Department of Biotechnology and Bioinformatics
JUIT Waknaghat

Minutes of BoS meeting held on 09.10.2018

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on **09.10.2018** at 10.30 AM in the Board room.

Following BoS Members and attendees were present.

1	Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat	
2	Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)	
3	Dr TC Bhalla Professor Emeritus Department of Biotechnology HPU Shimla (External Member BoS)	
4	Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	
5	Dr Harish Changotra Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	
6	Dr. Jata Shankar, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat(Invited attendee as M Tech coordinator)	
7	Dr. Saurabh Bansal, Assistant Professor (Grade II), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	
8	Head (or Representative), Department of Computer Science and Engineering, JUIT Waknaghat (Member BoS)	
9	Head (or Representative), Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS)	
11	Head (or Representative), Department of Physics and Materials Science, JUIT Waknaghat, (Member BoS)	
12	Head (or Representative), Department of Humanities and Social Sciences, JUIT Waknaghat, (Member BoS)	

Agenda

1. To discuss and finalize course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology and B. Tech. Bioinformatics (***Attached***: B. Tech Biotech B. Tech Bioinformatics, 160 hr Course-curricula)
2. To discuss the inclusion of new elective courses in M. Tech. Biotechnology course curriculum. (Attached M.Tech. Course structure and Electives)
3. To approve attainments of last semester's course outcome (CO) and Programme outcome (B.Tech. BT and BI)
4. Discussion on a suggestions and feedback received from our alumni regarding updating B.Tech. Biotechnology and B.Tech Bioinformatics curriculum.
    a. Fermentation of Red and White wine, Grape vine yearly cycle, Terroir, in Food and Agricultural Biotechnology/ Traditional Bio processing or any other related courses: Received from Mr Kunal our B.Tech. Biotech alumnus working in wine industry (Chateau de Camarsac) in France

    b. IT oriented content and their applications in Industry: Received from Mr Sahil Sethi our B.Tech. Bioinformatics alumnus working as Bioinformatics and Data Engineer In Pine Biotech, Nebraska USA

    c. Some topics related to organic farming to be included in Agricultural Biotechnology: Received from Shivam Sharma, B.Tech. M. Tech and PhD Biotech alumnus working in Ministry of Agriculture Govt of India

5. Approval of agenda items sent to registrar office to included in the Agenda of Academic council meeting

The meeting started with introduction of BoS members and attendees to Prof TC Bhalla, which was mediated by Prof Sudhir Kumar. Dr Anil Kant (Member Secretary) presented the welcome address and handed over the proceedings to Professor Sudhir Kumar. The board discussed the agenda items one by one and following are the recommendation of the BoS.

Agenda Item 1

To discuss and finalize course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology and B. Tech. Bioinformatics.

The members were apprised about new B.Tech 160 credit hour scheme which AICTE has made mandatory to be followed by all the Technical educational Institutes. AICTE model scheme with recommended credit hours to be allocated to various disciplines, electives, and open electives was also presented to the members.

Resolution

1. Course structure of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech. Bioinformatics was presented. Dr TC Bhalla Enquired about the programming languages courses in this structure. Dr Tirthraj clarified that programming languages viz. Perl, Python, HTML, JAVA script and PHP are taught to B. Tech. Bioinformatics students, and are also included in this schemes in two courses.
    - ✓ Programming Languages for Bioinformatics 4th Semester
    - ✓ Scripting Languages for Bioinformatics 5th Semester

Course structure of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech. Bioinformatics (Annexure-I) was approved by all members of BoS.

2. **Course structure 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology (Annexure-II) as was presented and approved.**

3. Detailed syllabi of the individual courses of B.Tech Bioinformatics and Biotechnology were presented discussed and following were main observations.

   Prof M. Nigam Head of the Electronic and communication said the format of courses should be uniform across the Departments. Member secretary Dr Anil Kant informed that at Department level we have followed a common format and are ready to follow any other common format as and when suggested by higher authorities.

   Prof TC Bhalla stated that
   - Chemistry course should focus on advanced content over 10+2
   - Advanced and popular techniques such as CRISPR should be taught at some level.

   Members of BoS were of the view that Chemistry course already have advanced contents over 10+2, and redundancies if any will be taken care off.

   Dr Anil Kant informed that techniques CRISPR are already being taught in elective courses such as Plant Biotechnology, and included in Advances in Gene manipulation. Many other courses also contain such latest techniques and developments.

   After thorough deliberations, the detailed syllabi of individual core courses were approved to be adopted.

