

हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

Central University of Himachal Pradesh (Established under Central Universities Act 2009) अस्थाई शैक्षणिक खण्ड, शाहपुर, ज़िला कॉंगड़ा, हिमाचल प्रदेश - 176206 Temporary Academic Block, Shahpur, Distt. Kangra (HP) - 176206 Website: www.cuhimachal.ac.in

फ़ाइल संख्याः जीव विज्ञान/-1-5/पाठ्य समिति/हि.प्र.के.वि./18/ 40(A)

दिनांक: 10.05. 2018

MINUTES OF THE FIRST BOARD OF STUDIES MEETING HELD ON

10TH May, 2018

The meeting of the First Board of Studies of the Department of Zoology, School of Life Sciences was held on 10th May, 2018 in the Committee Room of Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. Prof. Ambrish Kumar Mahajan, Head, Department of Zoology, and, Dean, School of Life Sciences welcome all the Hon'ble members and presided over the meeting.

Following members attended the meeting:

- Prof. Ambrish Kumar Mahajan Head and Convener Head, Department of Zoology and Dean, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Prof. Nripendranath Mandal Subject Expert Division of Molecular Medicine, Bose Institute, Kolkata.
- Prof. Desh Raj Thakur Subject Expert Department of Bio-Sciences, Himachal Pradesh University, Summer Hill, Shimla.
- 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.
- Dr. Polamarasetty Aparoy Vice Chancellor's Nominee Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Ms. Nivedita Rana Resource Peron (Special Invitee) Department of Zoology, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Dehra.
- Dr. Vivek Sharma Resource Peron (Special Invitee) Department of Zoology, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Dehra.
- Dr. Rakesh Chauhan Resource Peron (Special Invitee) Department of Zoology, 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 ZOO-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. Thursday the 10th May, 2018. (Annexure-I)

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

The BOS approved the minutes of the Curriculum Development Committee (CDC), Zoology held on 28.08.2017 (Placed as ANNEXURE-A) with following minor amendment(s) for the ongoing batch.

- 1. Some of the Courses from Course Compulsory and Course Open have been interchanged from the CDC.
- 2. The Course name of 3rd and 4th semester have been re-aligned from the courses approved in CDC and added new courses for the ongoing session as per Annexure-II.
- 3. The Practical/Lab courses have also been added in the 3rd and 4th semester as per CBCS guidelines.
- 4. M.Sc. Dissertation has been added for the ongoing session as per Annexure-II.
- 5. The Curricular Framework has been prepared as per Annexure II for the forthcoming session.
- 6. The course contents to be prepared by the faculty members and will be placed in next BOS meeting for approval

Item ZOO-BOS-1/18-3: Approval of Supervisors for Research Program

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

Item ZOO-BOS-1/18-4: Approval of Examiners for conducting Practical Examination in End Term. [As per Ordinance 4 clause b(i)]. (Annexure- V)

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

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

It was unanimously resolved that students may go for Industrial/Research Training in different Research/Academic Institutes like FRI, FSI, ZSI, Wild Life Institute of India etc. and Educational Tours during summer/ winter vacations.

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

Unanimously resolved that Scientists, Professors and Eminent Scholars in the field of Zoology 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)

7. Age Rey Dr. P. Aparoy 10 [05] 18 (VC's Nominee)

N. Mandel 105/2018 Prof. Nripendranath Mandal

Prof. Nripendranath Manda (Subject Expert)

Dr. Vivek Sharma, (Special Invitee)

10/05/18

Dr. Vikram Singh (VC's Nominee)

Dr. Rakesh Chauhan (Special Invitee)

