

Department of Biochemical Engineering and Biotechnology
Minutes of the Departmental Faculty Board Meeting
(DFB-05/2024-2025)

17/12/2024

The fifth meeting of the *Departmental Faculty Board* for the academic session 2024-2025 was held across two days: **Wednesday, December 11th, 2024** at **03:00 PM** and subsequent **Friday, December 13th, 2024** at **10:30 am** in the Committee Room of the Department.

The following members were present during the meetings:

<i>December 11, 2024</i>	<i>December 13, 2024</i>
Prof. Ritu Kulshreshtha, Chairperson	Prof. Ritu Kulshreshtha, Chairperson
Prof. Prashant Mishra	Prof. KJ Mukherjee
Prof. KJ Mukherjee	Prof. Preeti Srivastava
Prof. Atul Narang	Prof. Ravikrishnan Elangovan
Prof. Preeti Srivastava	Prof. Ishaan Gupta
Prof. Lucinda Doyle	Prof. Priti Sinha
Prof. Ishaan Gupta	Prof. Anjan Roy
Prof. Priti Sinha	Prof. Jatin Panwar
Prof. Anjan Roy	Prof. Amit Das, Convener
Prof. Jatin Panwar	
Prof. Amit Das, Convener	

Item 1: Confirmation of minutes of the 4th DFB meeting held on November 28th and December 2nd, 2024

*The minutes of previous meeting (DFB-04 of 2024-25) held on **November 28th and December 2nd, 2024** were confirmed as circulated.*

Item 2: Prof. Ishaan's request for additional TA's in BBL434

Prof. Ishaan requested allotment of additional TA's for his course BBL434 next semester. This is primarily to introduce three major updates. First, to introduce more detailed hands-on assignment pertaining to real-world applications. Second, to try new teaching tools that engage the students even after class. Third, to try AI-based teaching modalities to increase engagement. He also proposed names of following six DBEB students which he selected through a poll:

- 1. Khushi Singh (BTech)*
- 2. Anoushka Jain (BTech)*
- 3. Sidhant Bansal (BTech)*
- 4. Ashwani (BTech)*
- 5. Kavya S (MTech)*
- 6. Navaneeth K Nampoothiri (MSR)*

The DFB agreed with the proposal subject to approval of the respective supervisors of the MTech/MSR students. DFB also noted that no separate financial assistance will be provided to the TA's.

Item 3: Upgradation of teaching laboratory equipment/infrastructure under the UPGRAD program

The DFB discussed possible upgradations of UG and PG teaching laboratories through the UPGRAD program. The proposal is attached as annexure 1.

Item 4: Future of chemical engineering courses in the BTech program

Profs. Preeti and Jatin informed the DFB that they had a discussion with the HOD of chemical engineering department regarding the future of the CLL courses in DBEB UG curriculum. ChE HOD informed them that they won't teach any CLL courses to the DBEB UG students possibly after the curriculum revision. They won't even conduct the respective practical classes which will be phased out soon. DFB recommended that HOD should write to them regarding the details of CLL courses affected with timeline of the phasing out practical classes. These official details may be incorporated to redesign the CLL courses as BBL courses as part of the new curriculum revision.

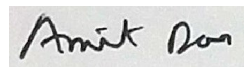
Item 5: Curriculum revision

DFB met again on 13th December 2024 to discuss revision of the DBEB UG and PG curriculum. The main agenda was to come up with a plan to become self-dependent in teaching of the engineering courses in view of the impending discontinuation of CLL courses. DFB proposed to remove some CLL courses and merge some CLL courses into new BBL courses to be floated by DBEB faculty. DFB made recommendations BS and GE courses from the current basket of floated courses. DFB also recommended UG core and elective courses and discussed the possible credit structure. The final proposed list of courses will be shared with DBEB faculty for comments.

