

Central University of Himachal Pradesh

Department of Plant Sciences

School of Life Sciences

AGENDA



1st BOARD OF STUDIES MEETING

TO BE HELD ON 11 April, 2018 at TAB SHAHPUR

Venue: Committee Room,
Central University of Himachal Pradesh
Temporary Academic Block, Shahpur



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

अस्थाई शैक्षणिक खण्ड, शाहपुर, जिला कांगड़ा, हिमाचल प्रदेश - 176206

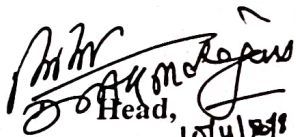
Temporary Academic Block, Shahpur, Distt. Kangra (HP) - 176206

Website: www.cuhimachal.ac.in

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AGENDA OF 1ST BOARD OF STUDIES MEETING

Agenda Item No.	Particulars	Information
BOT-BOS-1/18-1	Approval of Rules of Business for the Curriculum Development Committee. [As per Ordinance 4 clause b(i)]	Annexure – I
BOT-BOS-1/18-2	Approval of Courses for PG and RD Programs. [As per Ordinance 4 clause b(i)]	Annexure – II and III
BOT-BOS-1/18-3	Approval of Supervisors for Research Program. [As per Ordinance 4 clause b(i)]	Annexure – IV
BOT-BOS-1/18-4	Approval of Examiners for conducting Practical Examination in End Term. [As per Ordinance 4 clause b(i)]	Annexure – V
BOT-BOS-1/18-5	Approval of Student's Industrial Training/ Education Tours	
BOT-BOS-1/18-6	Approval for Invited Talks	


Head,
Department of Botany



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
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Temporary Academic Block, Shahpur, Distt. Kangra (HP) - 176206
Website: www.cuhimachal.ac.in

File No.: Botany/1-5/BOS/CUHP/18/39

Dated: 11.04.2018

MINUTES OF THE FIRST BOARD OF STUDIES MEETING HELD ON
11TH APRIL, 2018

The meeting of the First Board of Studies of the Department of Botany, School of Life Sciences was held on 11th April, 2018 in Committee Room of Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. Prof. Ambrish Kumar Mahajan, Head, Department of Botany and Dean, School of Life Sciences welcomed all the Hon'ble members.

Following members attended the meeting:

1. Prof. Ambrish Kumar Mahajan – Head and Convener
Head, Department of Botany and Dean, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
2. Prof. G.A. Shantibala Devi – Subject Expert
Department of Life Sciences, Manipur University, Manipur.
3. Dr. Arvind Bhatt – Subject Expert
Department of Biotechnology at Himachal Pradesh University, Summer Hill, Shimla.
4. Prof. Mushtaq Ahmed – Vice Chancellor's Nominee
Department of Environmental Sciences, School of Earth and Environmental Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
5. Dr. Vikram Singh – Vice Chancellor's Nominee
Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
6. Ms. Nivedita Rana – Special Invitee
Department of Zoology, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Dehra.
7. Dr. Vivek Sharma – Special Invitee
Department of Zoology, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Dehra.

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8. Dr. Shalini Chandel – Special Invitee
Department of Botany, School of Life Sciences, Central University of Himachal Pradesh,
Temporary Academic Block, Dehra.
 9. Dr. Pawan Kumar Sharm – Special Invitee
Department of Botany, School of Life Sciences, Central University of Himachal Pradesh,
Temporary Academic Block, Dehra.

Following Decision were taken in BOS meeting as per the Agenda.

Item BOT-BOS-1/18-1: Approval of Rules of Business for the Board of Studies.

It was unanimously resolved that the draft rules of Business for the Board of Studies presented before the Board of Studies approval as “Rules of Business for the Board of Studies” which would come into effect from this day i.e. Wednesday the 11th April, 2018. (Annexure- I)

Item BOT-BOS-1/18-2: Approval of Courses for PG and RD Program (As per the Ordinance 4 clause 4 b (i).

The BOS approved the minutes of the CDC, Botany held on 16.08.2017 (**Placed as ANNEXURE-A**) with minor amendment (s) by adding the following three practical courses of 04 credits each, respectively, for 3rd and 4th Semester students of M.Sc. Botany who have already been admitted in the University.