11 Prof. Desh Raj Thakur (Subject Expert)

Prof. Ambrish Kumar Mahajan Chairman & Convener

Page 2 of 2

Annexure

10/05/18

Semester	Total Credits	Core-Compulsory	Credits	Total Credits	Core-Open	Credit		
		ZOOL 410: Animal Taxonomy	4					
		ZOOL 411: Ecology and Environment	2					
a st		ZOOL 412: Cellular and Molecular Biology	4					
1 st	16	ZOOL 413: Invertebrate Biology	2					
		ZOOL 414: Zoology Lab I	2					
		ZOOL 415: Zoology Lab II	2					
_		ZOOL 416: Cytogenetics and Evolution	2		ZOOL 424: Biostatistics	2		
ZOOL 417: Principles of Biochemistry 2 ZOOL 425: Bioinformatics	ZOOL 425: Bioinformatics	2						
2 nd	ZOOL 417: Principles of Biochemistry 2 ZOOL 425: Bioinformatics							
		ZOOL 419: Zoology Lab III	2					
		ZOOL 420: Zoology Lab IV	2					
		ZOOL 525A: Entomology	2		ZOOL 527: Immunology and Biotechnology	2		
3 rd	4	ZOOL 526A: Animal Behaviour	2	4	ZOOL 528: Ichthyology	2		
	16 ZOOL 413: Invertebrate Biology 2 ZOOL 414: Zoology Lab I 2 ZOOL 415: Zoology Lab II 2 ZOOL 416: Cytogenetics and Evolution 2 ZOOL 416: Cytogenetics and Evolution 2 ZOOL 417: Principles of Biochemistry 2 ZOOL 418: Functional Anatomy of Chordates 4 ZOOL 419: Zoology Lab III 2 ZOOL 420: Zoology Lab IV 2 4 ZOOL 525A: Entomology ZOOL 526A: Animal Behaviour 2 ZOOL 508: Animal Physiology 4	2						
4^{th}	8	ZOOL 510: Developmental Biology	4	4	ZOOL 532: Talastology ZOOL 530: Applied Zoology	2		

Table - 1: Revised Curricular Framework for M.Sc. in Zoology based on Choice Based Credit System (CBCS) (Year 2018)

Page 1 of 2

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Annexure

Semester	Total Credits	Elective-Ope	n				mill T.		()					
	4	CBB 518: Ele	ements of Systems Biology	4	Room	n if a								
3 rd		CBB 515: CA	DD Computer aided drug discovery	4	NIN	Jospoil8	Mary .							
		CBB 504: Genomics and Proteomics		4	6.10	8)	1. 1							
Semester	Total Credits	Electives (Specialization)		Credits	Semester	Total Credits	Electi	ves (Specialization)	Credits					
			ZOOL 571 A: Pesticides Hazards and Environment	2			Entomology	ZOOL 574 (A): Medical Entomology	2					
	8	Entomology	ZOOL 572 A: Insect Control and IPM	2										
1			ZOOL 573 A: Agricultural Entomology	2				ZOOL 576: Entomology Lab – II	2					
			ZOOL 575: Entomology Lab – I	2										
3 rd		8	Fis Fishe an	8	ZOOL 561 A: Fish Taxonomy and Physiology	2	4 th	8		ZOOL 565: Fish Diseases				
2.6.							Fish, Fisheries	ZOOL 562 A: Fish and Fisheries of India	2			Fish, Fisheries	and Control	2
					and Limnology	ZOOL 563: Limnology of Lakes, Streams and Ponds	2	and Limnology	ZOOL 567 : Fisheries and					
					ZOOL 566: Fisheries and Limnology Lab – I 2			Limnology Lab – II	2					
		- SI2			dinter di		ZOOL 599: N	I.Sc. Dissertation	4					

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Page 2 of 2



हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

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फ़ाइल संख्या: जन्तु विज्ञान/1-5/पाठ्य समिति/हि.प्र.के.वि./18/ SdS

दिनांक: 09.09. 2020

MINUTES OF THE 2nd BOARD OF STUDIES MEETING

HELD ON 9th SEPTEMBER, 2020

The meeting of the 2nd Board of Studies of the Department of Animal Sciences, School of Life Sciences, Central University of Himachal Pradesh, Dharamshala, HP was held through online mode on Cisco Webex {<u>https://meetingsapac20.webex.com/meetingsapac20/j.php?MTID=ma8d1c821600bac0e6fa869844d9c1bdc</u>, Meeting number (access code): 170 432 7156, Meeting password: pKHdFqPG858 (75433774 from video systems)} on 9th September, 2020 at 11:00 AM. During the meeting, the Subject Experts were available on Cisco Webex and all other members were present in the Seminar Hall, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. Dr. Sunil Kumar, Associate Professor & Head, Department of Animal Sciences Chaired the meeting.

