



NAAC Criterion-I

Key Indicator – 1.1.2

**Approved Minutes of relevant BOS
meeting highlighting the syllabus revision**

1.1.2 Evidences



**Department of Environmental Sciences
Central University of Himachal Pradesh, Dharamshala,
Kangra**



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Department of Environmental Sciences

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2	Approved Minutes of the 7 th BOS meeting highlighting the syllabus revision dated 20/6/2018	ENV-BOS 7/18-3	3
3	Approved Minutes of the 7 th BOS meeting highlighting the syllabus revision dated 20/6/2018	ENV-BOS 7/18-4	3
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8	Approved Minutes of the 12 th BOS meeting highlighting the syllabus revision 1/4/2022	ENV-BOS 12/22-5	18
9	Percentage of syllabus revision as per structurer of the course during each academic years	More than 25 %	19-24



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2016

हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
(Established under Central Universities Act 2009)
PO Box no. 21, Dharamshala, Distt. Kangra, Himachal Pradesh- 176215
(Temporary Academic Block, Shahpur)

File No. EES/1-12/DRC/CUHP/15/

Dated: 14th December, 2016

MINUTES

1. The 6th Board of Studies (BOS) meeting of Department of Environmental Sciences was held on 14th December, 2016 at 10.30 AM at Central University of Himachal Pradesh, Temporary Academic Block (TAB), Shahpur. The following were present:

1.	Dr. Deepak Pant , Associate Professor & Head, Department of Environmental Sciences, Dean, School of Earth and Environmental Sciences	CONVENER & CHAIRMAN
2.	Prof. H. Tombi Singh Ex-Vice Chancellor, Manipur University, Imphal (Manipur)	SUBJECT EXPERT
3.	Dr. Adarsh Pal Vig. Department of Botanical and Environmental Sciences, GNDU, Amritsar	SUBJECT EXPERT
4.	Prof. Ambrish Kumar Mahajan , Professor, Department of Environmental Sciences, Central University of Himachal Pradesh	MEMBER
5.	Dr. Mushtaq Ahmed Associate Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	MEMBER
6.	Dr. Ankit Tandon Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	MEMBER
7.	Dr. Vikram Singh , Assistant Professor, Centre for Computational Biology & Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)

The following member could not attend the meeting due to prior assignments and was granted leave of absence:

1.	Dr. O.S.K.S. Sastri , Associate Professor & Dean, School of Physical and Material Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
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2. Dr. Deepak Pant, Dean, School of Earth and Environmental Sciences (Convener & Chairman of the BOS) welcomed all the members and thanked them for being available for attending this meeting.

THEREAFTER, THE AGENDA ITEMS WERE TAKEN UP AS UNDER:

ITEM NO: ENV-BOS-6/15-1

Confirmation of the Minutes of the 5th Meeting of the Board of Studies held on 22nd February, 2016.

The Minutes of 5th Meeting of the Board of Studies (BOS) held on 22nd February, 2016 were confirmed.

ITEM NO: ENV-BOS-6/15-2.

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To place before the BOS the revised **Curricular Framework** for M.Sc. in Environmental Sciences based on **Choice Based Credit System (CBCS) (Year 2016-17)** adopted by the University in its 13th Academic Council Meeting held on 15th June, 2015 vide ITEM NO: 13.10 (T) (Table-I). (200) (474)

The BOS discussed the **revised Curricular Framework** (based on Choice Based Credit System) (CBCS) and approved as shown in table-I below.

ITEM NO: ENV-BOS-6/15-3.

To place before the BOS "Curricular Framework" of **Human Making** and **Skill Development** courses to be offered by the Department of Environmental Sciences based on **Choice Based Credit System (CBCS)** adopted by the University in its 13th Academic Council Meeting held on 15th June, 2015 vide ITEM NO: 13.10 (T).

Table 2: List of Foundation Courses (Human Making and Skill Development)

Under Graduate Level

S. No.	Name of the Faculty Member	Course Name for Human Making	Course Code
1.	Dr. Anurag Linda	Basics of Environmental Studies*	ENV 121
2.	Dr. Ankit Tandon	Environmental Issues and Policies*	ENV 122

Post Graduate Level

S. No.	Name of the Faculty Member	Course Name for Human Making	Course Code
1.	Prof. A. K. Mahajan	Earthquake Awareness*	ENV-437
2.	Dr. Deepak Pant	Carbon Management	ENV577
3.	Dr. Mushtaq Ahmed	Principles of Biodiversity and Wildlife Conservation*	ENV439
4.	Dr. S. Chatterjee	Environmental Ethics	ENV 508
5.	Dr. Dilbagh Singh	Energy and Environment	ENV 404

S. No.	Name of the Faculty Member	Course Name for Skill Development	Course Code
1.	Prof. A. K. Mahajan	Disaster Management	ENV-536
2.	Dr. Deepak Pant	Waste Management	ENV - 411
3.	Dr. Mushtaq Ahmed	Microbes and Sustainable Development*	ENV440
4.	Dr. Ankit Tandon	Basics of Climate Change*	ENV 443
5.	Dr. S. Chatterjee	Contemporary Environmental Issues	ENV 547
6.	Dr. Anurag Linda	Water Resource Conservation in Hilly Region*	ENV441
7.	Dr. Dilbagh Singh	Nano-techniques and Environment	ENV 528

† For Under Graduate Level

* Courses to be introduced

The BOS discussed the list of courses as given in table 2 above and approved the same.

ITEM NO: ENV-BOS-6/15-4

To approve the list of paper setters for the End-Semester examinations for the Department of Environmental Sciences as adopted by the University in its 16th Academic Council Meeting held on 65th June, 2016 vide ITEM NO: 16.11 vis-à-vis Ordinance 30.

