

Minutes of Board of Studies Meeting
Department of Biotechnology
School of Energy Technology (SoET)
Pandit Deendayal Energy University
Gandhinagar, Gujarat-382 426

Date: 14/12/2023
Time: 11:30 AM to 01:00 PM
Venue: Board Room, First Floor, C-Block
Mode: Hybrid Mode
Microsoft Meeting ID:
446 405 239 445

A. Members of Board of Studies

Name of BoS Member	Name of Organization and Designation	Present / Absent	Remarks
Prof Anirbid Sircar	Director of School of Energy Technology, PDEU	Present	
Dr Praghresh Bhatt	Dean of School of Energy Technology, , PDEU	Present	
Dr.Swapnil A. Dharaskar	Chairman-BoS , Head of Department of Chemical Engineering,I/C Department of Biotechnology, PDEU	Present	
Prof. Surendra Singh Kachhwaha	Dean of School of Technology, PDEU	Absent	
Dr.Sivaraman Dhanasekaran	Assistant Professor, Department of Biotechnology, PDEU	Present	
Dr.P.S.Pradeep	Assistant Professor, Department of Biotechnology, PDEU	Present	
Dr.Manoj Pandey	Head of Department of Chemistry, PDEU	Present	
Dr. Surya Ramachandran (External Academic member)	Associate Professor, Medical Biotechnology Gujarat Biotechnology University, Gujarat, India	Present	
Dr.Pallab Bhattacharya (External professional member)	Associate Professor, National Institute of Pharmaceutical Education and Research, Ahmedabad, Gujarat, India	Present	
Dr.Bhoomika Patel (External professional member)	Associate Professor, School of Medico-Legal Studies, National Forensic sciences university, Gujarat, India	Present	
Dr. Devi Rajeswari (External Academic member)	Associate Professor & Head School of Biosciences and Technology, VIT University, Vellore, Tamil Nadu, India.	Present	
Dr. Yogesh Murkunde (Industrial Expert- Recruiter)	Director , Intox Pvt Ltd, Pune, India	Present	
Dr. Vishal Patel (Industrial Expert- Recruiter)	Sun Pharma Advanced Research Company, Vadodara, India	Present	
Dr. Jignesh Kotecha (Industrial Expert- Recruiter)	Research and Development Wing Torrent Pharmaceuticals Ltd, Ahmedabad, Gujarat, India	Present	

B. Agenda of the Meeting

1. Welcome address by Prof. Anirbid Sircar – Director of the School of Energy Technology.
2. Progress of Biotechnology course by Dr. Swapnil Dharaskar- Head, Dept of Chemical Engineering/I/C Biotechnology.
3. Presentation and briefing of revised framework- Semester 2nd of B. Tech program in Biotechnology by Dr.Sivaraman Dhanasekaran Dept of Biotechnology.
4. Review and discussion on proposed frame work and revised course curriculum for B. Tech in Biotechnology by the committee members.
5. Review and discussion on proposed open/Ph.D electives from the Department of Biotechnology.
6. Inclusion of Dr. Sachidanand Singh, Recently Joined Associate Professor as internal BoS Member.
7. Conclusion of the Meeting by Dr.Praghnesh Bhatt, Dean SoET.
8. Summary of the minutes by Dr.Sivaraman Dhanasekaran, Asst.Prof.Dept of Biotechnology

C. Minutes of BoS Meeting and General Discussion/Recommendation by BoS Members:

- **Dr. Swapnil Dharaskar**, Chairman of the BOS, greeted all the BoS members by providing formal instructions to both the External and Internal members. After the introduction, he provided the committee with a concise overview of the proposed agenda and the department's work over the past six months.
- **Professor Anirbid Sircar**, The Director of the School of Engineering and Technology (SoET) emphasized to the committee members about the significance of revising the course matrix in order to enhance students' employability and research opportunities.
- **Dr.Sivaraman Dhanasekaran**, The Assistant Professor from the Department of Biotechnology provided a detailed report to the committee on the department's advancements, approved projects, patents, student enrollment in the B.Tech Biotechnology program, and the updated topic layout matrix and course curriculum.
- Following points were proposed, discussed and approved during the meeting:

Agenda	Approval of the 1st BoS Minutes of Meeting Action taken
Discussion:	All the inputs given during the 1 st BoS - 28-06-2023, were summarized ,discussed, and implemented and, all BoS members (Internal & External) unanimously accepted the previous BoS minutes and found satisfactory and approved the action taken for the 1 st BoS.
Agenda:	<i>Introduction of Dr. Sachidanand Singh, Newly Joined Associate Professor in Department of Biotechnology, SoET, PDEU.</i>

Discussion: Dr. Sachidanand Singh has joined the department on 1st December 2023, He explained about his expertise and the members of BoS welcomed and approved him to be a part of BoS as internal BoS member.

