(Established by H.P. State Legislature vide Act No. 14 of 2002)

Date: 25.05.2022

# **Department of Biotechnology and Bioinformatics**

A meeting of Board of Studies (BoS) of the **Department of Biotechnology and Bioinformatics** was held as per the following schedule :

Meeting Name:	Board of Studies –Department of Biotechnology and Bioinformatics		
Date of Meeting:	21-05-2022	Time:	10:00 AM
Chairman:	Prof. (Dr.) Sudhir Kumar	Location:	Online

1. Meeting Objective:	
Board of Studies (BoS) meeting	

2(a). Meeting Attendees: The following members were present				
Prof. Sudhir Kumar, Head (Department of	Chairman			
Biotechnology and Bioinformatics, JUIT)				
Dr. Anil Kant, Associate Professor	Member Secretary / Coordinator			
(Department of Biotechnology and				
Bioinformatics, JUIT)				
Prof. T.C. Bhalla Ex, Professor Emeritus	External Member-1 (Academic)			
Department of Biotechnology HPU Shimla				
Dr Vinay Bhardwaj, Head Division of Crop	External Member-2 (Academic)			
Improvement, CPRI Shimla,				
Prof. G .P. S. Raghava, Prof and Head,	External Member-3 (Academic)			
Deptt of Computational Biology, IIIT-Dehli				
	External Member-4 (Alumni)			
Mr. Aditya Sahni, JUIT Alumni, Founder of				
ELEM, India Dr. Tiratha Raj Singh Associate Professor,	Member-1			
Department of Biotechnology and	Member-1			
Bioinformatics, JUIT)				
Dr. Rahul Shrivastava, Associate Professor,	Invitee, As Coordinator of M.Sc. Microbiology			
Department of Biotechnology and	invitee, As coordinator of Wise. Wicrobiology			
Bioinformatics, JUIT				
Prof. Ashish Rohila, Department of Civil	Co-opted member-1			
Engineering, JUIT Waknaghat, (Member	F			
BoS)				
	Co-opted member-2			
Dr. Amit Srivastava (Associate Professor				
&HOD, HSS, JUIT)				
,				
2(b). Leave of Absence: The following mem	bers were granted leave of absence by the Chairman, BOS			
Prof. R K Bajaj (Professor & HOD,	Co-opted member-3			
Mathematics, JUIT)				
Prof. P B Barman (Professor & HOD, PMS,	Co-opted member-4			

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JUIT)	
Dr. Saurabh Bansal Assistant Professor,	Member-2
Department of Biotechnology and	
Bioinformatics, JUIT Waknaghat	
Prof. Vivek Sehgal (Professor & HOD, CS &	Co-opted member-5
IT, JUIT)	-

Dr Anil Kant offered a welcome note to the members, introducing two new members, Prof. G.P.S. Raghava and Aditya Sahni inducted in the BoS recently. Prof. Sudhir Kumar addressed the house, welcoming members of BoS. Dr. Anil Kant presented agenda points one by one and following are the highlights of discussion and deliberation and resolutions

#### 3. Action Items / Instructions: Following decisions were taken/approved by the members of BoS.

Item No. 1: To consider approval of detailed syllabus of courses to be offered in 2nd year of M.Sc. Microbiology Program. (Attached: Course structure and detailed syllabus of second year courses).

Dr. Rahul Shrivastava presented the details of this agenda point and informed the house that we started the MSc Microbiology Program last year and two year course structure, and detailed syllabi of first year course are already ratified in the BoS and ACM. Proposed syllabi of second year courses were given to the members for perusal and suggestions if any. Members were asked to bring forward any observation or suggestion.

Dr. Sugandha Singh suggested that there should not be any course work in the final year of the MSc Program and so that students can focus on project /dissertation work.

Dr. Rahul informed that we have only minimal 1 or 2 courses in the 3rd and 4th semester and as per his observation this much theory course work may be necessary to motivate the students to come to the Department. No course work may be desirable in case students have to be sent out of university for project work.

