



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

Dharamshala, Distt. Kangra, Himachal Pradesh- 176215

(Shahpur Parisar, Shahpur, Kangra, Himachal Pradesh, India - 176206)



MINUTES

**FOURTEENTH MEETING OF THE BOARD OF STUDIES
OF THE DEPARTMENT OF ENVIRONMENTAL SCIENCES
HELD ON 29th November, 2023 AT 11.00 AM onwards.**

Venue: Seminar Room, Shahpur Parisar, Central University of Himachal Pradesh

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File No. EES/1-5 (Vol.II)/CUHP/....

Dated:29th November 2023

MINUTES

The 10th meeting of the Board of Studies (BOS) of the Department of Environmental Sciences was held in Seminar Room, Shahpur Campus, Central University of Himachal Pradesh on 1st April, 2022 at 11.00 AM onwards on Google Meet platform. The following members/invitees attended the meeting:

1.	Prof. A. K. Mahajan , Professor, Department of Environmental Sciences, Central University of Himachal Pradesh	CONVENER & CHAIRMAN
2.	Prof. Satish Bharadwaj , YS Parmar Agreeculture University, Nauni, Solan	SUBJECT EXPERT
3.	Prof. Raj Kumar Rampal , Ex-Dean, Dept. Env. Sc., Jammu University, Jammu	SUBJECT EXPERT
4.	Prof. Deepak Pant , Professor & Head, Department of Environmental Sciences, Dean, School of Earth and Environmental Sciences	MEMBER
5.	Dr. Ankit Tandon Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
6.	Dr. Dilbag Singh Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
7.	Dr. Chinmaya Maharana Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE

Following members could not attend the meeting

8.	Prof. Pradeep Kumar , Professor, School of Life Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
9.	Dr. Sunil Thakur , Associate Professor, School of Life Sciences, Central University of Himachal Pradesh	MEMBER (VC NOMINEE)

Prof. A. K. Mahajan, Dean, School of Earth and Environmental Sciences (Convener & Chairman of the BOS) welcomed all the members and thanked them for being available and for attending the meeting.

THEREAFTER, THE AGENDA ITEMS WERE TAKEN UP AS UNDER:

(Handwritten signatures of Prof. A. K. Mahajan, Prof. Satish Bharadwaj, Prof. Raj Kumar Rampal, Prof. Deepak Pant, Dr. Ankit Tandon, Dr. Dilbag Singh, and Dr. Chinmaya Maharana)

ITEM NO: ENV-BOS-14/23-01: Confirmation of the Minutes of the 13th Meeting of the Board of Studies held on 4th May 2023. (Annexure-I)

Board of Studies confirmed the Minutes of its 13th Meeting

ITEM NO: ENV-BOS-14/23-02: To place before the BoS for its approval the Synopsis of the following Research Degree Students for its approval. (Annexure-II)

Board of Studies approved the revised topics for the further revision of Proposed Synopsis.

ITEM NO: ENV-BOS-14/23-03: To discuss about supervision of the following RD scholars who's allotted supervisors have either not been the part of Central University of Himachal Pradesh or on lien (Annexure-III).

Board of Studies discussed the matter and deferred taking any decision on the matter. Board of Studies was of the opinion to send the matter to CUHP administration for their suggestions.

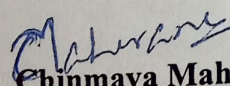
ITEM NO: ENV-BOS-14/23-04: To consider the progress report of following Research Degree Students and their application for allowing them to give Pre-Ph.D. presentation.

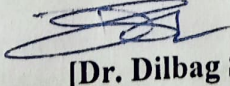
Board of Studies approved the Pre-Ph.D. presentation of Mr. Deepak (CUHP20RDENV02) (Annexure-IV)

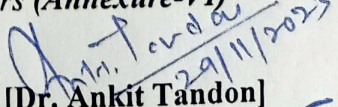
ITEM NO: ENV-BOS-14/23-05: To place before the BoS for its approval the list of new courses for the M.Sc. Environmental Science programme and the Ph.D. course work in the light of New Education Policy-2020.

