



Central University of Himachal Pradesh

(ESTABLISHED UNDER CENTRAL UNIVERSITIES ACT 2009)

Dharamshala, Himachal Pradesh-176215



NAAC Criterion-I

Key Indicator – 1.1.2

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

1.1.2 Evidences



Department of Computational Biology and Bioinformatics

Central University of Himachal Pradesh, Dharamshala,

Kangra



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Department of Computational Biology and
Bioinformatics

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हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
(Established under Central Universities Act 2009)
अस्थायी 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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Dated: 28.09.2017

Centre for Computational Biology and Bioinformatics

School of Life Sciences

Minutes of the 4th Board of Studies meeting held on 28th September, 2017

The meeting of the 4th Board of Studies of the Centre for Computational Biology and Bioinformatics, School of Life Sciences was held on 28th September, 2017 at 11:30 AM in the Committee Room, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. Prof. Ambrish Kumar Mahajan, Director, Centre for Computational Biology and Bioinformatics and Dean, School of Life Sciences welcomed all the Hon'ble members.

Following members attended the meeting:

1. **Prof. Ambrish Kumar Mahajan – Chairman and Convener**
Director, Centre for Computational Biology & Bioinformatics and Dean, School of Life Sciences, Central University of Himachal Pradesh.
2. **Prof. Sukesh C. Sharma – Subject Expert**
Department of Biochemistry, Punjab University, Chandigarh
3. **Prof. Duni Chand – Subject Expert**
Department of Biotechnology, University of Himachal Pradesh, Shimla.
4. **Dr. Mushtaq Ahmed – Vice Chancellor's Nominee**
Associate Professor, School of Earth and Environmental Sciences, Central University of Himachal Pradesh.
5. **Dr. Vikram Singh – Member**
Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.
6. **Dr. Yusuf Akhter – Special Invitee**
Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.
7. **Dr. Shailender Kumar Verma – Special Invitee**
Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.

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

Agenda Item No. – CBB-BOS-4/14-1

Review of Course Catalogue and Insertion of New Courses for the M.Sc. Computational Biology & Bioinformatics and Research Degree Program

In accordance with the draft ordinances number 4, Section 23 and Statute 16(2) of the Central Universities Act 2009, point number 4(a), the Director of the Centre for Bioinformatics and Computational Biology places before the members of the board for their approval of the additional courses that are to be included in CDC of the masters and research programs. The list of courses, respective course code, credits and level are as follows-

S. No.	Course Code	Course name	Credits
1.	CBB 433	Biosafety issues	2
2.	CBB 433A	Biosafety and Ethics	2
3.	CBB 434	Skills in agricultural technology	2
4.	CBB 434A	Agricultural Technology	2
5.	CBB403A	Fundamentals of Statistics	4
6.	CBB435	Fundamentals of Genetics	2
7.	CBB 531A	Life: Its Emergence, Evolution and Extent	2
8.	CBB 436	History of Science and Technology in India	2
9.	CBB 437	Principles of Scientific Writing	2

Decision:

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

Agenda Item No. – CBB-BOS-4/14-2

Approval of synopsis of following PhD Students

Sr. No.	Name of the Student	Roll No.	Title of the Synopsis	Name of the Supervisor
1.	Munawwar Karim	CUHP13RDCBB02	Prophylactic and post-infection therapeutics discovery against Leishmaniasis using computational approaches	Dr. Yusuf Akhter
2.	Neha	CUHP13RDCBB03	Application of Molecular dynamics based free energy calculation methods for identification of novel COX-2 inhibitors	Dr. P Aparoy
3.	Ankita Sharma	CUHP14RDCBB02	Studies on iron, zinc and copper binding proteins from bacterial pathogens of wheat	Dr. Shailender Kumar Verma
4.	Neha Choudhary	CUHP14RDCBB04	Network Pharmacological Evaluation of selected Ayurvedic Medicines	Dr. Vikram Singh

Decision:

All members agreed and approved it. Experts also made a suggestion that in future, synopsis of the students shall be approved within the time limit as specified by the UGC regulations during the enrolment of the student. The members also felt that since in Science subjects, title of the synopsis is subject to some modifications depending on the scientific output and that can be under taken before submission of the thesis.

Agenda Item No. – CBB-BOS-4/14-3

To appoint the co-supervisor of Mr Dixit Sharma (PhD Scholar).

Sr. No.	Name of the Student	Roll No.	Name of the Supervisor	Name and address of co-supervisor
1	Dixit Sharma	CUHP15RDCBB01	Dr. Shailender Kumar Verma	Dr. Birbal Singh, Principal Scientist Biotechnology Lab, ICAR-IVRI Regional Station, Palampur, H.P. INDIA. 176061 Email: bsbpalampur@yahoo.co.in

Decision:

All members agreed and approved it subject to the condition that Dr. Birbal Singh provides written consent on hard copy along with his CV. The email has been received from the co-supervisor which has been considered at this stage.

Agenda Item No. – CBB-BOS-4/14-4

To approve Dr. Shailender Kumar Verma, Assistant Professor, CBB, SoLS, as Co-supervisor in the PhD thesis of Ms. Shilpa, Deenbandhu Chhotu Ram University of Science and Technology (A State Government University), Murthal, Sonapat-131039, Haryana.

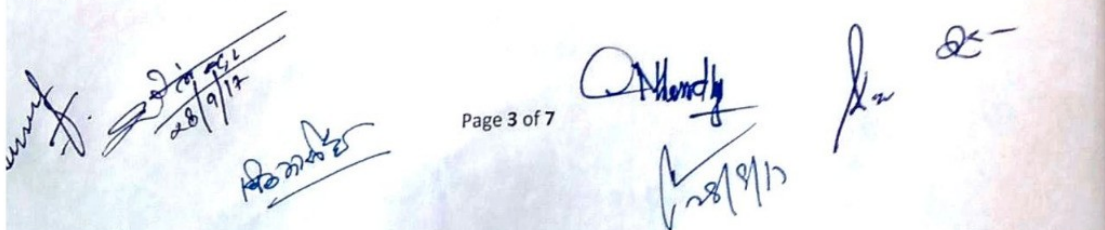
Decision:

All members agreed to defer this agenda item.

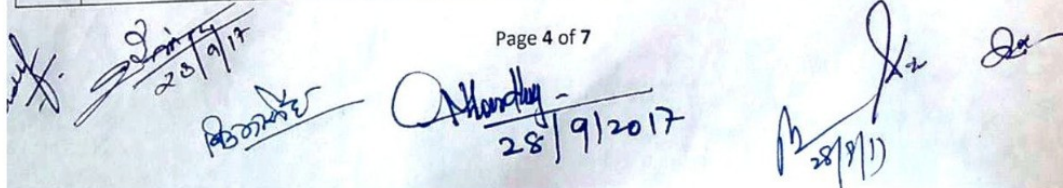
Agenda Item No. – CBB-BOS-4/14-5

Approval of List of Additional Experts as examiners for viva-voce of dissertations/ practical courses.

In accordance with the draft ordinances number 4(i), Section 23 and Statute 16(2) of the Central Universities Act 2009, point number 4(b) i and ii, the Director of the Centre for Bioinformatics and Computational Biology places before the members of the board for their approval, the list of examiners for various evaluation purposes. The lists of examiners is as follows-

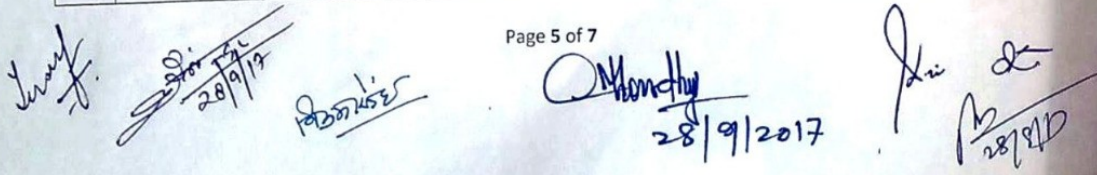
The bottom of the page contains several handwritten signatures and dates. On the left, there is a signature with the date '28/9/12'. In the center, there is a signature with the date '28/9/12'. On the right, there are two more signatures, one with a date '28/9/12' and another with a date '28/9/12'. The text 'Page 3 of 7' is printed in the center of the page.