Anurag

Singh

Chatterjee

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[Signature]

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[Signature]

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हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

PO Box no. 21, Dharamshala, Distt. Kangra, Himachal Pradesh- 176215

(Temporary Academic Block, Shahpur)



MINUTES

**EIGHTH BOARD OF STUDIES MEETING
HELD ON 7TH JUNE, 2019 AT 10.30 AM.**

**Venue: Seminar Hall, Temporary Academic Block,
CENTRAL UNIVERSITY OF HIMACHAL PRADESH,
Shahpur , District Kangra(HP)**

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हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)
PO Box no. 21, Dharamshala, Distt. Kangra, Himachal Pradesh- 176215
(Temporary Academic Block, Shahpur)

File No. EES/1-5 (Vol.II)/CUHP/230

Dated: 7th June, 2019

MINUTES

The 8th Board of Studies (BOS) meeting of Department of Environmental Sciences was held on 7th June, 2019 at 10.30 AM at Central University of Himachal Pradesh, Temporary Academic Block (TAB), Shahpur. The following were present:

1.	Prof. Mushtaq Ahmed , Head, Department of Environmental Sciences, Dean, School of Earth and Environmental Sciences	CONVENER & CHAIRMAN
2.	Prof. N. N. Mandal , Division of Molecular Medicine, Centenary Campus, Bose Institute, P-1/12 C.I.T. Scheme VII-M Kolkata-700054	SUBJECT EXPERT ✓
3.	Prof. Desh Raj Thakur , Department of Bio Sciences, Himachal Pradesh University, Shimla-171005	SUBJECT EXPERT
4.	Prof. Ambrish Kumar Mahajan , Department of Environmental Sciences, Central University of Himachal Pradesh	MEMBER
5.	Dr. Vikram Singh , Assistant Professor, Centre for Computational Biology & Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE) ✓
6.	Dr. Subhankar Chatterjee , Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	MEMBER
7.	Dr. Ankit Tandon , Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
8.	Dr. Anurag Linda , Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
9.	Dr. Dilbag Singh , Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE

The following member(s) could not attend the meeting due to their prior commitments:

1	Prof. O.S.K.S. Sastri , School of Physical and Material Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
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The Dean, School of Earth and Environmental Sciences (Convener & Chairman of the BOS) welcomed all the members and thanked them for being available for attending this meeting.

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THEREAFTER, THE AGENDA ITEMS WERE TAKEN UP AS UNDER:

Agenda Items:

ITEM NO: ENV-BOS-8/19-1: Confirmation of the Minutes of the 7th Meeting of the Board of Studies held on 20th June, 2018.

The Minutes of 7th Meeting of the Board of Studies (BOS) held on 20th June, 2018 were **confirmed**.
(ANNEXURE -I)

ITEM NO: ENV-BOS-8/19-2: To approve the minutes of different meetings of RAC and DRC held after the 7th meeting of the BOS.

The minutes of the meetings of the RAC/DRC as mentioned below were placed before the BOS.

1. DRC meeting held on 03.10.2018 **(ANNEXURE -II)**
2. RAC meeting held on 29.06.2018 **(ANNEXURE -III)**
3. RAC meeting held on 27.09.2018 **(ANNEXURE -IV)**
4. RAC meeting held on 18.03.2019 **(ANNEXURE -V)**
5. RAC meeting held on 03.06.2019 **(ANNEXURE -VI)**

The BOS discussed and approved the same except Annexure -VI that stands deferred **(ANNEXURE II- VI)**.

ITEM NO: ENV-BOS-8/19-3: To place before the BOS for its ratification a list of Research Supervisors allotted by the Head, Department of Environmental Sciences to the Research Degree Students admitted for Ph.D. degree programme during session 2018-2019 and RACs constituted vide Notification No. EES/1-15/RPMC/CUHP/15/101-115 Dated 27.05.2019 **(ANNEXURE -VII)** and corrigendum No. EES/1-15/RPMC/CUHP/15/154-168; Dated 31.05.2019.

List of Research Supervisors allotted by the Head, Department of Environmental Sciences vide Notification No. EES/1-2/CUHP/17/582-597; Dated 08.03.2019 to the Research Degree Students of the Department of Environmental Sciences enrolled for their Ph.D. degree programme during for the 2018-2019 session was placed before the BOS **(ANNEXURE -VII and VIII)**. The notification No. EES/1-15/RPMC/CUHP/15/101-115 Dated 27.05.2019 regarding constitution of RAC and corrigendum No. EES/1-15/RPMC/CUHP/15/154-168; Dated 31.05.2019 was placed before BOS.

The BOS ratified the same.

ITEM NO: ENV-BOS-8/19-4: To place before the BOS modified "Curricular Framework" for M.Sc. in Environmental Sciences based on Choice Based Credit System (CBCS) (Year 2019-20) as per UGC guidelines (Table-1).

The modified "Curricular Framework" **(ANNEXURE- IX)** was placed before the BOS. The BOS deliberated and approved the same and suggested that the department should offer a core course on Himalayan Ecology & Environment at M.Sc level.

ITEM NO: ENV-BOS-8/19-5: To place before the BOS a list of new courses for the M.Sc. Environmental Science program and for the course work of Research Degree students of the Department of Environmental Sciences (Table-2).

Anand
 Srinivas
 A. Mandel
 5
 [Other illegible signatures]

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A list of **new courses** for the M.Sc. Environmental Science program and for the course work of Research Degree students was placed before BOS. BOS **approved** the same list of **new courses**.

Table 2: List of New Courses to be introduced from Monsoon Semester of 2019.

Course Code	Name of the course	Credit
ENV 569a	Environmental Pollution and Health issues - an Introduction	2
ENV 582	Atmospheric Chemistry and Physics	4
ENV 583	Basics of Soil Science	2
ENV 584	Oceanography	4
ENV 585	Fundamentals of Basic and Applied Environmental Microbiology	4

ITEM NO: ENV-BOS-8/19-6: To place before the BOS, the matter regarding appointment of co-supervisors.

The requests received from the faculty members of the Department for the appointment a Co-Supervisor(s) for some of the Research Degree Students of the Department admitted during the session 2018-2019 as per the guidelines of UGC enlisted in the Sub Clause 6.4 of its Notification dated 5th May, 2016 for Minimum Standards and Procedure for Award of M.PHIL./PH.D. Degrees Regulations, 2016 were placed before the BOS.

The BOS considered the **requests from the faculty members for the appointment a Co-Supervisor(s)** for their Research Degree Students and approved their requests as given in the Table below with the condition that consent may be taken by the Concerned Supervisor from the Faculty/ Scientist willing to act as Co-Supervisor.

Table-3:

S.No.	Name of Research Degree Student	Enrolment Number	Name of Supervisor	Name and Address of Proposed Co-Supervisor
1.	Sachin Kumar	CUHP17RDENV08	Dr. Dilbag Singh	Prof. Deepak Pathania, Department of Environmental Science, Central University of Jammu
2.	Sarita Bamotra	CUHP17RDENV09	Dr. Ankit Tandon	Dr. Shweta Yadav, Department of Environmental Science, Central University of Jammu
3.	Shabnam	CUHP17RDENV10	Prof. Mushtaq Ahmed	Prof. Deepak Pant, Department of Chemistry, Central University of Haryana
4.	Shikha Rawal	CUHP17RDENV12	Dr. Anurag Linda	Dr. Pottakkal George Jose Scientist 'D', National Institute of Hydrology Sc.-In-Charge, Western Himalayan Regional Centre, Jammu

ITEM NO: ENV-BOS-8/19-7

To place before the BoS for approval the **updated list of External Examiners (ANNEXURE -X)** for conducting practical / M.Sc. Dissertations Examinations of the Department of Environmental Sciences.

