

JSS COLLEGE FOR WOMEN (AUTONOMOUS)



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Saraswathipuram, Mysore-570009

DEPARTMENT OF GEOGRAPHY

PROCEEDINGS OF BOS - STRUCTURE AND DETAILED SYLLABUS

UNDER NEP

Four year Multidisciplinary Undergraduate Programme

with Multiple Exit Options in



GEOGRAPHY

B.A. / B.Sc. Geography Degree (Basic/Honours)

Effective from 2021 - 2022

Program Outcomes:

By the end of the program the students will be able to:

(Refer to literature on outcome based education (OBE) for details on Program Outcomes)

PO1: Relating to Knowledge

By the end of the program the students will be able to:

- 1.1 Give explanation of relevant terms and concept of geography including definitions.
- 1.2 Give better explanation about relevant principles, theories and models in geography.
- 1.3 Show clear knowledge relating to man and environmental process and factors.

PO2: Understanding and application

By the end of the program the students will be able to:

- 2.1 Identify the importance of spatial scale and time scale.
- 2.2 Know the complex and interactive nature of physical and human environments.
- 2.3 Identify the importance of the resemblances and variance between places, environments and people.
- 2.4 Comprehend how processes bring changes in systems, distributions and environments.

PO3: Students Skills

By the end of the program the students will be able to:

- 3.1 Interpret a variety of types of geographical data and sources and recognise their limitations.
- 3.2 Communicate geographical evidence, ideas and arguments.
- 3.3 Use geographical data to identify trends and patterns.
- 3.4 Use diagrams and sketch maps to demonstrate geographical aspects.
- 3.5 Demonstrate skill of analysis and synthesis of geographical information.

PO4: Students Evaluation

By the end of the program the students will be able to:

- 4.1 Critically evaluate geographical principles, theories and models
- 4.2 Assess the effects of geographical processes and change on physical and human environments.
- 4.3 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.

4.4 Evaluate the relative success of failure of initiatives.

Syllabus Aims:

The aims of the syllabus describe the B.A. / B.Sc program in geography at 5th, 6th, 7th & 8th Level. 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 geographic al skills and practical field visits.

The BA./ B.Sc Geography syllabus aims to enable students to:

- Know the significance of scale in studying geography.
- Know the processes functioning at various scales within physical and human environments.
- Improve a sense of space, place and location.
- Develop consciousness of the relevance of geography to understanding and solving contemporary environmental problems.
- Realisation of the main fundamentals of physical geography and human geography and the interconnectedness between them.
- Explain the causes and effects of change over space and time on physical and human environments.
- Develop an gratefulness of the nature, value, limitations and importance of different approaches to analyses and explanation in geography.
- Increase the knowledge of, and ability to use and apply, appropriate skills and techniques including fieldwork.

- Improve a logical approach in order to present a structured, coherent and evidence-based argument.
- Develop a concern for accuracy and objectivity in extracting, recording, processing, presenting, analysing and interpreting geographical data.

PROCEEDINGS OF BOS

Proceedings of the meeting of the Board of Studies in Geography held on 12th October 2021 at 11.30 AM.

All the members of the board assembled on 12th October 2021 at 11.30 AM in the Department of Geography, JSS College for Women (Autonomous), Saraswathipuram, Mysore. The chairman welcomed all the members for meeting.

AGENDA:

- 1. Approval of Draft Syllabus copy.
- 2. Scheme of Examination.
- 3. Pattern of Question Paper.
- 4. List of Examiners.

Agenda 1: Syllabus.

The members made a deep analysis on the various contents and recommended some of precious suggestions. Based on the suggestions, following modifications has made.

| Unit | Deletion | Addition |
|------------------|--|--|
| Unit1: Physical | Introduction to Geomorphology. | Importance of Physical Geography. |
| Geography | Principles of Geomorphology. Geological Time scale. | Components of Earth System. Origin of the Earth: Nebular and Tidal Theory. |
| Unit2: | View of Pratt & Airy. | Case Study. |
| Geomorphic | Concept of Seashore Spreading. | Collection of Information regarding |
| Structure of the | | recent Volcanoes & Earthquakes. |
| Earth | | |
| Unit4: Evolution | Slope development Concept & | Case Study. |
| of Landforms | Types. View of W. Penk W. | Agents of Denudation. |

| Drainage Pattern & Sea waves. | |
|-------------------------------|--|
| Application of Geomorphology. | |

