 Field Visit: Agro Tourism Centre / Organic Farming Centre / Agro based Industry	

Subject Teacher **Head**

Department of Geography

Name of the teacher: Dr. Shashikant Shivagonda Patil

Programme- B.Com Semester – I
Subject: - Geography Course Title: Commercial Geography –I
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	**Month**
Module I : Introduction to Commercial Geography.	July & August
1.1 Concept of Commercial Geography	
1.2 Nature and Scope of Commercial Geography	
1.3 Significance of Commercial Geography	
Module II : Resources	September & October
2.1 Meaning & importance of Resources	
2.2 Classification of Resources	
2.3 Conservation of Resources & sustainable economic development.	
2.4 Major Bio-Resources & their international trade.	
Revision of Unit I,II,III,IV	November

Subject Teacher

Head
Department of Geography

Name of the teacher: Dr. Shashikant Shivagonda Patil

Programme- B.Com Semester – II
Subject: - Geography Course Title: Commercial Geography –II
Name of the teacher: Dr. Shashikant Shivagonda Patil

Module I : Economic Activities.	December & January
1.1 Classification of Economic activities	
1.2 Factors affecting on Economic activities.	
1.3 Classification of World's Economy.	
1.4 Major Economic Activities in India	
Module II : Globalization	February & March
2.1 Concept of Globalization	
2.2 Impact of Globalization on World Economy.	
3.3 Globalization & Indian Economy.	
3.4 Trade Organizations – WTO, OPEC, & EEC.	
4.5 Field visit- Industrial organization/ Trade organization/ APMC etc.	
Revision of Unit I,II	April

Programme- B.A Semester – III Subject: - Geography
Course Title: Physical Geography of Maharashtra
Name of the teacher: Dr. Shashikant Shivagonda Patil

C) Course Syllabi: **(CR = Credits / IH: Instructional Hours)**		
Modules	**CR**	**IH**
Module-I Physiographic Divisions of Maharashtra	**1**	**15**
1.1 Location (Absolute And Relative)		
1.2 Administrative Divisions of Maharashtra		
1.3 Physical Divisions Of Maharashtra **a) Konkan Coast** **b) Sahyadri (*Paschim Ghat*)** **c) Maharashtra Plateau (Deccan)**		
1.4 Major Drainage Systems: **a) Western River Systems (Tapi, Narmada & Konkan Rivers)** **b) Eastern River Systems (Godavari, Krishna)**		
MODULE-III CLIMATE OF MAHARASHTRA	**01**	**15**
2.1 Temperature Distribution		
2.2 Rainfall Distribution		
2.3 Drought Prone Area of Maharashtra		
2.4 Flood Affected Area of Maharashtra		
MODULE-II SOIL AND VEGETATION		
3.1 Major soil types, characteristics and its distribution in Maharashtra	**1**	**15**
3.2 Soil degradation and soil conservation in Maharashtra		
3.3 Major forest types: characteristics and their distribution		
3.4 Deforestation and conservation of forests in Maharashtra		
Module-IV Practical	**1**	**15**
4.1 Line graph		
4.2 Bar graph		
4.3 Divided Circle		
4.4 Divided rectangle		

Subject Teacher **Head**

Department of Geography

Programme- B.A Semester – III Subject: - Geography
Course Title: Resource Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I Basics of Resource Geography	July
1.1 Definition and Scope of Resource Geography	
1.2 Resource: Concept and Classification	
1.3 Importance of the Study of Resource Geography	
Module II: Major Resources: Distribution, Utilization and Problems	August
2.1 Water Resource	
2.2 Forest Resource	
2.3 Energy Resource	
2.4 Human Resource	
Module III: Sustainable Resource Development	September
3.1 Concept of Sustainable Resource Development	
3.2 Sustainable Development of Natural Resource: Water, Forest and Energy	
3.3 Sustainable Development of Human Resource	
Module IV: Practical (Theory Only)	October
4.1 Human Development Index: Indicators	
4.2 Pie Chart	
4.3 Choropleth Map	
4.4 Dot Map	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – IV Subject: - Geography
Course Title: Economic Geography of Maharashtra
Name of the teacher: Dr. Shashikant Shivagonda Patil