1. **Practical Course in Botany – I (Course code BOT-426) = 04 credits (Core-open)**
2. **Practical Course in Botany – II (Course code BOT-524) = 04 credits (Core-open)**
3. **M.Sc Dissertation (Course code BOT-599) (Core-compulsory)**

The BOS also resolved that the course, namely, Genetics & Cytogenetics (BOT -505) which has been listed as a core-compulsory course in the CDC minutes be shifted and placed as a Core-open course.

The BOS further approved that the course curriculum for M.Sc. Botany, in future shall be as per UGC choice based credit system (CBCS). Accordingly, the BOS recommends for approval to the School Board the course curriculum as placed at **ANNEXURE-II (to be approved through email).**

Item BOT-BOS-1/18-3: Approval of Supervisors

BOS members recommend taking up this agenda once the Department will have research scholar.

Item BOT-BOS-1/18-4: List of Experts Approved. (Annexure- V)

Head Department of Botany in consultation with the concern faculty members may add any other name to this list depending upon the situation as per need.


Item BOT-BOS-1/18-5: Approval of Student's Industrial Training / Education Tours

It was unanimously resolved that Students may go for Industrial Training in different Institutes and Educational Tours.


Item BOT-BOS-1/18-6: Invited Talks/Lectures

Unanimously resolved that Scientists, Professors and Eminent Scholars in the field of Botany should be invited for delivering talks for the benefit of M.Sc. students.

The meeting ended with a vote of thanks to the Chair.

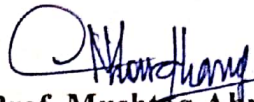

Ms. Nivedita Rana,
(Special Invitee)

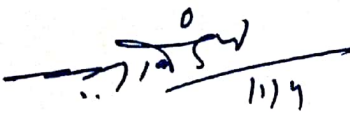

Dr. Vivek Sharma,
(Special Invitee)

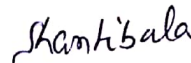

Dr. Shalini Chandel
(Special Invitee)

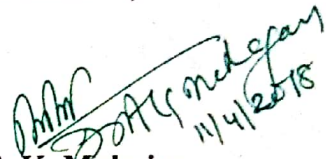

Dr. Pawan Kumar Sharma
(Special Invitee)

Dr. Vikram Singh
(VC's Nominee)


Prof. Mushtaq Ahmed
(VC's Nominee)


Dr. Arvind Bhatt
(Subject Expert)


Prof. G.A. Shantibala Devi
(Subject Expert)


Prof. A.K. Mahajan
Chairman & Convener

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Regulations for the conduct of the Business of Curriculum Development Committee (CDC)

Regulation No. 4

REGULATIONS FOR THE CONDUCT OF THE BUSINESS OF THE CURRICULUM DEVELOPMENT COMMITTEE

(Made under the Provisions of Section 29 of the Act and Statute 38 of 1st Statutes)

1. These regulations may be called, "Regulations for the conduct of the business of the Curriculum Development Committee" and shall come into force from the date of notification.
2. The Head of the Department (HOD)/Centre shall convene and preside over the meeting of Curriculum Development Committee.
3. In case Head of Department/Centre is not present at any meeting the senior-most member present shall act as the Chairman for the meeting in accordance with the clause 6 of University Ordinance 4.
4. The date, time and place for holding the meeting of the Curriculum Development Committee shall be as fixed by the Chairman.
5. A regular meeting of the Curriculum Development Committee shall be held at least two times, in a year as per the requirements of University Ordinance 4.
6. Notice for a meeting of Curriculum Development Committee, other than a special meeting, shall ordinary be issued at least 10 days before the day fixed for the meeting.
7. The quorum for the meetings of the Curriculum Development Committee shall be 50% of the members of the Curriculum Development Committee which shall include at least one outside expert.
8. Special meeting may be called by the chairman at his/her own initiative or on a written request by at least 50% of the members of Curriculum Development Committee.
9. In case of special meeting called at the request of the members, no item other than those notified in the Agenda shall be discussed and that the presence of all members, at whose request the special meeting was called, will be essential.
10. If in the opinion of the Vice-Chancellor, it is not necessary or expedient to convene a meeting of the Curriculum Development Committee to consider any item and if he consider that a matter could be disposed of by circulation among the members of Curriculum Development Committee he may issue necessary instructions to that effect.
11. An item proposed by any member(s) and included in the agenda may be withdrawn by the member with the permission of the chairman.
12. The conduct of business and order of speaking shall be controlled by the Chairman.