Resolutions:

| I SS – Geomorphology - Practical | | | | | |
|----------------------------------|---|---|--|--|--|
| Exercise | Deletion | Addition | | | |
| Exercise 3: | - | 8 Relief feature. | | | |
| Exercise 4: | Aspect maps. | - | | | |
| Field Work | Cross section & Measurement of Channel field, Geomorphic map of Channel & Bed. | Related to the local formation & degradation. | | | |

| II SS – Introduction to Climatology and Oceanography | | | | |
|---|--|--|--|--|
| Unit | Deletion | Addition | | |
| Unit2: Atmospheric Temperature | Albedo Net Radiation & Latitudinal Heat Budget. | - | | |
| Unit3: (Unit2 & 3 Merged - Named as) Atmospheric Pressure, Wind and Humidity. | Tricellular, Hedley, Polar cells. Air mass & Front Classification. Climate Change. | - | | |
| Unit4: Oceanography | - | Relief of Ocean floor. Ocean Temperature, Density & Salinity. Ocean Tides, Currents & Depositions. | | |

Agenda 2: Scheme of Examination.

| Formative Assessme | Formative Assessment | | | |
|------------------------------|----------------------|--|--|--|
| Assessment Occasion/ type | Weightage in Marks | | | |
| Assignment | 10% | | | |
| Seminar - Viva | 20% | | | |
| Written Test | 10% | | | |
| CIA | 60% | | | |
| Total | 100% | | | |

| Theory | Syllabus to be covered | Time | % of Weightage |
|--------------------------|------------------------|----------|------------------|
| | in the Exam | allotted | (Marks) |
| Internal Assessment Test | Up to 50% | 1 Hour | 40 |
| | (After 45 days) | | (C1=20 & C2=20) |
| External End Semester | Up to 100% | 3 Hour | 60 |
| | (After 90 days) | | |
| Total | | | 100 |

| Practical | Syllabus to be covered | Time | % of Weightage (Marks) |
|-----------------------------|------------------------|----------|------------------------|
| | in the Exam | allotted | |
| Internal Assessment Test | Up to 50% | 1 Hour | 25 |
| | (After 45 days) | | (C1=20 & C2=20) |
| Final Practical Performance | Up to 100% | 3 Hour | 60 |
| at Exam (External Exam) | (After 90 days) | | |
| | | Total | 50 |

| S1. No. | Component | 4 Credit Course (Theory Paper of Lab oriented Course) 60Marks |
|------------|--|---|
| 1 | 05 Short Answer type | 5X2 = 10 Marks |
| 2 | 04 Medium Answer type | 4X5 = 20 Marks |
| 3 | 03 Long Answer type | 3X10 = 30 Marks |
| 04 | Total Semester End Examination Marks in each course | 60 Marks |

| I & II SI | MESTER |
|--|---------------------------|
| Duration: 03 hours | Maximum Marks: 60 |
| I. Answer any FIVE of the followings: | 5 X 2 = 10 |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| | |
| II. Answer any FOUR of the followings: 8 9 | 4 X 5 = 20 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 | 4 X 5 = 20 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 | 4 X 5 = 20 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 16 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 16 17 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 16 17 18 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 16 17 18 | 4 X 5 = 20 3 X 10 = 30 |
| II. Answer any FOUR of the followings: 8 9 10 11 12 13 III. Answer any THREE of the followings: 14 15 16 17 18 | 4 X 5 = 20 3 X 10 = 30 |

Agenda 4: List of Examiners.

| S1.No | Name | College | Contact Number |
|-------|----------------------|--------------------------|----------------|
| 1 | Mahadeva Prasad A.N. | JSS Degree College, | 9449324289 |
| | | Nanjanagudu | |
| 2 | Srinivas | Maharani's Arts | 9448554033 |
| | | Government F.G. College, | |
| | | Mysuru | |
| 3 | Mariswamappa | JSS Degree College, | 9483667545 |
| | | Gundlupete | |
| 4 | Basavaraju S | JSS Degree College, | 9620101858 |
| | | Chamaraja Nagara | |
| 5 | Dr. Vasuma M.G. | Maharani's Arts | 9611599746 |
| | | Government F.G. College, | |
| | | Mysuru | |
| 6 | Shivakumar M | JSSArts, Commerce & | 9448049801 |
| | | Science College, Ooty | |
| | | road, Mysuru | |
| 7 | Nijagunamma | JSS Degree College, | 8970180082 |
| | | Nanjangudu | |
| 8 | Shylaja N. | Shree Adichunchanagiri | 9449203578 |
| | | F.G. College | |
| 9 | PrabhuSwamy H.K. | JSS Degree College, | 9964642427 |
| 10 | | Gundlupete | |
| 10 | Dr. Manjunath H.R. | Maharaja's College, | 7795016365 |
| | | Mysuru | 0000055000 |
| | Dr. Bharathi T.P. | Maharaja's College, | 9902955303 |
| 10 | | Mysuru | 0001614461 |
| 12 | Chandrakala M | Government F.G. College, | 9901614461 |
| 10 | | Chamaraja Nagara | 0000410105 |
| 13 | Dr. Vishanath H.R. | Government F.G. College | 9902418105 |
| | | for women, Hunusuru – | |
| 1 / | 0 | Mysuru(D) | |
| 14 | Smitha | USS Degree College, | |
| 1 🖻 | | Kollegal | 9700550669 |
| 15 | Satnish K.K. | JSSArts, Commerce & | 8722559668 |
| | | Science College, Ooty | |
| | | road, Mysuru | |