C) Course Syllabi: **(CR = Credits / IH: Instructional Hours)**		
Modules	**CR**	**IH**
Module-I Minerals	**1**	**15**
1.1 Mineral Resources: Distribution and Production of Iron Ore, Bauxite and Manganese. **1.2 Power Resources; Distribution and Production of Coal, Mineral Oil, Natural Gas.** **1.3 Non Conventional Resources: Solar and Wind.** **1.4 Sustainable development of resources**		
Module II Agriculture	**1**	**15**
2.1 Major agricultural systems in Maharashtra		
2.2 Major food Crops: Rice, Jawar, Bajara, Wheat,		
2.3Major cash Crops: Sugarcane, Cotton, oil seeds and Tea.		
2.4 Problems of Agriculture in the Context of Globalization.		
MODULE-III INDUSTRIES	**1**	**15**
3.1 Classification of industries.		
3.2Agro Based Industries: Location Factors, Distribution, production and Trade of Sugar and Cotton Industries.		
3.3 Mineral based industries: Location Factors, Distribution, and Production and Trade of Iron and Steel andAluminum Industries.		
3.4 Automobile Industries.		
3.5 Tourism Industries		
Module-IV Practical (Only theory)		
4.1 Traffic flow		
4.2 Dot Map		
4.3 Choropleth map		
4.4 Scatter Diagram		

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – IV Subject: - Geography
Course Title: Agriculture Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module-1 Basics of Agriculture Geography	December
1.1 Definition, Nature and Scope of Agricultural Geography	
1.2 Approaches to the Study of Agricultural Geography	
1.3 Determinants of Agriculture: Physical and Human	
1.4 Agricultural Geography: Significance of Study	
Module II Agriculture Systems and Land-use Theory	January
2.1 Agricultural Systems: Nomadic Herding, Livestock Ranching, Sifting Cultivation, Intensive Subsistence Farming, Commercial Farming and Horticulture.	
2.2 Von Thunen's Theory of Agricultural Land Use	
Module III Agriculture: Regionalization, Problems and Modern Concept	February
3.1 Methods of Agricultural Regionalization: Crop Combination and Crop Diversification	
3.2 Agricultural Problems: Physical and Non-Physical (Economic, Social, Cultural, Political and Administrative)	
3.3 Modern Concepts: i) Vertical Farming ii) Urban Terrace Farming iii) Sustainable Agriculture	
Module IV: Practical (Theory Only)	March
4.1 Line Graphs	
4.2 Bar Graphs	
4.3 Ergograph	
4.4 Agricultural Land Record	
Revision of Unit –I,II,III,IV	April

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – V Subject: - Geography
Course Title: population Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I: Introduction to Population Geography	July
1.1.Definition of Population Geography	
1.2.Nature and Scope of Population Geography	
1.3 Significance of Population Geography	
1.4 Sources of Population Data	
Module II: Population Growth and Distribution	August
2.1. World Population Growth and Distribution	
2.2. Factors Affecting on the Population Distribution	
2.3. Population Concepts: Under Population, Optimum Population and Over population	
2.4 Recent Population Policies: India and China	
Module III: Population Dynamics	September
3.1. Concept of Population Dynamics	
3.1.1 Fertility: Concept and Types	
3.1.2. Fertility: Causes, Effects and Measures	
3.1.3. Mortality: Concept and Types	
Module IV: Migration	October
4.1.Concept of Migration	
4.2. Types of Migration	
4.3. Causes and effects of Migration	
4.4. Recent trends in Migration	
Revision of Unit –I,II,III,IV	November

Subject Teacher

Head
Department of Geography

Programme- B.A Semester – VI Subject: - Geography
Course Title: Economic Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

C) Course Syllabi:
(CR = Credits / IH: Instructional Hours)

Modules	**Month**
Module – I Introduction to Economic Geography	December
1.1 Meaning and Definition of Economic Geography	
1.2 Nature and Scope of Economic Geography	
1.3 Branches of Economic Geography	
1.4 Significance of Economic Geography and Approaches to the study of Economic Geography	
Module – II Economic Activity	January
2.1 Concept and Classification of Economic Activity	
2.2 Factors Affecting on Location of Agricultural Activity	
2.3 Factors Affecting on Location of Industrial Activity	
2.4 Alfred Weber's Theory of Industrial Location	
Module – III Major Industries	February
3.1 Agro-based Industries i) Cotton Textile Industry with special reference to India ii) Sugar Industry with special reference to India	
3.2 Non- agricultural Industries i) Iron and Steel Industry – USA ii) Automobile Industry – India	
3.3 Service Industries i) Tourism Industries ii) Geo-spatial Industries	
Module – IV Transport and Trade	March
4.1 Significance of Transportation	
4.2 Major Transport Routs: Roadway, Railway, Airway and Ocean Routs	
4.3 International Trade: India and USA	
4.4 Trade Policies: India and USA	
Revision of Unit –I,II,III,IV	April

