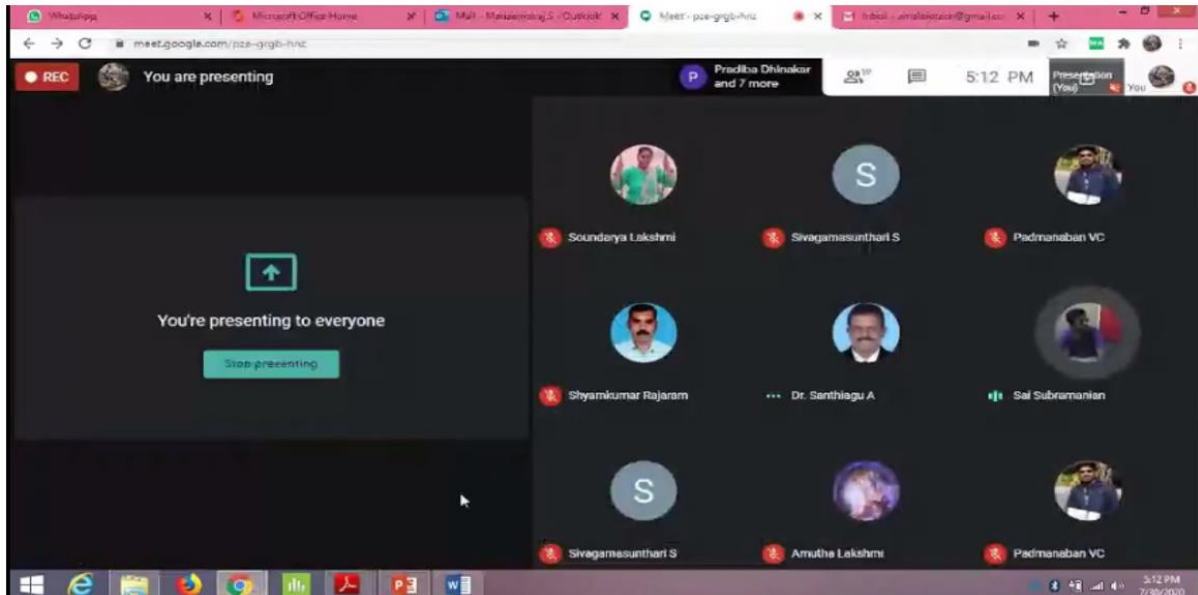




(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

ANNEXURE VIII

DEPARTMENT OF BIOTECHNOLOGY





(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

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DEPARTMENT OF BIOTECHNOLOGY
Minutes of Meeting – First Draft – BoS– 30th July, 2020

MINUTES OF THE 1st ONLINE MEETING

BOARD OF STUDIES OF BIOTECHNOLOGY

DATE: 30th July, 2020, Thursday

Time: 2.30 PM – 5.30 PM

PLATFORM : GOOGLE MEET

Meeting Link: <https://meet.google.com/pze-grgb-hnz>

IN ATTENDANCE:

S.No	Name of the Expert	Designation	Capacity
1	Dr. SukumaranPrabhu, Professor	Professor, Department of Biotechnology Sri Venkateswara College of Enigneering, Sriprembadur.	Anna University Nominee
2	Dr. A.Sanathiagu	Professor, School of Biotechnology, NIT Calicut, Kerala-673601.	Academic Council nominated BoS Members
3	Dr. N.Ayyadurai	Senior Scientist, Biochemistry & Biotech- nology, CSIR-Central Leather Research Institute, Adyar, Chennai – 600 020.	
4	Dr. K. Rajeshwari, Founder and Managing Director	Bioklone Biotech Private Limited, Plot No. 14 and 15, Golden Jubilee Biotech Park, (Inside SIPCOT IT Park), Siruseri, Nava- lur, Chennai – 603 103, Tamil Nadu, India.	Industrialist
5.	Ms.S.Sivagamasunthari Associate Scientist	Biocon Park , SEZ, BommasandraJigani Link Rd, Phase-IV, Bommasandra Industri- al Area, Bengaluru, Karnataka 560099.	Alumni

FACULTY OF BIOTECHNOLOGY	MEMBERS
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S.No	Name of the Faculty	Designation
1	Dr. M. Vasanthi	Chairperson / HoD-BT
2	Dr. AnantAchary	Principal and Senior Professor / BT
3	Dr. R. Shyam Kumar	PG Programme Co-ordinator
4	Dr. S. Mariaamal Raj	UG Programme Co-ordinator
5	Dr. K. Geetha	Research Programme Co-ordinator
6	Dr. I. Ganesh Moorthy	Associate Professor / BT
7	Dr.S.Karthikumar	Assistant Professor / BT
8	Mr.S.Manibalan	Assistant Professor / BT
9	Ms.M. Soundaryalakshmi	Assistant Professor / BT
10	Dr.V. C. Padmanaban	Assistant Professor / BT
11	Dr. A. Ronaldo Anuf	Assistant Professor / BT
12	Er. R.Amuthalakshmi	Assistant Professor / BT
13	Dr.D.Pradiba	Assistant Professor / BT

THE MINUTES:

The meeting is called for considering the Undergraduate and Postgraduate curriculum & syllabi.