B.A/B.Sc Semester 1 Title of the Course: Fundamentals of Physical Geography

| Number of Theory Credits | Number of lecture hours/ semester | Number of practical Credits | Number of practical hours/ semesters |
|---|---|--|---|
| 4 | 56 or 64 | 2 | 56 or 64 |
| Course Outcomes: After the comp Define the fiel To outline the Earth. To illustrate a To understand Course Objectives: To define the To introduce v To understand landforms. To study the i | pletion of this course, st d of Geomorphology and e mechanism of dynamic and explain the forces af <u>d the conceptual and dy</u> : concepts in Geomorpho various concept to unde d the dynamic nature of <u>impact human on geomo</u> | tudents should be able d to explain the essentia c nature of the Earth's s fecting the crust of the mamic aspects of landfo logy and Physical Geogr rstand cycles of the soli f the Earth's surface, va orphic system. | to: al principles of it. urface and interior of the earth and its effect on it. orm development caphy d Earth surface rious processes, and |
| Content of Theory | y Course 1 | | 52/56Hrs |
| Unit – 1 Physical (| Geography | | 13/14 |
| Introduction to Geo Physical Geography Components of Ear Biosphere. Origin of the Earth: Distribution of Con | ography: Physical and H : meaning, nature, deve <u>th System</u> : Lithosphere, <u>Nebular and Tidal Theo</u> tinents and Oceans | uman geography elopment, scope and Im , Atmosphere, Hydrosph | portance here and |
| Unit – 2 Geomorph | hic Structure of the Ea | arth | 13/14 |
| Internal structure of Alfred Wegener's co Theory of Isostacy Convectional current Theory of Plate Tech <u>Case Studies</u> : Colle Earthquake | of the earth ontinental drift nt theory tonics ction of Information reg | arding recent Volcano a | and |
| Unit – 3 The Dynar | nics of Earth Earth's M | lovements: Endogenetic | and 13/14 |
| Exogenetic forces, S | Sudden and Diastrophic | e movements | |

Code: GEOGDSC T1 1

Epeirogenetic and Orogenetic Movements Process of folding and faulting Vulcanicity and earthquake

<u>Rocks</u>: Characteristics, types, importance, and rock cycle <u>Weathering</u>: Meaning, types and controlling factors

Mass Movement: Meaning, controlling factors, types-landslides, rock-falls

| Unit – 4 Evolution of Landforms | 13/14 |
|---|-------|
| Evolution of Landforms | |
| Landforms: Meaning, types & factors controlling landforms development | |
| Concept of Cycle of Erosion – W.M. Davis | |
| Agents of Denudation: River, Groundwater, Sea waves, Wind and | |
| Glaciers and resultant landforms. | |
| Case Studies: Agents of Denudation. | |

- 1. Ahmed E. (1985) Geomorphology, Kalyani Publishers, New Delhi.
- 2. Bloom A.L. (1978) Geomorphology: A Systematic Analysis of Late Cenozoic Landforms Prentice Hall of India, New Delhi.
- 3. Brunsden D. (1985) Geomorphology in the Service of Man: The Future of Geography, Methnen, U.K.
- 4. Chorley, R.J., Schumm, S. A. and Sugden, D.E. 1984: Geomorphology, Methuen, London
- 5. Cooke, R.U. and Warren, 1973: Geomorphology in Deserts, Batsford, London
- 6. Dayal, P. 1996: Textbook of Geomorphology, Shukla Book Depot, Patna.
- 7. Goudar M B, Physical Geography (Kannada Version)
- 8. GoudieAnrewet.al. (1981) Geomorphological Techniques, George Allen &Unwin, London.
- 9. Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn.
- 10. Hugar M R Physical Geography part 1(Kannada Version)
- 11. Kolhapure and S SNanjan, Physical Geography (Kannada Version)
- 12. Nanjannavar S S: Physical Geography (Kannada Version)
- 13. P Mallappa, Physical Geography (Kannada Version)
- 14. Ranganath Principles of Physical Geography (Kannada Version)
- 15. Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York
- Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley Intl. Edn. & Wiley, 1984.
- 17. Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Develop- ment, Elsevier, Amsterdam