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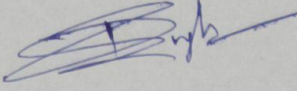
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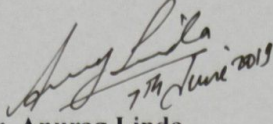
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The updated list of External Examiners was placed before the BOS. The BOS approved the same.

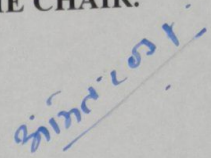
THE MEETING ENDED WITH A VOTE OF THANKS TO THE CHAIR.



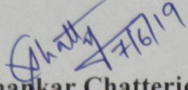
Dr. Dilbag Singh
(SPECIAL INVITEE)



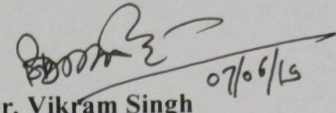
Dr. Anurag Linda
(SPECIAL INVITEE)



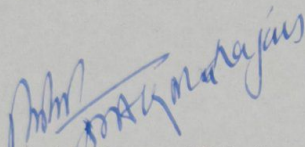
Dr. Ankit Tandon
(SPECIAL INVITEE)



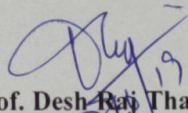
Dr. Subhankar Chatterjee
(MEMBER)



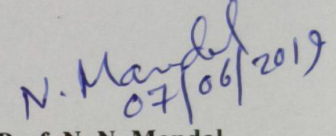
Dr. Vikram Singh
(MEMBER -VC NOMINEE)



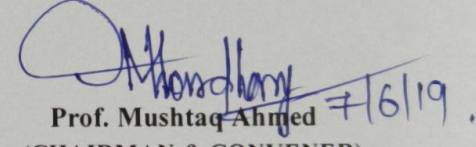
Prof. Ambrish Kumar Mahajan
(MEMBER)



Prof. Desh Raj Thakur
(SUBJECT EXPERT)




Prof. N. N. Mandal
(SUBJECT EXPERT)



Prof. Mushtaq Ahmed
(CHAIRMAN & CONVENER)

Annexure-I

हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
 (Established under Central Universities Act 2009)
 Dharamshala, Distt, Kangra, Himachal Pradesh- 176215
 (Temporary Academic Block, Shahpur)



MINUTES

**NINTH BOARD OF STUDIES MEETING
 HELD ON 7TH JULY, 2020 AT 12.00 PM.**

**Venue: Seminar Hall, Temporary Academic Block,
 CENTRAL UNIVERSITY OF HIMACHAL PRADESH,
 Shahpur , District Kangra (HP)**



(Signature)
 (Dr. Dilbag Singh)

(Signature)
 (Dr. Ankur Randon)

Approved through Email
 (Prof. O.S.K.S. Sastry)

Approved through Email
 (Prof. Desh Raj Thakur)

(Signature)
 (Dr. Subhankar Chatterjee)

Approved through Email
 (Dr. Vikram Singh)

Approved through Email
 (Prof. A. K. Mahajan)

Approved through Email
 (Prof. AL. Ramanathan)

Prof. Deepak Pant)
 Chairman and Convenor
 Head, Department of Environmental Sciences
 हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
 Central University of Himachal Pradesh
 अस्थायी शैक्षणिक ब्लॉक / Temporary Academic Block
 शाहपुर, कांगड़ा (हि.प्र.) / Shahpur, Kangra [H.P.] - 176206



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)
Dharamshala, Distt. Kangra, Himachal Pradesh- 176215
(Temporary Academic Block, Shahpur)

Dated: 7th July, 2020

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

MINUTES

The 9th Board of Studies (BOS) meeting of Department of Environmental Sciences was held on 7th July, 2020 at 12.00PM at Central University of Himachal Pradesh, Temporary Academic Block (TAB), Shahpur. The following were present:

1.	Prof. A. K. Mahajan, Professor&Head, Department of Environmental Sciences, Dean, School of Earth and Environmental Sciences	CONVENER & CHAIRMAN
2.	Prof. O.S.K.S. Sastrî, Professor & Dean, School of Physical and Material Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
3.	Dr. Pankaj Thakur, Associate Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	MEMBER
4.	Dr. Subhankar Chatterjee, Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	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

The following members attended the meeting on line due to Covid-19 situations:

1.	Prof. Desh Raj Thakur, Department of Bio Sciences, Himachal Pradesh University, Shimla-171005	SUBJECT EXPERT (online)
2.	Dr. Vikram Singh, Assistant Professor, Centre for Computational Biology & Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE) on line
3.	Dr. Anurag Linda Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE (Online)

The following members were available on telephone because of Covid-19 situations:

1.	Prof. N. N. Mandal, Division of Molecular Medicine, Cernersay Campus, Bose Institute, P-1/12 C.I.T. Scheme VII-M Kolkata-700054	SUBJECT EXPERT (by circulation)
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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 for attending this meeting.

(Handwritten signatures)

(Signature)
(Dr. Dilbag Singh)

(Signature)
(Dr. Ankit Tandon)

Approved through Email

(Prof. O.S.K.S. Sastrî)

Approved through Email

(Prof. Desh Raj Thakur)

(Signature)
(Dr. Subhankar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email

(Prof. A. K. Mahajan)

Approved through Email

(Prof. AL. Ramanathan)

Prof. Deepak Pant)
Chairman and Convener
Head, Department of Environmental Sciences
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
अस्थायी शैक्षणिक ब्लॉक/Temporary Academic Block
शाहपुर, कांगड़ा (हि.प्र.)/Shahpur, Kangra (H.P.)-176206

THEREAFTER, THE AGENDA ITEMS WERE TAKEN UP AS UNDER:

Agenda Items:

ITEM NO: ENV-BOS-9/20-1: Confirmation of the Minutes of the 8th Meeting of the Board of Studies held on 7th June, 2019.

The BoS confirmed the Minutes of the 8th Meeting of the Board of Studies held on 7th June, 2019. (Annexure-I)

ITEM NO: ENV-BOS-9/20-2: To place before the BoS, a list of courses to be taught in the coming academic session for the M.Sc. Environmental Science program and for the course work of Research Degree students of the Department of Environmental Sciences

The BoS approved the list of courses to be taught in the coming academic session for the M.Sc. Environmental Science program and for the course work of Research Degree students of the Department of Environmental Sciences (Annexure-II)

ITEM NO: ENV-BOS-9/20-3: To place before the BoS, the matter regarding appointment of Supervisor and Co-supervisors to the following Research Degree Students admitted for Ph.D. degree programme in the session 2018-2019.