13. The Chairman at his own instance or at the instance of any member may call or order any member to participate in the discussion.

14. Ordinarily no business other than that is brought forward in the agenda or supplementary agenda shall be transacted in the meeting. The Chairman may, however, introduce or permit to introduce any other item for discussion provided that such an item could satisfactorily be dealt with in the meeting without any prior notice.

15. All decisions in the meetings of Curriculum Development Committee shall be taken by consensus. However, if circumstances so warrant, the Chairman may resort to voting for taking a decision by majority of the votes of the members present. It shall be for the Chairman to decide the manner in which the votes are to be cast. The Chairman shall have a vote and a casting vote.

16. A matter once decided by the Curriculum Development Committee shall not be reopened within next six months except with the consent of the Chairman.

17. The Head of the Department/Centre, within seven days after the meeting of the Curriculum Development Committee, shall send a copy of the minutes to each member of the Curriculum Development Committee.

18. The decisions recorded in the proceedings shall be submitted to the Dean of the School concerned for inclusion in the agenda of the School Board for its next meeting.

19. Formal confirmation of the minutes will be the first item on the agenda of the following meeting of the Curriculum Development Committee.



Central University of Himachal Pradesh

(ESTABLISHED UNDER CENTRAL UNIVERSITIES ACT 2009)

PO Box: 21, Dharamshala, Himachal Pradesh-176215

No. Botany/1-1/CUHP/2017

Date: 16.08.2017

A meeting of Course Curriculum Development Committee was held on 16 August 2017 to propose the courses as per CBCS Guidelines for M.Sc. Botany Programme.

The following members were present in the meeting:-

1. Prof. H.R. Sharma, Dean, School of Social Science
2. Prof. Arvind Bhatt, Deptt. of Biotechnology, Himachal Pradesh University, Shimla
3. Dr. Adarsh Pal Vig, Department of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar

The Committee suggested the following structure of the courses to be offered in the department of M.Sc. Botany as per new CBCS.

COURSE STRUCTURE (M.Sc. Botany)

Core Compulsory Courses (40 Credits)

Sr. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1	BOT 501	Plant Cell Biology	4	
2	BOT 502	Biodiversity of Viruses, Bacteria and Fungi	4	
3	BOT 503	Phycology	4	
4	BOT 504	Bryophytes and Pteridophytes	4	
5	BOT 505	Genetics and Cytogenetics	4	
6	BOT 506	Gymnosperms	4	
7	BOT 507	Angiosperms	4	
8	BOT 508	Plant Physiology and Metabolism	4	
9	BOT 509	Plant Ecology and Evolution	4	
10	BOT 510	Anatomy and development of Plants	4	

Adarsh Vig

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Core Open Courses (12 CREDITS)

Sr. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1.	BOT 521	Biomathematical and Computer Applications	4	
2.	BOT 522	Applied and Industrial Botany	4	
3.	BOT 523	Bioinstrumentation and analysis	4	

Elective Specialization

(CHOOSE 16 CREDITS FROM ANY ONE GROUP)

Note: A specialization shall only be offered if minimum 10 students have opted for it.

Specialization I: Plant Biotechnology				
S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1	BOT 551	Plant Cell and Tissue Culture	4	
2	BOT 552	Plant Genetic Engineering	4	
3	BOT 553	Plant Breeding and Intellectual Property Rights	4	
4.	BOT 554	Industrial Biotechnology	4	

Specialization II: Computational Biology				
S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1	BOT 555	Bioinformatics	4	
2	BOT 556	Statistical Techniques	4	
3	BOT 557	Computer Applications in Plant sciences	4	
4.	BOT 558	Biosystematics	4	

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Specialization III: Applied Ecology and Environment

S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1	BOT 559	Plant resource utilization and conservation	4	
2	BOT 560	Plant Biodiversity	4	
3	BOT 561	Energy and Environment	4	
4.	BOT 562	Phytoremediation	4	

Specialization IV: Microbiology and Pathology

S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1.	BOT 563	Plant Microbes interaction	4	
2.	BOT 564	Plant Protection and Quarantine	4	
3.	BOT 565	Applied and industrial Microbiology	4	
4.	BOT 566	Environmental Microbiology	4	

