



(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).

**MINUTES OF THE 5th MEETING
BOARD OF STUDIES OF BIOTECHNOLOGY**

DATE: 23 September 2022, Friday

Time: 10.00 AM – 1.00 PM

PLATFORM: MS-Teams

Meeting Link:

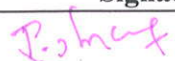
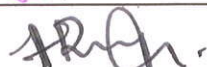
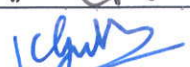


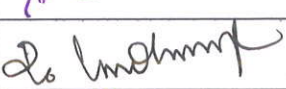

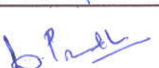

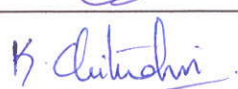

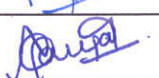
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IN ATTENDANCE:

BoS External members:

S. No	Name of the Expert	Designation	Capacity	Attendance
1	Dr S.Venkatesan	Professor & Head, Department Of Petrochemical Technology, Bharathidasan Institute Of Technology (Bit) Campus, Anna University, Tiruchirappalli	Anna University Nominee	In person
2	Dr. N.Ayyadurai	Senior Scientist, Biochemistry & Biotechnology, CSIR-Central Leather Research Institute, Adyar, Chennai – 600 020.	Academic Council nominated BoS Member	On-line
3	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
4	Ms.S.Sivagamasunthari	Associate Scientist, Biocon Park , SEZ, Bommasandra Jigani Link Rd, Phase-IV, Bommasandra Industrial Area, Bengaluru, Karnataka 560099.	Alumni	On-line

BoS Internal members:

S. No	Name of the Faculty	Designation	Signature
1	Dr. R. Shyam Kumar	Chairperson / HoD-BT	
2	Dr. A. Ronaldo Anuf	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	Dr.R.Baskaran	Associate Professor / BT	
7	Er. S. Manibalan	Assistant Professor / BT	
8	Dr. D.Pradiba	Assistant Professor / BT	
9	Er. R. Amutha Lakshmi	Assistant Professor / BT	
10	Mrs. K. Chitradevi	Assistant Professor / BT	
11	Mr. Karl Joseph Samuel	Assistant Professor / BT	
12	Mrs. A. Ganga	Assistant Professor / BT	

THE MINUTES:

The BoS meeting was organized for discussing the curriculum framework of amendments in proposed R2021, syllabus of IV semester courses of R2021, syllabus of 4th year (VII and VIII Semesters) courses of R2020 and syllabus of special elective courses for doctoral program

Discussion:

1. Dr. R. Shyam Kumar, Head of the Department delivered the Welcome address
2. Dr. K. Geetha, Associate Professor, introduced Dr. Venkatesan, the Anna University nominee to the other members of the Board of Studies
3. Dr. K. Geetha, PG programme coordinator, presented the Vision, Mission, POs, PEOs and PSOs for the UG Programme.
4. Dr. A. Ronaldo Anuf, UG programme coordinator, presented the proposed curricular amendments in R2021 to the Board of Studies members.

Discussion on agenda:

1. The UG programme coordinator presented the R2021 with the concepts of Honours degree and Minor degree which was proposed by the Anna University, Chennai. He mentioned that the total credits have been reduced from 180 credits to 166 credits which could help the students to get a provision for add-on courses to avail Honours and Minor degree.

2. The UG programme coordinator mentioned that the General Aptitude course (1 credit course) was introduced as a new course in the fourth semester of the curriculum.
3. The UG programme coordinator mentioned about the verticals (a total of eight verticals across various domains with seven courses in each vertical) for Professional Elective (PE) courses in R2021. He also discussed about the institute level verticals for Minor degree. Six PEs and four Open Electives (OE) will be introduced in which two OE courses shall belong to emerging technologies like IoT.
4. The UG programme coordinator informed about introduction of one management course - Human Values and Professional Ethics in the VII semester as per the proposed Anna University curriculum R2021.
5. The UG programme coordinator mentioned about the concept of Summer Internship/ Mini Project in two semester (Semester IV & VI) vacations which will be evaluated in the V & VII semester respectively.
6. He mentioned that Mandatory audit courses in Tamil language (Scientific Thoughts in Tamil) will be introduced in the curriculum with over and above credit.