No.	Name	Address	Email
1.	Prof. H.S. Dhaliwal	(Former professor PAU Ludhiana and IIT Roorkee) Professor and Vice Chancellor, Eternal University, Baru Sahib via Rajgarh, Distt. Sirmour-173101, Himachal Pradesh; Phone No.: +91-9805098702.	hsdhaliwal07@gmail.com, hsdhaliwal@eternaluniversity.edu.in;
2.	Dr. Kamendra Awasthi	Assistant Professor, Department of Physics, Malaviya National Institute of Technology Jaipur-302017, Rajasthan; Phone no.: 0141-2713441.	kawasthi.phy@mnit.ac.in
3.	Dr. Anjali Awasthi	Assistant Professor, Center for Advanced Studies, Department of Zoology, University of Rajasthan, Jaipur-302004, Rajasthan; Phone no.: +91-9461339369.	anjkam.awasthi@gmail.com , anjali.chaturvedi83@gmail.com
4.	Dr. Manoj Kumar	Staff Scientist VI: National Institute of Plant Genome Research, ArunaAsafAlif Marg, New-Delhi-110067; Phone No.: +911126741612,14,17 Ext-160, +91-11-26735160.	manoj_prasad@nipgr.ac.in, manoj_pds@yahoo.com
5.	Dr. T. R. Sharma	Director (A) & Joint Director (Research), ICAR- Indian Institute of Agricultural Biotechnology	
6.	Dr. Sangeeta Saxena	Associate Professor, Department of Biotechnology, School of Bio-sciences & Biotechnology, BabasahebBhimraoAmbedkar University (A Central University), Vidya-Vihar, Rae-Bareli Road, Lucknow-226025, Uttar-Pradesh; Phone No.: +91-522-2505364, +91-9450645342.	dr_sangeeta_saxena@yahoo.com
7.	Dr. G. Sunil Babu	Assistant Professor, Department of Biotechnology, School of Bio-sciences & Biotechnology, Babasaheb Bhimrao Ambedkar University (A Central University), Vidya-Vihar, Rae-Bareli Road, Lucknow-226025, Uttar-Pradesh; Phone No.: +91-9455036926.	sunil_gos@yahoo.com;
8.	Dr. Birbal Singh	Principal Scientist Biotechnology Lab ICAR-IVRI Regional Station, Palampur Himachal Pradesh. 176061 Ph.No.: 9418431715	bsbpalampur@yahoo.co.in
9.	Dr. Rinku Sharma	Senior Scientist Pathology Lab ICAR-IVRI Regional Station, Palampur Himachal Pradesh. 176061 Ph.No.: 9418153235	rinkusharma99@gmail.com
10.	Dr. Gorakh Mal	Principal Scientist Biochemistry Lab ICAR-IVRI Regional Station, Palampur Himachal Pradesh. 176061	gorakh14@yahoo.com
11.	Dr. Rajendra Patil	Associate Professor Department of Veterinary Pathology CSK Himachal Pradesh Agri. University Palampur 176062 Himachal Pradesh,	rdpatil02@rediffmail.com

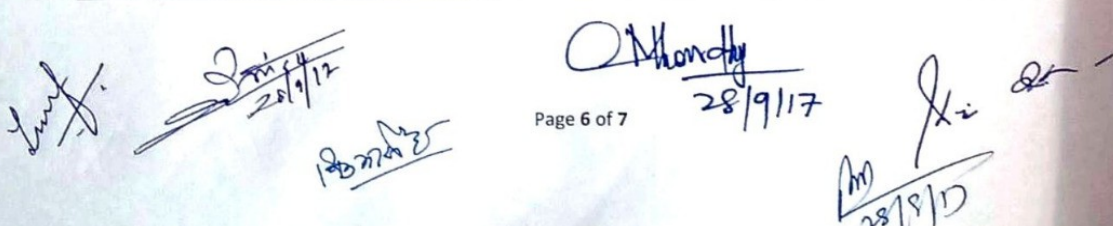


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		Ph. No.: 94180 53235	
12.	Dr. P.N. Sharma	Professor Department of Plant Pathology CSK Himachal Pradesh Agri. University Palampur 176062 Himachal Pradesh, Phone: 01894-230326 (O), 9418161835 (mobile) Fax: 01894-30511	pns1960@gmail.com ; pns@hillagric.ernet.in
13.	Dr. R.S. Chandel	Principal Scientist Department of Agricultural Entomology CSK Himachal Pradesh Agri. University Palampur 176062 Himachal Pradesh, Ph.No.: 9418019747	visitrvcandel@yahoo.com
14.	Dr. K. D. Sharma	Professor Department of Agricultural Biotechnology CSK Himachal Pradesh Agri. University Palampur 176062 Himachal Pradesh, Phone: 01894 230314(O); 094184-68896 (mobile) Fax: +91-1894 230511	kml1967@rediffmail.com , kmaldev2002@yahoo.co.in
15.	Dr. Sudesh Radotra	Principal Scientist Regional Research Centre, ICAR-IVRI campus, Palampur ICAR-Indian Grassland and Fodder Research Institute Himachal Pradesh, 176061 Ph.No.: 9418053231	sradotra@rediffmail.com
16.	Dr. Amit Chawla	Scientist Biotechnology Lab CSIR-IHBT, Palampur, Himachal Pradesh, Ph.No.: 01894-233339	amitchawla@ihbt.res.in
17.	Dr. Rakshak Kumar	Scientist Biotechnology Lab CSIR-IHBT, Palampur Himachal Pradesh, 176061 Ph.No.: 9882986355	rakshakacharya@gmail.com
18.	Dr. Tulika Prakash Srivastava	Assistant Professor School Of Basic Sciences Indian Institute of Technology Mandi Himachal Pradesh, 175001 Ph.No.: 01905 -237922	tulika@iitmandi.ac.in
19.	Dr. Shyam Kumar Masakapalli	Assistant Professor School Of Basic Sciences Indian Institute of Technology Mandi Himachal Pradesh, 175001	shyam@iitmandi.ac.in
20.	Dr. Tirathraj Singh	Assistant Professor, Department of Biotechnology & Bioinformatics, Jaypee University of Information Technology, Waknaghat	tiratharaj@gmail.com
21.	Dr. Ram Rup Sarkar	Senior Scientist, Chemical Engineering & Process Development Division, NCL, Pune	rr.sarkar@ncl.res.in
22.	Dr. S. Ramachandran	Professor, Biological Sciences Division, Institute of Genomics & Integrative Biology, New Delhi	ramu@igib.res.in


 Several handwritten signatures and dates are present at the bottom of the page. One signature is dated 28/9/17. Another signature is dated 28/9/2017. There are also some illegible handwritten notes and initials.

23.	Prof. Kuldeep K. Sharma	Dean and Professor, Life Sciences, University of Jammu	prof.ksharma@gmail.com
24.	Dr. Suresh Kumar Sharma	Professor, Department of Statistics, Punjab University, Chandigarh	ssharma643@yahoo.co.in
25.	Dr. Sudhir P. Singh	Scientist, Synthetic Biology, CIAB, Mohali	pratapsudhir17@gmail.com
26.	Dr. Chetan Gadgil	Scientist, Chemical Engineering Division, National Chemical Laboratory, Pune	cj.gadgil@ncl.res.in
27.	Dr. Binay Panda	Scientist, Institute of Bioinformatics and Applied Biotechnology, Bengaluru	binav@ganitlabs.in
28.	Dr. Soumen Roy	Associate Professor, Department of Physics, Bose Institute, Kolkata	rsoumen@gmail.com
29.	Dr. Areejit Samal	Reader, Room 219, New Building, The Institute of Mathematical Sciences (IMSc), 4th Cross Road, CIT Campus, Taramani Chennai 600113	areejit.samal@gmail.com
30.	Dr. Amitabha Nandi	Assistant Professor, Department of Physics, IIT Bombay, Mumbai – 400076	amitabha@phy.iitb.ac.in
31.	Dr. Vijai Singh	Assistant Professor & Group Leader, Institute of Advanced Research, Gandhinagar	vijaisingh15@gmail.com
32.	Dr. A. Krishnamachari	Assistant Professor School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi -110067	akchhari@gmail.com
33.	Dr. Harpreet Singh	Head, Department of Bioinformatics, Hans Raj Mahila Maha Vidyalaya, Jalandhar-144008	harpreetsingh05@gmail.com
34.	Dr. Ritushree Kukreti	Biological Sciences Division, Institute of Genomics & Integrative Biology, New Delhi	ritus@igib.res.in
35.	Dr. Ganesh Bagler	B-205, Indraprastha Institute of Technology, Delhi	bagler@iiitd.ac.in
36.	Dr. Sarika Jalan	Complex Systems Lab (SB301), IIT Indore, Khandawa Road, Simrol, Indore 453552	sarika@iiti.ac.in
37.	Dr. Awadhesh Prasad	Office Room No.-- 177, Multistoried Building, Department of Physics & Astrophysics, University of Delhi, Delhi-110007	awadhesh.prasad@gmail.com
38.	Prof. Bibhudhananda Biswal	Cluster Innovation Centre, University of Delhi Delhi – 11007	bibhucic@gmail.com
39.	Dr. Vijai Pal Yadav	Room No: 115A School of Environmental Sciences Jawaharlal Nehru University New Delhi -110067	vpal@mail.jnu.ac.in
40.	Prof. Atul Johari	Room No.: 404 School of Life Sciences Jawaharlal Nehru University New Delhi -110067	ajohri@jnu.ac.in , akjohri14@yahoo.com
41.	Prof. Suman Dhar	Special Centre for Molecular Medicine Jawaharlal Nehru University New Delhi -110067	skdhar@mail.jnu.ac.in , skdhar2002@yahoo.co.in



