



(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).

DEPARTMENT OF BIOTECHNOLOGY

MINUTES OF THE 4th MEETING

BOARD OF STUDIES OF BIOTECHNOLOGY

DATE: 16, March, 2022, Wednesday

Time: 10.30 AM – 1.30 PM

PLATFORM: MS-Teams

Meeting Link:

https://teams.microsoft.com/l/meetupjoin/19%3ameeting_Mjk1YtQ3MjYtNzZiNS00YjI2LWI2M2MtNWU2MWNiNTZhNTM2%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%2253e97dde-b467-45ac-80a2-df98f8017534%22%7d

IN ATTENDANCE:

BoS External members:

S. No	Name of the Expert	Designation	Capacity	Attendance
1	Dr. Sukumaran Prabhu	Professor, Department of Biotechnology, Sri Venkateswara College of Engineering, Pennalur, Sriperumpudur tk – 602117	Anna University Nominee	Physical mode
2	Dr. A.Santhyagu	Professor, School of Biotechnology, NIT Calicut, Kerala-673601.	Academic Council nominated BoS Member	On-line
3	Dr. N.Ayyadurai	Senior Scientist, Biochemistry & Biotechnology, CSIR-Central Leather Research Institute, Adyar, Chennai – 600 020.	Academic Council nominated BoS Member	On-line
4	Dr. K. Rajeshwari	Founder and Managing Director, Bioklone Biotech Private Limited , Plot No.14 and 15, Golden Jubilee Biotech Park, Siruseri, Navalur, Chennai – 603 103, Tamil Nadu.	Industrialist	On-line

5	Ms.S.Sivagamasunthari	Associate Scientist, Biocon Park , SEZ, BommasandraJigani Link Rd, Phase-IV, Bommasandra Industrial Area, Bengaluru, Karnataka 560099.	Alumni	On-line
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BoS Internal members:

S. No	Name of the Faculty	Designation
1	Dr. R. Shyam Kumar	Chairperson / HoD-BT
2	Dr. S. Mariaamal Raj	UG Programme coordinator
3	Dr. K. Geetha	PG Programme coordinator
4	Dr.S.Karthikumar	Research Programme coordinator
5	Dr. I. Ganesh Moorthy	Associate Professor / BT
6	Mr. S. Manibalan	Assistant Professor / BT
7	Ms.M. Soundaryalakshmi	Assistant Professor / BT
8	Dr. A. Ronaldo Anuf	Assistant Professor / BT
9	Ms. R. Amuthalakshmi	Assistant Professor / BT
10	Dr.D.Pradiba	Assistant Professor / BT

THE MINUTES:

The BOS meeting was organized for discussing the curriculum framework of newly proposed KCET regulation R2021, syllabus of 3rd and 4th semester courses of R2021, syllabus of 3rd year and 4th year courses of R2020.

DISCUSSIONS:

- Dr. R. Shyam Kumar, Chairperson of the BOS, delivered the Welcome address.
- Dr. K .Geetha, PG programme coordinator, presented the Vision, Mission, PO, PEO and PSO for UG and PG Programmes.
- Dr. Sukumaran Prabhu, the Anna University nominee, enquired whether the PEO and PSO were attained for UG and PG Programmes. He also enquired about research and placement activities of PG students.
- Dr. S. Mariaamalraj, the UG programme coordinator mentioned the placement record of PG students and UG students to the BoS members.
- The Anna University nominees, suggested highlighting the placement and research achievements of UG and PG students in graphical representation in future meeting.
- Dr. R. Suresh Babu, Dean (Academic Courses) suggested to formulate additional POs for PG courses. Dr. I. Ganesh Moorthy, mentioned that the POs are available in the NBA website which can be used for mapping.