Subject Teacher

Head
Department of Geography

Name of the teacher: Prof. Eknath Kamalakar
B.A.B.Ed Semester – I Subject: - Geography Course Title: Physical Geography

Modules	Month
Module I. Introduction To Physical Geography	July
1.1 Definitions And Nature of Physical Geography	
1.2 Scope of Physical Geography	
1.3 Branches of Physical Geography	
1.4 Importance of Physical Geography	
Module II Atmosphere: Concepts And Components	August
2.1 Concepts: Weather And Climate	
2.2 Composition And Structure of Atmosphere	
2.3 Insolation: Factors Affecting on Distribution of Insolation	
2.4 Temperature: Vertical And Horizontal Distribution	
Module III Lithosphere	September
3 .1 Interior of The Earth	
3.2 Earth Movements And Its Classification	
3.3 Weathering: Concept And Types	
3.4 Erosional And Depositional Landforms of River	
Module IV Hydrosphere	October
4.1 Hydrosphere : Concept And Importance	
4.2 Distributional Pattern of Water Bodies- Ocean & Seas	
4.3 Inland Waterbodies - Rivers, Lakes, Canals, Tanks	
4.4 Field Visit And Preparation of The Report	
Revision of Unit I,II,III	November

Subject Teacher **Head**

Department of Geography

Name of the teacher: Prof. Eknath Kamalakar
Programme- B.A. Semester – II Subject: - Geography Course Title: Human Geography

Modules	Month
Module I : Introduction of Human Geography	December
1.1 Definitions and Nature of Human Geography	
1.2 Scope of Human Geography	
1.3 Branches of Human Geography	
1.4 Importance of Human Geography	
Module II : Population Dynamics	January
2.1 Population Growth with Special Reference to India	
2.2 Distribution of Population in India	
2.3 Factors Affecting on Growth and Distribution of Population	
2.4 Population theories : Malthus' theory of Population Growth and Demographic Transition Theory	
Module III : Rural and Urban Settlements	February
3.1 Types and patterns of rural settlements	
3.2 Functions of Rural Settlements	
3.3 Locational Arrangement of Urban Centres	
3.4 Functions of Urban Centers	
Module IV : Emerging Concepts in Agriculture	March
4.1 Agro Tourism	
4.2 Organic Farming	
4.3 Agro based industries	
4.4 Field Visit: Agro Tourism Centre / Organic Farming Centre / Agro based Industry	

Subject Teacher **Head**

Department of Geography

Name of the teacher: Dr. Shashikant Shivagonda Patil

Programme- B.Com Semester – I
Subject: - Geography Course Title: Commercial Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I : Introduction to Commercial Geography.	July
1.1 Concept of Commercial Geography	
1.2 Nature and Scope of Commercial Geography	
1.3 Significance of Commercial Geography	
Module II : Resources	August
2.1 Meaning & importance of Resources	
2.2 Classification of Resources	
2.3 Conservation of Resources & sustainable economic development.	
2.4 Major Bio-Resources & their international trade.	
Module III : Economic Activities.	September
3.1 Classification of Economic activities	
3.2 Factors affecting on Economic activities.	
3.3 Classification of World's Economy.	
3.4 Major Economic Activities in India	
Module IV : Globalization	October
4.1 Concept of Globalization	
4.2 Impact of Globalization on World Economy.	
4.3 Globalization & Indian Economy.	
4.4 Trade Organizations – WTO, OPEC, & EEC.	
4.5 Field visit- Industrial organization/ Trade organization/ APMC etc.	
Revision of Unit I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.Com Semester – II Subject: - Geography
Course Title: Marketing Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I : Introduction to Marketing Geography	December
Module I. Introduction to Marketing Geography	
1.1 Concept of Marketing Geography -	
1.2 Nature and Scope of Marketing Geography	
1.3 Basic Components of Marketing Geography	
1.4 Significance of Marketing Geography	
Module II Market System	January
2.1 Definition and Structure of Markets	
2.2 Factors affecting on Market systems.	
2.3 Classification of Markets.	
2.4 Significance of Markets	
Module III Agricultural Marketing.	February
3.1 Agricultural Marketing.	
3.2 Approaches to the study of Agricultural Marketing.	
3.3 Process and system of Agricultural Marketing.	
3.4 Functions and channels of Agricultural Marketing	
Module IV Maps and Cartographic Techniques	March
4.1 Map -: Meaning and Types	
4.2 Components of Map	
4.3 Cartographic Techniques- 4.3.1. Line Graph 4.3.2. Bar Graph 4.3.3. Divided Circle 4.3.4. Divided Rectangle	
Revision of Unit I,II,III,IV	May