Reference Websites

- 1. http://www.solarviews.com/eng/earth.htm
- 2. http://www.moorlandschool.co.uk/earth/tectonic.htm
- 3. https://www.usgs.gov/
- 4. https://www.ksndmc.org/

Pedagogy

| Formative Assessment | | |
|-----------------------|--------------------|--|
| Assessment | Weightage in Marks | |
| Occasion/ type | | |
| Case Studies | 30% | |
| Assignment | 20% | |
| CIA | 50% | |
| Total | 100% | |

GEOGDSCP1.1 Geomorphology Practical CREDIT: 02

Content of Practical Course 1: List of Experiments to be conducted

Exercise-1: Identification of Rocks and Minerals.

Mineral samples: Iron ore, Bauxite ore and Manganese.

Rock Samples: Granite, Basalt, Lime Stones, Sandstone, Quartzite and Marble.

Exercise-2: <u>Extraction and interpretation</u> of Geomorphic information from Topographical maps

Exercise-3: Preparation of contour map from Toposheet, Construction of Relief Profiles: Serial, Super imposed, Projected & Composite.

Exercise-4: Slope Analysis - Slope Maps (Wentworth method) Slope

calculation and conversion (Isotan and Isosin) on the basis of Toposheets.

Contour Relief Features: Conical Hill, Uniform and Undulating Slopes,

Concave and Convex Slopes, U and V Shaped Valley and Waterfalls.

Exercise-5: Drainage Morphometry: delineation of watershed, stream ordering

<u>Morphometric analysis</u>: mean stream length, drainage density and drainage frequency.

Field Work: Related to local land formation and degradation.

B.A. / BSc Semester 1

Title of the Course: GEOGOE T1.1 - 1. Introduction to Physical Geography

| • | urs/ semester |
|--|--------------------------------|
| 3 42 - 45 | |
| Course Outcomes: Students will be able to understand the fundamental concepts in E Understands basic terminology used to describe physical processes forms. 3. Describe elements of the atmosphere and the oceans | arth Sciences and landscape |
| Course Objectives: This course aims to Study basic principles of the Earth Sciences Understand the landforms, atmospheric elements and structure an oceanography | d basics of |
| Content of Theory Course 1 | 42/45Hrs |
| Unit – 1 | 11 |
| <u>Movement of the Earth</u> - Rotation & Revolution, Effects of the Earth movement. <u>Coordinates</u> - Latitude, Longitude and Time. <u>Structure of the Earth.</u> | |
| Unit – 2 | 11 |
| <u>Rocks</u> - types, significance, <u>Weathering</u> – types. <u>Agents of Denudation</u> - River, Glacier, Wind and Under Ground water. Volcanicity, Earthquakes and Tsunamis | |
| Unit – 3 | 11 |
| Structure and Composition of Atmosphere, Weather and Climate. Atmospheric <u>Temperature</u> , Heat Budget of the atmosphere Atmospheric <u>Pressure, Winds and Precipitation</u> | |
| Unit – 4 | 12 |
| <u>Distribution</u> of Land and Sea,. <u>Submarine Relief</u> of the Ocean, <u>Temperature</u> & <u>Salinity</u> of Sea Water. <u>Ocean Tides</u> , Waves and Deposits, Ocean currents - Atlantic, Pacific and Indian Oceans. | |

5. Willian D. Thornbury (1997) Principle of Geomorphology. New Age International (Pvt Ltd.) New Delhi.

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| Assessment Occasion/ type | Weightage in Marks |
|------------------------------|--------------------|
| Quiz | 30% |
| Assignment | 20% |
| CIA | 50% |
| Total | 100% |