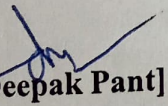
Board of Studies approved the list of New Courses for the M.Sc. Programme and Ph.D. Course work. (Annexure-V)

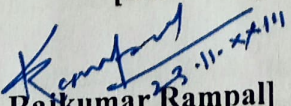
ITEM NO: ENV-BOS-14/23-06: To place before the BoS for its approval, the revised syllabus of various courses following the feed-backs received from different stake-holders (Annexure-VI)

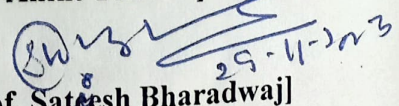

[Dr. Chinmaya Maharana]

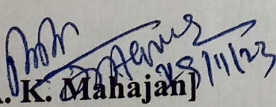

[Dr. Dilbag Singh]


[Dr. Ankit Tandon]


[Prof. Deepak Pant]


[Prof. Rajkumar Rampal]


[Prof. Satish Bharadwaj]


[Prof. A. K. Mahajan]



CENTRAL UNIVERSITY OF HIMACHAL PRADESH

[ESTABLISHED UNDER THE CENTRAL UNIVERSITY ACT 2009]
PO BOX:21 DHARAMSHALA, DISTRICT KANGRA – 176215 (HP)
www.cuhimachal.ac.in



SEMESTER- III METHODS IN SCIENTIFIC RESEARCH

Course Code: ENV 581
Science

Credit: 04

M.Sc. Environmental

Learning Outcomes:

By the end of this course, students should be able to:

- Understand the scientific method and its application in research.
- Formulate straightforward research questions and hypotheses.
- Design adequate research studies and experiments.
- Collect, analyse, and interpret data using appropriate statistical methods.
- Evaluate the validity and reliability of research findings.
- Communicate research results effectively through written reports and presentations.

UNIT-I

Foundations of Scientific Research: Meaning, Objectives, Motivation, Utility. Concept of theory, empiricism, deductive and inductive theory. Characteristics of scientific method – Understanding the language of research – Concept, Construct, Definition, Variable.

UNIT-II

Defining Research Problem: Process of Formulating Hypothesis, Qualities of a good Hypothesis, Null Hypothesis, Alternative Hypothesis, Hypothesis Testing – Logic & Importance, Research Design, Sampling.

UNIT-III

Data Collection, Analysis and Interpretation Methods: Surveys and Questionnaires, Interviews, Observations, Ethnography, Descriptive Statistics, Inferential Statistics, Data Visualization, Software Tools.

UNIT-IV

Laboratory Safety and Ethics for Environment Science: Equipment and Techniques, Field Trip to a local Ecosystem, Biodiversity Assessment, Environmental Data Analysis and Statistics

UNIT -V

Environmental Research Ethics and Future Trends, Ethical Considerations in Environmental Research, Emerging Technologies and Trends in Environmental Science, Reporting and Presenting Environmental Research.

Books Recommendation:

1. "Research Design and Methods for Environmental Science" by Alan H. Terrestrial
2. "Research Methodology" – C.R.Kothari
3. "Research Methods in Environmental Science" by Paul G. Harris
4. "Environmental Sampling and Analysis for Technicians" by Maria Csuros and David A. Dzombak
5. "Environmental Statistics: Methods and Applications" by Vic Barnett and Toby Lewis
6. "Sampling Techniques for Environmental Monitoring" by Michael J. Barak
7. "Handbook of Research Methods and Applications in Environmental Studies" by Ruth L. Berry, Frank Vanclay, and Ana Margarida Esteves

[Handwritten signatures and dates]
25/11/2023

Annexure-II (Minutes of 14th BoS Meeting of the Dept. of Env. Sc.)

Board of studies approved the revised topics for the further revision of Proposed Synopsis

Sr. No.	NAME	PROPOSED TITLE	REVISED TITLE
1	PANDIT PRASHANT SHERA	DEVELOPMENT OF THERAPEUTIC HYBRID COMPLEX USING MOLECULAR HYBRIDIZATION OF BIOACTIVE COMPOUNDS OF CURCUMA LONGA(TURMERIC) USING Pi-Pi INTERACTIONS	DEVELOPMENT OF THERAPEUTIC HYBRID COMPLEX OF TURMERIC (Curcuma longa L.)
2	ABINASH	STUDIES ON SECONDARY INORGANIC AEROSOL, IN THE AMBIENT ATMOSPHERE OF URBAN LOCATION IN NORTH-WESTERN INDIA	DYNAMICS OF SECONDARY INORGANIC AREOSOLS IN URBAN ATMOSPHERE OF NORTHERN INDIA
3	SONIYA	AN INVESTIGATION OF GLACIER DYNAMICS OF SPIITI BASIN USING REMOTE SENSING AND FIELD OBSERVATION	DYNAMICS OF GLACIERS IN THE SPIITI BASIN, HIMACHAL PRADESH, INDIA
4	SONALI	AMMONIATED COMPOUNDS FROM FARM YARD MANURE FOR CARBON DIOXIDE CAPTURE	STANDARDIZATION OF TECHNIQUE FOR CO2 CAPTURE THROUGH COW DUNG

29-11-22
 20/11/2022
 20/11/2022