DISCUSSIONS:

1. Dr.M.Vasanthi, the chairperson, welcomed the gathering and introduced the external members to the faculty.
2. The chairperson presented the Overview of the Institution/Department, Courses offered in the institution, Student and Faculty strength and also about the growth and development of the Institution/Department.
3. The chairperson discussed about the Proceedings of 1st Academic Council Meeting held on 17th July 2020 to the experts. The highlights of the discussion were as follows:

	<p>Recommendations from the Governing Body and Academic Council for Framing UG Curriculum:</p>	<ol style="list-style-type: none"> 1. Credit range: 165 – 170 2. 20 – 24 credit per Semester. 3. VIII Sem Project Work: 8 – 10 credits 4. Online Course (Maximum 6 credits) 5. Audit Course (Mandatory non credit) 6. First semester is common for all Programme 7. First year credit range : 40 – 42 8. Engineering Graphics to be in II Semester 9. Programme specific papers could be offered in II Sem. 10. AICTE & AU 2019 curriculum could be taken as base for framing curriculum. 11. III Sem Mathematics (Programme specific) Mandatory
	<p>Recommendations from the Governing Body and Academic Council for Framing PG Curriculum:</p>	<ol style="list-style-type: none"> 1. Credit range : 70 – 75 2. 20 – 22 credit per semester. 3. Online Course (Max 3 credits) 4. Open Elective: Industry Certification Courses 5. AU R2017 & AU R2019 curriculum could be taken as base for framing curriculum 6. Project Work Phase I : 6-8 credit 7. Project Work Phase II : 12-14 credit 8. II Sem Mathematics (Programme specific) Optional 9. Over and above credit will appear in transcript 10. 1 Tutorial period = 1 credit

4. Dr. R. Shyam Kumar presented the features of the PG regulations.
5. Dr. Sukumaran Prabhu, the Anna University nominee, suggested that credit distribution should be as per AICTE model curriculum. This would mean an allocation of credit range of 70 -75 for Postgraduate Syllabus.
6. The Anna University nominee advised to invite external evaluators for evaluation of both theory and practical papers for at least 5 years. After that internal faculty members could be involved in the evaluation process.
7. The Anna University nominee also suggested renaming the paper “Applied statistics for Biologists” to Applied statistics for Biotechnologists. He also recommended having a Committee of Faculty members from Mathematics and Biotechnology departments while preparing the syllabus.
8. Dr. A. Santhiagu supported the above statement and suggested to include Biostatistics related contents and case studies addressing the biological concepts in the syllabus.

9. The chairperson enquired that whether non – parametric tests could be included in the syllabus and Dr.A.Santhy accepted the above suggestion.
10. The Anna University nominee enquired about the minimum number of students required for the selection of one elective.
11. The chairperson replied that according to the Academic council meeting recommendations, the minimum number of students required for the selection of one elective in Post graduate programme would be followed and it is recommended to be 4 candidates
12. Dr.A.Santhy recommended including the Bioprocess Simulation course in the first semester as bridging course.
13. Dr.N.Ayyadurai suggested to add courses like Synthetic Biology and Structural Biology course in the syllabus.
14. Dr.A.Santhy supported the above statements and advised to include the subjects as Professional Elective in Semester 2.
15. Dr.K.Rajeshwari enquired about the provision for including courses focusing at Pharma Industry regulatory issues or Entrepreneurship to bridge the gap and make the students Industry ready candidates.
16. The Anna University nominee advised that there should be some difference between the Undergraduate and Postgraduate syllabus of Advanced Bioprocess Technology.
17. Dr.V.C.Padmanaban explained the outline of the Bioprocess Principles and Bioprocess Engineering of Undergraduate Curriculum and mentioned that around 20 -25% of syllabus is advanced in Postgraduate Curriculum.
18. Dr.A.Santhy recommended that the title of the first unit “Black Box Model” of Advances in Bioprocess Technology course has to be reframed.
19. He also suggested the swapping of Unit 3 and Unit 2 in Bioprocess Technology Course
20. Dr.K.Rajeshwari advised including Antibody therapeutics / Mammalian cell culture system as Case Studies in Unit 5 of Immunotechnology Course
21. Anna University nominee suggested to include Drug Designing topic in the Computational Biology paper and Mr.S.Manibalan mentioned that Molecular Docking topic was already there in the syllabus.
22. Anna University nominee enquired whether Animal Ethical committee approval is there for Animal Handling experiments given in Immunotechnology laboratory
23. The chairperson informed that it extension of approval need to be sought from Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)