Item 6: Any other matter with the permission of chair

- 1. Moving to 99c: HOD suggested all faculty should start checking their offices in 99c. If they feel that everything is fine, they may take the keys and otherwise report the issues to the office of Dean-infra for rectification.*
- 2. Prof Anjan proposed to the DFB whether the department should purchase a subscription to the online platform JOVE to increase the productivity of teaching and research. The DFB did not recommended the subscription at the moment.*

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



**Amit Das,
DFB Convener**

Annexure 1: UpGRAD proposal



Indian Institute of Technology Delhi

Application for the

UpGRAD

Support for UG & pG laboratory upGRADation

1. Name of the academic unit: Department of Biochemical Engineering and Biotechnology
2. Coordinator for the UpGRAD Program (HoD or faculty nominated by faculty board): Prof. Preeti Srivastava and Prof. Priti Sinha
3. Details of the laboratories to be upgraded or to be newly developed (laboratory-wise list of equipment is provided in next section) :

S. No.	Number & name of the lab course	Name of existing laboratory & physical location	No. of students doing this lab course	Sem I / Sem II / both	Faculty Coordinator	Expected Cost (Rs.)
1.	BBL342 (Physical and Chemical Properties of Biomolecules) BBL434, (Bioinformatics) BBL772 (Data analytics and informatics for Biotechnology)	Computation Lab	75-80 75-80 ~35	Both	Amit Das/Ishaan Gupta	20,50,000
2.	BBL231 (Molecular Biology and Genetics) BBL733 (Recombinant DNA Technology) BL771 (Microbial Biochemistry and Molecular Biology) BBL774 (Biomolecular Engineering)	UG/PG Lab	75-80 75-80 ~30 ~30	Both	Preeti Srivastava	10,55,000
3.	BBL749 (Cancer Cell Biology) BBL733 (Recombinant DNA Technology)	UG/PG Lab	~40 ~75	Both	Ritu Kulshreshtha	13,50,000

4.	CLL231 (Fluid Mechanics for Chemical Engineers) BBL432 (Fluid Solid Systems) BBL737 (Instrumentation and Analytical Methods in Bioengineering)	UG Lab/PG Lab	75-80 75-80 ~50-60	Both	Priti Sinha	80,00,000
5.	CLL261 (Process Dynamics and Control)	PG Lab	75-80	Sem III	Jatin Panwar	32,85,000
6.	BBL331 (Bioprocess Engineering) BBL332 (Bioprocess Engineering Lab)	UG Lab	75-80	Sem I	Ashish Misra	6,50,000
7.	For all courses	UG/PG	~200	Both	Ashish Misra	17,62,000
8.	BBL433 (Enzyme Science and Engineering)	UG/PGLab	~75	Sem	RKE	1200000
Total cost						1,93,52,000

4. Laboratory – wise list of equipment to be upgraded / repaired / replaced / newly set up:

S. No.	Name of the equipment to be upgraded / repaired/ newly purchased	Approx. cost	Faculty Coordinator responsible for purchase & installation	Expected date by which the equipment will be installed, and payment will be made (the funds will be allocated on 01 January)	Courses
EQUIPMENTS FOR ALL COURSES (UG/PG Lab)					
1.	RockerX 2	30000	Ashish Misra	Feb, 2025	All courses
2.	Vortexer	7000	Ashish Misra	Feb, 2025	All courses
3.	MinispinX4	400000	Ashish Misra	Feb, 2025	All courses

4.	Roller	15000	Ashish Misra	Feb, 2025	All courses
5.	Heating blockx2	40000	Ashish Misra	Feb, 2025	All courses
6.	magnetic stirrer	30000	Ashish Misra	Feb, 2025	All courses
7.	Homogenizer	450000	Ashish Misra	Feb, 2025	All courses
8.	Probe for sonicator	150000	K J Mukherjee	March, 2025	All courses
9.	15ml falcon centrifuge	40000	Ashish Misra	Feb, 2025	All courses
10.	High precision weighing balance	6000000	Priti Sinha	March, 2025	All courses
11.		1762000			
12.					
13.	EQUIPMENTS FOR BIOCHEMICAL ENGG COURSES (UG/PG Lab)				
14.	Tensiometer	1200000	Priti Sinha	April, 2025	BBL432
15.	Flow meters	200000	Priti Sinha	April, 2025	BBL432
16.	Packed bed	500000	Priti Sinha	April, 2025	BBL432
17.	Fluidised bed	500000	Priti Sinha	April, 2025	BBL432
18.	micro-PIV	400000	Priti Sinha	April, 2025	BBL432, BBL737
19.	Plasma cleaner	100000	Priti Sinha	April, 2025	BBL432, BBL737
20.	Different Pumps	2000000	Priti Sinha	April, 2025	BBL432, BBL 731, BBL737
21.	viscometer	1000000	Priti Sinha	April, 2025	BBL432
22.	Spin coater	5,00,000	Priti Sinha	April, 2025	BBL737
23.	Hot plate	5,00,000	Priti Sinha	April, 2025	BBL737