BoS approved the appointment of Supervisor and Co-supervisors to the following Research Degree Students admitted to Ph.D. degree programme in the session 2018-2019 as follows:

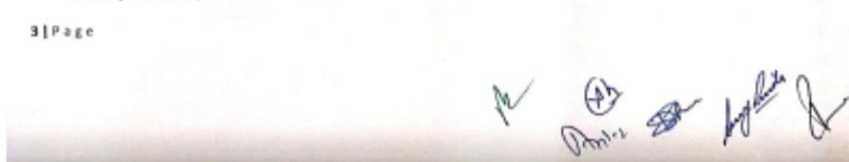
Sr. No.	Name of Research Degree Student	Enrolment Number	Name of Supervisor
1	Chhabeel	CUHP18RDENV01	Dr. Ankit Tandon
2	Harsh Sharma	CUHP18RDENV02	Prof. A. K. Mahajan

ITEM NO: ENV-BOS-9/20-4: To place before the BOS the matter regarding the appointment of Prof. A. K. Mahajan as co-supervisor to the Ms. Sunanda Patial of Maharaja Agrasen University, Baddi, Solan, Himachal Pradesh as per the guidelines of UGC enlisted in the Sub Clause 6.4 of its Notification dated 5th May, 2016 for Minimum Standards and Procedure for Award of M.PHIL./PH.D degrees Regulations, 2016.

The BoS approved the appointment of Prof. A. K. Mahajan as co-supervisor to the Ms. Sunanda Patial of Maharaja Agrasen University, Baddi, Solan, Himachal Pradesh as per the guidelines of UGC enlisted in the Sub Clause 6.4 of its Notification dated 5th May, 2016 for Minimum Standards and Procedure for Award of M.PHIL./PH.D degrees Regulations, 2016.

ITEM NO: ENV-BOS-9/20-5: To place before the BoS, the matter regarding change of Supervisor and Co-supervisors of Ms. Shabnam (CUHP17RDENV10) as Prof. Mushtaq Ahmed (present Supervisor) has taken lien to join Central University of Jammu. Prof. Mushtaq Ahmed has been appointed as Supervisor by the last BOS and notified by Department on 08/03/2019. Later Prof Mushtaq Ahmed shifted to Central University Jammu in November 2019 on lien. Now Miss Shabnam

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(Dr. Dilbag Singh)


(Dr. Ankit Tandon)

Approved through Email

(Prof. O.S.K.S. Sastry)

Approved through Email

(Prof. Desh Raj Thakur)


(Dr. Subhankar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email

(Prof. A. K. Mahajan)

Approved through Email

(Prof. AL. Ramanathan)

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Prof. Deepak Pant)
Chairman and Convener
Head, Department of Environmental Sciences
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
अस्थायी शैक्षणिक ब्लॉक/Temporary Academic Block
शाहपुर, कांगड़ा (हि.प्र.)/Shahpur, Kangra (H.P.)-176206

has requested vide her mail dated 24/5/2020 for change of supervisor for direct supervision. Prof. Mushtaq Ahmed has given his NOC mentioning that he is not in a position to guide her as he has retired to C.U. At present Prof. Mushtaq Ahmed is supervisor and Prof. Deepak Pant is a co-supervisor. In the meantime Miss. Shabnam has also send a request that she wanted to resign from Ph.D programme as she don't want to continue further. Submitted for discussion and approval please.

The BoS discussed the matter and resolved to appoint Prof. A. K. Mahajan as Supervisor (for Administrative Formalities) and Prof. Deepak Pant as Co-Supervisor (Subject Area Expert) for the Ph.D. research work of Miss. Shabnam. The BoS advised to send back the resignation request of Miss. Shabnam to her for re-consideration. This should be considering as supernumerary seat under Prof A.K. Mahajan.

ITEM NO: ENV-BOS-9/20-6: To place before the BOS, the matter regarding appointment of co-supervisors. The requests received from the faculty member (Dr. Ankit Tandon and Dr. Anurag Linda) of the Department for the appointment a Co-Supervisor for their Research Degree Students (Ms. Sarita Bamotra and Ms. Shikha Rawal respectively) of the Department admitted during the session 2016-2017 as per the guidelines of UGC enlisted in the Sub Clause 6.4 of its Notification dated 5th May, 2016 for Minimum Standards and Procedure for Award of M.PHIL./PH.D. Degrees Regulations, 2016.

The BoS approved the appointment of following co-supervisors for their Research Degree Students (Ms. Sarita Bamotra and Ms. Shikha Rawal) of the Department admitted during the session 2016-2017 as per the guidelines of UGC enlisted in the Sub Clause 6.4 of its Notification dated 5th May, 2016 for Minimum Standards and Procedure for Award of M.PHIL./PH.D. Degrees Regulations, 2016.

S. No.	Name of Research Degree Student	Enrolment Number	Name of Supervisor	Name and Address of Co-Supervisor
1	Sarita Bamotra	CUHP17RDENV09	Dr. Ankit Tandon	Dr. Shweta Yadav, Department of Environmental Science, Central University of Jammu
2	Shikha Rawal	CUHP17RDENV12	Dr. Anurag Linda	Dr. Pottakkal George Jose National Institute of Hydrology, Scientist-in- Charge, Western Himalayan Regional Centre, Flood Control Complex, Jammu Cantt. Jammu-180003 (J&K), INDIA

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(Dr. Dilbag Singh)



(Dr. Ankit Tandon)

Approved through Email

(Prof. O.S.K.S. Sastry)

Approved through Email

(Prof. Desh Raj Thakur)


(Dr. Subhankar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email

(Prof. A. K. Mahajan)

Approved through Email

(Prof. AL. Ramanathan)

Prof. Deepak Pant)
Chairman and Convener
Head, Department of Environmental Sciences
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
अस्थायी शैक्षणिक ब्लॉक/Temporary Academic Block
शाहपुर, कांगड़ा (हि.प्र.)/Shahpur, Kangra [H.P.]-176206

ITEM NO: ENV-BOS-9/20-7: To place before the BOS the matter regarding change of supervisor under clause 12.1 of the ordinance of Ms. Kamika Mahajan (CUHP17RDENV05), R.D. student, admitted to the University during the session 2017-18 and presently doing Ph.D. under the supervision of Dr. Subhankar Chatterjee. A letter from Dr. Subhankar Chatterjee and Miss Kamika Mahajan are attached for kind consideration.

