Four Year Under Graduate Programme (FYUGP)

As per the provisions of NEP- 2020

Binod Bihari Mahto Koyalanchal University

Subject: **Geography**

To be Implemented from the Academic Session 2023-2027

Syllabus for Semester - II, IV,VI, VIII

Members of the Board of Studies of the Four-Year Undergraduate Programme (FYUGP)

Syllabus as per Guidelines of the Binod Bihari Mahto Koyalanchal University, Dhanbad

1. **Chairman:**

   Miss Shital Shally Toppo
   Head, University Department of Geography
   BBMKU

2. **Expert Members:**

   (i) **Dr. Saroj Kumar Singh**
   Head, University Department of Geography
   VBU Hazaribagh

3. **Internal Members:**

   (i) **Dr. Pradeep Kumar Singh**
   Head, Department of Geography
   MCC, Hazaribagh

   (ii) **Miss Sanehlata Tirkey**
   Head, Department of Geography
   R. S. More College Govindpur

   (iii) **Mr. Raju Lakra**
   Head, Department of Geography
   B. S. K. College, Maithan

Minor from Vocational Course				
MN-2A	SEMESTER-II	DISASTER MANAGEMENT	Theory	4 Credits
MN-2B	SEMESTER-IV	SUSTAINABLE DEVELOPMENT	Theory	4 Credits
MN-2C	SEMESTER-VI	REMOTE SENSING, GIS, AND GPS	Theory	4 Credits
MN-2D	SEMESTER-VIII	AMANAT	Theory	4 Credits

I.MINOR COURSE-MN-2A: (Credits:Theory-04)

Marks: 25 (Viva Voce) + 75 (ESE: 3Hrs) = 100 Pass Marks: Th (Viva Voce + ESE) = 40

Instruction to Question Setter for

End Semester Examination (ESE 75 marks):

There will be two group of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No. 2&3 Will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

SEMESTER II

Disaster Management

Total credit -04 **Teaching Hours = 45 Hrs**

Course Objectives:

1. The student will get to know about meaning, concept, types and difference between disaster and hazard.

2. Students will understand about the causes, distribution, mapping, preparedness, and mitigation of different disasters in India including man-made disasters also.

3. They will study different major events related to man-made and natural hazards as a case study.

Learning Outcome:

After the completion of this course the student will get acquainted to the meaning, concept and types of disaster and hazard. They will also get aware about the mitigation measures in different natural and man-made disaster and hazards and recent major events also.

Module-I

Disasters: Meaning, Definition and Concepts: Hazards and Disasters: Risk and Vulnerability; Classification; Disaster in India: Flood, Glacial Lake Outburst Flood (GLOF): Causes, Impact, Distribution, Mapping and Mitigation; Landslide: Causes, Impact, Distribution, Mapping and Mitigation; Drought: Causes, Impact, Distribution, Mapping and Mitigation.

Module- II

Earthquake & Tsunami: Causes, Impact, Distribution, Mapping and Mitigation; Cyclone: Causes, Impact, Distribution, Mapping and Mitigation

Manmade disasters (Terrorism-Human Bomb, War, Industrial Disaster, Rail and Road Accident): Causes, Impact, Distribution, Mapping and Mitigation

Module-III

Case studies related to major events: Uttarakhand (Kedarnath) Tragedy 2013, Bhuj Earthquake 2002, Bhopal Gas Tragedy 1984, Tsunami in Indian Ocean 2004, Chas-nala (Coal Mine) Disaster

Mitigation and Role of NDMA and NIDM Response, Preparedness and Mitigation to Disasters and Hazards

Suggested Books:

1. Sharma, S.C. (2022): Disaster Management, Khanna Publication, New Delhi

2. Subramanian S. (2018): Disaster Management, Vikas Publishing House, Noida

3. Singh, S. (2018): Disaster Management, Pravalika Publications, Prayagraj

4. Pandey, M. (2014): Disaster Management, Wiley Publication, New Delhi.

5. Singh,N. (2008): Aapda Prabandhan, Radha Publication, New Delhi

6. Joshi, M. (2019): Aapda Prabandhan Jaagrukta Evam Aadhunikikaran, Akhand Publishing House, New Delhi

SEMESTER IV

Sustainable Development

Total credit -04 **Teaching Hours = 45 Hrs**

I.MINOR COURSE-MN-2B: (Credits:Theory-04)

Marks: 25 (Viva Voce) + 75 (ESE: 3Hrs) = 100 Pass Marks: Th (Viva Voce + ESE) = 40

Course Objectives:

1. Students will understand about the meaning, concept and approaches of Sustainable Development.

2. They will become aware of conservation of environment.

3. They will know about the exigencies of environmental degradation and amelioration measures through different awareness programs.

Learning Outcome:

After the completion of this course, they will get to know about the importance and need of Sustainable approaches in today's consumerist era. They will also know about the efforts attempted on international as well as on national level for optimum utilization of resources through viable technique.

Module –I

Sustainable Development: Meaning, Concept, Definition, History, Components and Scope; Ecology and Environmental conservation, Biodiversity loss and ecological imbalance; the role of higher education in sustainable development; Agenda 21 (1992); The Millennium Development Goals; Sustainable Development Goals. UNFCCC, COP, IPCC.

Module –II

Challenges to Sustainable Development; Sustainable Agriculture and forestry; Sustainable resource utilization: Water, mineral, soil and forest; Human Development; The human right to health and education; Poverty and disease; The Challenges of Health Coverage in Low-Income Countries; Sustainable Regional Development: Need and examples from Cities, Coastal, Rural and Mountainous area

Module –III

Inclusive Development: Education, Health; Climate Change: Carrying Capacity; Sustainable Development Policies and Programmes; Summits related to environment: Stockholm conference, Montreal Protocol, Brundtland Commission, Earth Summit, Paris Agreement (COP 21); NITI Aayog and Sustainable Development; National Environmental Policy.