Discussion on curriculum framework of R2021

- The UG programme coordinator presented the proposed R2021 overall credit distribution to the BoS members wherein he highlighted that the total credits have been increased to 180 in order to strengthen the employability skills area. The Anna University nominee conveyed his concern regarding students' difficulty if the number of courses were increased to attain 180 credits.
- The UG programme coordinator mentioned that employability enhancement courses such as "Coding theory I and II" in 1st year curriculum, "Design thinking" course in 2nd year curriculum will be added and the credit weightage for mini project and project work will be increased. No other courses have been added to the curriculum. This will encourage the students to improve their employability as well as research interest.
- The Anna University nominee questioned why a new regulation (R2021) is proposed before the passing out of even one batch of R2020. The UG programme coordinator replied that, as per the new National Educational Policy, the common first year curriculum and courses related to employability enhancement need to be included in the curriculum. Hence the need for proposing a new regulation.
- Dr. R. Shyam Kumar, the Chairperson mentioned that, the Academic council suggested to follow the new NEP and frame R2021. The Anna University nominee inquired whether all the colleges nearby are following the same and he enquired if any guidelines has been received from Anna University regarding the same. It was informed that, nearby colleges are also in the process of implementing the same and so far no guidelines has been received from Anna University.
- Dr. A. Santhiagu, Anna University nominee, suggested that Academic council of autonomous institution has the freedom to propose the new regulation until there are no guidelines given by Anna University.
- Dr. R. Suresh Babu, Dean (Academic Courses) insisted that the first year curriculum of all the departments need to be uniform and the new regulation with required changes has been framed according to the recommendations given by the academic council.
- The Anna University nominee enquired about the learning resources for online courses. The UG Programme coordinator replied that courses from NPTEL/ SWAYAM platform are chosen for online courses. The Anna University nominee suggested including Coursera platform also as it will additionally provide many valuable courses. The suggestion was highly appreciated and will be conveyed to the Dean Academic Courses.
- Dr. K. Rajeshwari, the industrialist, enquired about the list of courses under Employability Enhancement courses (EEC) and mock interview sessions that are conducted for students. The UG programme coordinator listed the courses which are categorized under EEC courses like Coding techniques theory and laboratory courses, English laboratory courses, Mini projects and project work. He also informed that practice session on Listening, Speaking, Reading and Writing will be conducted along with mock interview. All the BoS members accepted the same.

- The Anna University nominee queried about the open elective courses offered by other departments. He also asked about the procedure to disseminate the details about open elective courses to students. The UG programme coordinator explained that the class chairperson will disseminate the information about open elective courses in class committee meeting. The students will select the courses based on their interest. The BoS members accepted the same.
- The Anna University nominee inquired about the credit distribution in “Principles of Engineering” and “Coding techniques” courses in 1st year curriculum. He also enquired whether tutorial hours are provided for practicing problems and programs in coding theory courses. The UG programme coordinator replied that there is a separate laboratory course provided for Coding Technique in the same semester for practicing programmes. The BoS members accepted the same.
- The Anna University nominee enquired about the credit distribution (3 credits given for 2 Theory and 3 Practical hours) for the course “Engineering Graphics”. He inquired the reason behind giving 1 credit for a 3 hour practical session. His concern was that this should not lead to confusion among the students while calculating the GPA. There should be a clear indication about the same in regulation. He also suggested to reduce one theory hour and it can be added to practical hour. Dr. A. Santhiagu, the Academic council nominee also supported and suggested the same. He informed to bring this to the concern of academic council in future. The suggestion will be conveyed to the Academic Council.
- The UG programme coordinator presented the 3rd and 4th semester courses of R2021 to BoS members. The Anna University nominee, recommended to swap the Cell Biology theory and Cell Biology laboratory courses of 4th semester to 3rd semester with Microbiology theory and Microbiology laboratory courses of 3rd semester. The Industrial nominee, also suggested the same and insisted that studying Cell biology theory and lab courses before Microbiology theory and lab courses would be essential for clear understanding about the prokaryotic and eukaryotic cells.
- Dr. A. Ronaldo Anuf, the subject expert, explained the content of the syllabus of the Cell biology courses. The chairperson, suggested that, studying Microbiology in 3rd semester would be essential to learn Basic industrial Biotechnology in 4th semester. Dr. S. Karthikumar also suggested the same to BoS members. However, the Anna University nominee and Industrial expert, emphasized that exposure of students to basic cells and its organelles, difference in prokaryotes and eukaryotes is very important before learning Microbiology courses. Hence, Cell biology course can be given in 3rd semester prior to Microbiology. The suggestion was well accepted by all the members of the board and incorporated in the curriculum.
- In Design Thinking course, the Anna University nominee inquired that whether the students are showing interest in learning Audit course in R2020 (non-credit course in R2021). Dr. A. Ronaldo Anuf, the subject expert, mentioned that the students are showing good interest. The UG programme coordinator said that, 75% attendance is mandatory for completing the course. Also it is mandatory to study 2 Audit courses to get degree. The BoS members accepted the same.

