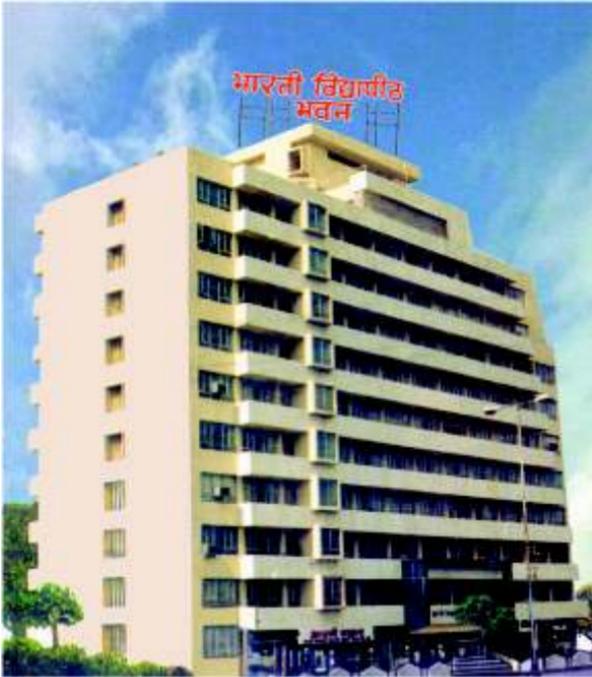


The DNA Club
Vacation Training Program



BHARATI VIDYAPEETH



Bharati Vidyapeeth, the parent body of Bharati Vidyapeeth Deemed University was established in May 1964 by Dr. Patangrao Kadam with the objective of bringing about intellectual awakening and holistic development of the people of our country through education.

Bharati Vidyapeeth is now a leading educational institution in the country, which has created history by establishing 154 educational institutions imparting education from the pre-primary stage to post graduate stage within a short span of 41 years. Our colleges and institutions of higher education impart education in different disciplines including Medicine, Dentistry, Ayurved, Homoeopathy, Nursing, Arts, Science, Commerce, Engineering, Pharmacy, Management, Social Sciences, Law, Environment Science, Architecture, Hotel Management and Catering Technology, Physical Education, Computer Science, Library Science, Information Technology, Biotechnology and Agriculture.

In recognition of the academic merit achieved by these institutions and potential for development which they have, the Department of Human Resource Development, Government of India and the University Grants Commission of India have accorded the status of a deemed to be university to Bharati Vidyapeeth with its seventeen constituent units.

Bharati Vidyapeeth Deemed University has received 'A' grade accreditation by National Assessment and Accreditation Council of UGC.

Bharati Vidyapeeth Deemed University has two campuses in Pune, one on Pune Satara Road 5 kms. south of Pune and another at Erandwane, in the heart of the city.

The campus at Pune on Pune-Satara Road is situated on a sprawling 70 acres of land. Architecturally well designed buildings on this campus house our Medical, Dental, Ayurved, Engineering and Homoeopathy Colleges besides other colleges. The other campus at Erandawane has Arts, Science, Commerce College, Pharmacy College and a few other colleges. Hostel facilities with modern amenities are provided separately for the girls and boys in both our campuses. With the recreational, communicational and other facilities that are available on the campuses our students can enjoy full fledged community life on these campuses.

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BHARATI VIDYAPEETH INSTITUTE OF ENVIRONMENT EDUCATION AND RESEARCH

The Bharati Vidyapeeth Institute of Environment Education and Research (BVIEER) was established on 25th January 1994.



ACTIVITIES

The programs of the Institute include formal environment education, non-formal educational activities and research. These independent spheres of activities have been integrated to augment the effectiveness of all three components. The Institute furthers an exchange of ideas and concepts between those involved in the formal sector of environment education at the Masters and undergraduate level with the school teachers participating in the training workshops on environment education. The students are given an opportunity to interact with scientists, industrialists, media personnel and environmental activists. Emphasis is given to field work and co-curricular activities.

FORMAL ENVIRONMENT EDUCATION

The Bharati Vidyapeeth Institute of Environment Education and Research conducts the following courses

Ph.D. (Environment Science)

M.Sc. (Environment Science)

Diploma in Environment . Education

Environment Research The research is focussed on need based issues with a view to bring about proconservation action. A major focus is on field ecology, biodiversity conservation, urban environmental planning and environment education. Several of its research projects have resulted in policy changes.

NON FORMAL ENVIRONMENT EDUCATION

The Institute has a major non-formal environment education outreach initiative. The School Environment Education Program of the **BVIEER** focuses on capacity building in school teachers through training and developing locale specific environment education material and regular monitoring of the program.



ENVIRONMENT MUSEUM AND ACTIVITY CENTRE

The Institute has developed a unique Environment Museum and Activity Centre. Several interactive exhibits in the form of charts, dioramas, an environmental laboratory, computer games, etc. are used for enhancing environmental consciousness.

