

Department of Biochemical Engineering and Biotechnology
Curriculum Review & Development (05/2016-17)

March 02, 2017

The 5th Departmental Curriculum Review & Development Meeting of the session 2016-17 was held on 1st March 2017 at 12 noon in the Departmental Committee Room (I-230). The following members were present:

1. Prof. Atul Narang	Chairman
2. Dr. D. Sundar	Member
3. Dr. Shilpi Sharma	Member
4. Dr. Preeti Srivastava	Member
5. Dr. Ashish Misra	Member

The committee deliberated on the following agenda items.

1. Nomination of students for summer internship in UC Dublin

A total of 15 applications were received from dual degree and B. Tech students (Annexure I). Applications from 2013 entry students were not considered as the committee felt that they are in 4th year and they should give priority to the M.Tech project. Following four students who have done SURA project in summer 2016 were short-listed for summer internship in UC Dublin.

Entry number	Name of student	B. Tech/Dual	CGPA	Experience
2014BB10042	K. Vinay	3 rd year B. Tech	8.803	DR1 SURA 2016
2014BB10030	Ayushi Agarwal	3 rd year B. Tech	8.37	SURA-2016
2014BB10029	Archit Kumar	3 rd year B. Tech	8.269	SURA 2016
2014BB10033	Chaitanya Bhave	3 rd year B. Tech	7.589	SURA 2016

2. Discussion of the laboratory component of two courses Enzyme science and Engineering (BBL433) and Bioprocess engineering laboratory (BBP 332)

It was observed that in the course BBL433 upto 7 experiments were of enzyme science and only three experiments were of enzyme engineering. The committee recommended revision of the laboratory component to reflect the theory taught in the class. It was suggested that the revised template be submitted to Prof. Saroj Mishra, Chairman sub committee for revision of course templates. Similarly, revision of the experiments in the course BBP332 was suggested. The proposed list of experiments for BBL433 is attached in Annexure II.

3. Equipment from PLN03

Head informed that the Department has finished the entire amount sanctioned in PLN03. A request to sanction ~15 lakhs more in PLN03 will be submitted. The amount will be utilized for the repair and purchase of equipments listed below.

1. Repair of Polarimeter in Instrumentation lab : 3 lakhs
2. Repair of GC-MS in Instrumentation lab : 2 lakhs
3. Spectrophotometers (2 no.) for UG lab : 7 lakhs (repeat order)
4. Vortexers (9 no.) for UG lab : 1 lakh (repeat order)
5. Weighing balance (2 no.) for UG lab : 1 lakh (repeat order)
6. Pumps for UG lab : 1 lakh

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

Preeti Srivastava

Annexure I: Applications received for summer internship in UC Dublin

S. No.	Entry no.	Name of student	B. Tech/dual	CGPA	Training/experience
1	2013BB50009	Deepak Jat	4 th year dual	7.32	
2	2013BB50038	Shreya Pal	4 th year dual	7.94	(NUS): Duke-NUS Graduate Medical School (May 2016 – July 2016)
3	2013BB50042	Sparsh Agarwal	4 th year dual	7.653	1. Ecole Normale Supérieure, Paris (May, 2016 - July, 2016) 2. University of Leicester, UK, (May, 2015 - July, 2015)
4	2013BB50022	Mira Kabra	4 th year dual	8.67	DR-3 R&D, Panacea Biotec Ltd., Delhi (May, 2015 - July, 2015) SURA-2015
5	2013BB50046	Vageesh Gupta	4 th year dual	8.27	Xiamen University, China (May, 2015 - July, 2015) SURA-2015
6	2013BB50014	Ekatmika	4 th year dual	6.832	Biocon R&D Department, Bangalore, India (May, 2016 – July, 2016)
7	2013BB50008	Jayant Darokar	4 th year dual	5.581	CSIR-IGIB (Dec. 2016)
8	2014BB10030	Ayushi Agarwal	3 rd year B. Tech	8.37	SURA-2016
9	2014BB50010	Paras Agrawal	3 rd year dual	7.135	Australian Center for Astrobiology , UNSW(May, 2016 - July, 2016)
10	2014BB10052	Rashmi Yadav	3 rd year B. Tech	7.816	IGBMC France, 2016
11	2014BB10042	K. Vinay	3 rd year B. Tech	8.803	DR1 SURA 2016
12	2014BB10065	Vijayant Pratap	3 rd year B. Tech	7.6	
13	2014BB10029	Archit Kumar	3 rd year B. Tech	8.269	SURA 2016
14	2014BB10033	Chaitanya Bhawe	3 rd year B. Tech	7.589	SURA 2016
15	2014BB10050	Randheer	3 rd year B. Tech	7.8	Part of iGEM

Annexure II Proposed experiments for Enzyme science and engineering

1. Assay for invertase activity and effect of temperature
2. Assay for alcohol dehydrogenase activity and effect of pH
3. Kinetic Analysis of enzyme catalysed reaction (Determination of K_m and V_m)
4. Kinetic Characterization of the enzyme and in presence of an inhibitor
5. Enzyme entrapment in calcium alginate beads
6. Kinetic characterization of enzyme immobilized in calcium alginate beads
7. Effect of water and solvent on the lipase catalyzed esterification reaction.
8. Study conversion rate in CSTR enzyme reactors
9. Study conversion rate in PFR enzyme reactors
10. Calorimetric assay for glucose using immobilized glucose isomerase