Agenda: *Approval of the course structure, syllabus and practical's for the 2nd semester of B.Tech Biotechnology Batch (2023-27)*

Discussion: The members of BOS have discussed the proposed revision on course structure of the second semester regarding inclusion of Biotechnology related courses for the better academic prospects in terms of understanding the subject matter and subsequent research and placement opportunities in the field of Biotechnology.

Under the 2nd Semester, considering the need of introduction of Biotechnology and application of its in Human health system new courses and labs have been included in replacement of the following with the mapped credits (9 Credits).

S.No	2 nd Sem. Old Course Str.	2 nd Sem. Proposed
1	Elements of Civil Engineering & Solid Mechanics	Human Anatomy and Physiology-I- Theory
2	Elements of Civil Engineering & Solid Mechanics - Lab	Human Anatomy and Physiology- I -Lab
3	Elements of Electrical Engineering	Principles of Biotechnology- Theory
4	Elements of Electrical Engineering –Lab	

II Semester B.Tech Biotechnology (Batch- 2023-27) Course Structure

Sem	Category	Code	Course Name	L	T	P	C	Hrs/W
2	BSC	23MA102T	Mathematics II for Biotechnology	3	1	0	4	4
	PC		Human Anatomy and physiology - I	4	0	0	4	4
	PC		Principles of Biotechnology	3	0	0	3	3
	PC Lab		Human Anatomy and physiology - I- Lab	0	0	2	1	2
	ESC	22PH101T	Engineering Physics	3	0	0	3	3
	ESC	22PH101P	Engineering Physics - Lab.	0	0	2	1	2
	ESC	16ME103P	Workshop Practice	0	0	2	1	2
	ESC	20CP102P	Fundamentals of Python Programming	0	0	2	1	2
	HSC	20HS101P	Communication Skills - I	0	0	2	1	2
	HSC	16HS109T	Professional Ethics & Human Values	1	0	0	1	1
	HSC	16SP101	NCC - II	0	0	2	1	2
		16SP102	NSS - II					
		16SP103	Sports - II					
	HSC	20TP110	Civic Services & Social Internship	0	0	0	1	0
				14	1	12	22	27

Syllabus for theory and practical (Sem.2-Proposed) attached as Annexure -1

Agenda: *Open Electives proposed form Department of Biotechnology and PhD Course electives.*

Discussion: Open Electives to be offered by Department of Biotechnology from 3rd Semester Onwards under Pharmaceutical and Industrial Applications

S.No	Pharmaceutical/ Industrial Applications
1	Biology for Engineers
2	Biomedical Health Informatics
3	Medical Diagnostics
4	Biosimilars Technology

PhD Course Electives proposed:

1. Regulatory affairs and Clinical trials
2. Precision medicine and wellness

Annexure-2: Syllabus for the Open Electives and PhD Electives to be proposed for 2023 Batch onwards.

Agenda: *Approval of the course structure, syllabus and practical's for the 2nd semester of B.Tech Biotechnology Batch (2023-27)*

Discussion: Director, SoET asked all the BoS members to give their inputs for the enhancement of the curriculum and accordingly the suggestions are incorporated.

Agenda: Inputs for each stake holders, discussion, suggestion and scope of implementations. Proposed Course Structure for the B.Tech Biotechnology as per the alignment of PDEU and considering the placement and Research objectives in concern.

Expert Suggestion: Dr.Pallab Bhattacharya (Professional Expert) appreciated presentation and the progress of the department, However, he expressed his concern regarding the infrastructure and equipment's customized for B.Tech Biotechnology students in accordance with the standards and program outcomes.

Discussion: Dr. Swapnil Dharaskar, Chairman of BoS, explained about the funded sanctioned by the management for the development of the Initial Biotechnology Lab and presently space is been allocated as the shared facility between Chemical Engineering and Biotechnology, Later full-fledged facility for Biotechnology is Been proposed (Annexure III- Proposed list of Instruments for Biotechnology).

Expert Suggestion: Dr. Surya Ramachandran (Academic Expert) appreciated the initiatives and also felt positive about the changes adopted in the 2nd Semester for the betterment of the students, further she requested the copy of syllabus likely to be thought to the students with respect Human anatomy and Physiology 1 and 2 and the concerned labs to be executed during 2nd and 3rd semester of the program.

Discussion: Dr. Sivaraman Dhanasekaran, an Assistant Professor, presented the syllabus along with laboratory procedures for both semesters. He also emphasized the significance of course

work pertaining to human anatomy and physiology throughout the course to enhance knowledge, particularly for students specializing in pharmaceutical studies. (Annexure 1-Syllabus of Theory and Lab).

Expert Suggestion: Dr. Bhoomika Patel (Professional Expert) have appreciated the management initiate in starting biotechnology program at PDEU further she expressed preview about the credits matching for the 2nd and 3rd semester. Dr. Bhoomika Patel requested an explanation for the removal of the current bridge course in biology, known as Fundamentals of Life Sciences. Additionally, she provided her insights on the importance of exposing biotech students to modern analytical techniques available at neighboring institutions.