Subject Teacher **Head**

Department of Geography

Programme- B.A.B.Ed Semester – III Subject: - Geography
Course Title: Soil Geography
Name of the teacher: Prof. Dr.Arun Patil

Modules	Month
Module I: Fundamentals of Soil Geography	July
1.1 Definition, Nature and Scope of Soil Geography	
1.2 Basics of Soil Geography and Pedology	
1.3 Recent trends in Soil Geography	
Module II Soils: Formation and Properties	August
2.1 Jenny's Model of Soil Formation	
2.2 Process of Soil Formation: Physical, Biotic and Chemical.	
2.3 Physical Properties of Soils: Morphology, Texture, Structure, Water, Air and Temperature.	
2.4 Chemical Properties of Soils: P^H, Organic Matter, NPK (Nitrogen, Phosphorous and Potassium) and Other Properties.	
Module III Soils: Classifications and Distribution	September
3.1 Genetic Classification of Soils.	
3.2 Characteristics and Distribution of Soils in Maharashtra.	
3.3 Soil Degradation: Concept, Causes, Consequences and Preventive Measures	
Module IV Practical (Theory Only)	October
4.1 Soil Profile	
4.2 **Soil Sample Collection and its Tools**	
4.3 Soil Analysis	
4.4 Process of Vermicompost	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**

Department of Geography

Programme- B.A.B.Ed. Semester – III Subject: - Geography
Course Title: Resource Geography
Name of the teacher: Dr. Eknath kamalakar

Modules	Month
Module I Basics of Resource Geography	July
1.1 Definition and Scope of Resource Geography	
1.2 Resource: Concept and Classification	
1.3 Importance of the Study of Resource Geography	
Module II: Major Resources: Distribution, Utilization and Problems	August
2.1 Water Resource	
2.2 Forest Resource	
2.3 Energy Resource	
2.4 Human Resource	
Module III: Sustainable Resource Development	September
3.1 Concept of Sustainable Resource Development	
3.2 Sustainable Development of Natural Resource: Water, Forest and Energy	
3.3 Sustainable Development of Human Resource	
Module IV: Practical (Theory Only)	October
4.1 Human Development Index: Indicators	
4.2 Pie Chart	
4.3 Choropleth Map	
4.4 Dot Map	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – IV Subject: - Geography
Course Title: Oceanography
Name of the teacher: Dr. Eknath kamalakar

Modules	Month
Module-1 Fundamentals of Oceanography	July
1.1 Definition, Nature and Scope of Oceanography	
1.2 Oceanography and Physical Sciences	
1.3 Branches of Oceanography	
1.4 Oceanography: Significance of the Study	
Module II Ocean: Properties and Currents	August
2.1 Oceanic Temperature: Factors Affecting on Ocean Temperature and Distribution of Oceanic Temperature	
2.2 Salinity of Ocean: Factors Affecting on Oceanic Salinity and Horizontal Distribution of Oceanic Salinity	
2.3 Oceanic Currents: i) Types of Oceanic Currents ii) Responsible Factors for Origin of Ocean Currents iii) Ocean Currents: Pacific, Atlantic and Indian Ocean	
Module III Applied Oceanography	September
3.1 Ocean or Marine Deposits: Sources and Classification	
3.2 Ocean Resources: Biotic, Mineral and Energy Resources	
3.3 Ocean Pollution: Causes, Effects and Preventive Measures	
Module IV: Practical (Theory Only)	October
4.1 Hypsographic Curve	
4.2 Wind Rose	
4.3 Data Collection, Analysis and Preparation: i) Isohalines Map ii) Isotherms Map	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A.B.Ed. Semester – IV Subject: - Geography
Course Title: Agriculture Geography
Name of the teacher: Prof.Dr. Arun Patil