Discussion on proposed curriculum framework R2021:

1. The UG programme coordinator specifically mentioned that R2021 regulation have been started and the first batch of R2021 currently doing their second year (III semester-Students admitted in AY 2021-22). The proposed modifications will be implemented from their IV semester.
2. The UG programme coordinator mentioned that the mandatory online courses as proposed in the curriculum have been removed. Instead of that the completion of online course will be considered as an equivalent to PE in the verticals. All the BoS members agreed.
3. The UG programme coordinator presented the curriculum for each semester. He mentioned that there is no major modification in the first semester and one new course "Scientific Thoughts in Tamil" will be introduced from AY 2022-23 onwards.
4. The UG programme coordinator requested special permission from the Board of Studies Members to add the Mandatory audit course - Scientific thoughts in Tamil in semester IV for the first batch of R2021 students admitted in AY 2021-22.
5. The UG programme coordinator informed that there is no major modifications in the second semester curriculum. The Anna University nominee enquired about the syllabus of Coding Techniques I and II courses which was clarified by the programme coordinator.
6. The UG programme coordinator presented the curriculum of the III semester and mentioned that the audit courses will be added from the list provided.
7. The UG programme coordinator mentioned that the "General Aptitude" course was included in IV semester for facilitating the students during their placement and competitive examination preparation. In addition, the modifications were made in the "Chemical Engineering Laboratory" syllabus and the credits have been reduced to 1. The Anna University nominee suggested that instead of "General Aptitude" the "Professional Development" course may be included as a compulsory 1 credit course. The UG programme coordinator replied that the current R2021 first batch students are already undergoing it as an audit course (Developing your Personality) in the III semester.
8. The UG programme coordinator mentioned that the "Summer Internship" will be taken up by the students for a period of two weeks (1 credit) in IV semester and VI semester vacation and the same will be evaluated in the V and VII semester respectively. The

Anna University nominee mentioned that the students can visit any industry/ institute/ other educational organization/ research centre/ entrepreneurship activity to earn credit for Summer Internship.

9. The UG programme coordinator mentioned that the "Protein Engineering" course was shifted to PE vertical list from the Professional Core. "Bioinformatics" course was shifted from VI semester to V semester. He informed that the "Immunology" course was shifted from VII semester to VI semester because semester VII has common courses like Management elective courses and OE courses. "Immunology Laboratory" was converted to 1 credit course (3 hours) from 2 credits. The Anna University nominee enquired about the credit and hours system. The UG programme coordinator explained the system to the panel members.
10. The UG programme coordinator mentioned that three PE is offered in V Semester. In semester VI three PE and one OE will be offered. The OE (OE-I) will be offered from the list of courses in Emerging technologies.
11. In semester VII, 3 OE (OE-II, III and IV) will be offered, in which OE-II will be in emerging technologies domain and OE-III & IV will be from courses offered by other departments
12. The UG programme coordinator informed that the "Computational Biology Laboratory" was introduced in VII semester and "Project Work" was in VIII semester. The Anna University nominee suggested that the project work may include Industry oriented Project/ Internship and the rubrics need to be framed for evaluating the same.

Discussion on PE Verticals framework R2021:

1. The UG programme coordinator mentioned that 8 verticals have been planned in different domains, each containing seven courses. He listed all the verticals with the subjects in which the highlighted courses had equivalent NPTEL course (12 weeks). The students may drop a PE course by completing the equivalent NPTEL course. Anna University nominee insisted to provide the list of equivalent NPTEL courses for the subjects in the verticals. He also suggested that the students can take-up courses in other platforms like Coursera, edX & MOOC platform. The UG programme coordinator replied that the "Three-member committee" will guide students with the selection of NPTEL courses.
2. Dr S. Venkatesan, Anna University nominee enquired about the flexibility of handling the vertical courses by the faculty members. He insisted not to compromise on the fundamental core courses. The UG programme coordinator replied that only one course (Protein Engineering) has been shifted from Professional Core to PE verticals. All other courses has been retained.
3. The UG programme coordinator mentioned that the Anna University R2021 syllabus has provided 7 verticals, whereas in our (KCET R2021) proposed vertical list the "Diversified vertical" has been included to accommodate basic and advanced courses like Immunotechnology, Biosensors, Bio-nanotechnology, Bio-conjugate Technology & Algal technology.
4. Dr. N. Ayyadurai, Academic council nominee, appreciated that lot of choices have been provided for the students to select the PE course based on their interest. He enquired about the number of students required for offering the course. The UG programme coordinator replied that minimum 15 students are required for offering a particular course.
5. The UG programme coordinator presented the list of OE offered to other Department students by Biotechnology Department. Dr. N. Ayyadurai, Academic council nominee