INFRASTRUCTURE

The 16,000 sq. ft. building of the Institute is specially designed as a model of environment management. The building includes an administrative section, a formal education facility with well ventilated classrooms, well equipped laboratories and library and an innovative Environment Museum and Activity Center and a specially designed naturally ventilated audio-visual hall of 200 capacity.

A model Nature Trail that has local species of plants of the Western Ghats, has also been developed at the Institute.

FACULTY

The Institute has a core staff of highly trained young dynamic personnel who are supported by visiting faculty drawn from other institutions both within and outside the campus as well as from industries and Government and Non-Government organisations.

COLLABORATIONS

The Institute has collaborations with the Geography Department of Lancaster University, UK, Department of Geography, Cologne University, Germany. Selected students are placed for a two month internship in GIS with the Geomed Research Corporation, Germany.



Interpretation Exhibits





Well equipped library for students



Students working in the Computer Laboratory



Students in the Chemistry Laboratory

VACATION TRAINING PROGRAM

INTRODUCTION

The great variety of life on earth that has provided man with all his needs since time immemorial forms a support system which has been used by civilizations for their growth and development. Our dependence on nature is so great that man cannot continue to live without protecting the earth's environmental resources.

Understanding the organization of plants and animals has helped in utilizing the Earth's biological wealth for the benefit of humanity and has been integral to the process of 'development'. This includes better health care, better crops and the use of these life forms as raw material for industrial growth. However this has also produced the modern consumerist society which adversely affects the diversity of biological resources upon which it is based. The diversity of life is so great that if we use it sustainably we can go on developing new products from biodiversity for many generations. This can only happen if we manage biodiversity as a precious resource and prevent the extinction of species.

To encourage and create an interest among students about the rich biodiversity of our country, its importance, Bharati Vidyapeeth Institute of Environment Education and research is organizing a four week Vacation Training Program from 20th April to 16th May 2009. The program has been catalysed and supported by the Department of Biotechnology, Government of India. There is no charge for the course.

This program is designed for meritous students who have appeared the standard X examinations this year and are awaiting their results. 30 students from Maharashtra and Goa respectively will be selected based on their merit and aptitude and interest in the program.

This course will help students explore the possibilities of pursuing a career in the science of bioresources. Students can pursue very interesting and satisfying careers in this field. This course attempts to enhance awareness about bioresources, threats faced by them and possible conservation measures as well as develop problem solving skills through innovative sessions such as 'Meet the Scientists', audio-visuals, discussions, role plays, field trips, camps, demonstrations, lab activities and field projects.

Participating students will be awarded a certificate.

OBJECTIVES

- To enhance understanding among students about the immense value of biological diversity of our country, the importance of locally available bioresources, their sustainable use and conservation.
- To equip them with relevant skills for bioresource conservation.
- To create opportunities for hands on experience in the field at the school level.
- To facilitate interaction with leading experts in the field including the core and visiting faculty at the Institution.
- To develop and understanding about the future avenues and challenges in the field of bioresources of our country.
- To create awareness about the applications of computers in bioresource conservation and use of GIS for mapping of bioresources.
- To acquire good physical and mental health through the practice of Yoga.

DURATON OF THE COURSE

20th April to 16th May 2009 (4 weeks)

ACCOMMODATION

All the participants will be provided hostel accommodation on campus. Food will be provided for all participants