24. Dr. A. Santhiagu and Anna University nominee suggested to remove the Handling of Animals Experiment (Experiment No. 1) from the immunotechnology lab syllabus
25. Dr. A. Santhiagu suggested renaming the lab course "Integrated Bioprocess Development Lab" as "Integrated Bioprocess Laboratory".
26. Anna University nominee suggested moving the Preparative Analytical Techniques lab to Semester 1 and Dr. Rajeshwari also suggested the same.
27. The chairperson suggested that over the years it is observed that Postgraduate students find it difficult to process the analytes in their chosen model or system for project work as they are not aware of the derivatization or analytical tools to be used for a specific biomolecule purification and characterization. It was discussed and concluded that first seven experiments of the Lab Preparative Analytical Techniques can be moved to semester 1 as separate laboratory. As per this suggestion new laboratory course titled Advanced Biochemistry and Advanced Microbiology laboratory would be included in the first semester.
28. Anna University nominee insisted on having Biosafety Committee for conducting experiments related to Recombinant DNA Technology.
29. Anna University nominee also suggested to include the Extracellular matrix and Scaffold topics in Unit 3 of Tissue Engineering.
30. Anna University nominee suggested to include including Research methodology for Biotechnologists course as Professional Course instead of elective course. Dr. A. Santhiagu suggested that it is mandatory for Ph.D program and for the Post graduate program it could be offered as elective paper and students opting for higher studies could study it
31. The above statement was discussed and it was decided to include the Research Methodology paper to the Professional Elective Category.
32. Er. S. Sivagamasundari suggested providing Industry specific topics like Regulatory Affairs and Industry Oriented Certification courses as Professional Elective.
33. All the faculty members of the department accepted her suggestion.
34. Anna University nominee suggested NPTEL/SWAYAM platform for Online courses as 2 credit course.
35. Er. M. Soundaryalakshmi enquired about the duration of Online Course to the experts.
36. It was recommended that duration of online course can be minimum of 8 weeks and maximum of 12 weeks.
37. The External experts suggested the following suggestions regarding the formatting of the syllabus:

- i. For every Paper, under objective, the phrase “The Course aims at” has to be removed.
- ii. The objective has to be pointed out clearly.
- iii. For every paper, Unit title has to be checked for the appropriateness with the contents of the unit
- iv. In each unit, subtitles have to be clearly mentioned separated by hyphen.
- v. In reference section, DOI can be mentioned for e-Books, for re-prints, Book edition and Publication has to be checked
- vi. For the entire syllabus, margin alignments have to be done uniformly.

38. After this, the chairperson presented the regulation of Undergraduate syllabus.

39. The chairperson, presented the proposed R2020 - First year curriculum, syllabus and curriculum framework for the Undergraduate (UG) program. Also, she presented the comparison of the overall credit of proposed R2020 KCET, AICTE model curriculum and AU R2019 curriculum to the board.

40. Anna University nominee suggested framing the UG curriculum with 160 credits. Dr. Anant Achary and the chairperson highlighted the Academic council recommendations as well as AICTE model curriculum.

41. Dr. A. Santhiagu and other board members agreed to proceed with overall credit of 165 to 170 for the UG program.

42. The chairperson presented the proposed UG curriculum for the II, III and year. The board of study members recommended that the academic council recommendations could be adopted.

43. Students should complete two mandatory audit courses (non -credit) to become eligible for getting degree,

44. Online courses of maximum 6 credits (one online course should be given during VII/VIII semester),

45. Seven professional electives can be offered to UG Biotechnology students and 2 open electives could be offered to other departments

46. Over and above credit for internship/training, value added programs could be included.

47. Anna University nominee opined that categorization of courses under specific categories like professional core, professional electives, engineering sciences, general engineering, employability enhancement courses need to be properly verified before drafting the syllabus. He also suggested that prerequisite components for higher semester

papers should be met with in the lower semesters and there has to be a sequential arrangement of theory and laboratory courses and should facilitate thorough understanding of the concepts by the students. The chairperson assured that all these fundamental things will be abided and will follow the institutional guideline framework for allocation of codes and categories for the courses.

48.The chairperson explained to the members that the UG curriculum framework will be shared to the members of the BOS through online before drafting of the syllabus and the presentation of the same in the meeting to be scheduled for finalization and approval of UG curriculum framework and syllabus.

49.Dr. A.Santhyagu, and Ms. S.Sivagamasundari appreciated the efforts taken by the Department of Biotechnology to design the professional elective category based on the various domains of biotechnology that would support the Program Specific outcome of industry preparedness and higher study preparedness. The external expert members appreciated the effort taken by the department in considering GATE syllabus while framing the elective subject options.

50.The syllabus of the programme specific course to be offered during the second semester , Biochemistry and Biochemistry Laboratory was presented to the board and the following modifications were suggested by Dr. A. Santhyagu : the title of Unit 1 to be modified as “Introduction to Biomolecules”and modifying the content of unit 2 based on unit 1.

51.Anna University nominee opined that the syllabus for Biochemistry theory paper proposed for the second semester needs extensive revision as the syllabus proposed is very vast . He also opined that the subunits need to be specifically pronounced to avoid ambiguity while setting question paper. He also suggested including clinical biochemistry aspects in the fifth unit instead of case studies related to industrial biotechnology. He also extended his support in drafting the syllabus

52.In Biochemistry laboratory Course, the members opined that no modifications were required and it could be taken as such

Date of next meeting:The next meeting will be held during the next even semester (tentatively, First week of January, 2021).

Dr.R.Shyam Kumar proposed the vote of thanks to all the external and internal experts and the meeting adjourned