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B.A. / BSc Semester 1

Title of the Course: OE 1.1.2 Fundamentals of Remote Sensing Code: GEOGOE T1.1.2

| Number of Theory Credits | Number of lecture hours/ semeste | r |
|---|---|---------------------------------------|
| 3 | 42 - 45 | |
| Course Outcomes: 1. This course is to make under and to impart necessary ski interpretation to the studen in remote sensing. 2. Students will learn how to h understanding of biophysical | erstand the basic concepts of Remote a lls of remote sensing analysis, and im ts. So that, students acquire employation nandle and process the satellite images al phenomena of the earth system. | Sensing age ble skills s for |
| Course Objectives: To congregate the basic conception of remote sensing 2. integration of remote sensing in To study basics of digital imtechniques. To study the applications of problems. | cepts and fundamentals of physical To create a firm basis for successful n any field of application. age processing and image interpretati T the remote sensing to solve the real-w | ion vorld |
| Content of Theory Course 1 | | 52/56Hrs |
| Unit – 1 Introduction | | 11 |
| Definition of Remote Sensing, develoctromagnetic waves, spectrum, and applications. Types-Satellites telemetry of satellites. | elopmental stages, Laws of Physics, regions, wavelength, frequencies, , Sensors, Payloads, Orbits, | |
| Process and types of Remote Se | ensing | 11 |
| Process of remote sensing, interact and targets, atmospheric noises, a of remote sensing, optical remote spectrum, thermal remote sensing spectral remote sensing, LADAR, a | ction of radiation with atmosphere attenuation in radiance, resolutions sensing, visible region of the g, microwave remote sensing, Hyper and other remote sensing Platforms. | |
| Unit – 3 Image Classification ar | nd Interpretation | 11 |
| Satellite products and its spectral band ratios; Land use land cover NRSC; Visual image interpretation and interpretation keys. Image cla unsupervised, and principal comp assessment. | characteristics, composite images, classification schemes-Anderson and n, elements, stages of interpretation assification- supervised, conent analysis (PCA) and accuracy | |
| Unit – 4 Applications of Remote | Sensing | 12 |
| Disaster Management, Meteorolog Irrigation Studies, Forestry Studie Resource, Oceanic and Coastal m Urban and Rural Mapping and Ma | cical Studies, Agricultural and es, Hydrological Studies, Natural apping, Soil resource mapping, anagement. | |

- 1. Image processing and GIS for remote sensing: techniques and applications; Second Edition (2016) Liu, Jian-Guo, Mason, Philippa J
- 2. Introduction to Remote Sensing and Image Interpretation (2003); Lillesand T.M.
- 3. Introduction to Remote Sensing, Fifth Edition (2011); James B. Campbell, Randolph H.W ynne
- 4. Introductory Digital Image Processing: A Remote Sensing Perspective, Fourth Edition (2015) John R. Jensen
- 5. Practical handbook of remote sensing, First Edition (2016) Lavender, Andrew, Lavender, Samantha
- 6. Remote Sensing and GIS, Second Edition (2011), Bhatta, B.
- 7. Remote sensing and image interpretation (2015); Chipman, Jonathan W., Kiefer, Ralph W., Lillesand
- 8. Remote Sensing of the Environment: An Earth Resource Perspective (Prentice HallSeries in Geographic Information Science) Second Edition (2006), John Jensen
- 1. https://onlinecourses.nptel.ac.in/noc19_ce41/preview

Pedagogy

| Formative Assessment | | |
|------------------------------|--------------------|--|
| Assessment Occasion/ type | Weightage in Marks | |
| Quiz | 30% | |
| Assignment | 20% | |
| CIA | 50% | |
| Total | 100% | |

B.A. / BSc Semester 2

Title of the Course: Introduction to Climatology and Oceanography

CODE: GEOGDSC T2.1

| Credits | Number of lecture hours/ semester | Number of practical Credits | Number of p hours/ sem | ractical esters |
|--|--|---|---|--|
| 4 | 52 or 56 | 2 | 52 or 5 | 6 |
| Course Outcomes: After the completion 1. define the field of composition and 2. to outline the me surface and to ex to time and space 3. to illustrate and of the formation of the formation of the 4. to understand ar ofCondensation a Course Objectives: This course aims to 1. to define the fiel 2. to introduce var 3. to understand the | a of this course, st f climatology and structure. chanism and pro- chanism and pro- chan the tempe e. explain the air pro- the Atmospheric I and compute the air and formation of p change of climatology a ious dimensions of the global atmosph | tudents should be to understand the cess of solar radia rature distributio essure system, wi Disturbance. r humidity as wel precipitation and s and components of of climatology like heric pressure, ter | e able to e atmospheric ation transfer to ea n and variation ac nd regulating forc l as to explain the its types. f the climate syste structure and co nperature, and wi | erth ecording es and e process em mposition. ind system. |
| to study the con Content of Theory | cept of atmosphe Course 1 | ric moisture and : | its types | 52/56Hrs |
| Jnit – 1 Composition Nature and Scope of Atmospheric Science Origin and structure Mesosphere, Ionosp | on and Structure f Climatology, es; Climatology ar e of the Atmosphe here, Exosphere a | nd Meteorology ere: Troposphere, and their characte | ere Stratosphere, eristics. | 14 |
| Composition of the a Jnit – 2 Atmospher | atmosphere Weat. ic Temperature | her and Climate | | 14 |
| Insolation: Definition Factors affecting the | n, Mechanism, So Insolation: Angle | o <mark>lar Constant.</mark> e of incidence, len | gth of the day. | |
| Sunspots, Distance atmosphere. Heating and cooling Conduction, convec Temperature: mean Distribution of Temp Vertical, Horizontal, Budget: Incoming sl Terrestrial radiation | between the earth process of the at tion, and advection ing and Influencin perature Distribut and Inversion of hortwave solar rac | h and the sun, eff mosphere-Radiation. Ing Factors on the tion of the temper temperature. Glo diation, Outgoing | ect of the ion, rature: bal Energy Longwave | |