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 28/9/17

Decision:

All members agreed with the above list for examiners as proposed. However, course-wise list of external paper-setters for end term examinations as per clause 22 of ordinance no 30 shall be prepared separately and should get approved by circulation by the BOS.

With above observation, all members agreed and approved the above list.

Agenda Item No. – CBB-BOS-4/14-6

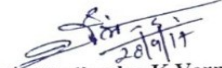
To review the suggestion from 3rd School Board meeting.


Decision:


No suggestion was given by 3rd school board for approval.

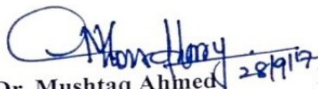
Any item with the permission of the Chair: No item has been taken

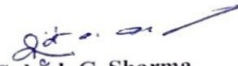
The meeting ended with a vote of thanks by the chair.

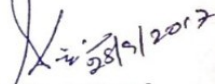

Dr. Shailender K Verma
(Special Invitee)


Dr. Yusuf Akhter
(Special Invitee)


Dr. Vikram Singh
(Member)


Dr. Mushtaq Ahmed
(VC's Nominee)


Prof. Sukesh C. Sharma
(Subject Expert)


Prof. Duni Chand
(Subject Expert)


Prof. Ambrish Kumar Mahajan,
(Chairman and Convener)



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

File No: LS/1-5(Vol.II)/CUHP/12/

Dated:

Centre for Computational Biology and Bioinformatics

School of Life Sciences

Minutes of the 5th Board of Studies meeting held on 23rd August, 2018

The meeting of the 5th Board of Studies of the Centre for Computational Biology and Bioinformatics, School of Life Sciences was held on 23rd August, 2018 at 10:30 AM in the Committee Room, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. Prof. Ambrish Kumar Mahajan, Director, Centre for Computational Biology and Bioinformatics and Dean, School of Life Sciences welcomed all the Hon'ble members.

Following members attended the meeting:

- 1. Prof. Ambrish Kumar Mahajan – Chairman and Convener**
Director, Centre for Computational Biology & Bioinformatics and Dean, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- 2. Prof. Sukesh C. Sharma – Subject Expert**
Department of Biochemistry, Punjab University, Chandigarh
- 3. Prof. Duni Chand – Subject Expert**
Department of Biotechnology, Himachal Pradesh University, Shimla.
- 4. Prof. Mushtaq Ahmed – Vice Chancellor's Nominee**
Professor, Department of Environmental Sciences, School of Earth and Environmental Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- 5. Dr. Vikram Singh – Member**
Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.
- 6. Dr. P. Aparoy – Special Invitee**
Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur.

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

Agenda Item No. – CBB-BOS-5/18-1

Approval of the Minutes of the 4th Board of Studies meeting held on 28.09.2017

Decision:

All members agreed and approved the Minutes of the 4th Board of Studies meeting held on 28.09.2017.

Agenda Item No. – CBB-BOS-5/18-2

Review of Course Catalogue and Insertion of New Courses for the M.Sc. Computational Biology & Bioinformatics and Research Degree Program

In accordance with the draft ordinances number 4, Section 23 and Statute 16(2) of the Central Universities Act 2009, point number 4(a), the Director of the Centre for Bioinformatics and Computational Biology places before the members of the board for their approval of the additional courses that are to be included in CDC of the masters and research programs. The list of courses, respective course code, credits and level are as follows-

S. No.	Course Code	Course name	Credits
1	CBB 538	Data Science	02
2	CBB539	R for Data Science	02
3	CBB540	High Throughput Sequencing: data analysis and application	04

Decision:

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

Agenda Item No. – CBB-BOS-5/18-3

Approval of course curriculum of M.Sc. CBB in the CBCS format as given in **Annexure 1**.

Decision:

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

Agenda Item No. – CBB-BOS-518-4

Approval of synopsis of following Ph.D. Scholars

Sr. No.	Name of the Student	Roll No.	Name of the Supervisor
1.	Mr. Dixit Sharma	CUHP15RDCBB01	Dr. Shailender Kumar Verma
2.	Mr. Vikram Singh	CUHP15RDCBB06	Dr. Vikram Singh

Decision:

All members agreed and approved it. Experts also made a suggestion that in future, synopsis of the students shall be approved within the time limit as specified by the UGC regulations during the enrolment of the student. The members also felt that since in Science subjects, title of the synopsis is subject to some modifications depending on the scientific output and that can be under taken before submission of the thesis.

Agenda Item No. – CBB-BOS-5/18-5**Approval of List of Experts as Examiners**

In accordance with the draft ordinances number 4(i), Section 23 and Statute 16(2) of the Central Universities Act 2009, point number 4(b) i and ii, the Director of the Centre for Bioinformatics and Computational Biology places before the members of the board for their approval, the list of examiners for various evaluation purposes.

The lists of examiners are as follows-

S. No.	Name	Address	Email
1.	Prof. Bhushan Patwardhan	Director, Interdisciplinary School of Health Sciences, Savitribai Phule Pune University, Ganeshkhind Pune - 411 007	bhushan@unipune.ac.in
2.	Prof. Parbati Biswas	Department of Chemistry, University of Delhi, Delhi-110007	pbiswas@chemistry.du.ac.in
3.	Dr. Avinash Chand Yadav	Department of Physics & Astronomical Sciences, School of Basic & Applied Sciences, Central University of Jammu, Samba-181 143, J&K, India	jnu.avinash@gmail.com avinashyadav@cuajammu.ac.in
4.	Dr. Awadhesh Prasad	Office Room No. – 177, Multistoried Building, Department of Physics and Astrophysics, University of Delhi, Delhi-110007	awadhesh@physics.du.ac.in , awadhesh.prasad@gmail.com
5.	Dr. Hemant Rituraj Kushwaha	School of Biotechnology, Jawaharlal Nehru University, New Delhi - 110067	hemantkushwaha@jnu.ac.in , ritturajhemant@gmail.com
6.	Dr. Karnati Raja Ram Mohan Roy	Department of Animal Biology, School of Life Sciences, University of Hyderabad Prof. CR Rao Road Hyderabad - 500046	roykarnati@uohyd.ac.in
7.	Prof. Krishnaveni Mishra	Department of Biochemistry School of Life Science University of Hyderabad, Prof. C.R.Rao Road, Gachibowli, Hyderabad, 500046, India	kmsl@uohyd.ernet.in , krishnaveni.mishra@gmail.com
8.	Dr. Poosarla V.Giridhar	Assistant Professor Microbiology and FST (Food Science & Technology) Department Gitam Institute of Science Gandhi Nagar, Rushikonda, Visakhapatnam-530 045	giridhar.poosarla@gitam.edu , pvgdhar@gmail.com
9.	Dr. Debashis Barik	Assistant Professor School of Chemistry University of Hyderabad Gachibowli, Hyderabad, 500046, AP, India	dbariksc@uohyd.ac.in barikdd@gmail.com
10.	Dr. Sairam Swaroop	Assistant Professor, Chemistry, IIT-Gandhinagar	msairam@iitgn.ac.in

	Mallajosyula	Palaj, Gandhinagar - 382355,	
11.	Prof. Rajeswari R. Moganty	Department of Biochemistry, All India Institute of Medical Sciences, New Delhi-110029, India	rajeswari3011@hotmail.com

Decision:

All members agreed with the above list of examiners as proposed. It is also suggested that the list will be updated regularly by the faculty members of the Centre for Computational Biology and Bioinformatics (CCBB) with the consent of the Director, CCBB and the same will be reported in the next meeting of BoS.