MEDIUM OF INSTRUCTION

English

VENUE

Institute of Environment Education and Research

Bharati Vidyapeeth University

Katraj-Dhankawadi, Pune 411 043

NAME OF THE COURSE DIRECTOR

Shamita Kumar

Vice Principal

Institute of Environment Education and Research

Bharati Vidyapeeth University

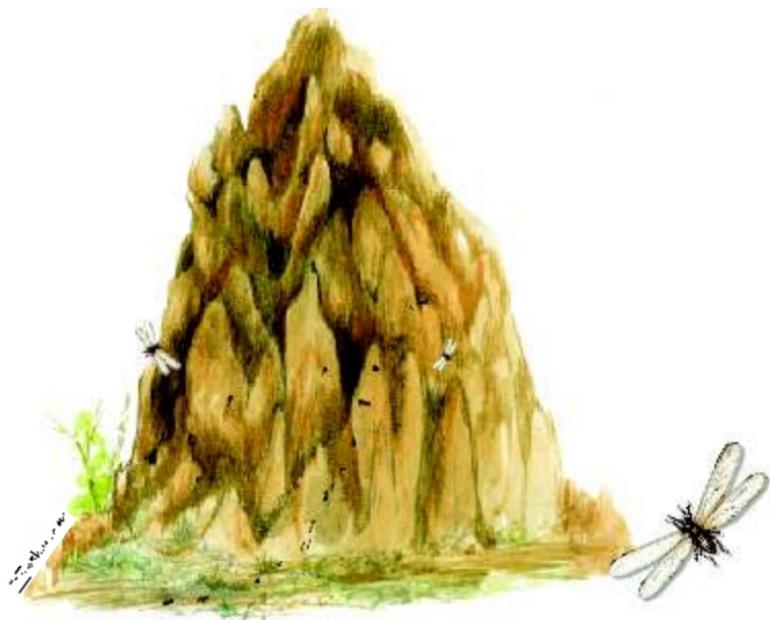
Katraj-Dhankawadi, Pune 411 043

Phone: 020-24375684, 24362155

Email: bvieer@vsnl.com

NUMBER OF PARTICIPANTS

60



COURSE CURRICULUM

Sessions on the following topics through various media such as 'Meet the scientists' session, audio-visuals, activities, field visits, etc. will be organized. Well known eminent scientists will be invited to deliver talks to the participants.

A. INTRODUCTION TO BIORESOURCES

1. Biodiversity - What is biodiversity, types of biodiversity, overview of the biodiversity of India.
2. Value of biodiversity - Direct and indirect values, ethical values, ecologically relevant resources
3. Water - A critical bioresource
4. Watershed management- An important tool for conservation
5. Soil - An important bioresource
6. Microbial diversity - Introduction and economic value, commercial applications
7. Medicinal Plants - An important economic resource
8. Folklore knowledge bases
9. Importance of conserving agrobiodiversity
10. Biofertilizers and biopesticides
11. Organic Farming - Sustainable farming
12. Important indigenous breeds of India and the need for their conservation.
13. Fisheries - an important bioresources

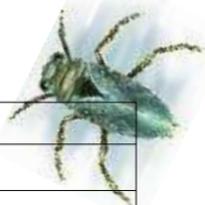


14. Threats to bioresources
15. In-situ conservation measures - The Protected Area Network
16. Traditional Conservation - Sacred Groves
17. Ex-situ conservation measures - Botanical gardens, Zoos, Breeding Programs, Ecorestoration Programs, in-vitro propagation
18. Biofuels - Fuels of the future
19. Bioremediation
20. Intellectual Property Rights and bioresources
21. Patenting
22. Bioprospecting, GIS as a tool for bioresource mapping
23. Biotechnology and bioresources
24. National and International Organizations, Programmes and Conventions on Biodiversity
25. Role of bioinformatics in the conservation and management of bioresources
26. Emerging avenues and careers in the field of Biodiversity and Biotechnology



B. Field Sessions

| S.No. | Field sessions for understanding local bioresources and their conservation measures |
|-------|---|
| 1. | Field work for documenting local bioresources and the extent of their use and misuse |
| 2. | Visit to institutions and individuals involved with conservation of bioresources |
| 3. | Understanding traditional conservation practices |
| 4. | Interactions with various stakeholders such as local people, local governing institutions, etc. |
| 5. | Study of ecosystems through Nature Camps and Nature Trails |



C. Laboratory sessions

| | |
|-------------|---|
| Practical 1 | Understanding aquatic life |
| Practical 2 | Introduction to microbial world |
| Practical 3 | Water analysis techniques |
| Practical 4 | Monitoring and analysis of ambient air quality. |
| Practical 5 | Bird identification |
| Practical 6 | Applications of Biotechnology |



D. Introduction to computers

| | |
|---------------------|--|
| Computer Session 1 | Computer fundamentals |
| Computer Session 2. | Introduction to MS-DOS, MS-Windows and MS - office |
| Computer Session 3 | Internet accessing, email and other facilities |
| Computer Session 4 | Understanding GIS |
| Computer Session 5 | Bioresources database searching |
| Computer Session 6 | Web designing |



E. Interactive Sessions

1. Quiz programme
2. Role Play
3. Play/ skit put up by children
4. Film show
5. Poster design and display

F. Individual Projects by students

Each student will work on a specific project assignment which involves data collection through field studies, data analysis, interpretation and design of a school! community based action program as follow-up and for wider dissemination of their findings

G. Wrap-up session

This final concluding session will essentially focus on experience sharing by the participants, discussion on follow-up action projects and activities, interaction with eminent scientists and award of certificates.

LIST OF INSTRUCTIONS

Students should carry the following with them

- 1 Light bedding
- 2 Water bottle
- 3 Cap
- 4 Torch
- 5 Sport shoes
- 6 Personal medicines

Students should NOT carry

- 1 Valuables (gold ornaments, expensive things)
- 2 Heavy bags





Organised by
**Institute of
Environment Education and Research**
Bharati Vidyapeeth University,
Dhankawadi, Pune 43



In Collaboration with
National Bioresource Development Board,
Department of Biotechnology, Government of India