| Unit – 3 Atmospheric Pressure, Winds and Moisture / Humidity | |
|--|----|
| <u>Atmospheric Pressure</u> : Influencing factors on atmospheric pressure. <u>Pressure</u> : Vertical and Horizontal Distribution of the atmospheric pressure and Pressure Belts, Pressure Gradient. <u>Winds</u> : Influencing factors, Types - Planetary, Seasonal, Local, Variable winds-Cyclones and Anti-Cyclones. <u>Humidity</u> and there types <u>Clouds</u> there types and Types of <u>Precipitation</u> . | |
| Unit – 4 Oceanography | 14 |
| <u>Relief features of Ocean floor.</u> Ocean <u>Temperature, Density and Salinity</u> . | |
| <u>Ocean Tides</u> . <u>Ocean Currents</u> : Pacific, Atlantic and Indian Ocean Currents. <u>Ocean Deposits</u> : Coral Reefs and Atolls. | |

- 1. Lal, D. S. (1998). Climatology. Allahabad: Chaitanya Publishing House.
- 2. P Mallappa, Physical Geography (Kannada Version)
- 3. Ranganath Principles of Physical Geography (Kannada Version)
- 4. Nanjannavar S S: Physical Geography (Kannada Version)
- 5. Hugar M R Physical Geography part 1(Kannada Version)
- 6. Goudar M B, Physical Geography (Kannada Version)
- 7. Kolhapure and S SNanjan, Physical Geography (Kannada Version)
- 8. Lutgens, Frederic K. & Tarbuck, Edward J. (2010). The Atmosphere: An Introduction to Meteorology. New Jersey: Pearson Prentice Hall.
- 9. Oliver, John E. & Hidore, John J. (2003). Climatology: An Atmospheric Science. Delhi: Pearson Education.
- 10. Singh, S. (2005). Climatology. Allahabad: PrayagPustakBhawan.
- 11. Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
- 12. Critchfield, H.J., (1975): general Climatology, Prentice Hall, New Jersey.
- 13. Mather, J.R. (1974): Climatology: Fundamentals and Applications; Mc Craw Hill Book Co., U.S.A.
- 14. Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
- 15. Trewartha, G.T. (1980): An Introduction to Climate; McGraw Hill, New York, 5th edition, (International Student Edition)

Reference Websites

- 1. https://earthobservatory.nasa.gov/
- 2. https://mausam.imd.gov.in/
- 3. https://www.weatheronline.in/
- 4. https://earthexplorer.usgs.gov/
- 5. https://www.nhc.noaa.gov/satellite.php

Pedagogy

| Formative Assessment | | |
|------------------------------|--------------------|--|
| Assessment Occasion/ type | Weightage in Marks | |
| Quiz | 30% | |
| Assignment | 20% | |
| CIA | 50% | |
| Total | 100% | |

GEOGDSC P2.1- Climatology Practical CREDITS: 02 Content of Practical Course 1: List of Experiments to be conducted

Conduct all exercises with Goal, Procedure, devices, and findings.

Exercise 1: Understanding <u>Structure and Functions</u> of the Indian Meteorological Department (IMD).

Exercise 2: Collection of temperature data from IMD website.

https://mausam.imd.gov.in/bengaluru/

Exercise 3: Plotting of downloaded temperature data using graphical methods-line graph.

Elementary Instrumental Observation:

Exercise 4: Centigrade and Fahrenheit thermometer for measuring temperature.

Exercise 5: Mercurial Barometer and Aneroid Barometer for measuring atmospheric pressure

Exercise 6: Wind Vane and cup-anemometer.

Exercise 7: Wet and Dry bulb thermometer for measuring humidity

Exercise 8: Rainguage- Dial type for measuring rainfall Exercise 3: Rainfall Trend Analysis (monthly and annual) Exercise 4: Interpretation of Indian Daily Weather charts.