Specialization V: Proteomics and Genomics

S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1.	BOT 567	Plant Molecular Biology	4	
2.	BOT 568	Proteins structure, function and Biology	4	
3.	BOT 569	Genome structure, function and dynamics	4	
4.	BOT 570	Applied Genetic Engineering	4	

Specialization VI: Field Botany and Herbarium

S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1.	BOT 571	Plant Taxonomy	4	
2.	BOT 572	Methods in Field Biology	4	
3.	BOT 573	Seed Biology	4	
4.	BOT 574	Field study tour and plant material preservation	4	

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Elective Open (04 CREDITS)

S. No.	Course Code	Course Name	Credits	Pre-requisite/Remarks
1	BOT 401	Paleobotany	4	
2	BOT 402	Ethanobotany	4	
3	BOT 403	Phytochemistry	4	
4	BOT 404	Horticulture and Forestry	4	
5	BOT 405	Seminar	4	
6	BOT 406	Project Report/Advance practical /Assignment	4	
7	BOT 407	Ecological Modelling	4	

Courses Offered to Other Departments

S. No.	Course Code	Course Name	Credits	Pre-requisite/Remarks
1	BOT 421	Plants and Society	2	
2	BOT 422	Bioethics and Bio safety	2	
3	BOT 423	Botanical and Ecological Principles	2	
4	BOT 424	Herbal and Medicinal Plants	2	
5	BOT 425	Plant Products in Human Healthcare	2	


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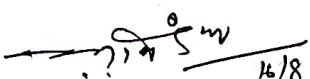
Courses Offered for PhD

S. No.	Course Code	Course Name	Credits	Pre-requisite/ Remarks
1	BOT 601	Research Methodology	6	
2	BOT 602	Applied Instrumentation and Analysis	6	
3	BOT 603	Statistical analysis and computer application in research	6	
4	BOT 604	Issues in Manuscript writing and publication	6	
5.	BOT 605	Bioprospecting of Plant Secondary Metabolites	6	

Note:

1. Field study tour to explore plant diversity of India must be a compulsory part of the course.
2. Practical courses related to theory papers must be added in different semesters of the course accordingly.


 1. Prof. H.R. Sharma,
 Dean, School of Social Science


 2. Prof. Arvind Bhatt,
 Deptt. of Biotechnology, Himachal Pradesh University, Shimla


 3. Dr. Adarsh Pal Vig,
 Department of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar



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Central University of Himachal Pradesh

4

पाठ्यक्रम निर्माण समिति, "वनस्पति विज्ञान विभाग" की बैठक,

दिनांक 16.08.2017 स्थान : टैब, शाहपुर, समय:पूर्वाह्न 10:00 बजे

उपस्थिति पत्रक

क्र.सं.	नाम	पदनाम	हस्ताक्षर
1.	प्रोफेसर हंसराज शर्मा, अधिष्ठाता समाज विज्ञान स्कूल	अध्यक्ष	
2.	प्रोफेसर अरविन्द भट्ट जैव प्रोद्योगिकी विभाग, हिमचल प्रदेश विश्वविद्यालय शिमला	कुलपति	
3.	डॉ. आदर्श विन्हा वानस्पति और पर्यावरण विज्ञान विभाग, गुरु नानक देव विश्वविद्यालय, अमृतसर, पंजाब	सदस्य	



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
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Department of Plant Sciences

School of Life Sciences

COURSE CURRICULUM

The "Curricular Framework" is given in Table-I below for M.Sc Botany, Department of Plant Sciences, School of Life Sciences, prepared based on the 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).

Dr. Anurag
21/6/18

TABLE-I: Curricular Framework" for M.Sc Botany based on Choice Based Credit System (CBCS) (Year 2018)