Following members attended the meeting:

- Dr. Sunil Kumar Head and Convener Head, Department of Animal Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Yogesh Kumar Rawal Subject Expert Department of Zoology, Panjab University, Chandigarh.
- Dr. Pawan Sharma Subject Expert Department of Entomology, CSKHPKV, Palampur.
- Dr. Mahesh Kulharia Vice Chancellor's Nominee Associate Professor & Director, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Vikram Singh Vice Chancellor's Nominee Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Rishi Thakur Dean's Nominee Assistant Professor, Department of Plant Sciences, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Rakesh Kumar Member Assistant Professor, Department of Animal Sciences, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Tarkeshwar- Special Invitee Assistant Professor, Department of Animal Sciences, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- Dr. Ranjit Kumar- Special Invitee Assistant Professor, Department of Animal Sciences, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur,

Page 1 of Kales

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The Chairman welcomed all the Hon'ble members and briefed about the past activities and also about the various agenda items to be discussed in the meeting which were sent in advance to all members through email including out-side experts. Various Agenda Items were placed before the committee and after detailed discussion and deliberations on each, the following decisions were taken:

AGENDA ITEM NO. - ANS-BOS-2/20-1

Approval of the Minutes of the 1st Board of Studies meeting held on 10.05.2018 attached as Annexure I.

Decision:

The Minutes of the first meeting of the BoS were Approved

Agenda Item No. - ANS-BOS-2/20-2

Proposal for Restructure of the Course Curriculum and addition of New Courses for the M.Sc. Zoology in the CBCS format (for 2020 Batch onwards) as given in Annexure -II.

Suggestions':

All

The proposal for restructuring of the current course curriculum was placed before the BoS in view of the requirement for imparting better knowledge and practical skills to the students with justification. The members deliberated upon the tabled new structure as recommended by the Departmental Council of Department of Animal Sciences, CUHP and suggested several changes for betterment. It was suggested that in the beginning foundation courses be preferred and thereafter as the students gain basic knowledge, gradually advanced and application-oriented courses be provided. In addition, the course curriculum must contain the components of skill, more hands-on training during practicals and also exposure to advanced fields so that they can help to contribute in various related fields/disciplines in future. Finally, after detailed deliberations, the new course curriculum with addition of few new courses and modification of others courses was recommended for Masters Degree of M.Sc. Zoology in the CBCS format (for 2020 Batch onwards) as per the detail given below and in Annexure -II.

Sr. No.	Course Code	Course Name		
140.		Core Compulsory (14 credits)		
1	ZOO 401	Cellular and Molecular Biology	4	
2	ZOO 402	Invertebrate Biology	2	
3	ZOO 403	Animal Taxonomy	4	
4	ZOO 404	Cellular & Molecular Biology and Invertebrate Biology - LAB	2	
5	ZOO 405	Animal Taxonomy and Histological Techniques - LAB		
		Core Open/Elective Open (02 credits)		
6	ZOO 406	Ecology and Environment	2	
7	ZOO 407	Histology and Histochemistry	2	
8	ZQO 408	Chronobiology	2	
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Semester - 1

the state	A MARKEN	Foundation Courses (Human Making, 02 credits)	
9	ZOO 409	Sericulture and Apiculture	2
		Foundation Courses (Skill Development, 02 credits)
10	ZOO 410	Advanced Techniques in Biology	2

Semester – 2

Sr. No.	Course Code	Course Name	Credits
		Core Compulsory (12 credits)	
1	ZOO 451	Cytogenetics	4
2	ZOO 452	Principles of Biochemistry	2
3	ZOO 453	Functional Anatomy of Chordates	2
4	ZOO 454	Cytogenetics and Principles of Biochemistry - LAB	2
5	ZOO 455	Functional Anatomy of Chordates and Fundamentals in Microbiology - LAB	2
		Core Open/Elective Open (04 credits)	
6	ZOO 456	Biostatistics and Bioinformatics	2
7	ZOO 457	Fundamentals in Microbiology	2
8	ZOO 458	Evolution	2
9	ZOO 459	Comparative Physiology	2
	State State State	Foundation Courses (Human Making, 02 credits)	
9	ZOO 460	Aquaculture	2
		Foundation Courses (Skill Development, 02 credits)	-
10	ZOO 461	Fundamentals of Wild Life	2