Modules	Month
Module-1 Basics of Agriculture Geography	December
1.1 Definition, Nature and Scope of Agricultural Geography	
1.2 Approaches to the Study of Agricultural Geography	
1.3 Determinants of Agriculture: Physical and Human	
1.4 Agricultural Geography: Significance of Study	
Module II Agriculture Systems and Land-use Theory	January
2.1 Agricultural Systems: Nomadic Herding, Livestock Ranching, Sifting Cultivation, Intensive Subsistence Farming, Commercial Farming and Horticulture.	
2.2 Von Thunen's Theory of Agricultural Land Use	
Module III Agriculture: Regionalization, Problems and Modern Concept	February
3.1 Methods of Agricultural Regionalization: Crop Combination and Crop Diversification	
3.2 Agricultural Problems: Physical and Non-Physical (Economic, Social, Cultural, Political and Administrative)	
3.3 Modern Concepts: i) Vertical Farming ii) Urban Terrace Farming iii) Sustainable Agriculture	
Module IV: Practical (Theory Only)	March
4.1 Line Graphs	
4.2 Bar Graphs	
4.3 Ergograph	
4.4 Agricultural Land Record	
Revision of Unit –I,II,III,IV	April

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – V Subject: - Geography

Course Title: Population Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

Modules	Month
Module I: Introduction to Population Geography	July
1.1.Definition of Population Geography	
1.2.Nature and Scope of Population Geography	
1.3 Significance of Population Geography	
1.4 Sources of Population Data	
Module II: Population Growth and Distribution	August
2.1. World Population Growth and Distribution	
2.2. Factors Affecting on the Population Distribution	
2.3. Population Concepts: Under Population, Optimum Population and Over population	
2.4 Recent Population Policies: India and China	
Module III: Population Dynamics	September
3.1. Concept of Population Dynamics	
3.1.1 Fertility: Concept and Types	
3.1.2. Fertility: Causes, Effects and Measures	
3.1.3. Mortality: Concept and Types	
Module IV: Migration	October
4.1.Concept of Migration	
4.2. Types of Migration	
4.3. Causes and effects of Migration	
4.4. Recent trends in Migration	
Revision of Unit –I,II,III,IV	November

Subject Teacher **Head**
Department of Geography

Programme- B.A Semester – VI Subject: - Geography

Course Title: Economic Geography
Name of the teacher: Dr. Shashikant Shivagonda Patil

C) Course Syllabi: (CR = Credits / IH: Instructional Hours)	
Modules	**Month**
Module – I Introduction to Economic Geography	December
1.1 Meaning and Definition of Economic Geography	
1.2 Nature and Scope of Economic Geography	
1.3 Branches of Economic Geography	
1.4 Significance of Economic Geography and Approaches to the study of Economic Geography	
Module – II Economic Activity	January
2.1 Concept and Classification of Economic Activity	
2.2 Factors Affecting on Location of Agricultural Activity	
2.3 Factors Affecting on Location of Industrial Activity	
2.4 Alfred Weber's Theory of Industrial Location	
Module – III Major Industries	February
3.1 Agro-based Industries i) Cotton Textile Industry with special reference to India ii) Sugar Industry with special reference to India	
3.2 Non- agricultural Industries i) Iron and Steel Industry – USA ii) Automobile Industry – India	
3.3 Service Industries i) Tourism Industries ii) Geo-spatial Industries	
Module – IV Transport and Trade	March
4.1 Significance of Transportation	
4.2 Major Transport Routs: Roadway, Railway, Airway and Ocean Routs	
4.3 International Trade: India and USA	
4.4 Trade Policies: India and USA	
Revision of Unit –I,II,III,IV	April

Subject Teacher **Head**
Department of Geography

Course Title: Evolution of Geographical thought
Name of the teacher: Prof. Eknath Kamalakar