Prof. T.C. Bhalla also supported the proposed course work in the final year, as he was of the view that university will be getting students of diverse backgrounds, instead of BSc Microbiology. So, intense theory course work may be required to expose students to general and advanced aspects of microbiology which may not be possible in just two semesters. The model of having no course work in final year may work better had we been admitting only BSc Microbiology students in MSc Microbiology.

#### Resolution: Approved as presented

Item No. 2 To consider approval of the modifications in the syllabus of "Microbial Genetics and Physiology" (21MS1MB212), a course in the 2nd semester of M. Sc. Microbiology. (Attached modified course structure)

Dr. Anil Kant Presented the agenda point and invited Prof. Sudhir Kumar (Course coordinator) to elaborate on proposed changes. Prof. Sudhir said that changes are required to avoid the overlapping of contents with other courses and to include advanced topics of Microbial genetics and Physiology.

All members were in agreement to bring the proposed modification in the contents of this course.

Resolution: Approved as presented

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Item No. 3: To consider approval of interchange of elective courses; Computational Systems Biology (Course Code 21MS2MB313; Credits 3) from 3rd to 4th semester, and Microbial Toxicology (Course Code 21MS2MB411, Credits 3) from 4th to 3rd semester in MSc Microbiology second year curriculum.

Dr. Rahul informed the house, why this interchange of elective courses was being proposed. Prof. G.P.S. Raghava suggested that any diverse course in mainstream program should be introduced as early as possible, so that students get time to think about specialisation / Project work etc in those areas.

Dr. Rahul informed the house that we already have an introductory course of Bioinformatics in the first year and the interchange will also be in the direction of the suggestion made by Prof. Raghava Sir.

#### Resolution: Approved as presented

Item No. 4: To consider approval of inclusion of two new courses on Artificial Intelligence and Data analytics from the Department of Computer Science in the VII and VIII semester of B. Tech. Bioinformatics Program, in the existing Elective baskets.

- a. a. VII Semester: Artificial Intelligence (20B1WCI731: 2 credits) and Artificial Intelligence Lab (20B1WCI771: 1 Credit), Total 3 credits
- b. VIII Semester: Data Analytics Course (18B1WCI843: 3 credits)

Dr Anil Kant presented the agenda item and invited Dr. Tiratha Raj Singh to tell the background proposal. Dr. Tiratha said that there were suggestions to include some courses from computer sciences to make B.Tech Bioinformatics attractive for students and to make them more industry ready. A committee was constituted which recommended the inclusion of these two courses offered by the CSE Department as Elective courses.

Prof. G.P.S. Raghava mentioned that Kaggle competition could be associated with the B.Tech. Bioinformatics students through an in-house or an external competition to make them more competitive for the global level challenges. Prof. Raghava also mentioned that integration of CSE courses for Bio related problems can benefit the students to solve real life problems. Dr. Tiratha Raj informed the house that B.Tech. Bioinformatics curriculum already has some of the such courses, like Machine Learning for Bioinformatics and Data Mining and Warehousing for Bioinformatics.

HSS department's representative Mrs. Trimbika Gautam asked if the newly added elective Data Analytics is having some overlapping contents with an elective from HSS Department being run in VI semester. Dr. Tiratha Raj confirmed that he will see the syllabus for both the subjects and also discuss with the concerned faculty. After the BoS Dr. Tiratha Raj had a detailed discussion with the faculty Dr. Amit Shrivastava of HSS department who is taking this course and he specifically mentioned that these two subjects are completely different in the approach of teaching and can be offered to the students as proposed.

Prof. T.C. Bhalla enquired whether this is going to increase the total credits of the program. Dr. Tiratha Raj said that total credits shall remain unchanged as the course being included in the elective basket. All members agreed on the proposal.

Resolution: Approved as presented

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#### ATTACH SIGNED ATTENDANCE SHEET

Dr. Anil Kant Associate Professor

Member Secretary, BoS

Department of Biotechnology

JUIT Waknaghat

Prof. Sudhir Kumar

Chairman BoS, HOD Department of

Biotechnology, JUIT Waknaghat

Approved / Not Approved

**Vice Chancellor**