Agenda Item No. – CBB-BOS-5/18-6

Modification of the Ph.D. topic, Objectives and Synopsis of Mr. Gagandeep Singh and extension of the registration for one year as per his request and recommendation of his Ph.D. Supervisor.

Decision:

Mr. Gagandeep Singh, Ph.D. Student in the Centre for Computational Biology and Bioinformatics (Enrolment No. CUHP12RDCBB03) under the supervision of Dr. Vikram Singh, Assistant Professor shall complete six years onw.e.f. the date of his registration in the University. He requires at least one year more for the submission of his Ph.D. thesis and hence has requested for extension period of one more year w.e.f. on health basis. Clause 3.3 of Ordinance 42 of Central University of Himachal Pradesh states, "Under special circumstances, extension beyond six years may be granted on genuine grounds by the Vice Chancellor for one more year." In terms of the above mentioned clause of the Ordinance, the BoS on the request of the candidate and recommendation of the Research Supervisor, hereby, recommends for the approval of the Hon'ble Vice Chancellor the extension period of one year w.e.f. for the submission of thesis to Mr. Gagandeep Singh.

Agenda Item No. – CBB-BOS-5/18-7

Modification of the Ph.D. topic, Objectives and Synopsis of Mr. Ashish and extension of the Registration for one year as per his request and recommendation of his Ph.D. Supervisor.

Decision:

Agenda Item No. – CBB-BOS-5/18-8

Any item with the permission of the Chair: No item has been taken

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

Dr. P. Aparoy

Dr. Vikram Singh

Prof. Mushtaq Ahmed

(Special Invitee)

(Member)

(VC's Nominee)

**Prof. Sukesh C. Sharma
(Subject Expert)**

**Prof. Duni Chand
(Subject Expert)**

**Prof. Ambrish Kumar Mahajan,
(Chairman and Convener)**



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

अस्थायी शैक्षणिक खण्ड, शाहपुर, जिला काँगड़ा, हिमाचल प्रदेश - 176206

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

Website: www.cuhimachal.ac.in

File No: LS/1-5/ CUHP/12/01

Dated: 18/09/2020

MINUTES

The 6th Board of Studies (BoS) meeting of Centre for Computational Biology and Bioinformatics was held on 18th September, 2020 at 11:00 AM at Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. The following were present:

1.	Dr. Mahesh Kulharia, Director, Centre for Computational Biology and Bioinformatics, School of Life Sciences	CONVERNER & CHAIRMAN	Offline Mode
2.	Prof. Birj Mohan, Ret. Professor, Chaudhary charan kumar Himachal Pradesh Agriculture University	SUBJECT EXPERT	Online Mode
3.	Prof. Desh Deepak Singh, Professor, Department of Biotechnology, Punjab University,	SUBJECT EXPERT	Online Mode
4.	Prof. Pardeep Kumar, Dean, Professor, Department of Plant Sciences, School of Life Sciences	MEMBER (VC NOMINEE)	Offline Mode
5.	Dr. Sunil Kumar, Associate Professor, Department of Animal Sciences, School of Life Sciences	MEMBER (VC NOMINEE)	Online Mode
6.	Dr. Shailender Kumar Verma, Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences	MEMBER	Offline Mode

The Director, Centre for Computational Biology and Bioinformatics (Convener & Chairman), School of Life Sciences welcomed all the members and thanked them for being available for attending this meeting.

Minutes of the 6th BOS meeting of Centre for Computational Biology and Bioinformatics
Held on 18th Sep 2020

ITEM NO: CBB-BOS-6/20-1: Approved the Minutes of the 5th Meeting of the Board of Studies held on 23rd August, 2018.(Annexure-I)

ITEM NO: CBB-BOS-6/20-2: Recommended the Change from nomenclature of the Centre for Computational Biology and Bioinformatics to Department of Computational Biology and Bioinformatics.

ITEM NO: CBB-BOS-6/20-3: Scrutinized, modified and approved the modified list of courses and syllabi to be taught/offered in the coming academic session (for 2020 Batch onwards) for the M.Sc. Centre for Computational Biology and Bioinformatics Sciences program in the CBCS format. (Annexure-II)

ITEM NO: CBB-BOS-6/20-4: Approved the list of courses to be taught/offered and syllabi for the course work of Research Degree students of the Centre for Computational Biology and Bioinformatics Sciences. (Annexure-III)

ITEM NO: CBB-BOS-6/20-5: Accredited the Faculty Member i.e. Dr. Mahesh Kulharia, Associate Professor, Centre for Computational Biology and Bioinformatics to become Ph.D. Supervisor/Guide.

ITEM NO: CBB-BOS-6/20-6: Approved of the allotment of Supervisor/Guide for the Ph.D. Scholars.

Sr. No.	Name of Student	Roll. Number	Name of Supervisor
1.	Mr. Ashish Panghalia	CUHP17RDCBB01	Dr. Vikram Singh
2.	Ms. Himisha Dixit	CUHP17RDCBB02	Dr. Shailender Kumar Verma
3.	Ms. Deepanshi Awasthi	CUHP20RDCBB01	Dr. Vikram Singh
4.	Ms. Shilpa Chauhan	CUHP20RDCBB02	Dr. Shailender Kumar Verma
5.	Ms. Varuni Bhardwaj	CUHP20RDCBB03	Dr. Mahesh Kulharia
6.	Mr. Virender Kumar	CUHP20RDCBB04	Dr. Shailender Kumar Verma

ITEM NO: CBB-BOS-6/20-7: Approved the RAC of Ms. Himisha Dixit and Mr. Ashish Panghalia.

Sl. No.	Name of the Student	Registration No.	Constitution of RPMC/RAC
1.	Mr. Ashish Panghalia	CUHP17RDCBB01	1. Head of the Department-Ex-Officio Chairman 2. Dr. Vikram Singh-(Research Supervisor)- Convener 3. Dr. Dilbag Singh- Subject Expert
2.	Ms. Himisha Dixit	CUHP17RDCBB02	1. Head of the Department-Ex-Officio Chairman 2. Dr. Shailender Kumar Verma-(Research Supervisor)- Convener 3. Dr. Tarkeshwer- Subject Expert

ITEM NO: CBB-BOS-6/20-8: Approved (Post facto) the allotment of Dissertation study semester (M.Sc. CBB).

PRIVY
CHOUK

Sr. No.	Name of Students	Roll No.	Title of the Thesis	Name of the Supervisor
1.	ASHITA SOOD	CUHP18CBB02	Atomistic structural determination of CALHM2 through in-silico techniques"	Dr. Mahesh Kulharia, Associate Professor
2.	DIKSHA TANTA	CUHP18CBB03	Protein-protein Interactions based study to analyze their importance as an effective drug targets	
3.	ISHIKA	CUHP18CBB04	To Create the drug molecule that can block PfHT1 (Plasmodium Falciparum Hexose Transporter 1) or its Homologs in other Plasmodium species.	
4.	PUSHPENDER SINGH CHANDEL	CUHP18CBB011	MD Simulation of Ebola virus Vp24 protein	
5.	ANKITA CHAUHAN	CUHP18CBB01	Network scale exploration of miRNA mediated regulation in Epilepsy associated COVID-19	Dr. Vikram Singh, Assistant Professor
6.	PUSHPESH DHIMAN	CUHP18CBB12	Comparative flux balance analysis of MERS, SARS and SARS-CoV-2 genomes	
7.	RADHIKA JOSHI	CUHP18CBB13	Aspects of genome scale evolution of SARS-CoV-2 and its protein interaction network with human-miRNAs	
8.	SHILPA PATHANIA	CUHP18CBB14	"Construction and analysis of SARS-CoV-2 protein interaction network with miRNAs associated with Glaucoma and Keratoconus"	
9.	NISHA VERMA	CUHP18CBB08	In silico structural analysis, physiochemical haracterization and structure prediction of Triticum aestivum Iron Regulated Transporter 1 (IRT1) Protein	Dr. Shailender Kumar Verma, Assistant Prof
10.	PRATIBHA SHARMA	CUHP18CBB09	Identification and Classification of ABC transporter proteins of Xanthomonas oryzae_BB151-3	

(Handwritten signatures and marks)

