**NATIONAL EDUCATION POLICY-2020**

**Skill Enhancement Course (NEW)**

**Geology (**Environmental Geology**)**

**(2023-24)**

**DEPARTMENT OF GEOLOGY FACULTY OF SCIENCE**

**SRI DEV SUMAN UTTARAKHAND**

**VISHWAVIDYALAYA, BADSHAHITHAUL,**

**TEHRI GARHWAL**

|  |  |  |  |
| --- | --- | --- | --- |
| S.No. | Name | Designation | Signature |
| 01 | Prof. G. K. Dhingra | Dean Science |  |
| 02 | Dr. S. K. Nautiyal | HOD Geology |  |
| 03 | Prof. Yashpal Sundriyal | Subject Expert |  |
| 04 | Prof. Pushpa Negi | PG Principal |  |
| 05 | Prof. Pankaj Pant | PG Principal |  |
| 06 | Prof. Kuldeep Singh Negi | PG Principal |  |
| 07 | Prof. Anita Rawat | Director USERC |  |
| 08 | Dr Pramod Kumar Anthwal | Faculty Member |  |
| 09 | Dr Biraj Borgohain | Faculty Member |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **List of Semester-wise Titles of the Papers in**  **Geology (**Environmental Geology**)**  **(Skill Enhancement Course)** | |  |  |
| **Year** | **Sem.** | **Course Code** | **Paper Title** | **Theory/**  **Practical** | **Credits** |
|  |  | **CERTIFICATE COURSE IN SCIENCE** | |  |  |
| FIRST YEAR | **I** |  | Level1: Elementary Environmental Geology | **Theory** | **3** |
| **II** |  | Level 2: Natural Resources | **Theory** | **3** |
| SECOND YEAR | **III** |  | Level 3: Earth Processes and Disasters | **Theory** | **3** |
| **IV** |  | Level 4: Environmental Problems and  Mitigation | **Theory** | **3** |

**Semester I**

**Skill Enhancement Course in Geology**

# Vocational Course (SEC): Environmental Geology

|  |  |  |
| --- | --- | --- |
| UG First Semester: Level1: Elementary Environmental Geology | | |
| **Course type,**  **paper &**  **Credits** | **Content** | **Teaching hours** |
| UG First  Semester:  Level1:  Elementary  Environmental  Geology | Unit I: Concept and classification of environmental geology. | 15 |
| Unit II: Earth system and biosphere, man and environment, Ecosystem, Concept of biodiversity. | 15 |
| Unit III: Environmental problems, spectrum of environmental geology. | 15 |

**Semester II**

**Skill Enhancement Course in Geology**

# Vocational Course (SEC): Environmental Geology

|  |  |  |
| --- | --- | --- |
|  | UG Second Semester: Level 2: Natural Resources | |
| **Course type,**  **paper &**  **Credits** | **Content** | **Teaching hours** |
| UG Second Semester: Level 2:  Natural  Resources | Unit I: Natural Resources: forests, land and land use, soils, water. | 15 |
| Unit II: Elementary idea about non renewable energy resources:  economic minerals, coal and Petroleum. | 15 |
| Unit III: Elementary idea about renewable energy resources. Wind Energy, Solar energy, geothermal Energy, Hydropower, Biomass energy. | 15 |

**Semester III**

**Skill Enhancement Course in Geology**

# Vocational Course (SEC): Environmental Geology

|  |  |  |
| --- | --- | --- |
| UG Third Semester: Level 3: Earth Processes and Disasters | | |
| **Course type,**  **paper &**  **Credits** | **Content** | **Teaching hours** |
| UG Third  Semester:  Level 3:  Earth Processes and Disasters | Unit I: Elementary idea of Lithosphere and Plate Tectonics. Brief idea of Earth processes. | 15 |
| Unit II: Hazards: earthquakes, volcanoes, instability of hill slopes, snow avalanches, floods, coastal hazards. | 15 |
| Unit III: Natural hazards and their mitigation, | 15 |

**Semester IV**

**Skill Enhancement Course in Geology**

# Vocational Course (SEC): Environmental Geology

|  |  |  |
| --- | --- | --- |
| UG Fourth Semester: Level 4: Environmental Problems and Mitigation | | |
| **Course type,**  **paper &**  **Credits** | **Content** | **Teaching hours** |
| UG Fourth Semester:  Level 4:  Environment al Problems and Mitigation | Unit I: Problems of pollution and wastes, urbanization and climate of cities, waste management. | 15 |
| Unit II: Biogeochemical factors in environment, human health, disease induced by environment. | 15 |
| Unit III: Wasteland management, rural development. | 15 |