Discussion: Dr. Sivaraman Dhanasekaran briefed the committee that the all major components of the course “Fundamentals of life sciences” is likely to be covered in the proposed subjects (Principles of biotechnology and Human anatomy & Physiology). Considering the fact and also to avoid repetition the bridge course Fundamentals of life sciences has been removed and suitable alternates have been included (Annexure 1-Syllabus of Theory and Lab). In addition to this course matrix of the committed semesters was discussed and inputs taken for credit mapping is considered as the 4 credit courses and their hours are been checked. Same was informed about the Infrastructure development and progress about Biotechnology.

Expert Suggestion: Dr. Devi Rajeswari (Academic Expert) was happy about the inclusion of the courses in the 2nd semester the two theory and practical's and its relevance to the field of biotechnology. Suggestion adopted via email.

Expert Suggestion: Dr. Yogesh Murkunde (Industrial Expert), asked about the internship program and project details

Discussion: The Course matrix for B.Tech Biotechnology program includes components from 4th semester and finally ends with Major and Minor Projects. PDEU centrally has also implemented Industry 4.0 syllabus in curriculum as default for the student's skill enhancement.

Expert Suggestion: Dr. Dr. Jignesh (Industrial Expert), appreciated the effort of introducing the Human physiology I and II and its relevance to the mapping of courses likely to be offered including Pharmacology, Pharmacokinetics & Dynamics in line with other semesters. Further he expressed his preview on conversion of some core electives in to core subjects to widen the scope of opportunities for the students in the pharma industry.

Discussion: Considering the importance of the suggestion course remapping may be attempted with in the allowed limit of credits as per the norms and the revised version may be submitted to the committee members during next BoS with approval from the concerned authorities.

Expert Dr. Vishal Patel (Industrial Expert), expressed that all the inputs are been covered and he is happy with the discussion and inclusion of the proposed courses. Further no suggestions from his part.

Suggestion:

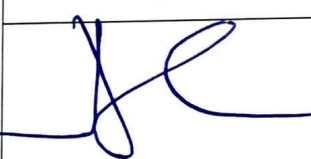
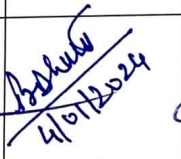
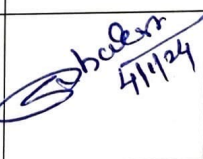

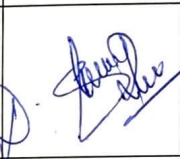
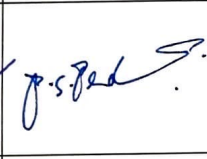





Agenda: Proposal on elective courses offered on behalf of the department of biotechnology

Discussion: Bos members unanimously accepted the proposed elective courses offered on behalf of the department of biotechnology (Enclosed Annexure II).

Agenda: Approval of the course structure, syllabus and practical's for the 2nd semester of B.Tech Biotechnology Batch (2023-27)

Discussion: Dr. Praghresh Bhatt, Dean of the School of Energy Technology, expressed his preview and briefed the committee on semester-wise credit mapping to be adopted for the proposed program for the approval.

Conclusion: BoS members provided their valuable inputs and suggestions concerning the improvisation of course layout about B.Tech in Biotechnology and the measures taken against each suggestion listed above in detail, along with corresponding enclosures in the form of annexures enclosed herewith for further clarification.

Prof. Anirbid Sircar Director of School of Energy Technology, PDEU	Dr. Praghresh Bhatt Dean – SOET, PDEU	Dr.Swapnil Dharaskar Chairman-BoS	Prof .Surendra Singh Kachhwaha Internal BoS Member	Dr. Sivaraman Dhanasekaran Internal BoS Member	Dr. P.S.Pradeep Internal BoS Member
					
Dr. Surya Ramachandran (External Academic member) Gujarat Biotechnology University, Gujarat, India	Dr. Jignesh Kotecha (Industrial Expert- Recruiter) Research and Development Wing Torrent Pharmaceuticals Ltd, Ahmedabad, Gujarat, India	Dr.Pallab Bhattacharya (External professional member) NIPER, Ahmedabad, Gujarat, India	Dr.Bhoomika Patel (External professional member) National Forensic sciences university, Gujarat, India	Dr. Devi Rajeswari (External Academic member) VIT University, Vellore,Tamil Nadu, India.	Dr. Yogesh Murkunde (Industrial Expert- Recruiter) Director , Intox Pvt Ltd, Pune, India
	Jignesh S. Kotecha <small>Digitally signed by Jignesh S. Kotecha Date: 2024.01.03 14:26:51 +05'30'</small>				
					Dr. Vishal Patel <small>Digitally signed by Dr. Vishal Patel Date: 2024.01.03 14:26:51 +05'30'</small>

Enclosure:

- (1) Annexures 1- Syllabus of the courses (2nd Sem)
- (2) Annexures 2- Syllabus of the open electives courses (Pharmaceutical/ Industrial Applications)
- (3) Annexures 3- Proposed list of instruments.