



## **CRITERION I - CURRICULAR ASPECTS**

### **1.3 Curriculum Enrichment**

#### **1.3.2 Certificate Courses/Value-added Courses**

## ***Value added Courses***

### **Department of Geography 2022-2023**

#### **Syllabus**

- 1. Basics of Geo Lab**
- 2. Awareness of Hazards (Natural)**
- 3. Basics of Microsoft Applications in Geography**
- 4. Modern Surveying**
- 5. Impacts of Climatic Changes**

VALUE ADDED COURSE

**PRACTICAL - BASICS OF GEO LAB**

Hours	: 30	Credits	: 2
		Marks	: 100

**Objectives**

- The practical course is to provide GIS practical skills to the students through open source GIS software (QGIS)

**Content - GIS**

1. Geo reference of Base Map
2. Digitizing Point and Line Features
3. Digitizing Polygon Features
4. Attribute Input and Editing
5. Spatial and Attribute Query
6. Overlay and Buffering
7. Map Design and Layout

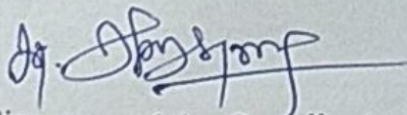
**Learning Outcomes**

- This course gives hands-on experience to the students for storage, manipulation and analysis of spatial data using GIS software.
- Students will able to use GIS software to do geo referencing, digitization, symbolization, layout of map and spatial analysis.

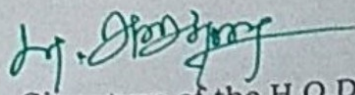
**References:**

1. Kang-t sung Chang, 2002. Introduction to Geographical Information Systems, Tata McGraw-Hill Publishing Company Limited, New Delhi.
2. QGIS Manual - [https://docs.qgis.org/2.14/en/docs/training\\_manual/](https://docs.qgis.org/2.14/en/docs/training_manual/)
3. Chang, K. T. (2006) Introduction to Geographic Information Systems. 3rd Edition, McGraw Hill, New York.

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**VALUE ADDED COURSE**  
**AWARENESS OF HAZARDS [NATURAL]**

Theory Hours	: 30	Credits	: 2
Exam Hours	: 2	Marks	: 100

**Objective:**

- To enhance the aims to introduce basic concepts of natural hazards.
- To get an idea of types of disaster.
- To display the Human induced disaster.
- To enrich the knowledge about the Preparedness, Response and Mitigation to Disaster.

**Content - Awareness of Hazards**

1. Aim and Scope of Awareness of hazards Studies, Risk, Vulnerability
2. Hazard identification and Definition and concepts.
3. Steps involved in Hazard identification and risk assessment:
4. Classification of Major Hazard.  
Geological (Earthquakes, Tsunami and Landslide), Meteorological (Cyclone and Heat Wave), Hydrological (Flood and Drought) and Anthropogenic (Accidents and Deforestation)
5. Mitigation steps, Risk Level and Mitigation measures
6. Components and awareness of Risk Assessment

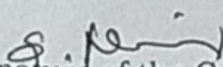
**Learning Outcomes:**

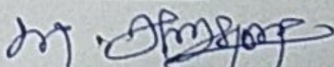
1. Comprehensive basic knowledge of natural hazards.
2. To identifying and predicting of hazardous.
3. Analysis Response and Mitigation to Disasters.
4. To Analysis of Risk Assessment.