- The Anna University nominee asked the process of allocating guides to the students for mini project and project work. The UG programme coordinator explained that, based on the interest of students, guides will be allocated. All the faculty members present their research area of interest to the students who will select the guide based on their area of interest. The Anna University nominee suggested to make sure that appropriate distribution of students to all the faculty members is followed. Dr. K. Geetha, PG programme coordinator emphasized that at least one student group will be allotted to each faculty member. The BoS member accepted the same.
- In professional elective courses, the Anna University nominee enquired about the availability of experts in handling Algal Technology, IPR courses. The UG programme coordinator informed that Dr. R Shyam kumar, the Chairperson and Dr. I. Ganesh Moorthy are the subject experts for Algal Technology and IPR courses, respectively.
- The Anna University nominee asked about the purpose of inclusion of Human Anatomy along with Physiology course in professional electives. The UG programme coordinator explained that one of the recruiters, Medical coding industry, insisted on teaching human anatomy to the students as part of their UG courses. Dr. S. Karthikumar said that this will help the students to understand other courses like Immunology, Cancer biology etc. The Industrial nominee supported the same. Dr. D. Pradiba also informed that understanding the anatomy would help students during their project phase for animal studies. Mr. S. Manibalan insisted that learning Human Anatomy would help the students to pursue Medical Pharmaceutics programme in Post-graduation. The BoS members accepted all the suggestions.
- The Anna University nominee insisted on moving the course “Protein Engineering” from professional elective list to the core course list. The industrial nominee also suggested the same and recommended to have Biotherapeutics / Molecular Therapeutics courses in the elective list instead of protein engineering. Dr. N. Ayyadurai, Academic council nominee, suggested to include courses related to Recombinant engineering in the elective bucket. Dr. K. Geetha, PG programme coordinator replied that recombinant engineering would be covered in the Genetic engineering course itself. The BoS members accepted the same. The suggestions were included in the curriculum.
- The UG programme coordinator mentioned that, in order to maintain the credit distribution to Professional core courses (PCC), one of the PCCs should be removed while Protein Engineering is included in the list of PCC. Dr. I. Ganesh Moorthy, suggested to merge Bioprocess principles and Bioprocess Engineering courses. The Anna University nominee and Dr.N.Ayyadurai, Academic council nominee suggested to ensure that the content of both bioprocess theory and laboratory courses are covered. Dr. I. Ganesh Moorthy also pointed out that most of the experiments in Bioprocess laboratory I are related to enzyme kinetics. Hence the name of the laboratory course can be changed from Bioprocess Laboratory I to Enzyme Engineering Laboratory. Dr. N. Ayyadurai, the Academic council nominee, suggested to ensure no overlaps in the experiments. All the BoS members accepted the changes and the changes were incorporated in the curriculum.