Syllabus Framework for M.Sc Botany based on Choice Based Credit System (CBCS) (Year 2018)									
Semester	Credits	Core- Compulsory	Credits	Facu lty	Credits	Core- Open/Elective open	Credits	Faculty	
I	16	BOT 503 – Phycology	2						
		BOT 504 – Bryophytes and Pteridophytes	2						
		BOT 506 –Gymnosperms — changed to BOT 506A as 2 Introduction to Gymnosperms							
		BOT 410- Mycology and Plant Pathology	4						
		BOT 514 – Cytogenetics and Molecular Biology	2						
		BOT 412 – Practical Course on Bryophytes, Pteridophytes and Gymnosperms	2						
		BOT 413 - Practical Course on Phycology, Mycology, Plant Pathology and Biology	2						
II	12	BOT 416 – Embryology of Angiosperms	2		4	BOT 524 – Biostatistics	2		
		BOT 415 – Plant Physiology and Biochemistry	4			BOT 574 – Basics of Bioinformatics	2		
		BOT 411 – Ecology and Environment	2			BOT 403 -Phytochemistry	2		
		BOT 417 – Practical Course on Embryology of Angiosperms, Ecology	2			BOT 575 – Cell Biology	2		
		BOT 418 – Practical Course on Plant Physiology and Biochemistry	2			BOT 401- Paleobotany	2		
						BOT 572 - Methods in Field Biology and Analytical Techniques	2		
III	4	BOT 419 – Anatomy and Development of Plants	2		4	BOT 565 -Applied and Industrial Microbiology	2		
		BOT 420 – Practical Course on Anatomy of Plants	2			BOT 519 - Plant Biodiversity and Bioresource Utilization	2		
IV	8	BOT 414 – Taxonomy of Angiosperms	2		4	BOT 520 - Bio-resources and Biotechnology	2		
		BOT 514 – Practical Course on Cytogenetics Molecular Biology, Microbiology	2			BOT 578- Genomics, Proteomics and Metabolomics	2		
		BOT 515 – M.Sc dissertation	4			BOT 577 -Economic Botany and Medicinal Plants	2		
						BOT 576- Genetics	2		
						BOT 407 - Ecological Modelling	2		
						BOT 404- Horticulture and Forestry	2		
						BOT 576 –Biosafety, IPR and Patenting	2		
						BOT 402 -Ethanobotany	2		
						BOT 573 - Seed Biology	2		
Semester	Credits	Elective (Specialization)	Credits		Semester	Credits	Elective (Specialization)	Credits	Faculty
III	8	BOT 516 – Genetics and Molecular Biology	4		IV	8	BOT 525 -Plant Biotechnology and Genetic Engineering	4	
		BOT 515 – Microbiology and Plant Pathology	4				BOT 564- Plant Protection and Quarantine	4	
		BOT 518 – Plant Ecology and Evolution	4				BOT 527- Plant Biodiversity and Biosystematics	4	
		BOT 121- Plant Physiology	4					4	
Approved by Circulation Ankush 24/11/2									

Approved by circular

2/1/18

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Annexure - V

**List of Examiners/Experts for the Department of Botany, School of Life Sciences,
Central University of Himachal Pradesh**

- 1. Prof. RK Chahota** - Department of Agricultural Biotechnology, CSK HPKV Palampur, HP 9418369800 rkchahota@yahoo.com
- 2. Dr. Vikas Sharma** - Department of Botany DAV University Jalandhar (Pb). 8699391984 vikasm@gmail.com
- 3. Dr. Rajnish Sharma** - Department of Biotechnology, UHF Nauni, Solan. HP. 9418193900 rajnish.sharma@yahoo.com
- 4. Prof. Anand Sagar** - Professor Department of Biosciences HP University Shimla 09816807646 email: asbio@rediffmail.com
- 5. Prof. Duni Chand**- Department of Biotechnology, HPU Shimla 9418276448 dunichand_2000@yahoo.co.in
- 6. Dr. Sikander Pal** - Assistant Professor, Department of Botany, Jammu University Jammu
- 7. Prof. Anita singh** - Department of Botany, CSKHPKV Palampur, HP 9418485620 anitasinghhpkv@gmail.com
- 8. Prof. Anand Sagar** - Professor Department of Biosciences HP University Shimla 09816807646 email: asbio@rediffmail.com
- 9. Dr. Vikas Sharma** - Department of Botany DAV University Jalandhar (Pb). 8699391984 vikasm@gmail.com
- 10. Dr. N.S.ATRI** - Professor, Department of Botany, Pujabi University Patiala Email: narinderatri04@gmail.com Mobile: +91- 9417810754
- 11. Dr. Harish Chander** - Assistant Professor, Department of Botany Jammu University Jammu
E-mail: harishchander@jammuuniveristy.in , hcdutt@rediffmail.com