



**Central University of Himachal Pradesh**

(ESTABLISHED UNDER CENTRAL UNIVERSITIES ACT 2009)

Dharamshala, Himachal Pradesh-176215



# **NAAC Criterion-I**

## **Key Indicator – 1.2.2**

**Minutes of the BOS highlighting the relevant documents to this metric**

## **1.2.2 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 BOS indicating the agenda item where CBCS is highlighted 7 <sup>th</sup> BOS 20/6/2018	ENV-BOS- 7/18-4	6
3	Approved Minutes of the BOS indicating the agenda item where CBCS is highlighted, 9 <sup>th</sup> BOS meeting	ENV-BOS- 9/20-9	11,12
4	Approved Minutes of the BOS indicating the agenda item where CBCS is highlighted 25/9/2021	ENV-BOS-10	22



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)

Dated: 22<sup>nd</sup> February, 2016

File No. EES/1-5(Vol.II)/CUHP/12/S32

MINUTES

1. The 5<sup>th</sup> Board of Studies (BOS) meeting of Department of Environmental Sciences was held on 22<sup>nd</sup> February, 2016 at 10.30 AM at Central University of Himachal Pradesh, Temporary Academic Block (TAB), Shahpur. The following were present:

1.	Prof. Ambrish Kumar Mahajan 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.	Dr. Asutosh Pradhan Head, Department of Social Work, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
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. Deepak Pant	Special invitee

2. The following members could not attend the meeting due to their prior commitments and unavoidable reasons.

1.	Prof. Arvind Agrawal Dean, School of Fine Arts, Central University of Himachal Pradesh.	MEMBER (VC NOMINEE)
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3. Prof. Ambrish Kumar 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.

THEREAFTER, THE AGENDA ITEMS WERE TAKEN UP AS UNDER:

ITEM No: ENV-BOS-5-1

Confirmation of the minutes of 4<sup>th</sup> Meeting of the Board of Studies (BOS) held on 7<sup>th</sup> April, 2015.

The Minutes of 4<sup>th</sup> Meeting of the Board of Studies (BOS) held on 7<sup>th</sup> April, 2015 were confirmed.

ITEM NO: ENV-BOS-2.

The "Curricular Framework" given in Table-I below for Department of Environmental Sciences prepared based on the Choice Based Credit System (CBCS) adopted by the University in its 13<sup>th</sup> Academic Council Meeting held on 15<sup>th</sup> June, 2015 vide ITEM NO: 13.10 (T) was placed before the BOS.

*Prof. Ankit Tandon*  
*Dr. Adarsh Pal Vig.*  
*Dr. Mushtaq Ahmed*  
*Dr. Asutosh Pradhan*  
*Dr. Arvind Agrawal*

TABLE-I: Curricular Framework<sup>1</sup> for Department of Environmental Sciences based on Choice Based Credit System (CBCS) (Year 2016)

Semester	Credits	Core- Compulsory	Credits	Faculty	Credits	Core- Open	Credits	Faculty
I <i>(19/1)</i> <i>(39)</i>	16	ENV 402a - Introduction to Earth Processes	2	AL				
		ENV 403 - Environmental Chemistry	4	SC				
		ENV 434 - Fundamentals of Ecology and Environment	4	MA				
		ENV 516 - Atmospheric Science	2	AT				
		ENV 435 - Environmental Sciences Laboratory - I*	2	All				
		ENV 404 - Energy and Environment	2	AL				
II	12	ENV 408 - Biodiversity and Wild Life Management	2	MA	4	ENV 523 - Toxic and Hazardous Waste Management	4	DP
		ENV 432 - Introduction to Statistical Techniques	4	AT		ENV 569 - Environmental Pollution and Health issues	4	SC
		ENV 424 - Fundamentals of Remote Sensing	2	AL		ENV 535 - Natural Hazards	2	AKM
		ENV 422 - Basics of Natural Resource Conservation	2	AL		ENV 525 - Environmental Geochemistry	2	AT
		ENV 436 - Environmental Sciences Laboratory - II*	2	All		ENV 553 Environmental Thermodynamics	2	SC
		ENV 524 - Environmental Impact Assessment	2	MA		ENV 572- Land Use Planning*	2	AKM
III	4	ENV 571 - Remote Sensing and GIS Lab*	2	AL	4	ENV 573 - Water Resource Management*	2	AL
						ENV 557 - Bio-resources and Environmental Biotechnology	4	SC
						ENV 412- Analytical Technique	2	DP
IV	8	ENV 575 - M.Sc. Dissertation*	6	All	4	ENV 574 Bio Analytical Techniques*	4	SC
		ENV 537 - Environmental Engineering	2	AT		ENV 576 Introduction to Environmental System Analysis*	2	AT

Semester	Credits	Elective (Specialization)	Credits	Faculty	Semester	Credits	Elective (Specialization)	Credits	Faculty
III	8	ENV 559 - Environmental Geophysics	2	AKM	IV	8	ENV 521 - Geo Engineering	2	AKM
		ENV 411 - Waste Management	2	DP			ENV 577 - Carbon Management*	2	DP
		ENV 550 - Microbial Ecology	2	MA			ENV 409 - Environmental Microbiology	2	MA
		ENV 611 - Atmospheric Chemistry	2	AT			ENV 613 - Atmospheric Physics	2	AT
		ENV 410 - Environmental Biotechnology	2	SC			ENV 578 - Recent Trends in Environmental Biotechnology*	2	SC
		ENV 578- Introduction to Glaciology*	2	AL			ENV 579 - Recent Trends in Glaciology*	2	AL

To Be Introduced

*Am. Tande* *As. Prasad* *Q. Mondal* *Am. Singh* *Am. Singh* *Am. Singh*



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# हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

## Central University of Himachal Pradesh

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PO Box no. 21, Dharamshala, Distt. Kangra, Himachal Pradesh- 176215  
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### Agenda for the 7<sup>th</sup> Meeting of Board of Studies

**Agenda for the 7<sup>th</sup> Board of Studies meeting** of the Department of Environmental Sciences, School of Earth & Environmental Sciences, Central University of Himachal Pradesh to be held on **20<sup>th</sup> June, 2018** at **Temporary Academic Block, Shahpur** is as under:-

- Welcome to all the members of BOS by the Chairman.