1.	PRIYANKA CHOUHARY	CUHP18CBB10	Bioinformatics functional characterization of hypothetical proteins of Chlamydia pistaci strain Ful127 to discover potential drug targets	
12.	SHIVALI KASHYAP	CUHP18CBB15	Phylogenetic Analysis of ATP-Binding Cassette Transporter (ABC) Gene in Xanthomonas translucens strain 569	

ITEM NO: CBB-BOS-6/20-9: Approved the Academic Activity Schedule of the Centre for Computational Biology and Bioinformatics. (Annexure-IV)

ITEM NO: CBB-BOS-6/20-10: Approved the **updated list of External Examiners** for conducting practical /M.Sc. Dissertations Examinations and of the Centre for Computational Biology and Bioinformatics Sciences. (Annexure-V)

ITEM NO: CBB-BOS-6/ 20-11: Approved (Post facto) the title, objectives and synopses of the Ph.D thesis of Mr. Gagandeep Singh, CUHP12RDCBB03. (Annexure-VI)

Sr. No.	Name of Students	Roll No.	Title of the Thesis	Name of the Supervisor
1.	Gagandeep Singh	CUHP12RDCBB03	In-silico studies on systems scale characterization of Camellia sinensis (tea) using transcriptomic and genomic data	Dr. Vikram Singh, Assistant Professor

ITEM NO: CBB-BOS-6/20-12: Approved the proposal for initiating the Advance Diploma in Bioinformatics as 1 year (2 semester) course by the Centre for Computational Biology and Bioinformatics in self-financing mode. The funds thus generated will be used for the upgradation of the research facilities of Centre for Computational Biology and Bioinformatics.

ITEM NO: CBB-BOS-6/20-13: Scrutinized, modified and approved the list of courses and detailed syllabi to be taught/offered in the next academic session (for 2021 Batch onwards) for the Advance Diploma in Bioinformatics. (Annexure-VII).

ITEM NO: CBB-BOS-6/ 20-11: Approved (Post facto) the list of courses to be taught/offered and syllabi for the previous batches of M.Sc. Computational Biology and Bioinformatics. (Annexure-VIII)

approved online
Prof. Desh Deepak Singh
 Dept. of Biotechnology
 Punjab University, Chandigarh

approved online
Prof. Brijmohan Sharma
 CSKHPKV, Palampur

[Signature]
Prof. Pardeep Kumar
 Dean SLS
 CUHP, Dharamsala

[Signature]
Dr. Shailender Kumar Verma
 Assistant Professor, CCBB
 CUHP, Dharamsala

approved online
Dr. Sunil Kumar
 HOD, Animal Sciences
 CUHP, Dharamsala

[Signature]
Dr. Mahesh Kulharia
 Director, CCBB
 CUHP, Dharamsala

Fwd: regarding the Board of studies CCBB - gourav.cuhimachal@hpcu.ac.in - Central University of Himachal Pradesh Mail

Fwd: regarding the Board of studies CCBB inbox

Mahesh Kulharia
to me

11:38 AM (19 minutes ago)

----- Forwarded message -----

From: **Prof. Desh Deepak Singh** <ddsingh@pu.ac.in>
Date: Wed, Oct 7, 2020 at 11:54 AM
Subject: Re: regarding the Board of studies CCBB
To: Mahesh Kulharia <kulharia@hpcu.ac.in>
Cc: Dr. Pardeep Kumar <pardeepsangla@gmail.com>, Dr. Sunil Kumar Thakur <sunilbcs@gmail.com>, Brij Sharma <drbrijsharma@gmail.com>, Shailender Kumar Verma <shailenderverma22@gmail.com>

Dear Dr. Mahesh Kulharia,

This is with reference to the BOS meeting and the draft minutes sent by you.

I am approving the minutes you sent and it maybe recorded accordingly.

Best wishes

--

Prof. Desh Deepak Singh
Professor, Biotechnology Department
BMS-I, South Campus
Panjab University,
Chandigarh-160 014
www: <http://biotechnology.nuchd.ac.in/>
Email: ddsingh@pu.ac.in
Ph: +91 172 2534091
+919228379835;

On 2020-10-06 13:38, Mahesh Kulharia wrote:

Dear Sirs,
Please find the draft minutes of the 6th meeting of Board of studies along with the annexures attached herewith for your kind perusal and approval.
We would really appreciate if you could find time to give your valuable suggestions/corrections/approval in next two days (i.e. 8 oct 2020).
Thanking you in anticipation
yours truly

Mahesh Kulharia
to me

11:38 AM (19 minutes ago)

----- Forwarded message -----

From: **Brij Sharma** <drbrijsharma@gmail.com>
Date: Wed, Oct 7, 2020 at 11:54 AM
Subject: Re: regarding the Board of studies CCBB
To: Mahesh Kulharia <kulharia@hpcu.ac.in>
Cc: Dr. Pardeep Kumar <pardeepsangla@gmail.com>, Dr. Sunil Kumar Thakur <sunilbcs@gmail.com>, <ddsingh@pu.ac.in>, Shailender Kumar Verma <shailenderverma22@gmail.com>

Approved.
Dr. B. M. Sharma
Sr. Professor & Programme Director (Retd.),
Ganesh Vihar (Khilru), P.O. Bindrabani,
Near SSB Chowk, Palampur- 176 061
Tel: +91 94184 71501
E-mail- drbrijsharma@gmail.com
FAX 01894 230326

://mail.google.com/mail/u/1/#inbox/FMfgxwJZJdDNvkCBNtdhmLMwrvnsHXs

1/2

Fwd: regarding the Board of studies CCBB - gourav.cuhimachal@hpcu.ac.in - Central University of Himachal Pradesh

Mahesh Kulharia

to me

11:39 AM (18 minutes)

----- Forwarded message -----

From: **Dr Sunil Kumar Thakur** <sunilbes@gmail.com>

Date: Wed, Oct 7, 2020 at 3:14 PM

Subject: Re: regarding the Board of studies CCBB

To: Mahesh Kulharia <kuharia@hpcu.ac.in>

Dear Dr Kulharia

I am approving the minutes of BOS sent by you.

Thanks & Regards

डॉ सुनील कुमार / Dr Sunil Kumar

सह-प्रोफेसर और विभागाध्यक्ष / Assoc. Prof. & Head

जंतु विज्ञान विभाग / Department of Animal Sciences

जैविक विज्ञान स्कूल / School of Life Sciences

हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय / Central University of Himachal Pradesh

अस्थायी शैक्षणिक खण्ड, शाहपुर / TAB Shahapur, Kangra HP - 176206

Mob. 9418050067, 7018445774. website: www.cuhimachal.ac.in



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh

(Established under Central Universities Act, 1956)

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

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

Website: www.cuhimachal.ac.in

File No: LS/1-5/ CUHP/12/ 75

Dated: 29.12.2020

MINUTES

The 7th Board of Studies (BoS) meeting of Centre for Computational Biology and Bioinformatics was held on 29th December, 2020 at 11:00 AM at Central University of Himachal Pradesh, Temporary Academic Block, Shahpur. The following were present:

1.	Dr. Mahesh Kulharia, Director, Centre for Computational Biology and Bioinformatics, School of Life Sciences	CONVERNER & CHAIRMAN	Offline Mode
2.	Prof. Brij Mohan, Ret. Professor, Chaudhary charan kumar Himachal Pradesh Agriculture University	SUBJECT EXPERT	Online Mode
3.	Prof. Desh Deepak Singh, Professor, Department of Biotechnology, Punjab University,	SUBJECT EXPERT	Online Mode
4.	Prof. Pardeep Kumar, Dean, Professor, Department of Plant Sciences, School of Life Sciences	MEMBER (VC NOMINEE)	Offline Mode
5.	Dr. Sunil Kumar, Associate Professor, Department of Animal Sciences, School of Life Sciences	MEMBER (VC NOMINEE)	Offline Mode
6.	Dr. Shailender Kumar Verma, Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences	MEMBER	Offline Mode
7.	Dr. Vikram Singh, Assistant Professor, Centre for Computational Biology and Bioinformatics, School of Life Sciences	Special Invite	Offline Mode

The Director, Centre for Computational Biology and Bioinformatics (Convener & Chairman), School of Life Sciences welcomed all the members and thanked them for being available for attending this meeting.