C) Course Syllabi: (CR = Credits / IH: Instructional Hours)	
Modules	**Month**
Module – I Geography in Ancient Period	July
1.1 Indian Geographical Thoughts	
1.2 Contribution of Greeks	
1.3 Contribution of Romans	
1.4 Arab Geographical Thoughts	
Module – II Schools of Geography	August
2.1 German School of Geography – Alexander von Humboldt	
2.2 French School of Geography – Vedal de la Blache	
2.3 American School of Geography – William Moris Davis	
2.4 British School of Geography – Halford J. Mackinder	
Module – III Dualisms in Geography	September
3.1 Determinism Vs Possibilism	
3.2 Systematic Vs Regional geography	
3.3 Physical Vs Human geography	
3.4 Ideographic Vs Nomothetic	
Module – IV Trends in Geography	October
4.1 Quantitative Revolution	
4.2 Paradigm in Geography	
4.3 Man-nature relationship: Radicalism, Behaviourlism and Humanism	
4.4 Recent trends in Geography	

Subject Teacher **Head**
Department of Geography

Course Title: Evolution of Geographical thought
Name of the teacher: Prof. Eknath Kamalakar

Modules	Month
Module I Introduction to Political Geography	Novembar
1.1 Definition of Political Geography	
1.2 Nature and Scope of Political Geography	
1.3 Approaches of Political Geography	
1.4 Significance of Political Geography	
Module II Concepts in Political Geography	Decembar
2.1 State	
2.2 Nation	
2.3 Boundary	
2.4 Frontiers	
Module III Geopolitics and Theories in Political Geography	January
3.1 Geopolitics : Concept and Definition	
3.2 Hartland Theory - Halford J. Mackinder	
3.3 Rimland Theory – Nicholas J. Spykeman	
Module IV Border Disputes and Resource Conflicts	Feruary
4.1 Border dispute of India- China, Pakistan and Nepal	
4.2 Water sharing dispute - Krishna, Godavari and Cauvery	
4.3Rehabilitation issues of water project: Koyana and Dudhganga Project	

Subject Teacher

Head
Department of Geography

Course Title: Practical-I Map and Map Making
Name of the teacher: Prof. Eknath Kamalakar

Modules	Month
Module – I: Introduction to Map and Scales	July
1.1 Map 1.1.1 Map: Definition and Elements 1.1.2 Classification of Maps: Based on Scale and Purpose	
1.2 Scale 1.2.1 Meaning and Definition, 1.2.3 Methods of Representation of scale - Verbal, Numerical and Graphical. 1.1.3 Scale Conversion 1.1.4 Construction of Graphical Scale – i) Simple (Plane Scale) ii) Time and Distance Scale iii) Diagonal Scale	
Module II: Map Projection	August
2.1 Definition, Classification of Projections: a) Based on the methods of Construction: Perspective and Non-perspective b) Based on Developable Surface used: Conical, Cylindrical, Zenithal, Conventional. c) Based on Position of Tangent Surfaces: Polar, Equatorial (normal), Oblique. d) Based on Position of view point or light: Gnomonic, Stereographic, Orthographic e) Based on Preserved qualities i) Equal area projection (Homolographic) ii) Orthographic Projection	

iii) Azumuthal Projection (True Bearing Projection)	
2.2 Graphical Construction of the following Projections with Properties and Use: i) Zenithal Polar Gnomonic Projection ii) Zenithal Polar Equal Area Projection iii) Simple Conical Projection with one standard Parallel iv) Cylindrical Equal Area Projection v) Mercator's Projection and Reference to Universal Transverse Mercator (UTM) Projection	September
Identification, Mapping of Slope, Relief Features and Profiles	
3.1 Slope and Gradient 3.1.1 Types of Slope: Gentle, Steep, Even, Uneven, Convex Concave,Terraced. 3.1.2 Representation of Relief by Contours: Hill, Mountain, Ridge, Cliff, Saddle, Plateau, Knoll, Spur, Col or Pass, Volcanic Col or Crater, Gorge,'V' Shaped Valley, Waterfall, 'U' Shaped Valley, Cirque, Hanging Valley, Ria Coast, Fiord Coast, Sea cliff. 3.1.3 Expression of Slopes: a) Gradient b) Degree c) Per Cent d) Mills	October
3.2 Profiles 3.2.1Superimposed Profile 3.2.2 Composite Profile 3.2.3 Projected Profile	