Note: Students are expected to download weather charts of the four seasons.

| Number of Theory Credits | Number of lecture semester | hours/ |
|---|--|-------------|
| 3 | 42 - 45 | |
| Students will learn how human, physical, and environs world interact. Students will be familiarized with economic processes and their impacts on economic, cultural and social act The student will describe what geography and human Understand population dynamics and migration. Course Objectives: This course aims to Understand the basics concepts of human geography Study population attributes and dynamic nature of it | mental components of t such as globalization, t tivities. geography are. | the rade |
| 3. Introduce economic, cultural, and trade activities and | their impact on the | |
| development of the region | | |
| Content of Theory Course 1 | | 45Hrs |
| Unit – 1 Introduction to Human Geography | | 11 |
| Environmental Determinism and Possiblism, Neo determinis determinism) <u>Approaches to Human Geography</u> : Exploration and Descript analysis <u>Approach</u> : Areal Differentiation Approach, Spatial organization <u>Modern approaches</u> : Welfare or Humanistic Approach, Radic Behavioural Approach, Post Modernism in geography | em (stop and go ive approach, regional on Approach. cal Approach, | |
| Fields and Sub Fields in Human Geography | | |
| Unit – 2 Geographical Analysis of Population | | 11 |
| Distribution and Growth of Population <u>Density of population</u> : meaning and Types: Arithmetic Densi Density, Regional distribution of Density of Population. <u>Population Movement</u> : Migration - Factors of population Mig factors, Cultural Factors, Environmental (Push and Pull fac <u>Migration Types</u> : Immigration and Emigration, Internal and I | <mark>ty and Phys</mark> iological ration, Economic tors) International Migration | |
| Unit – 3 Cultural Patterns and Processes | | 11 |
| <u>Concept of Culture</u> : Material and Non material Culture. <u>Cultural Regions</u> : Traits & Complexes, Cultural Hearths, Cu Languages of the World: Types, Classification and Distribution | ltural Diffusion. on. | |

| | | 1 |
|---|----|---|
| | | |
| Unit – 4 Human Economic Activities, Development and Settlements | 12 | |
| Primary Economic Activities - Agriculture, Types: Primitive Subsistence, | | |
| Intensive subsistence, | | |
| Plantation Agriculture, Extensive Commercial grain cultivation, Mixed | | |
| Farming, Dairy Farming | | 1 |
| Secondary Activities: Manufacturing, classification – based on size – Small | | |
| Scale and Large scale. Based on Raw material – Argo-based, Mineral based, | | |
| Chemical Based and Forest based. Industrial Regions of the world. | | |
| Tertiary Activities: Types: Trade and commerce, Retail Trading services, | | 1 |
| Wholesale trading. | | 1 |
| Transport and communications: Factors, communication services – | | 1 |
| Telecommunication. Services: Informal and Non formal sector. Information | | 1 |
| technology and service. | | ĺ |
| Human Settlements: Factors, Classification, Types and Patterns: Rural, | | ĺ |
| Urban. Compact or Nucleated and Dispersed settlements. Rural settlement | | l |
| Patterns: linear, rectangular, circular, star shaped, T shaped. | | 1 |

- 1. Hartshorne, T. A., & Alexander, J. W. (2010). Economic Geography. New Delhi: PHI Learning.
- 2. Knox, P., Agnew, J., & McCarthy, L. (2008). The Geography of the World Economy. London: Hodder Arnold.
- 3. Lloyd, P., &Dicken, B. (1972). Location in Space: A Theoretical Approach to Economic Geography. New York: Harper and Row.
- 4. Siddhartha, K. (2000). Economic Geography: Theories, Process and Patterns, NewDelhi:

Kisalaya Publications.

 Smith, D. M. (1971). Industrial Location: An Economic Geographical Analysis, NewYork: John Wiley and Sona

John Wiley and Sons.

Pedagogy

| Formative Assessment | | |
|------------------------------|--------------------|--|
| Assessment Occasion/ type | Weightage in Marks | |
| Quiz | 30% | |
| Assignment | 20% | |
| CIA | 50% | |
| Total | 100% | |

ageZ

B.A. / BSc Semester 2

Title of the Course: 2. Basics of Geographic Information Systems (GIS)