Signature
29/12/2020

Agenda Items:

ITEM NO: CBB-BOS-7/20-1: Approved the Minutes of the 6th Meeting of the Board of Studies held on 18th September, 2020. (Annexure-I)

ITEM NO: CBB-BOS-7/20-2: Recommended the Change from nomenclature of the Centre for Computational Biology and Bioinformatics to Department of Computational Biology and Bioinformatics. (Annexure-II)

ITEM NO: CBB-BOS-7/20-3: Approved the Re-scrutinizing of the Curriculum and addition of new courses for the M.Sc. Binformatics in the CBCS format. (Annexure-III)

ITEM NO: CBB-BOS-7/20-4: Approved the detailed syllabus for the M.Sc. Binformatics in the CBCS format (for 2020 Batch onwards). (Annexure-IV)

ITEM NO: CBB-BOS-7/20-5: Approved the appointment of Dr. Mahesh Kulharia, Associate Professor, and Centre for Computational Biology and Bioinformatics to become Ph.D. Co-Supervisor/Guide for Ms. Himisha Dixit (Reg.No.CUHP17RDCBB02) doctoral work. (Annexure-V)

ITEM NO: CBB-BOS-7/20-6: Approved the little, objectives and synopses of the Ph.D thesis of Ms. Himisha Dixit (Reg.No. CUHP17RDCBB02). (Annexure-VI)

ITEM NO: CBB-BOS-7/20-7: Approved the little, objectives and synopses of the Ph.D thesis of Mr. Ashish Panghalia (Reg.No.CUHP17RDCBB01). (Annexure-VII)

The meeting ended with votes of thanks by the chair:

Dr. Vikram Singh
Assistant Professor,
Special Invite

Sharma
29/12/2020
Dr. Shailender Kumar Verma
Assistant Professor, CCBB
CUHP, Dharamshala

Sunil Kumar
29/12/2020
Dr. Sunil Kumar
HoD, Animal Sciences,
(VC Nominee)

Approved Online
Prof. Desh Deepak Singh
(Subject Expert)

Approved Online
Prof. Brij Mohan Sharma
(Subject Expert)

Pardeep Kumar
29/12/2020
Prof. Pardeep Kumar
HoD, Plant Sciences,
(VC Nominee)

Kulharia
29/12/2020
Dr. Mahesh Kulharia
Director, CCBB, CUHP,
Convener & Chairman



mohit lamba <mohitlamba215@gmail.com>

Regarding the 7th Board of Studies agenda CCBB

3 messages

mohit lamba <mohitlamba215@gmail.com>
To: ddsingh@pu.ac.in, drbrijsharma@gmail.com
Cc: Mahesh Kulharia <kulharia@gmail.com>

Mon, Jan 18, 2021 at 9:56 AM

Dear Sirs,

Please find the draft regarding the 7th meeting of Board of Studies along with the annexures attached herewith for your kind perusal and approval.

We would really appreciate it if you could find time to give your valuable suggestions/corrections/approval in the next one day.

--

Regards/सादर,

Mohit/मोहित

Lower Division Clerk, अवर श्रेणी लिपिक

School of Life Sciences, जैविक विज्ञान स्कूल

School of Earth and Environmental Sciences, पृथ्वी एवं पर्यावरण विज्ञान स्कूल

Central University of Himachal Pradesh, हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय

TAB-Shahpur: टैब-शाहपुर.

Mobile Number: 9991206122, 9588584463.

7th Board of Studies minutes of the meeting CCBB.pdf
831K

Prof. Desh Deepak Singh <ddsingh@pu.ac.in>
To: mohit lamba <mohitlamba215@gmail.com>
Cc: drbrijsharma@gmail.com, Mahesh Kulharia <kulharia@gmail.com>

Mon, Jan 18, 2021 at 11:23 AM

Approved

(minutes of 7th meeting of Board of Studies meeting of Center for Computational Biology and bioinformatics of Central University of Himachal Pradesh held on 29th December, 2020 through online mode).

--

Prof. Desh Deepak Singh
Professor, Biotechnology Department
BMS-I, South Campus
Panjab University,
Chandigarh-160 014
www: <http://biotechnology.puchd.ac.in/>
Email: ddsingh@pu.ac.in
Ph: +91 172 2534091
+919228379835;

[Quoted text hidden]

7th Board of Studies minutes of the meeting CCBB.pdf
831K

Brij Sharma <drbrijsharma@gmail.com>

Mon, Jan 18, 2021 at 2:07 PM

पाठ्यक्रम समिति बैठक के कार्यवृत्त

कार्यसूची मद संख्या	ब्यौरा	अनुलग्नक	निर्णय
मद CBB-BOS-9/21-1	23.03.2021 को आयोजित हुई संगणकीय जीव विज्ञान एवं जैव सूचना केंद्र की आठवीं पाठ्य समिति (8th BOS) के कार्यवृत्त अनुमोदन हेतु प्रस्तुत है।	अनुलग्नक - I	स्वीकृत
मद CBB-BOS-9/21-2	राष्ट्रीय शिक्षा नीति (एनईपी-2020) के अनुसार M.Sc. Bioinformatics के लिए नए पाठ्यक्रमों में संशोधन के हेतु प्रस्ताव प्रस्तुत है।	अनुलग्नक - II	स्वीकृत*
मद CBB-BOS-9/21-3	पी-एच.डी. (CBB) कार्यक्रम के नामांकन में परिवर्तन का प्रस्ताव प्रस्तुत है।	अनुलग्नक - III	स्वीकृत
मद CBB-BOS-9/21-4	पी-एच.डी. (Bioinformatics) कार्यक्रम के पाठ्यक्रम कार्य के लिए नए पाठ्यक्रम आरम्भ करने की स्वीकृति हेतु प्रस्ताव प्रस्तुत है। 1. IKS - 02 क्रेडिट 2. Pedagogy of Teaching Learning Process - 02 क्रेडिट	अनुलग्नक - IV	स्वीकृत
मद CBB-BOS-9/21-5	विभिन्न एंटी-एग्जिट सिस्टम को अपनाने के हेतु प्रस्ताव प्रस्तुत है।	अनुलग्नक - V	स्वीकृत#
मद CBB-BOS-9/21-6	संगणकीय जीव विज्ञान एवं जैव सूचना केंद्र में प्रायोगिक (Practical) एवं मौखिक (Viva-Voce) परीक्षा हेतु बाह्य परीक्षकों की सूची के अनुमोदन हेतु प्रस्ताव प्रस्तुत है।	अनुलग्नक - VI	स्वीकृत
मद CBB-BOS-9/21-7	संगणकीय जीव विज्ञान एवं जैव सूचना केंद्र में पी-एच.डी. शोधार्थियों के लिए पर्यवेक्षक आबंटन का प्रस्ताव प्रस्तुत है।	अनुलग्नक - VII	स्वीकृत
मद CBB-BOS-9/21-8	कोई अन्य मामले जो कि अध्यक्ष की अनुमति से विचार- विमर्श किए जाएंगे।		

*ध्यावसायिक पाठ्यक्रमों की सूची को भविष्य में संकाय विशेषज्ञता और उपलब्धता के अनुसार संशोधित किया जाएगा।

#यह सीयूएचपी एनईपी कार्यान्वयन समिति की सिफारिश है। प्रवेश/निकास के तौर-तरीके यूजीसी/सीयूएचपी दिशानिर्देशों के अनुसार विश्वविद्यालय के अधिकारियों द्वारा तय किए जाएंगे।

डॉ. बृजमोहन शर्मा
सेवानिवृत्त प्रोफेसर
चौधरी सरवन कुमार कृषि
विश्वविद्यालय हिमाचल प्रदेश
पालमपुर

डॉ. सुनील कुमार
जन्तु विज्ञान विभाग
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

प्रोफेसर देशदीपक सिंह
जैव प्रौद्योगिकी विभाग
पंजाब विश्वविद्यालय

प्रोफेसर देशदीप कुमार
पाठ्य विज्ञान विभाग
डीन स्कूल जीव विज्ञान

डॉ. शैलेन्द्र कुमार वर्मा
सहायक प्रोफेसर
संगणकीय जीव विज्ञान एवं जैव सूचना केंद्र

डॉ. महेश कुल्हाप्रेया
अध्यक्ष, पाठ्यक्रम समिति
संगणकीय जीव विज्ञान एवं जैव सूचना केंद्र



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

Website: www.cuhimachal.ac.in



प्रो. महेश कुल्हिया / Prof. Mahesh Kulharia

Email ID: kulharia@hpcu.ac.in

Mobile: 9988428856

सन्दर्भ संख्या / Ref. No :

CUHP/CBB/HOD/0001

दिनांक / Date :

27/3/23

Criteria Index Number	Criteria Details
1.1.2	Percentage of Programmes where syllabus revision was carried out during the last five years.