24.	Laser printer	10,00,000	Priti Sinha	April, 2025	BBL737
25.	Vacuum Pump	1,00,000	Priti Sinha	April, 2025	BBL737
26.	Spectrophotometer (for enzyme kinetics)	1200000	Ravikrishnan Elangovan	April, 2025	BBL433
27.	UV and RI detectors	500000	Ashish Misra	April, 2025	BBL331, BBL 432
28.	Chiller	150000	Ashis Misra	April, 2025	BBP332, BBL775
29.	absorption column	2000000	Jatin Panwar	April, 2025	BBL331
30.	apparatus to quantify mass transfer coefficient	1000000	Jatin Panwar	April, 2025	BBL331
31.	Function generator	25,000	Jatin Panwar	April, 2025	BBL737
32.	Oscilloscope	150000	Jatin Panwar	April, 2025	BBL737
33.	Multimeters	50,000	Jatin Panwar	April, 2025	BBL737
34.	Arduino	10000	Jatin Panwar	April, 2025	BBL737
35.	Miscellaneous components	50,000	Jatin Panwar	April, 2025	BBL737
36.		13135000			
37.	EQUIPMENTS FOR BIOTECH COURSES (UG/PG lab)				
38.	2 midi gel electrophoresis	100000	Preeti Srivastava	Feb, 2025	(BBL231, BBL733 and BBL771, BBL774)
39.	2 Vertical gel electrophoresis	100000	Preeti Srivastava	Feb, 2025	(BBL231, BBL733 and BBL771, BBL774)
40.	Helmet and goggles	5000	Preeti Srivastava	Feb, 2025	(BBL231, BBL733, BBL771, BBL774)
41.	UV torch	50000	Preeti Srivastava	Feb, 2025	(BBL231, BBL733, BBL771, BBL774)

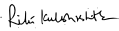
42.	enzyme pipette (2.5ul)	100000	Preeti Srivastava	Feb, 2025	(BBL231, BBL733 and BBL771, BBL774)
43.	Power packs	500000	Preeti Srivastava	Feb, 2025	BBL231, BBL733, BBL131, BBL771, BBL774
44.	Microscopes	200000	Preeti Srivastava	April, 2025	BBL132
45.	Desktop for microscope	50000	Ritu Kulshreshtha	Mar, 2025	BBL733, BBL749
46.	4X and 20X lens	300000	Ritu Kulshreshtha	April, 2025	BBL733, BBL749
47.	Plate Reader	1000000	Ritu Kulshreshtha	March 2025	BBL733, BBL749
48.		2405000			
49.	COMPUTATION LAB				
50.	2x 48 Port managed network switch	10,00,000	Amit Das	Mar, 2025	BBL342, BBL434, BBL772
51.	Power supply for network switch	50,000	Amit Das	Mar, 2025	-same-
52.	10x Desktop computers	10,00,000	Amit Das	Mar, 2025	-same-
		20,50,000			

Total= 19552000

5. Declaration:

This proposal has been prepared in consultation with the faculty board. I will myself will coordinate OR the academic unit has appointed **Prof Priti Sinha and Prof. Preeti Srivastava** to coordinate, the organization of this UpGRAD initiative. Our department/center/school will complete the necessary payments and submit a report in prescribed format, as per the approved timelines of this initiative.

Name and Signature of the Head of the Academic Unit

Ritu Kulshreshtha 

Please note:

- Proposals with bundled costs will not be considered. Laboratory-wise and equipment-wise breakup of cost is required.
- Only the equipment used for UG laboratories (and for PG teaching laboratories, with appropriate justifications) will be considered.
- Research equipment are not to be included.