The BoS approved the change of supervisor and also approved the appointment of Prof. A. K. Mahajan as Supervisor with the condition that Ms. Kamika Mahajan will not use any data, any bacterial strain, any publication and any material which she has generated/used in Dr. Subhankar Chatterjee's lab, for her future PhD research/thesis and for any write-up/publication. She will not be allowed to carry any bacterial strain, any material from Dr. Subhankar Chatterjee's lab. She will also not be allowed to use the research topic she was working on in his group under his supervision. Before joining any other lab Ms. Kamika Mahajan will acquire an NOC and proper relieving letter from Dr. Subhankar Chatterjee.

She will start afresh with new topic for her PhD research under the supervision of Prof. A. K. Mahajan. The matter of co-supervisor has also been discussed as Prof. Mahajan has mentioned that he is not the subject expert. Prof. Mahajan has agreed to help the student so that she can complete her degree from the department of Environmental Sciences and need not to deregister. Since Prof. Mahajan has mentioned that he has already discussed the matter verbally with Dr. Sunil Thakur to be her co-supervisor and Dr. Sunil Thakur has also given his consent in writing. The BOS consider the request of Prof. Mahajan and also allowed him to consider Dr. Sunil Thakur as her co-supervisor. This should be considering as supernumerary seat under Prof. A.K. Mahajan.

The BoS also suggested that this case should be considered as an exceptional and one time case and this kind of practices (Change of supervisor on whims and fancies of students) in the department should be discouraged. Except some unavoidable circumstances department should not allow the PhD students to change the supervisor.

ITEM NO: ENV-BOS-9/20-8: To place before the BoS for approval of new course ENV 58 Regional (Indian) Environmental Policies (04 credits) for spring session 2020- 21.

The BoS approved the new course ENV 58 Regional (Indian) Environmental Policies (04 credits) for spring session 2020- 21. (Annexure-III)

ITEM NO: ENV-BOS-9/20-9: To Place before the BOS, prior assignment of Dr. Pankaj Thakur as supervisor/co-supervisor at his previous organization (Shoolani University) whereby he has a Ph.D.

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(Dr. Dilbag Singh)


(Dr. Ankur Pandon)

Approved through Email

(Prof. O.S.K.S. Sastry)

Approved through Email

(Prof. Desh Raj Thakur)


(Dr. Subhankar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email

(Prof. A. K. Mahajan)

Approved through Email

(Prof. AL. Ramanathan)

Prof. Deepak Pant)
Chairman and Convener
Head, Department of Environmental Sciences
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
अस्थायी शैक्षणिक ब्लॉक/Temporary Academic Block
शाहपुर, कांगड़ा (हि.प्र.)/Shahpur, Kangra (H.P.)-176206

student as Guide. The names of the students are Ms. Lavanya Tandon, Ms. Bhavna Sharma, Ms. Farah Menzer and Sanjay Thakur.

The BoS accorded its approval to Dr. Pankaj Thakur to continue his supervision/co-supervision to Ms. Lavanya Tandon, Ms. Bhavna Sharma, Ms. Farah Menzer and Sanjay Thakur at his previous organization (Shoolani University).

ITEM NO: ENV-BOS-9/20-10: To place before the BoS for approval the updated list of External Examiners for conducting practical/M.Sc. Dissertations Examinations and of the Department of Environmental Sciences.

The BoS discussed the matter and advised to abandon with such list of External Examiners. BoS empowered the Head of the Department to propose names of external examiners on the recommendation of the faculty concerned on case to case basis as and when it required to do so.

THE MEETING ENDED WITH A VOTE OF THANKS TO THE CHAIR.


Dr. Dilbag Singh


Dr. Anurag Linda


Dr. Ankit Tandon


Dr. Subhanakar Chatterjee

Dr. Vikram Singh


Dr. Pankaj Thakur

Prof. O.S.K.S. Sastri

Prof. N. N. Mandal


Prof. Desh Raj Thakur

Prof. Ambrish K. Mahajan
(Chairman and Convener)


(Dr. Dilbag Singh)

(Dr. Ankit Tandon)

Approved through Email

(Prof. O.S.K.S. Sastri)

Approved through Email

(Prof. Desh Raj Thakur)


(Dr. Subhanakar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email

(Prof. A. K. Mahajan)

Approved through Email

(Prof. AL. Ramanathan)

Prof. Deepak Pant)
Chairman and Convener
Head, Department of Environmental Sciences
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
अस्थायी शैक्षणिक ब्लॉक/Temporary Academic Block
शाहपुर, कांगड़ा (हि.प्र.)/Shahpur, Kangra [H.P.]-176206

हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

Dharamshala, Distt. Kangra, Himachal Pradesh- 176215

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



MINUTES

TENTH MEETING OF THE BOARD OF STUDIES
OF THE DEPARTMENT OF ENVIRONMENTAL SCIENCES
HELD ON 25TH SEPTEMBER, 2021 AT 11.45 AM onwards.

Venue: ONLINE - GOOGLE MEET

हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
 (Established under Central Universities Act 2009)
 Dharamshala, Distt. Kangra, Himachal Pradesh- 176215
 (Shahpur Campus, Shahpur, Kangra, Himachal Pradesh, India - 176206)




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


Dated: 25th September, 2021

MINUTES

The 10th meeting of the **Board of Studies (BOS)** of the **Department of Environmental Sciences** was held **Online** on 25th September, 2021 at **11.45 AM onwards** on Google Meet platform. The following members/invitees attended the meeting:

1.	Prof. Deepak Pant , Professor & Head, Department of Environmental Sciences, Dean, School of Earth and Environmental Sciences	CONVENER & CHAIRMAN
2.	Prof. AL. Ramanathan , School of Environmental Sciences, Jawaharlal Nehru University, New Delhi - 110067	SUBJECT EXPERT
3.	Prof. Desh Raj Thakur , Department of Bio Sciences, Himachal Pradesh University, Shimla-171005	SUBJECT EXPERT
4.	Prof. A. K. Mahajan , Professor, Department of Environmental Sciences, Central University of Himachal Pradesh	MEMBER
5.	Prof. O.S.K.S. Sastri , Professor, School of Physical and Material Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
6.	Dr. Vikram Singh , Assistant Professor, Centre for Computational Biology & Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
7.	Dr. Ankit Tandon Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
8.	Dr. Subhankar Chatterjee , Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE


 (Dr. Dilbag Singh)

 (Dr. Ankit Tandon)
 Approved through Email
 (Prof. O.S.K.S. Sastri)

 Approved through Email
 (Prof. Desh Raj Thakur)


 (Dr. Subhankar Chatterjee)
 Approved through Email
 (Dr. Vikram Singh)
 Approved through Email
 (Prof. A. K. Mahajan)
 Approved through Email
 (Prof. AL. Ramanathan)

Prof. Deepak Pant)
 Chairman and Convener
 Head, Department of Environmental Sciences
 हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
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9.	Dr. Dilbag Singh Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	SPECIAL INVITEE
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The following members could not attend the meeting:

1.	Dr. Anurag Linda Assistant Professor, Department of Environmental Sciences, Central University of Himachal Pradesh.	MEMBER
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Prof. Deepak Pant, 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:


Agenda Items:


ITEM NO: ENV-BOS-10/21-1: *Confirmation of the Minutes of the 9th Meeting of the Board of Studies held on 7th July, 2020.*

The BoS confirmed the Minutes of the 9th Meeting of the Board of Studies held on 7th July, 2020. (Annexure-I)

ITEM NO: ENV-BOS-10/21-2: *To place before the BoS for its approval, a revised structure the M.Sc. Environmental Science programme in the light of New Education Policy-2020. All the revisions made, time to time, in the syllabus of different courses of the M.Sc. Environmental Science programme as per the NEP-2020 guidelines will be reported to the upcoming BOS meetings.*


The BoS approved the revised structure the M.Sc. Environmental Science programme in the light of New Education Policy-2020. (Annexure-II)


(Dr. Dilbag Singh)


(Dr. Ankur Randon)

Approved through Email
(Prof. O.S.K.S. Sastry)

Approved through Email
(Prof. Desh Raj Thakur)


(Dr. Subhankar Chatterjee)

Approved through Email
(Dr. Vikram Singh)

Approved through Email
(Prof. A. K. Mahajan)

Approved through Email
(Prof. AL. Ramanathan)

Prof. Deepak Pant)
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Department of Environmental Sciences

Matrix of Courses Offered and Opted by M.Sc. Env. Sc. Students (Revision in Structure has been Highlighted)

June 2017	Dec 2017	June 2018	Dec 2018	June 2019	Dec 2019	June 2020	Dec 2020	June 2021
II Sem	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem
ENV 408	ENV 402A	ENV 408	ENV 402A	ENV 408	ENV 402A	ENV 408	ENV 401	ENV 411
ENV 422	ENV 403	ENV 422	ENV 403	ENV 422	ENV 403	ENV 411	ENV 402A	ENV 422
ENV 424	ENV 404	ENV 424	ENV 404	ENV 424	ENV 404	ENV 422	ENV 403	ENV 424
ENV 432	ENV 434	ENV 432	ENV 434	ENV 432	ENV 434	ENV 424	ENV 444	ENV 428
ENV 436	ENV 435	ENV 436	ENV 435	ENV 436	ENV 435	ENV 432	ENV 501	ENV 432
ENV 503	ENV 439	ENV 503	ENV 516	ENV 441	ENV 443	ENV 436	ENV 560	ENV 443
ENV 535	ENV 516	ENV 508	ENV 437	ENV 528	ENV 560	ENV 501		ENV 445
ENV 569		ENV 528	ENV 443	ENV 535		ENV 508		ENV 535
		ENV 535		ENV 569A		ENV 553		ENV 553
IV Sem	III Sem	IV Sem	III Sem	IV Sem	III Sem	IV Sem	III Sem	IV Sem
ENV 409	ENV 411	ENV 409	ENV 524	ENV 409	ENV 411	ENV 428	ENV 410	ENV 428
ENV 412	ENV 524	ENV 412	ENV 530	ENV 412	ENV 412	ENV 509	ENV 412	ENV 431
ENV 428	ENV 528	ENV 428	ENV 536	ENV 428	ENV 524	ENV 536	ENV 503	ENV 509
ENV 521	ENV 530	ENV 521	ENV 537	ENV 521	ENV 547	ENV 537	ENV 524	ENV 536
ENV 528	ENV 531	ENV 561	ENV 547	ENV 546	ENV 557	ENV 575	ENV 564	ENV 575
ENV 561	ENV 550	ENV 575	ENV 550	ENV 561	ENV 564	ENV 583	ENV 571	ENV 583
ENV 562	ENV 559	ENV 577	ENV 559	ENV 569A	ENV 571	ENV 586	ENV 573	ENV 586
ENV 575	ENV 571	ENV 580	ENV 571	ENV 575	ENV 573	ENV 587	ENV 582	ENV 610
ENV 577	ENV 578	ENV 613	ENV 578	ENV 580	ENV 582		ENV 588	
ENV 579	ENV 611		ENV 581					
ENV 580			ENV 611					
ENV 613			ENV 614					
			ENV 615					

Generally, out of 8 courses have been revised each year. As some of the courses are 2 credits, and some are 4 credits, so out 80 credit each year, the syllabus of more than 20 credits have been revised that makes it more than 25 % of the Syllabus of M.Sc. Env. Sc. Programme.

Structure of the M.Sc. Environmental Science Program

clearly indicating the courses, credits/Electives as approved by the BoS of Dept. Env. Sc.

S.No.	Academic Session	Page No.
1.	2016-17	2
2.	2017-18	3
3.	2019-20	4
4.	2020-21	5
5.	2021-22	6

TABLE-I: Revised Curricular Framework" for M.Sc. in Environmental Sciences based on Choice Based Credit System (CBCS) (Year 2016)

Semester	Credits	Core- Compulsory	Credits	Credits	Core- Open	Credits	
I	16	ENV 402a - Introduction to Earth Processes	2				
		ENV 403 - Environmental Chemistry	4				
		ENV 434 - Fundamentals of Ecology and Environment	4				
		ENV 516 - Atmospheric Science	2				
		ENV 435 - Environmental Sciences Laboratory - I	2				
		ENV 404 - Energy and Environment	2				
II	12	ENV 408 - Biodiversity and Wild Life Management	2	4	ENV 523 - Toxic and Hazardous Waste Management	4	
		ENV 432 - Introduction to Statistical Techniques	4		ENV 569 - Environmental Pollution and Health issues	4	
		ENV 424 - Fundamentals of Remote Sensing	2		ENV 535 - Natural Hazards	2	
		ENV 422 - Basics of Natural Resource Conservation	2		ENV 525 - Environmental Geochemistry	2	
		ENV 436 - Environmental Sciences Laboratory - II	2		ENV 553 - Environmental Thermodynamics	2	
					ENV 503 - Environmental Legislation: National & International	2	
III	4	ENV 524 - Environmental Impact Assessment	2	4	ENV 508 - Environmental Ethics	2	
		ENV 571 - Remote Sensing and GIS Lab	2		ENV 572 - Land Use Planning	2	
					ENV 573 - Water Resource Management	2	
					ENV 546 Renewable and Non renewable Energy potential in HP State	2	
IV	8	ENV 575 - M.Sc. Dissertation	6	4	ENV 557 - Bio-resources and Environmental Biotechnology	4	
		ENV 412- Analytical Technique	2		ENV 537 - Environmental Engineering	2	
					ENV 421 - Municipal Solid Waste Management	2	
					ENV 428 - Himalayan Geology	2	
					ENV 574 - Bio Analytical Techniques	4	
					ENV 561 - Science of Climate Change	2	
Semester	Credits	Elective (Specialization)	Credits	Semester	Credits	Elective (Specialization)	Credits
III	8	ENV 559 - Environmental Geophysics	2	IV	8	ENV 521 - Geo Engineering	2
		ENV 411 - Waste Management	2			ENV 577 - Carbon Management	2
		ENV 550 - Microbial Ecology	2			ENV 409 - Environmental Microbiology	2
		ENV 611 - Atmospheric Chemistry	2			ENV 613 - Atmospheric Physics	2
		ENV 410 - Environmental Biotechnology	2			ENV 579 - Recent Trends in Environmental Biotechnology	2
		ENV 578- Introduction to Glaciology	2			ENV 580 - Recent Trends in Glaciology	2
		ENV 530 Green Chemistry and Environment	2			ENV 555 Emerging Ethical Issues for Nanotechnology in Environment	2