Semester – 3

Sr. No.	Course Code	Course Name	Credits
		Core Compulsory (08 credits)	
1	ZOO 501	Entomology	2
2	ZOO 502	Immunology	4
3	ZOO 503	Ichthyology	2
	4.	Core Open/Elective Open (04 credits)	
4	ZOO 504	Animal Behavior	2
5	ZOO 505	Animal Biodiversity	2
6	ZOO 506	Animal Biotechnology	2
7	ZOO 507	Medical Biochemistry and Health	2
		Elective Specialization (08 credits)	
		Entomology	
8	ZOO 508	Pesticides Hazards and Environment	2
9	ZOO 509	Advances in Entomology and Pest Management	2
10	ZOO 510	Agricultural Entomology	2
11	ZOO 511	Entomology LAB - I	2
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		Fish and Fisheries	
12	ZOO 512	Fish Physiology	2
13	ZOO 513	Fish Taxonomy and Fisheries	2
14	ZOO 514	Limnology of Lakes, Streams and Ponds	2
15	ZOO 515	Fisheries and Limnology LAB - I	2
		Molecular Biology	
16	ZOO 516	Advances in Molecular Biology	2
17	ZOO 517	Genomics and Proteomics	2
18	ZOO 518	Genetic Disorders and Cancer	2
19	ZOO 519	Molecular Biology LAB - I	2

Semester - 4

Sr. No.	Course Code	Course Name	Credits
1 115		Core Compulsory (12 credits)	
1	ZOO 551	Animal Physiology	4
2	ZOO 552	Developmental Biology	4
3	ZOO 599	M.Sc. Dissertation	4
		Core Open/Elective Open (04 credits)	,
4	ZOO 553	Parasitology	2
5	ZOO 554	Applied Zoology	2
6	ZOO 555	Medical Microbiology	2
7	ZOO 556	Endocrinology	2
		Elective Specialization (04 credits)	
		Entomology	
8	ZOO 557	Medical Entomology	2
9	ZOO 558	Entomology Lab-II	2
		Fish and Fisheries	
10	ZOO 559	Fish Diseases and Control	2
11	ZOO 560	Fisheries and Limnology LAB- II	2
		Molecular Biology	
12	Z <mark>OO 561</mark>	Molecular Genetics	2
13	ZOO 562	Molecular Genetics LAB - I	2

Decision:

All members agreed and approved the list of above new courses with above minor modifications and need based reshuffling.

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AGENDA ITEM NO. - ANS-BOS-2/20-3

Proposal for framing New Courses for Ph.D. programme in the Department of Animal Sciences in the CBCS format (for 2020 Batch onwards) as given in Annexure III.

Decision:

All members agreed and approved the list of new courses with minor modifications.

AGENDA ITEM NO. - ANS-BOS-2/20-4

Proposal of the Faculty Members of the Department of Animal Sciences to become M.Phil./Ph.D. Supervisor/Guide.

Decision:

The members unanimously resolved that since all Faculty Members possess requisite qualifications and desired experience to guide research students for M.Phil. and Ph.D. Degrees, hence they are approved as Supervisor(s)/Guide(s) for M.Phil./Ph.D scholars as per UGC guidelines.

- 1. Dr. Sunil Kumar, Associate Professor, Department of Animal Sciences, School of Life Sciences.
- 2. Dr. Rakesh Kumar, Assistant Professor, Department of Animal Sciences, School of Life Sciences.
- 3. Dr. Tarkeshwar, Assistant Professor, Department of Animal Sciences, School of Life Sciences.
- 4. Dr. Ranjit Kumar, Assistant Professor, Department of Animal Sciences, School of Life Sciences.

AGENDA ITEM NO. - ANS-BOS-2/20-5

Proposal of the allotment of Supervisor/Guide for the newly admitted Ph.D. Scholars (2020 batch).

Decision:

All members unanimously resolved to approve the following faculty members as Supervisor(s)/ Guide(s) for the newly admitted Ph.D. Scholars (2020 batch).