DVV: Kindly provide 1)List of programs where syllabus revision has been carried out during the last five years as certified by the Registrar 2)Approved Minutes of the relevant Academic Council/BOS meetings highlighting the changes

Clarification /Justification and evidence

1)List of programs where syllabus revision has been carried out during the last five years as certified by the Registrar

Programme Code	Programme name	Year of Introduction	Status of implementation of CBCS / elective course system (Yes/No)	Year of implementation of CBCS / elective course system	Year of revision (if any)	If revision has been carried out in the syllabus during the year, Percentage of content added or replaced
PG Programme Bioinformatics	NA	28.12.2020	Yes	28.12.2020	2021 and 2022	60
Ph.D Programme CBB	NA	28.12.2020	Yes	28.12.2020	2021 and 2022	40

Evidence: for "2"

Revision /Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 4th meeting of BoS held on 28 Sep 2017 and recorded in File No: LS/I-5(Vol II)/CUHP/12/114. These were as per the Comprehensive Choice-Based Credit System (CBCS) on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB were offered under Core-Compulsory, Core-Open, Elective-Specialisation, Elective-Open, Foundation-Human-Making and Foundation-Skill Development:

S.No.	Course Code	Course Name	Credits	Course Type
1	CBB433	Biosafety Issues	2	Elective Specialization
2	CBB433A	Biosafety and ethics	2	Elective Specialization
3	CBB434	Skills in Agricultural Technology	2	Elective Specialization
4	CBB434A	Agricultural technology	2	Elective Specialization
5	CBB403	Fundamentals of statistics	4	Core Compulsory
6	CBB435	Fundamentals of Genetics	2	Core Open
7	CBB531A	Life: Its emergence and Extent	2	Elective Specialization
8	CBB436	History of Sciences and technology in India	2	Foundation
9	CBB437	Principles of Scientific Writing	2	Core Open

पत्राचार का पता : हिमाचल प्रदेश केंद्रीय विश्वविद्यालय, शाहपुर, जिला

Correspondence Address: Central University of Himachal Pradesh, Shahpur, District

निदेशक / Director

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Centre for Computational Biology and Bioinformatics
हिमाचल प्रदेश केंद्रीय विश्वविद्यालय, शाहपुर /
Central University of Himachal Pradesh,
Dharamshala-176215



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

Website: www.cuhimachal.ac.in

आज़ादी का
अमृत महोत्सव


प्रो. महेश कुल्हिया / Prof. Mahesh Kulharia

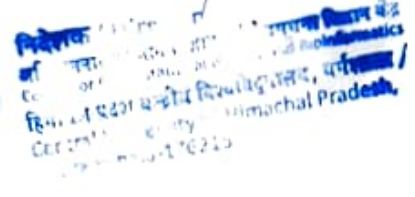
Email ID: kulharia@hpcu.ac.in Mobile: 9988428856

सन्दर्भ संख्या / Ref. No : CUIP/CPB/HOD/002

दिनांक / Date : 27/3/23

This was a change of nearly 25 percentage of the syllabus in terms of choices for the students.
The above facts are true to the best of departmental records and knowledge.


Prof. Mahesh Kulharia
Head of the Department
Computational Biology and Bioinformatics


विभागाध्यक्ष
गणनात्मक जीव विज्ञान केंद्र
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7/11
आजादी का
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प्रा. महेश कुलहर्षिया / Prof. Mahesh Kulharia

Email ID: kulharia@hpsu.ac.in Mobile: 9988428856

सन्दर्भ संख्या / Ref. No : CUHP/CBB/HOD/0003


दिनांक / Date : 27/3/23

Revision / Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 4th meeting of BoS held on 28 Sep 2017 and recorded in File No: LS/I-5(Vol II)/CUHP/12/114. These were as per the Comprehensive Choice-Based Credit System (CBCS) on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB were offered under Core-Compulsory, Core-Open, Elective-Specialisation, Elective-Open, Foundation-Human-Making and Foundation-Skill Development:

S.No.	Course Code	Course Name	Credits	Course Type
1	CBB433	Biosafety Issues	2	Elective Specialization
2	CBB433A	Biosafety and ethics	2	Elective Specialization
3	CBB434	Skills in Agricultural Technology	2	Elective Specialization
4	CBB434A	Agricultural technology	2	Elective Specialization
5	CBB403	Fundamentals of statistics	4	Core Compulsory
6	CBB435	Fundamentals of Genetics	2	Core Open
7	CBB531A	Life: Its emergence and Extent	2	Elective Specialization
8	CBB436	History of Sciences and technology in India	2	Foundation
9	CBB437	Principles of Scientific Writing	2	Core Open

This was a change of nearly 25 percentage of the syllabus in terms of choices for the students. The above facts are true to the best of departmental records and knowledge.


Prof. Mahesh Kulharia
Head of the Department
Computational Biology and Bioinformatics

निदेशक / Director
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Shahpur, 176215

पत्राचार का पता : हिमाचल प्रदेश केंद्रीय विश्वविद्यालय, शाहपुर, जिला कांगड़ा (हि-प्र०) - 176206

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सन्दर्भ संख्या / Ref. No : CUHP/CBB/HOD/04 100/001
दिनांक / Date : 27/3/23


Revision /Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 5th meeting of BoS held on 23 Aug 2018 and recorded in File No: LS/1-5(Vol II)/CUHP/12/. These were as per the Comprehensive Choice-Based Credit System (CBCS) on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB were offered under Core-Compulsory, Core-Open, Elective-Specialisation, Elective-Open, Foundation-Human-Making and Foundation-Skill Development:

S.No.	Course Code	Course Name	Credits	Course Type
1	CBB538	Data Science	2	Elective open
2	CBB539	R for Data Science	2	Core Compulsory
3	CBB540	High Throughput Sequencing: analysis and application	4	Core Compulsory

This was a change of nearly 10 percentage of the syllabus in terms of choices for the students.

The above facts are true to the best of departmental records and knowledge.


Prof. Mahesh Kulharia
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हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय, धरमशाला /
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सन्दर्भ संख्या / Ref. No. CUHP/CBS/H10/0205

दिनांक / Date: 27/3/23

Revision / Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 6th meeting of BoS held on 18 Sep 2020 and recorded in File No: LS/I-5(Vol II)/CUHP/12/01. These were as per the Comprehensive **Choice-Based Credit System (CBCS)** on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB and PhD were offered under Core-Compulsory, Core-Open, Elective-Specialisation, Elective-Open, Foundation-Human-Making and Foundation-Skill Development:

Course Changes in M.Sc

Semester I

Credits	Core - Compulsory	Credits	Old/ Revised
10	CBB 401 - Sequence Analysis	4	Old
	CBB 402 - Statistical Mechanics	2	Old
	CBB 403 - Sequence Analysis Lab	2	Old
	CBB 404 - Programming Lab I	2	Revised (100%)

Credits	Core Open	Credits	Old/ Revised
6	CBB 405 - Basics of Biochemistry	4	Old
	CBB 406 - Concepts of Genetics	2	Old
	CBB 407 - Biomolecules	2	Revised (50%)
	CBB 408 - Fundamentals of Molecular Dynamics simulations	4	Revised (100%)

Human Making Courses (Total Credits =02)			
1	CBB 409	Biosafety Issues	2 Old
Skill Development Courses (Total Credits = 02)			
1	CBB 410	Machine Learning - I	2 Old

Semester II

Credits	Core - Compulsory	Credits	Old/ Revised
12	CBB 451 - Biomolecular Structure Modelling	4	Revised (100%)

Handwritten signature and date.