Dean, School of Earth & Environmental Sciences

 Himachal Pradesh

 Central Office

 Himachal Pradesh

 Jammu, Kangra (H.P.)-176205

2017-18

Modified Curricular Framework* for M.Sc. in Environmental Sciences based on Choice Based Credit System (CBCS) (wef-20.06.18): (ANNEXURE-I)

Credits	Core- Compulsory	Credits	Credits	Core- Open and Elective-Open	Credits		
I	16	ENV 402a – Introduction to Earth Processes	2				
		ENV 403 - Environmental Chemistry	4				
		ENV 434 - Fundamentals of Ecology and Environment	4				
		ENV 516 - Atmospheric Science	2				
		ENV 435 - Environmental Sciences Laboratory – I	2				
		ENV 404 - Energy and Environment	2				
II	12	ENV 408 - Biodiversity and Wild Life Management	2	4	ENV 523 - Toxic and Hazardous Waste Management	4	
		ENV 432 - Introduction to Statistical Techniques	4		ENV 569 - Environmental Pollution and Health issues	4	
		ENV 424 – Fundamentals of Remote Sensing	2		ENV 535 - Natural Hazards	2	
		ENV 422- Basics of Natural Resource Conservation	2		ENV 553 - Environmental Thermodynamics	2	
		ENV 436 - Environmental Sciences Laboratory – II	2		ENV 503 – Environmental Legislation: National & International	2	
		ENV 524 - Environmental Impact Assessment	2		ENV 508 – Environmental Ethics	2	
III	4	ENV 571 - Remote Sensing and GIS Lab	2	4+4	ENV 552 – Contemporary Environmental Issues	2	
					ENV 573 – Water Resource Management	2	
					ENV 537 – Environmental Engineering	2	
					ENV 536 – Disaster Management	2	
					ENV 581 - Methods in Scientific Research	2	
IV	8	ENV 575 – M.Sc. Dissertation	6	4+4	ENV 421 – Municipal Solid Waste Management	2	
		ENV 412- Analytical Technique	2		ENV 428 – Himalayan Geology	2	
					ENV 574 - Bio Analytical Techniques	4	
					ENV 561 – Science of Climate Change	2	
					ENV 546 - Renewable and Non renewable Energy potential in HP State	2	
Semester	Credits	Elective (Specialization)	Credits	Semester	Credits	Elective (Specialization)	Credits
III	8	ENV 559 - Environmental Geophysics	2	IV	8	ENV 521 – Geo Engineering	2
		ENV 614 - Advanced Waste Management Techniques	2			ENV 577 - Carbon Management	2
		ENV 550 – Microbial Ecology	2			ENV 616 – Advanced Microbial Technologies	2
		ENV 611 – Atmospheric Chemistry	2			ENV 613 – Atmospheric Physics	2
		ENV 615 – Advanced Bioremediation Techniques	2			ENV 579 - Recent Trends in Environmental Biotechnology	2
		ENV 578- Introduction to Glaciology	2			ENV 580 - Recent Trends in Glaciology	2
		ENV 530 Green Chemistry and Environment	2			ENV 555 - Emerging Ethical Issues for Nanotechnology in Environment	2

** New courses to be introduced; course codes will be allotted accordingly

Page

20/6/18


2019-20


(Year-2016)

TABLE-I: Curricular Framework for Department of Environmental Sciences based on Choice Based Credit System (CBCS)

Semester	Credits	Core- Compulsory			Core-Open/Elective-Open			Credits	Faculty
		Credits	Faculty	Credits	Credits	Faculty			
I	16	ENV 402a - Introduction to Earth Processes	2	AL	4	2	AL	2	AL
		ENV 403 - Environmental Chemistry	4	DBS+SC					
		ENV 434 - Fundamentals of Ecology and Environment	4	MA					
		ENV 560 - Meteorology & Climatology	4	AT					
		ENV 435 - Environmental Sciences Laboratory - I	2	All					
II	12	ENV 408 - Biodiversity and Wild Life Management	2	MA	4	2	AL	2	AL
		ENV 411 - Waste Management	2	SC					
		ENV 402 - Introduction to Statistical Techniques	4	AT					
		ENV 501 - Environmental Pollution and Human Health	2	SC					
		ENV 436 - Environmental Sciences Laboratory - II	2	All					
III	6	ENV 424 - Fundamentals of Remote Sensing	2	AL	4+2	2	AL	2	SC
		ENV 524 - Environmental Impact Assessment	2	DBS					
		ENV 571 - Remote Sensing and GIS Lab	2	AL					
IV	6	ENV 575 - M.Sc. Dissertation	6	All	4+2	2	AL	2	AKM
III	8	Elective (Specialization)			IV	8	Elective (Specialization)		
		ENV 564 - Near Surface Geophysics	4	Faculty			ENV 585* - Fundamentals of Basics & Applied Environmental Microbiology	4	MA
		ENV 557- Bio-resources and Environmental Biotechnology	4	AKM			ENV 509 - Glaciology	4	AL
		ENV 582* - Atmospheric Chemistry and Physics	4	SC			ENV 586* - Nano-Techniques and Applications in Environment	4	DBS
I	4	Human Making and Skill Development Courses			II	4	Human Making and Skill Development Courses		
		ENV 443 - Basics of Climate Change (HM)	2	AT			ENV 508 - Environmental Ethics	2	SC
		ENV 553 - Environmental Thermodynamics (SD)	2	DBS			ENV 441 - Water Resource Conservation in Hilly Region	2	AL

Approved in the 8th meeting of BoS.
N. Mandal
01/06/2019




 Dean, School of Earth & Environmental Sciences
 Central Office
 Kanpur, Kanpur (U.P.)-208002