**References:**

1. Savindra S. and Jeetendra S. (2013) Disaster Management, Pravalika Publications, Allahabad.
2. NDMA (2011) Disaster Management in India. Ministry of Home Affairs, New Delhi.
3. Carter, N. (1991) Disaster Management: A Disaster Manager's Handbook. Asian Development Bank, Manila.
4. <http://www.ndma.gov.in/en/> and <http://nidm.gov.in/>

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**VALUE ADDED COURSE**

**PRACTICAL - BASICS OF MICROSOFT APPLICATIONS IN GEOGRAPHY**

Hours	: 30	Credits	: 2
		Marks	: 100

**Objective**

- The aim of this value added course is to provide the students an opportunity to understand the basic operations of a computer system

**Content - Basics of Microsoft Applications**

**I Word Processor**

- a. Create and Save a Word Document
- b. Paragraph Editing
- c. Table Preparation
- d. Header and Footer

**II Spreadsheet**

- a. Create and Save an Excel Sheet
- b. Prepare a Table
- c. Calculate Basic Statistics
- d. Prepare Charts and Diagrams

**III Power Point**

- a. Create and Save a Presentation
- b. Insert Different Layout
- c. Apply Custom Animation and Slide Show

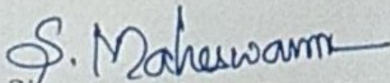
**Learning Outcome:**

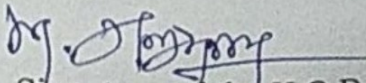
- Students can able to demonstrate functional skills on basic computing using software packages.

**References:**

1. Stefano Ceri, Dino Mandrioli & Licia Sbattella, (1998) The Art and Craft of Computing, Addison-Wesley.
2. User Manual of Microsoft Office Packages.

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22VACGE04

**VALUE ADDED COURSE****PRACTICAL - MODERN SURVEYING**

Hours	: 30	Credits	: 2
		Marks	: 100

**Objectives**

- To understand basic principles of modern surveying.
- To acquaint yourself with the skills of modern surveying tools.

**Contents - Modern Surveying**

1. Remote sensing Technology
2. Aerial Photography
3. Visual interpretation: aerial photographs and satellite images
4. GNSS Survey – Using smart phone

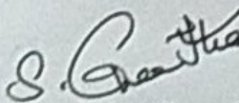
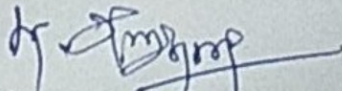
**Learning Outcomes**

- Explain the terms used in terminology.
- Convert measurement units used topography.
- Calculate length or area on the map in the real value.
- Recognize measuring instruments used in basic telescopic sight.

**References:**

1. Surveying and Levelling Vol. I and Vol. II by T. P. Kanetkar and S.V. Kulkarni , Pune Vidyarthi Griha Prakashan.
2. Surveying and Levelling by Subramanian, Oxford University Press.
3. Surveying, Vol. I & II by Dr. B. C. Punmia, Ashok K. Jain, ArunK.Jain , Laxmi Publications.
4. Textbook of Surveying by C. Venkatramaiah , University Press.
5. Surveying for Engineers by John Uren & Bill Price, Palgrave Macmillan.
6. Surveying, Vol. I & II by S. K. Duggal, TataMc-Graw Hill.

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**VALUE ADDED COURSE****IMPACTS OF CLIMATIC CHANGES**

Theory Hours	: 30	Credits	: 2
Exam Hours	: 2	Marks	: 100

**Objective:**

- This course is introduced to understand the climatic change, causes, consequences and its impact.

**Content: Impacts of Climatic Changes**

1. Climate change
2. Indicators of climatic change
3. Causing factors of climatic change
4. Impact of climatic change
5. Mitigation and management

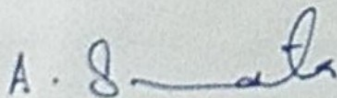
**Learning Outcomes:**

- Climate change on Environment.
- Various indicators regarding biological and historical records
- Causing factors of climate change
- Impacts of various disasters
- Plan to control and manage the natural resources

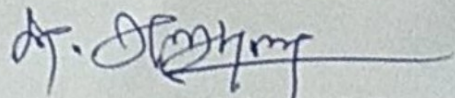
**Reference:**

1. William James Burroughs, (2001) Climate Change: A multidisciplinary approach.
2. Climate Change (2007): Climate Change 2007 - Impacts, Adaptation and Vulnerability.
3. Ghosh Roy M.K., (2016): Global Warming and Climate Change, Scientific International Private Limited, New Delhi.

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