भूविज्ञान विभाग/DEPARTMENT OF GEOLOGY
राजीव गांधी विश्वविद्यालय/Rajiv Gandhi University
रोनो हिल्स, दोईमुख/Rono Hills, Doimukh
अरुणाचल प्रदेश–७९१११२/Arunachal Pradesh – 791 112

RGU/GEOL/NOTICE/2021-22/1107

तिथि/Date: 05 August 2024

NOTIFICATION

This is for information to all the students of **PG III semester** of Rajiv Gandhi University that the Department of Geology is offering **GLO-536B: Natural Hazard and Disaster Management** as ***Open Elective*** course under CBCS for the session 2024-25. Copy of the syllabus is enclosed with this notification.

Interested students can fill up the enclosed form and submit the same to the office of the Head, Department of Geology on or before **9th August 2024 (Friday)** during office hours. List of provisionally selected candidates for the course will be published on 12th August 2024. Classes shall commence from 14th August 2024.

05/08/2024

विभागाध्यक्ष (प्रभारी), भूविज्ञान विभाग
Head i/c, Department of Geology

विभागाध्यक्ष/Head
भूविज्ञान विभाग/Dept. of Geology
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Application for Open Elective Course
(GLO-536B: Natural Hazard and Disaster Management)

1. **Name of Student (in block letters)** | | | | | | | | | | | | | | | | | | | | |
2. **Department/Institute:** _____
3. **Roll No.:** _____
4. **RGU Registration No.:** _____
5. **ABC ID:** _____
6. **Programme (Semester):** _____
7. **I Semester SGPA/Percentage:** _____
8. **II Semester SGPA/Percentage (if available):** _____
9. **Email ID:** _____
10. **Mobile No. (WhatsApp):** _____

Date: ……

Signature of Student

Signature of Student Advisor

Signature of Head with seal
(parent department/institute)

Accepted/Not Accepted

Signature of HoD, Department of Geology with seal

Copy 1: *To be submitted to Head, Parent Department*
Copy 2: *To be submitted to the Department of Geology*

GLO-536B

Natural Hazard and Disaster Management

Total Credit: 4

Total Marks: 100

(Internal Assessment: 20, End-semester Examination: 80)

Objective

The main objective of this course is to introduce the students to various natural hazards and disasters, their causes, vulnerability, risk assessment, mitigation measures and their management at different stages to reduce the loss of life and property.

Course Outcome

On completion of the course the students will be familiar to different types of natural hazards and disasters such as earthquake, volcanic eruption, flood, landslide, cyclone etc. and will have a knowledge about the risk associated with these and its management.

Unit 1: Hazardous natural processes and energy sources; hazard, risk, disaster, and catastrophe; magnitude and frequency of hazardous events; fundamental concepts for understanding natural processes as hazards; risk assessment.

Unit 2: Earthquake: magnitude and intensity; seismicity of the world; reduction of earthquake hazard. Introduction to tsunamis; causes of tsunamis; tsunami risk and its minimization. Volcanoes and volcanic eruptions; distribution of volcanoes, minimizing the volcanic hazard.

Unit 3: Introduction to landslides; types of landslides; identification of potential landslides; prevention of landslides; landslide warning systems; hazards from ground subsidence. river flooding as natural hazard; magnitude and frequency of floods; nature and extent of flood hazards; adjustments to flood hazards.

Unit 4: Coastal hazards; coastal processes; sea-level change; perception and mitigation of coastal hazards. Hurricanes and cyclones: classification and nomenclature; cyclone development; cyclone prone regions; effects of cyclones; cyclone forecasts and warnings; climate change and related hazards.

Recommended Books

Text Books:

1. **Disaster Education and Management: A Joyride for Students, Teachers and Disaster Managers -** Rajendra Kumar Bhandari, *Springer*
2. **Natural Hazards and Disasters -** Donald Hyndman and David Hyndman, *Brooks-Cole*
3. **Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes -** Edward A. Keller, Duane E. DeVecchio and Robert H. Blodgett, *Pearson*

Reference Books:

1. **Environmental Hazards and Disasters: Contexts, Perspectives and Management -** B. K. Paul, *Wiley-Blackwell*
2. **Geological Hazards** - B. A. Bolt, W. L. Horn, G. A. Macdonald and R. F. Scott, *Springer-Verlag*
3. **Introduction to Emergency Management** - Michael K. Lindell, Carla Prater and Ronald W. Perry, *Wiley*
4. **Natural Disasters** - Patrick L. Abbott, *McGraw-Hill*
5. **Natural Hazards: Earthquakes, Volcanoes and Landslides -** Ramesh P. Singh and Darius Bartlett, *CRC Press*
6. **Environmental Hazards: Assessing Risk and Reducing Disaster** - Keith Smith and David N. Petley, *Routledge*