

## **CONCEPT NOTE FOR VAC COURSES**

### **DEPARTMENT OF BOTANY**

**Title: SEMESTER 1: Plant ecosystem and Diversity**

**SEMESTER 2: Environment and climate changes**

**To be taught to: Botany students.**

The Department of Botany has put forward the “**Plant ecosystem and Diversity**” for Sem-I and “**Environment and climate changes**” for Sem-II as their titles for VAC as these topics are integral part of understanding on global issues relate to environment and climate. Also, the knowledge of plant ecosystem and diversity will help the students to find the solutions for the issues that are in forefront. The students will be able to understand and get involved in conservation practices for rare, endangered and threatened plant species. Besides knowledge on environment protection law will help them get integrated into the govt plan for sustainable development.

### **DEPARTMENT OF MICROBIOLOGY**

**TITLE : SEMESTER 1 – Microbial Biodiversity Of India -1**

**SEMESTER 2 - Microbial Biodiversity of India -2**

**To be taught to: Microbiology students**

The value addition course on Microbial Biodiversity of India aims to uncover the immense potential of India's microbial diversity and equip participants with the knowledge and skills to harness its value. Microorganisms play a crucial role in various industries, including agriculture, pharmaceuticals, biotechnology, and environmental management, offering vast opportunities for innovation and economic growth. This course proposes a comprehensive exploration of cave microbiome, actinobacteria from the mangrove ecosystem, soil microbiota from the Jhum agroecosystem, and edible mushrooms in Northwest Himalayas, its importance, and applications. It indeed offers a unique opportunity for the students to delve into the diverse world of microorganisms and unlock their immense value. By harnessing the potential of India's microbial biodiversity, students can contribute to sustainable development, innovation, and economic growth.

## **DEPARTMENT OF POLITICAL SCIENCE**

**TITLE: SEMESTER 1 – Human Rights-1**

**SEMESTER 2- Human Rights-2**

**To be taught to: Arts students.**

Human Rights are principles/standards of how people should interact with each other at all different levels in society such as in the family, society, workplace, in politics, in international relations etc. It is therefore vital that people everywhere should strive to understand what human rights are. The knowledge of these rights not only helps to promote justice and equality in the society but also help in developing our potential as human beings. Putting human rights in practice can help us to create a peaceful world as they can help reduce friction within the society. Values of tolerance, equality and respect can help reduce friction within society. Putting human rights ideas into practice can helps us create the kind of society we want to live in. Every person has dignity and value. One of the ways that we recognise the fundamental worth of every person is by acknowledging and respecting their human rights. Human rights are a set of principles concerned with equality and fairness. They recognise our freedom to make choices about our lives and to develop our potential as human beings. They are about living a life free from fear, harassment or discrimination The paper would not only make the students aware of their rights but would also help in making them more responsible towards the society

## **DEPARTMENT OF STATISTICS**

**TITLE: SEMESTER 1 – Data Presentation Using Power Bi -1**

**SEMESTER 2- Data Presentation Using Power Bi -2**

**To be taught to: Statistics students**

With the advent of Technology and its progress at lightning speed, use of data analysis tools and techniques have become indispensable part of Today's Industry. Presenting, organizing and analysing data using Data Analysis Software is the essence of all data-based decision-making process. Department of Statistics will be doing the training to get introduced to the basic and advanced features of data Presentation using very powerful tool POWER BI by offering to the

students of Science Faculty, the value education course, DATA PRESENTATION USING POWER BI at both the semesters of First Year Undergraduate Program under NEP 2020. Students who have offered subject Statistics as major or minor or any student who wishes to get acquainted with data presentation techniques would become natural choice for this value education course

## **DEPARTMENT OF ZOOLOGY**

**TITLE: SEMESTER 1 – Animal Biodiversity within India-1**

**SEMESTER 2 - Animal Biodiversity within India-2**

**To be taught to: Zoology students**

Biodiversity is important as it forms the base for all processes that support life on earth. The entire animal life as well as humans depend on it for their survival. Biodiversity as a subject is essential to study because each species gives us some clue as to how life evolved and will further continue to evolve. Biodiversity conservation is the protection and management of biodiversity to obtain resources for sustainable development. The main objective of places like National parks, biospheres and sanctuaries is the conservation of biodiversity. These parks comprise many kinds of plants that help the environment by providing clean water and fresh air. It provides a haven for animals to thrive and reproduce.

The syllabus is designed to introduce the learners to the concept of biodiversity which will help them understand various aspects of zoology. Biodiversity has an impact on nature and its workings. It enables an individual to understand life processes like climate change, anthropological effects on earth, etc. It also plays a role in interpreting the geographical interactions of nature with animals influencing their survival.

## **DEPARTMENT OF GEOGRAPHY**

**TITLE OF THE COURSE: ENVIRONMENTAL STUDIES AND SUSTAINABILITY**

**To be taught to: Arts and Commerce Students**

Value Enhancement course on Environmental Studies and Sustainability aims to create awareness among students and to sensitize them about environmental degradation. The world

has already started to witness its hazardous effects like global climate change and loss of biodiversity. Key to the human survival and economic growth in future is the sustainable development.

The course introduces the students to the basics of earth systems, and human interference in the same. As most of the earth's environment has been carelessly exploited for resources, a judicious and responsible use of resources like water, forests and fuels is a must. More and more world population are turning to an urban lifestyle, cities have become the centres of environmental abuse. The course also discusses the urban environment and its issues such as solid waste generation and its management. Students are also made aware of the various global, regional and local issues such as world climate change, Acid rain, Ozone depletion etc. It is necessary that the common people and nations take up environmental cause. Topics on environmental movements and various techniques in environmental management have been introduced.

## **DEPARTMENT OF PHYSICS**

**TITLE: SEMESTER 1 – Basics of Communication Systems -1**

**SEMESTER 2 -Basics of Communication Systems-II**

**To be taught to: Physics students**

Department of Physics offers VAC for students of science discipline with a course titled “**Basics of Communication Systems-I** in SEM-I which gives an idea about concepts of electronic communication systems to introduce the Amplitude Modulation, Fundamentals of Amplitude and frequency modulation. AM and FM circuits which are very much useful to learner to study basic concepts and application of communication techniques.

Whereas Department of Physics offered VAC for students of science discipline with a course titled “**Basics of Communication Systems-II** in SEM-II which gives an idea about concepts of digital communication, radio transmitters, communication receivers so as to learners will get a better understanding of digital era of communication.