2020-2021

TABLE-I: Curricular Framework for Department of Environmental Sciences based on Choice Based Credit System (CBCS) (Year 2020)

Semester	Credits	Core- Compulsory	Credits	Faculty	Credits	Core-Open/Elective-Open	Credits	Faculty		
	16	ENV 401 – Introduction to Ecology	2	PT*						
		ENV 402a - Introduction to Earth Processes	2	AL						
		ENV 403 - Environmental Chemistry	4	DBS						
		ENV 501 - Environmental Pollution and Human	2	SC						
		ENV 560 – Meteorology and Climatology	4	AT						
		ENV 444** - Environmental Geo Science Laboratory	2	AKM						
I	12	ENV 411 - Waste Management	2	SC	4	ENV 428- Himlayan Geology	2	AKM		
		ENV 422 - Basics of Natural Resource Conservation	2	DBS		ENV 404 - Energy and Environment	2	AL		
		ENV 424 - Fundamentals of Remote Sensing	2	AL		ENV 408 - Biodiversity and Wild Life Management	2	SC		
		ENV 432 – Introduction to Statistical Techniques	4	AT						
		ENV 445** Environmental Chemistry Laboratory	2	PT*						
II	6	ENV 524 - Environmental Impact Assessment	2	DBS	4+2	ENV 412- Analytical Technique	2	SC		
		ENV 536- Disaster Management	2	AKM		ENV 503-Environmental Legislations: National and International	2	DBS		
		ENV 551 - Remote Sensing and GIS Lab	2	AL		ENV 573 - Water Resource Management	2	AL		
V	6	ENV 575 - M.Sc. Dissertation	6	All	4+2	ENV 537 – Environmental Engineering	2	AT		
						ENV 547- Contemporary Environmental Issues	2	SC		
						ENV 583 - Soil Science	2	PT*		
Semester	Credits	Elective (Specialization)	Credits	Faculty	Semester	Credits	Elective (Specialization)	Credits	Faculty	
II	8	ENV 587*-Regional (Indian) Environmental Policies	4	PT	IV	8	ENV 564 - Near Surface Geophysics	4	AKM	
		ENV 582* - Atmospheric Chemistry and Physics	4	AT			ENV 509 - Glaciology	4	AL	
		ENV 555- Bio-resources and Environmental Biotechnology	4	SC			ENV 586* - Nano-Techniques and Applications in Environment	4	DBS	
Semester	Credits	Human Making and Skill Development Courses	Credits	Faculty	Semester	Credits	Human Making and Skill Development Courses	Credits	Faculty	
		ENV 508 - Environmental Ethics (HM)	2	SC			II	ENV 443 - Basics of Climate Change (HM)	2	AT
		ENV 441 - Water Resource Conservation in Hilly Region (SD)	2	AL			ENV 553 - Environmental Thermodynamics (SD)	2	DBS	

* Course to be introduced; [Credit distribution: AT-22; AL-22; SC-22; DBS-22; PT-16; AKM-14]


 Dean, School of Earth & Environmental Sciences
 Central University of Jammu
 Jammu, Jammu and Kashmir
 Kanara (H.P.)-176206

Department of Environmental Sciences

Curricular Framework for based on Choice Based Credit System (CBCS) (Year 2021-22-NEP)

Semester	Credits	Core- Compulsory	Credits	Faculty	Credits	IDC	Credits	Faculty	
I	12	ENV 402a - Introduction to Earth Processes	2	AL					
		ENV 403 - Environmental Chemistry	4	DBS+DP					
		ENV 501 - Environmental Pollution and Human Health	2	SC					
		ENV 516 - Atmospheric Science	2	AT					
		ENV 444 - Environmental Geo Science Laboratory	2	AKM					
II	8	ENV 401 - Introduction to Ecology	2	SC	4	ENV 428- Himalayan Geology	2	AKM	
		ENV 424 - Fundamentals of Remote Sensing	2	AL		ENV 443 - Basics of Climate Change	2	AT	
		ENV 432a - Basics of Statistical Techniques	2	AT		ENV 404 - Energy and Environment	2	AL	
		ENV 445- Environmental Chemistry Laboratory	2	DBS		ENV 406- Biodiversity and wild life management	2	SC	
III	6	ENV 551 - Remote Sensing and GIS Lab	2	AL	6	ENV 553-Environmental Thermodynamics	2	DBS	
		ENV 412- Analytical Technique	2	SC		ENV535 - Natural Hazard	2	AL	
		ENV 531 - Toxicology Laboratory	2	DP+SC		ENV 503-Environmental Legislations: National and International	2	DBS	
						ENV XXX - Environmental Data Analysis Laboratory	2	AT	
IV	6	ENV 575 - M.Sc. Dissertation	6	All	6	ENV 536- Disaster Management	2	AKM	
						ENV 573 - Water Resource Management	2	AL	
						ENV 547- Contemporary Environmental Issues	2	DBS	
						ENV 577- Carbon management	2	DP	
Semester	Credits	Elective (Specialization)	Credits	Faculty	Semester	Credits	Elective (Specialization)	Credits	Faculty
III	8	ENV 582 - Atmospheric Chemistry and Physics	4	AT	IV	8	ENV 509 - Glaciology	4	AL
		ENV 586 - Nano-Techniques and Applications in Environment	4	DBS			ENV 588- Advanced Environmental Technology	4	DBS
		ENV 564 - Near Surface Geophysics	4	AKM			ENV 561-Science of Climate Change	4	AT
		ENV 431- Environmental Data Analysis	4	AT			ENV 610-Applied Biotechnology and Bioremediation	4	SC
		ENV 557- Bio resources and Environmental Biotechnology	4	SC			ENV 589* Climatology	4	AT
		ENV 574-Bio-Analytical Technique	4	SC			ENV 222- Chemistry of toxic and detoxication	4	DP
		** Glacial Remote Sensing	4	AL					
Semester	Credits	IKS & VS	Credits	Faculty	Semester	Credits	IKS & VS	Credits	Faculty
I		ENV 508a - Indian Tradition and Environmental Ethics (IKS)	2	SC	II		ENV 438a - Environment and Society in Indian Perspective (IKS)	2	SC
		ENV 441 - Water Resource Conservation in Hilly Region (IKS)	2	AL			ENV 539 - Indigenous Traditional Knowledge & Environmental Conservation (IKS)	2	DBS
		ENV 411 - Waste Management (VS)	2	DP			ENV 524- Environmental impact Assessment (VS)	2	DBS
		ENV 537 - Environmental Engineering (VS)	2	AT			ENV447* - Computational Statistical Analysis Laboratory (VS Lab)	2	AT