3.2.4 Longitudinal Profil	
Module – IV : Topographical Maps	Novembar
4.1 Indexing of S.O.I. Topographical Map	
4.2 Signs, Symbols and Colors used in SOI Toposheet	
4.1 Interpretation of S.O.I.'s Topographical Maps a) Marginal Information b) Physical environment: Relief, Drainage and Vegetation c) Cultural environment: Settlements, transportation and Communication,Irrigation.	
Module V: Weather Instruments and IMD Maps	Decembar
5.1 Study of weather Instruments with reference to Principle, Mechanism, and Function a) Thermograph b) Barograph c) Dry and Wet Bulb Thermometer d) Cup Anemometer e) Rain Gauge	
5.2 Isobaric Patterns: Cyclone, Anticyclone, Col, Ridge, Secondary Depression	
5.3 Signs and Symbols used in Indian Daily Weather Maps	
5.4 Interpretation of Indian Daily Weather Maps Marginal Information, Pressure, Winds, Clouds, Rainfall, Other Conditions, Sea Condition, Temperature departure from normal	
Module VI : Representation Techniques of Statistical Data a) Divided Rectangle b) Proportional Circle c) Proportional Sphere d) Choropleth Map e) Dot Map f) Isopleths	January
Module VII: Journal and Viva Voce	

Course Title- Practical-II Advanced Tools, Techniques & Field Work in Geography
Teacher Name- Prof Dr. Arun Patil

Modules	Month
Module – I: Introduction to Map a **nd Scales**	July
1.1 Definition and Characteristics of Computer	
1.2 Application of computer in geography 1.2.1. Construction of Line Graphs, Bar Graphs 1.2.2 Construction of Pie Diagram and Scatter Diagram	
1.3 Application of Excel for Data Analysis 1.3.1. Calculation of Mean,Median,mode For simple data) 1.3.2 Calculation of Standard Deviation For simple data)	
Module:-II: Remote Sensing	August
2.1 Definition of Remote Sensing	
2.2 Fundamentals of Remote Sensing: EMR, Sensors and Platforms	
2.3 Application of Remote Sensing in Geography	
2.4 Aerial photographs and Satellite imagery: Definition, types and difference	
2.5 Determination of Photo Scale	
2.6 Elements of image interpretation	
2.7 Identification of Physical and cultural features from Aerial Photographs or Satellite Imagery	
Module-III: GIS and GNSS	Sepetember
3.1 Geographical Information System (GIS) 3.1.1 Definition and components 3.1.2 GIS Data Structure: spatial and non-spatial data 3.1.3 Georeferencing, Digitization, Map Layout Preparation 3.1.1 Application of GIS in Geography	
3.2 Global Navigation Satellite System 3.1.1 Definition and components 3.2.2 GPS applications in Geography 3.3.3 Determining latitude, longitude and altitude with the	

help of GPS	
3.3 Exercise with Google earth Program (Point, Line and Polygon)	
Module-IV: Statistical methods and techniques	October
4.1 Measures of Central Tendency: Mean, Median and Mode	
4.2 Dispersion: Mean Deviation and Standard Deviation	
4. 3 Association and Correlation: Karl Pearson's Method (Product Moment)	
4.4 Analysis of Time Series: Semi-average Method	
Module-V: Surveying	
5.1 Introduction to Survey: Meaning and types	November
5.2 Preparation of plans of the given area with any one of the following survey method A- Plane Table survey (Radial, Intersection, and Traverse method) B- Dumpy Level survey C- Theodolite survey D- Total Station E- Abony Level Survey	
5.3 Preparation of plans Prismatic compass survey 5.1.1 Radial, Intersection and Traverse method 5.1.2 Types and conversion of bearings 5.1.3 Correction of bearing	
Module-VI: Project work based on field work any one of following	December
Resource survey, Population survey, Agricultural survey, Settlement Survey, Environmental issues, Industrial visit, Health survey, Natural Hazard or Disaster 1. Project Report must be content of following points: Introduction – Aims – Objectives - Review of the literature – Data collection – Methodology - Data Analysis – Interpretation - Findings – Suggestions - Bibliography 2. The duration of the field work should not exceed than 20 days 3. The word count of the report should be about 8000 to 12,000 excluding figures, tables, photographs, maps, references and appendices 4. One copy per student of the report as per research standard should be Submitted at the timeof examination.	
Module- VII: Study Tour Maximum 15 days of Study Tour and preparation of Tour Report. The Study Tour Report must be content of following points:Introduction – Necessity – Importance - Route map –	January

Objectives – Methodology - Geographical Profile (Natural, Socio-economic and Cultural) - Geographical importance of visited tourist places – Conclusion – References	