Sr. No.	University Roll No.	Name	Father Name	Supervisor Name
1	CUHP20RDANS01	Bhavna	Purshottam Chand	Dr. Rakesh Kumar
2	CUHP20RDANS02	Disha Chauhan	Rakesh Chauhan	Dr. Ranjit Kumar
3	CUHP20RDANS03	Geetika	Ashwani Choudhary	Dr. Ranjit Kumar
4	CUHP20RDANS04	Jigmet Yangchan	Tsering Motup	Dr. Sunil Kumar
5	CUHP20RDANS05	Kanika Choudhary	Subhash Chand	Dr. Tarkeshwar
6	CUHP20RDANS06	Kumari Ruchika	Wilson P. Dass	Dr. Tarkeshwar
7,	CUHP20RDANS07	Kushal Thakur	Pawan Kumar Thakur	Dr. Rakesh Kumar
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AGENDA ITEM NO. - ANS-BOS-2/20-6

Proposal for the allotment of Dissertation students in 2nd or 3rd semester (M.Sc. Zoology).

Decision:

All Members agreed and approved the allotment of Dissertation students in 3rd semester (M.Sc. Zoology)

AGENDA ITEM NO. – ANS-BOS-2/20-7

Proposal of List of Experts as Examiners for the Practical and Viva Voce Examinations of M.Sc. Zoology as given in Annexure IV.

In accordance with the draft ordinance 4(i), Section 23 and Statute 16(2) of the Central Universities Act 2009, section 4(b) i and ii, the Head, Department of Animal Sciences placed before the members of the Board of Studies (BoS) the list of examiners for M.Sc. Practicals and Viva Voce Examination for their approval, as per list attached at Annexure IV.

Decision:

All members agreed and approved the list of examiners as proposed at Annexure IV. It was also suggested that the list will be updated regularly by the faculty members of the Department of Animal Sciences (DoAS) with the consent of the HoD, Animal Sciences and the same be reported in the next meeting of BoS. It was also suggested that preferably the subject/ course experts be invited for specific courses. The BoS also recommended that, if needed, HoD, Animal Sciences may invite a Subject Expert (External Examiner) not included in the list on the recommendations of the concerned faculty member(s) and after approval of Competent Authority of the University.

AGENDA ITEM NO. - ANS-BOS-2/20-8

To approve Dr. Sunil Kumar, Associate Professor, Department of Animal Sciences, SoLS, as Co-supervisor in the PhD thesis of Ms. Kanika Mahajan, Research Scholar, Department of Environmental Sciences. SoEES, CUHP, Dharamshala

Decision:

All members agreed and approved this agenda item.

AGENDA ITEM NO. - ANS-BOS-2/20-9

To approve Dr. Sunil Kumar, Associate Professor, Department of Animal Sciences, SoLS, as Co-supervisor in the PhD thesis of Ms. Diksha Pathania, Research Scholar, Ph.D. Botany (2017-18), Shoolni Univesity, Solan.

All members agreed and approved this agenda item. The approved this agenda item. The approved the agenda item. The agenda item agenda item agenda item. The agenda item agenda item agenda item agenda item. The agenda item agenda item agenda item agenda item. The agenda item agenda item agenda item agenda item agenda item agenda item agenda item. The agenda item age

AGENDA ITEM NO. - ANS-BOS-2/20-10

To Approve Dr. Rakesh Kumar, Assistant Professor, Department of Animal Sciences, SoLS, as Co-Supervisor in the PhD thesis of Mr. Bhagat Singh, Research Scholar, Department of Biotechnology, Delhi Technological University, Shahbad, Daulatpur, Delhi.

Decision:

All members agreed and approved this agenda item.

AGENDA ITEM NO. - ANS-BOS-2/20-11

Approval of New Courses in the Department of Animal Sciences, School of Life Sciences under B.Voc. (Bachelor of Vocational) category:-

- 1. Diploma in Medical Laboratory Technology.
- 2. Certificate Course in Insect Pest Management.
- 3. Certificate Course in Skill Development (Organic Farming, Apiculture, Sericulture and Aquaculture).

Decision:

All members agreed and approved the above mentioned new courses after the applying in University Grants Commission (UGC).

AGENDA ITEM NO. - CBB-BOS-5/18-8

Any item with the permission of the Chair: No item was taken

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

Dr. Ranjit Kumar,

(Special Invitee)

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Dr. Rishi Thakur (Dean's Nominee)

Dr. Yogesh Kumar Rawal (Subject Expert)

Dr. Tarkeshwar. (Special Invitee)

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Dr. Vikram Singh (VC's Nominee)



Dr. Pawan Sharma (Subject Expert)

Calee & lawer/ 09/09/2020 Dr. Rakesh Kumar

(Member)

Dr. Mahesh Kulharia

(VC's Nominee)

Chairman & Convener

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