Suggested Books: -

1. G. Arjun, Sarkar A. & others (2019): Environmental Issues & Sustainable Development, Notion India Press, Chennai

2. Ahlawat, A. (2019): Sustainable development Goals, Notion India Press, Chennai

3. Ossewarde, M.J. (2018): Introduction to Sustainable Development, Sage Publication, New Delhi

4. Mishra, J. (2018): Growth with Sustainability, Notion India Press

5. Sedana, N. & Indapurkar, K.: Susainable Development Goals, Bloomsberry Publication House, London

SEMESTER VI

Remote Sensing, GIS & GPS

I.MINOR COURSE-MN-2C: (Credits:Theory-04)

Marks: 25 (Viva Voce) + 75 (ESE: 3Hrs) = 100 Pass Marks: Th (Viva Voce + ESE) = 40

Total credit -04 **Teaching Hours (Module I & II -30 Hrs. + Module III- 30 Hrs.) =60 Hrs**

Course Objectives

To understand the meaning, concept, and definition of Remote sensing and GIS, as an important tool in the study and explaining Geographic phenomenon straddle over Earth surface. To make aware the students about satellite, remote sensing, data processing, manual and digital image interpretation, and navigation.

Learning outcome

After the completion of course, the students will have ability to appreciate and apply the new technology in mapping of resources, their locations and availability.

Module 1:

Remote Sensing: Meaning and Types; Significance and its Application in Modern Era; Electromagnetic-waves and their Spectrum; Scanner (Along track & Across-track); Spectral Signature and Resolution; Remote Sensing Platforms; Image Interpretation key; Relief Displacement; Space Programme of India for Remote Sensing and Communication satellites.

Module 2:

Evolution, Definition and Application of GIS; Components of GIS; Coordinate system; Raster and Vector Data; Meaning and concept of GPS; Various Navigation Satellites: IRNSS, Google Earth and Google Map; Geo-Coordinates; Geographic Indication (GI);

Module 3: (Practical)

A Project file consisting of two exercises will be done from Aerial Photo and Satellite Images; thematic map-making process; raster and vector data (point, line, polygon); Geo-referencing; image classification (supervised and unsupervised) and image enhancement process using any GIS Software on above-mentioned themes.

Suggested Books:

1. Jensen, J.R. (1996): Remote sensing of the environment. An Earth Resource Perspective, Pearson Education, New Delhi

2. Campbell, J.B., 1996, Introduction to remote sensing, Taylor and Francis, London

3. LIliesand, Keifer, and Chipman (2004): Remote sensing and image interpretation, John Wiley and Sons, Singapore

4. Reddy, M. Anji (2008): Remote sensing and Geographical Information system, B.S. publication,

5. Rashid,S.M., (1993): Remote Sensing in Geography, Manak Publication, New Delhi

6. Bhatta, B.,(2021): Remote Sensing and GIS, Oxford University Press, New Delhi

11/05/24 11/05/2024 11/05/2024

SEMESTER VIII

I.MINOR COURSE-MN-2D: (Credits:Theory-04)

Marks: 25 (Viva Voce) + 75 (ESE: 3Hrs) = 100 Pass Marks: Th (Viva Voce + ESE) = 40

Amanat

Total credit -03 **Teaching Hours (Module I & II -30 Hrs. + Module III- 30 Hrs.) =60 Hrs**

Aminee is an old occupation that is related to the measurement of land. It is very relevant and significant to cadastral land surveys in the present era. This course has the potential to learners' employability in various cadastral land surveys of private as well as Govt. institutions.

Course Objectives

1. To provide basic and practical knowledge of surveying that are used in various land survey in general and cadastral in particular.

2. Learners will be able to comprehend the basic and practical knowledge of land survey in class as well as field surveys.

Learning outcome

This course is concerned to provide basic and applied knowledge of Amanat survey which leads learners towards getting employment opportunity as surveyor in cadastral land and map survey.

Module – I

Introduction, the objective of study Amanat/Aminee, Scope of Survey, Historical Background of the cadastral survey, the stages in the preparation of the record of right and preparation of village maps, Principles of surveying,

Module – II

Principle and evolution of Toposheet, GIS and, Remote sensing, Aerial survey and GPS, Present day importance of a Surveyor/Amin, Methodology of chain surveying (both chain and tape and gunters chain survey), Theodolite traversing, Plane Table Survey, Prismatic compass survey, Dumpy level survey.

Module-III (Practical)

Construction of scale: Simple, Diagonal and Comparative; Conventional Sign; Details of the unit of measurement, Area Calculation (Local system, British units and Metric unit), enlargement and reduction of

plots, Measurement of land area with the help of Gunter's chain, Plane Table Survey intersection method, resection, Three point problem (tracing paper, trial and error and Bessel's Method), A dumpy level survey (at least for recording the height of land surface/road for a length of 1000 feet and meter).

Suggested Books:

1. Walia, R.M. (2018): Amanat (vekur), Notion Press, Chennai.
2. Shrivastav, C.K. (2020): Bhoo Mapan Vidhi evam Uske Tatva (Hkw&ekiu fof/k ,oa mlds RkRo), Universal Law Publishing Co., New Delhi.
3. Sharma, J.P. (2018): Prayogik Bhoogol, Rastogi Prakashan, Meerut.
4. Singh, R. L. & Singh, Rana P.B. (Elements of Practical Geography, Kalyani Publishers, New Delhi.
5. Gopi, S., Sathikumar, R. & Madhu, N. (2007): Advanced surveying total station, GIS and Remote Sensing, Pearson, New Delhi.