4. List of Elective courses and their detailed syllabi were present to the members for discussion and ratification. Following were main points of discussion

Prof. Bhalla Suggested that name and content of courses of B. Tech., M. Tech degree programmes should have technological orientation, which was agreed upon by all the members. In this context it was decided that courses list below will be referred back to the teaching faculties to change the name/content or drop the courses.

Industrial Enzymes	: Suggested to be named Industrial Enzyme Technologies
Neurobiology	: Referred back to teaching faculty for his/her comments: DR Udaybanu suggested the name to be changed to Experimental Neurology
Virology	: Referred back to teaching faculty his/her comments: Dr Harish informed that Virology course will have a unit on techniques used in virology and requested could to run this courses run as an elective with M.Tech. Code.
Microbial Ecology	: Referred back to teaching faculty his/her comments: Dr Ashok Nadda informed that Microbial Ecology already contained technical contents such as function and regulation of microbial productivity and

metabolism; the importance of microbial processes for the turnover of nutrients and organic carbon.

Discussions were also made on grouping and offering the elective courses in form of buckets and following points emerged and agreed upon by members.

a. Elective list, Groups should be kept dynamic and elective can be added or dropped as per requirements, availability and expertise of teaching faculties at HOD level, which should be ratified in next BoS meeting.

b. While grouping elective courses in buckets and offering electives in different semesters care should be taken arrange these according to advancement level of subject matter (**Suggestion made by Prof Bhalla and agreed upon by all the members**)

c. Elective of same or related specialization should be preferably put in different groups / buckets so that students with keen interest in a particular field will have a chance to opt for maximum electives of that field **(Suggestion made by Prof. M Nigam)**

d. Electives offered in M Tech program can also be included in the electives buckets of B. Tech and B. Tech M. Tech and Integrated programs (with M. Tech. code), to avoid the repetition, overlapping and redundancies of courses. This will also help in offering more choice and flexibility in choice of electives to the students **(Suggested by Prof. Sunil Kha). Dr Anil Kant** informed the house that this is already being practiced; the courses such as **Food Process and Engineering, and Plant Biotechnology with M. Tech/Integrated code** are being taken by B. Tech students as well. In future also this will be done by incorporating M Tech electives courses in the appropriate elective buckets of B. Tech Programmes.

After all such deliberations the electives subjects along with their detailed syllabus was approved and ratified. It was also decided to implement the suggestions / observation listed above as such or outcome consultation about courses refereed to concerned faculties.

Agenda Item 2
To discuss the inclusion of new elective courses in M. Tech. Biotechnology course curriculum.
Resolution
M. Tech course structure along with electives and detailed course syllabi were presented.

The members approved M. Tech. Biotechnology course curriculum, **(Annexure-III)** with a caveat that the observations regarding name and content of courses and dynamic nature of list of electives courses as stated above are also applicable in this case as well.

Agenda Item 3
To approve attainments of last semester's course outcome (CO) and Programme outcome (B.Tech. BT and BI)

Resolution
The odd and even semester data on attainment of course outcome (CO) and Programme outcome were presented (**Annexure IV a and IV b**).

Prof Sudhir Kumar stated that the attainment level of almost all the PO and PSO are above the minimum criterion of 4.5.

Thus report on data on previous year semesters was therefore ratified.

Agenda Item 4

Discussion on a suggestions and feedback received from our alumni regarding updating B.Tech. Biotechnology and B.Tech. Bioinformatics curriculum.

Resolution

The suggestion received and as stated in the agenda items were brought forward and the house were informed the Department has already taken steps to include the specific topic in the modified syllabi of relevant courses.

Agenda item 5

Approval of agenda items sent to registrar office to included in the Agenda of Academic council meeting.

Prof Sudhir informed BoS members that registrar office asked the Department for agenda item of ACM in a specified format and the Department has already sent the agenda items as listed below

1. Approval for introduction of New Programs / Courses. **Nil**
2. Approval for discontinuation of any Existing Programs / Courses. **Nil**
3. Approval for change in nomenclature of Existing Programs / Courses. **Nil**
4. Approval for Increase / Reduction in sanctioned intake of Existing Programs / Courses. **Nil**
5. Approval for introduction of new Course structure / detailed syllabus. **Approval course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology and B. Tech. Bioinformatics (**
6. Approval for Revision / Modification / Changes in existing Course Structure / detailed syllabus
   Approval of modification M. Tech. Biotechnology course structure and inclusion of new electives
7. Any other item Nil

The agenda items send to registrar office was approved.

15/10/2018

Dr Anil Kant Associate Professor
Member Secretary, BoS
Department of Biotechnology
JUIT Waknaghat

15/10/18

Prof. Sudhir Kumar
Chairman BoS, HOD Department of Biotechnology, JUIT Waknaghat