#### **Agenda Items:**

#### **ITEM NO: ENV-BOS-7/18-1**

Confirmation of the Minutes of the 6<sup>th</sup> Meeting of the Board of Studies held on 14<sup>th</sup> December, 2016.

#### **ITEM NO: ENV-BOS-7/18-2**

To approve the minutes of different meetings of RPMC and DRC held after the 6<sup>th</sup> Meeting of Board of Studies (**Annexure A**).

#### **ITEM NO: ENV-BOS-7/18-3**

To place before the BOS the modified "**Curricular Framework**" for **M.Sc. in Environmental Sciences based on Choice Based Credit System (CBCS) (Year 2018-19)** adopted by the University in its 13<sup>th</sup> Academic Council Meeting held on 15<sup>th</sup> June, 2015 vide ITEM NO: 13.10 (T) (**Table-1**).

#### **ITEM NO: ENV-BOS-7/18-4**

To place before the BOS a "**Booklet of Course Contents**" for the M.Sc. Environmental Science Program offered by the Department of Environmental Sciences based on **Choice Based Credit System (CBCS)** adopted by the University in its 13<sup>th</sup> Academic Council Meeting held on 15<sup>th</sup> June, 2015 vide ITEM NO: 13.10 (T) (**Annexure-B**).

#### **ITEM NO: ENV-BOS-7/18-5**

To place before 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**).

**Annexure-B**

**Booklet of Course Contents for M.Sc. Environmental Science Program**

Proposed structure of courses to be offered in the Department of Environmental Sciences as per new Choice Bases Credit System (CBCS). A student needs to complete 80 credits to get Masters Degree.

**A. CORE COMPULSORY COURSES**

Note: A student has to fulfil 40 credits from the following core compulsory courses.

Semester	Total Credits	Core-Compulsory Courses	*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
		ENV 432 - Introduction to Statistical Techniques	4
		ENV 424 – Fundamentals of Remote Sensing	2
		ENV 422- Basics of Natural Resource Conservation	2
		ENV 436 - Environmental Sciences Laboratory – II	2
III	4	ENV 524 - Environmental Impact Assessment	2
		ENV 571 - Remote Sensing and GIS Lab	2
IV	8	ENV 575 – M.Sc. Dissertation	6
		ENV 412- Analytical Technique	2

\*60 Contact Hours are recommended for 4 Credit courses & 30 Contact Hours are recommended for 2 Credit courses

**B. CORE OPEN COURSES and D. ELECTIVE OPEN COURSES**

Note: A student has to fulfil 12 credits and 08 credits from the following core open and elective open courses.

Total Credits	Core-Open and Elective Open Courses	*Credits
04	ENV 523 - Toxic and Hazardous Waste Management	4
	ENV 569 - Environmental Pollution and Health issues	4
	ENV 535 - Natural Hazards	2
	ENV 553 - Environmental Thermodynamics	2
	ENV 503 – Environmental Legislation: National & International	2
4+4	ENV 508 – Environmental Ethics	2
	ENV 547- Contemporary Environmental Issue	2
	ENV 573 – Water Resource Management	2
	ENV 537 – Environmental Engineering	2
	ENV 6** - Research Methodologies in Environmental Sciences	4
4+4	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
	ENV 546 Renewable and Non renewable Energy potential in HP State	2

\*60 Contact Hours are recommended for 4 Credit courses & 30 Contact Hours are recommended for 2 Credit courses

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

*(Handwritten signatures and initials)*

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

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

10<sup>th</sup> Bos

Implementation of CBCS under NEP Guidelines

1st Semester:			
Course Type	Course Code	Course Name	Credits
Major Courses	ENV 401	Introduction to Ecology	2
	ENV 402a	Introduction to Earth Processes	2
	ENV 403	Environmental Chemistry	4
	ENV 445	Environmental Chemistry Laboratory	2
	ENV 501	Environmental Pollution and Human Health	2
	ENV 516	Atmospheric Science	2
Vocational / Skill	ENV 411	Waste Management	2
Interdisciplinary course offered to other department (Minor Course)	ENV 443	Basics of climate change	2
	ENV 508	Environmental Ethics	2
Indigenous Knowledge System	ENV 449	Indigenous Knowledge System	2
2nd Semester:			
Course Type	Course Code	Course Name	Credits
Major Courses	ENV 424	Fundamentals of Remote Sensing	2
	ENV 428	Himalayan Geology	2
	ENV 432	Introduction to Statistical Techniques	4
	ENV 444	Environmental Geo Science Lab	2
	ENV447	Computational Statistical Analysis Laboratory	2
	ENV 577	Carbon Management	2
Interdisciplinary course offered to other department (Minor Course)	ENV 408	Biodiversity and wild life management	2
	ENV 547	Contemporary environmental issues	2
Vocational / Skill	ENV 524	Environmental impact Assessment	2
Indigenous Knowledge System	ENV 441	Water Resource Conservation in Hilly Region	2

Amey Joshi  
13/12/2021

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13/12/2021

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