- The Industrial nominee enquired whether practical hour is included in Protein Engineering course. It was clarified that there is no practical hour allotted for protein engineering.
- The Anna University nominee suggested to swap Tissue Engineering course from 7th semester professional elective to 6th semester elective courses along with Stem Cell Technology. They pointed out that it is necessary to learn Stem cell technology either prior to or along with Tissue Engineering. The point was well taken and incorporated in the curriculum.
- The Anna University nominee inquired about the course content and necessity of Developmental Biology course in professional electives. Dr. D. Pradiba, the subject expert, explained the course content and emphasized that learning this course would enable students to prepare well for the competitive exams like CSIR – NET, DBT-JRF etc. The BoS members accepted the same.
- The Anna University nominee recommended to include course related to phytochemical analysis related course in the electives. The Industrial nominee also suggested the same and mentioned to include Phytomedicine. The point was well taken and incorporated in the curriculum.
- In Open Elective courses, the Anna University nominee enquired whether Nano technology course is offered by any other departments. He insisted to ensure that Nano technology should be given before Nanobiotechnology. The point was well taken.
- In Open Elective II, The Anna University nominee and Dr. N. Ayyadurai, Academic council nominee suggested to merge Bioremediation course with Environmental Biotechnology course. Dr. K. Geetha, PG programme coordinator suggested to add Principles of Food Processing in the place of Bioremediation. The BoS members also suggested the same. The points were well taken and implemented in the curriculum.
- The Anna University nominee suggested to provide the open elective courses to all the departments. The suggestion was well taken and would be conveyed to Dean Academic Courses.
- The syllabus of all the courses in R2021 (3rd & 4th Sem) were approved without any modifications except Microbiology theory, Biochemistry Laboratory and Enzyme Technology & Biotransformation theory where suggestions for improvement were given.

Discussion on Syllabus of Microbiology Theory Course:

- In Microbiology course syllabus, the Anna university nominee suggested to reframe the sentence to “multiplication of virus, bacteria and bacteriophage” in unit 2. The point was well taken and incorporated.
- In Unit 4, the Anna University nominee mentioned the typographical error. It was suggested to give “:” instead of “-“. The point was well taken and suggestion is incorporated.
- The industrial nominee suggested to include one fungal disease in unit 4. The point was well taken and it was added in the syllabus.
- In unit 5, the Anna university nominee suggested to mention the microorganism name in Leaching of ores. The point was well taken and the suggestion has been incorporated.

- Dr. S. Kathikumar suggested to remove “Biosensor” from Unit 5 as it overlapped with Enzyme Technology. The point was well taken and suggestion was incorporated.

Biochemistry Laboratory course syllabus

- In Biochemistry Laboratory course, the Anna university nominee suggested to modify “the estimation of protein by UV spectroscopy” to “UV-Visible spectroscopy”. The industrial nominee also suggested to add BCA method of estimating protein. The points were well taken and incorporated in the syllabus.
- The Anna University nominee enquired whether commercial TLC plates are available. Dr. S. Karthikumar replied that they are available for students.
- The Anna University nominee suggested to include the source of phytochemical extraction in experiment 10. The point was well taken and incorporated in the syllabus.
- In experiment 11, the Anna University nominee suggested to add salivary amylase enzyme. The point was well taken and corrections were made accordingly.
- In experiment 12, it was suggested to mention Origin pro (trial version). The software was included as per the suggestion.

Enzyme Technology and Biotransformation

- The Anna University nominee enquired about the content of Unit 5. Dr. S. Karthikumar, the subject expert, clarified that application of enzymes in production of different pharmaceutically important molecules will be covered. The BoS members accepted the same.

Discussion on Result analysis

- The end-semester results of II year Biotechnology (1st and 2nd semester) were presented to the BoS members. The Anna University nominee enquired about the pass percentage. He suggested that comparison should be done between AUR2017 batch students` result with R2020 (KCET) batch students. The point was well taken.
- The UG programme coordinator proposed the Vote of Thanks and the meeting concluded successfully.



Dr S.Mariaamalraj
BoS Coordinator



Dr R.Shyam Kumar
BoS-BT Chairman