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सन्दर्भ संख्या / Ref. No : CUHP/CBB/H-0/00-6
 दिनांक / Date : 27/3/23

Credits	Core - Compulsory	Credits	Old/ Revised
	CBB 452 – Algorithms in Computational Biology	2	Old
	CBB 453 – Molecular Evolution	2	Old
	CBB 454 - Molecular Simulations Lab	2	Revised (100%)
	CBB 455 - Programming Lab II	2	Revised (100%)

Credits	Core Open	Credits	Old/ Revised
4	CBB 456 – Cell and Molecular Biology	2	Old
	CBB 457 - Essentials of Immunology	2	Old
	CBB 458 – Statistical Genetics	4	Old

Human Making Courses (Total Credits =02)			
1	CBB 459	History of Sciences and Technology in India	2 Old
Skill Development Courses (Total Credits = 02)			
1	CBB 460	Machine Learning II	2 Revised (100%)

Semester III

Credits	Core - Compulsory	Credits	Old/ Revised
10	CBB 501 – Computer Aided Drug Discovery	4	Revised (50%)
	CBB 502 – Chemoinformatics	2	Old
	CBB 598 – M.Sc. Dissertation I	4	Old

Credits	Elective Open	Credits	Old/ Revised
4	CBB 503 - Plant Bioinformatics	4	Old
	CBB 504 - Biological Database Management Systems	2	Revised (100%)
	CBB 505 - Database Management Lab	2	Revised (100%)

From Electives a student is to take only 6 credits

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 Central University of Himachal Pradesh,
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सन्दर्भ संख्या / Ref. No.: CUHP/CPB/HbD/008
 दिनांक / Date: 27/3/23

Credits	Elective (Specialization) Structural Bioinformatics	Credits	Old/Revised
6	CBB 506 – Computational Methods in Structure Analysis	4	Revised (100%)
	CBB 507 – Structure Prediction Lab	2	Revised (100%)
Credits	Elective (Specialization) Applied Plant Bioinformatics	Credits	
6	CBB 508 – Next Generation Sequencing: methods and data analysis	4	Old
	CBB 509 – Practical course on R programming in Bioinformatics	2	Old
Credits	Elective (Specialization) Network Bioinformatics	Credits	
6	CBB 510 – Introduction to Dynamical Systems: From Cells to Societies	4	Old
	CBB 511 – Numerical Methods for Computational Biologists	2	Old

Semester IV

Credits	Core - Compulsory	Credits	Old/Revised
16	CBB 551 – Elements of Systems Biology	4	Old
	CBB 552 – Computational Genomics and Proteomics	4	Old
	CBB 599 – M.Sc. Dissertation II	8	Old

Credits	Elective Open	Credits	Old/Revised
4	CBB 553 – Fundamentals of Metabolomics	2	Old
	CBB 554 – Practicals of Metabolomics	2	Old

This was a change of nearly 25 percentage of the syllabus in terms of choices for the students.
 The above facts are true to the best of departmental records and knowledge.

निदेशक / Director
 अभिकल्पनात्मक जीव विज्ञान एवं वैद्युतका विभाग के
 प्रमुख / Head of the Department of Computational and Biophysical Sciences
 हिमाचल प्रदेश केंद्रीय विश्वविद्यालय, धरमशाला /
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Handwritten signature and date: 11/11/2022
 दिनांक / Date: 11/11/2022

Course Changes in PhD

Course Code	Core (C)/Elective (E)	Course Name	Credits	Old/Revised
CPE-RPE	C	Research and Publication Ethics	2	Revised (100%)
CBB - 601	C	Research Methodology	4	Revised (100%)
CBB - 602	E	Sequence and Structural Bioinformatics	4	Revised (100%)
CBB - 603	E	Statistical Mechanics	4	Revised (100%)
CBB - 604	E	Scientific Programming Lab	4	Revised (100%)
CBB - 605	E	Molecular Dynamics Lab	4	Revised (100%)
CBB - 606	E	Plant Bioinformatics	4	Old

This was a change of nearly 75 percentage of the syllabus in terms of choices for the students.

The above facts are true to the best of departmental records and knowledge.

Prof. Mahesh Kulsharma
 Head of the Department
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 निदेशक / Director
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संदर्भ संख्या / Ref No: CUHP/CPB/BIO/2009
 दिनांक / Date: 27/12/23
 पृ.सं. 0/0016

Revision / Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 7th meeting of BoS held on 29 Dec 2020 and recorded in File No: LS/1-5(Vol II)/CUHP/12/75. These were as per the Comprehensive **Choice-Based Credit System (CBCS)** on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB were offered under Core-Compulsory, Core-Open, Elective-Specialisation, Elective-Open, Foundation-Human-Making and Foundation-Skill Development:

Course Code	Name of the Course	Course Credits	Old/Revised/ Introduced
BIN 401	Sequence Analysis	2	Revised
BIN402	Biomolecular Structure Analysis	2	Revised
BIN403	Linux and Shell Scripting Lab	2	Revised
BIN404	Sequence and Structure Analysis Lab	2	Revised
BIN405	Python Programming Lab I	2	Revised
BIN407	Concepts of Genetics	2	Revised
BIN409	Statistical Methods	4	Revised
BIN457	Statistical Genetics	2	Revised
BIN451	Algorithms in Bioinformatics	2	Revised
BIN452	Fundamentals of Molecular Dynamics simulations	2	Revised
BIN453	Molecular Dynamics Simulation Lab	2	Revised
BIN454	Python Programming Lab II	2	Revised
BIN455	Cell and Molecular Biology	2	Revised
BIN459	DBMS Lab	2	Revised

This was a change of nearly 30 percentage of the syllabus in terms of choices for the students. The above facts are true to the best of departmental records and knowledge.

Prof. Mahesh Kulharia
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 Central University of Himachal Pradesh,
 Dharamshala-176215 Kangra (H.P.) - 176206

पत्राचार का पता : हिमाचल प्रदेश केंद्रीय विश्वविद्यालय,

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सन्दर्भ संख्या / Ref. No.: CUP/CBB/HOD/0010
 दिनांक / Date: 27/9/23

Revision / Changes Carried out in BoS Meetings of Department of Computational Biology and Bioinformatics as per CBCS guidelines

The following revision were carried out in the 9th meeting of BoS held on 27 Sep 2021 and recorded in File No: LS/1-5(Vol II)/CUHP/12/. These were as per the Comprehensive **Choice-Based Credit System (CBCS)** on the same pattern as prescribed the UGC. The courses of the M.Sc. CBB were offered under Major, Minor, Vocational/Skill and Value Added Courses:

Semester – I			
Type	Code and Nomenclature	Credits	Old/Revised
Major	BIN 415 Basics of Biochemistry	2	Old
	BIN 416 Cell and Molecular Biology	2	Old
	BIN 417 Statistical Methods	4	Old
	BIN 418 Linux and Shell Scripting Lab	2	Old
Minor	BIN 419 Sequence Analysis	2	Old
	BIN 420 Biomolecular Structure Analysis	2	Old
Vocational	BIN 421 Python Programming Lab I	2	Revised
	BIN 422 Sequence and Structure Analysis Lab	2	Revised
IKS	University wide		
Semester – II			
Major	BIN 465 Computer Aided Drug Discovery	4	Revised
	BIN 465 Computational Genomics and Proteomics	4	Revised
	BIN 467 Algorithms in Bioinformatics	4	Old
Minor	BIN 468 Fundamentals of Machine Learning	2	Revised
	BIN 469 Fundamentals of Molecular Dynamics	2	Revised
Vocational	BIN 470 Python Programming Lab II	2	Revised
IKS	BIN 471 History of Science in India	2	Old
Semester – III			
Major (Any for credits equivalent)	BIN 515 Biological Databases and Management	2	Old
	BIN 516 Systems Biology and Biological Networks	4	Revised
	BIN 517 Essentials of Immunology	2	Revised
Minor	BIN 518 Research Methodology	4	Introduced
Vocational	BIN 519 Computer Aided Drug Design Lab	2	Revised
	BIN 520 Systems Biology Lab	2	Old
Review	BIN 521 Review of Literature and research	8	Old
Semester – IV			
Major	BIN 565 Statistical Genetics	2	Old

पत्राचार का पता : हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

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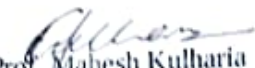
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संदर्भ संख्या / Ref. No.: CUHP/CA/1100/0011
दिनांक / Date: 27/3/23

(Any for credits equivalent Minor)	BIN 566 Molecular Evolution	4	Revised
	BIN 567 Introduction of Synthetic Biology	2	Old
	BIN 568 Academic Writings	2	Revised
	BIN 569 Paper publication/ seminar/ conference	2	
Vocational	BIN 570 Molecular Dynamics Simulation Lab	2	Old
	BIN 571 Data Analysis Lab	2	Revised
Dissertation	BIN 595 Dissertation	8	Old
Total		80	

This was a change of nearly 45 percentage of the syllabus in terms of choices for the students.

The above facts are true to the best of departmental records and knowledge.


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