CODE: GEOGOE T2.1.2

| Number of Theory Credits | Number of lecture hours/ semester | r |
|--|--|--|
| 3 | 39 or 42 | |
| Course Outcomes: Students are trained to adapt the mathematical models of geoges Students will have the hands-ord spatial data collection, data store display through the thematic mathematic mathematics Students are exposed on spatial withrange of proven mathematics Students can employ in various they deal to solve geographical performance of the geographical performance of the GIS data types and states Study geo processing and visual | the theoretical concepts in a practical way graphy. In training on various modes of spatial a rage, data analytics, data interpretation aps. I thinking to solve the geographical pro- cal and statistical models. Corporate and government organisation problems. | ay through and non- n and data blems n where a Systems. |
| Content of Theory Course 1 | | 52/56Hrs |
| Unit – 1 Introduction | | 10 |
| Emergence of GI Science, Milestone an Definition, scope, role of GIS in digital merits and demerits, global market, in integration with GIS. | nd Developmental stages in GIS, world; Components, functionalities, nterdisciplinary domains, and its | |
| Unit – 2 Geodesy and Spatial Mathe | matics | 10 |
| Cartesian coordinates, latitude, longit geographical coordinates, Datum: WG measurement using Geographic and p length by coordinates and various inte | udes, formats of angular units, S84, vs NAD32. UTM, Aerial Distance projected coordinates, Area, Perimeter, ernational measures. | |
| Unit – 3 GIS Data and Scale | | 10 |
| Spatial Data and its structures; source errors, topology of data and relationsh generalization; precision and accuracy spatial data integration | es and types of data collection; data hip. Large Scale vs Small Scale, y of data-logical consistency and non- | |
| Unit – 4 Geoprocessing and Visualiz | ation | 12 |
| Spatial and Non-Spatial Queries, prox and Surface models. Hotspot and den maps and | <mark>simity analysis, Preparation of Terrai</mark> n sity mapping. Types of maps, thematic | |
| Pivot tables | cartograms. Tabulations: Graphs and | |

∎ Page

- 1. An Introduction to Geographical Information Systems Ian Heywood (2011)
- 2. Geographic Information Systems and Cartographic Modelling Tomlin, C.D. (1990)
- 3. Geographic Information Systems and Environmental Modelling Clarke, C., K. (2002)
- 4. Geographic Information Systems and Science Paul A. Longley, et. al. (2015)
- 5. Geographic Information Systems: A Management Perspective Aronoff, S. (1989)
- 6. GIS Fundamentals, Applications, and Implementations Elangovan, K. (2006)
- 7. Introduction to Geographical Information Systems Chang, Kang-Tsung (2015)
- 8. Mathematical Modeling in Geographical Information System, Global Positioning System and Digital Cartography Sharma, H.S. (2006)
- 9. Remote Sensing and GIS Bhatta, B. (2011)
- 10. Spatial analysis and Location-Allocation Models Ghosh, A. and G. Rushton (1987)

Reference Websites

- 1. IIRS MOOC programme: https://isat.iirs.gov.in/mooc.php
- ITC Netherlands, Principles of GIShttps://webapps.itc.utwente.nl/librarywww/papers_2009/general/principle sgis.pdf
- 3. Geographical Information Systems: Principles, Techniques, Management and Applications https://www.geos.ed.ac.uk/~gisteac/gis_book_abridged/

Pedagogy

| Formative Assessment | | | | |
|------------------------------|--------------------|--|--|--|
| Assessment Occasion/ type | Weightage in Marks | | | |
| Quiz | 30% | | | |
| Assignment | 20% | | | |
| CIA | 50% | | | |
| Total | 100% | | | |

JSS COLLEGE FOR WOMEN (AUTONOMOUS)

DEPARTMENT OF GEOGRAPHY - Board of Studies

Honorable members were informed about the student strength and results of odd semester. The board of studies approved the existing syllabus, scheme of examination, structure of question papers and the panel of examiners. The intense discussions made about the implementing of NEP.

| NEP 2020 - SUBJECT EXPERT COMMITTEE GEOGRAPHY | | | | | |
|--|----------------------------|---|---|-----------|--|
| S1. No | Name | Designation and Address | Position | Signature | |
| 1 | Smt. Nagalambike N. | Jss college for Women (Autonomous), Saraswathi puram, Mysuru-09 | Chairperson | | |
| 2 | Dr P. Jayashree | Professor and Chairperson DoS in Environmental Science, MGM Mysuru – 06 | University Nominee | | |
| 3 | Dr A.N. Mahadeva Prasad | HoD - Department of Geography JSS Degree College, Nanjangudu Ph:9449324289 | A.C. Nominee | | |
| 4 | Dr Nagendra Swamy R.B. | Department of Geography, Bhandari and Rathi College, Guledagudda, Bagalakote-District Ph:9164667729 | A.C. Nominee from Other University (Rani Channamma University,Belagavi) | | |
| 5 | Dinesh kumar D.K. | Project Engineer and Regional Head, Mysore Division, Karnataka Renewable Energy Development Ltd., Govt. of Karnataka, Mysuru | Environmentalist/ Industrialist/ Resource Person Related to Subject | | |
| 6 | Miss Sunadna K.V. | JSS Public School, Siddhartha Nagar, Mysuru – 11 | Alumina | | |