enquired about the student response to the OE courses. The UG programme coordinator clarified that although learning the fundamentals would be difficult, subject becomes interesting once they learn the concepts.

6. Dr. K. Rajeshwari, the industry nominee, enquired about the course “Testing of Biological Materials”. The UG programme coordinator explained about the syllabus of the particular course to the members. She suggested to change the course title, if required. Dr. N. Ayyadurai, Academic council nominee clarified that the course deals with biomaterials and therefore the same course title may be retained.
7. Dr. K. Rajeshwari, the industry nominee, enquired about the course “Plant Biotechnology”. The UG programme coordinator replied that the course has been included in the vertical titled “Food & Agro-Sciences”.
8. Dr. K. Rajeshwari, the industry nominee, enquired whether any of the theory courses in the verticals have practical classes/ site visit. The UG programme coordinator replied that all the courses are theory based with a provision to include activities like field visit/ proposal writing / project presentation.
9. Dr. K. Rajeshwari, the industry nominee, enquired about the content of “Bio-entrepreneurship” syllabus. The UG programme coordinator informed that the course contains topics supporting real time applications like project presentation. In addition to that Dr. S. Karthikumar, Subject expert, explained about the syllabus and real time activities such as business model preparation, market survey and start-up schemes related the course. All the Board members accepted the same.

Discussion on syllabus for fourth semester R2021:

1. The UG programme coordinator presented the syllabus for all the theory and laboratory courses for IV semester under R2021.
2. The Anna University nominee insisted that department faculty shall handle “Probability and Biostatistics” course with program specific examples. The UG programme coordinator replied that the course will be conducted by mathematics faculty with real time applications in the field of biotechnology. In addition, he mentioned that the syllabus was framed by mathematics department with inputs from Biotechnology faculty.
3. Dr. I. Ganesh Moorthy, NBA coordinator mentioned that the applications of the mathematical course are conducted as a “Value Added Program” under the topic - Design of experiments & MATLAB for the students. The basic fundamental concepts of mathematics such as ANOVA table, F Test will be refreshed during the conduct of VAP. The Anna University nominee accepted the same.
4. Dr S. Venkatesan, Anna University nominee suggested that the syllabus of “Fluid Mechanics and Heat transfer operations” is too heavy for a biotechnology student and few parts in the syllabus may be removed. Dr. I. Ganesh Moorthy, the Subject expert mentioned that the course is designed in view of GATE preparation, as most of the topics are reflected in GATE. He informed the BoS members that Unit 5 - Radiation may be removed and replaced by Evaporators concepts. All the Bos Members accepted the same.
5. Dr. N. Ayyadurai, Academic council nominee enquired about the “Molecular Biology” course syllabus represents only DNA concepts. Dr. S. Karthikumar, Subject expert replied that the particular subject act as a fundamental prerequisite course for “Genetic Engineering” course. Dr. R. Shyam Kumar, Head of the Department mentioned that the syllabus for course was framed by referring Anna University and other universities. In addition to that, Dr. K. Geetha, the PG programme coordinator added the point that,

majority of the institution follows the same syllabus. Dr. K. Rajeshwari, the industry nominee also explained that the particular course covers the basics and the advanced techniques like Recombinant DNA Technology will be covered in the Genetic Engineering course. And the Bos members accepted the same.

6. The UG programme coordinator presented the syllabus for "General Aptitude" course which is a common course at intuitional level. The Anna University nominee asked to compare it with GATE syllabus.

Discussion on syllabus for IV-year (VII & VIII Sem) R2020:

1. The UG programme coordinator presented the syllabus of all theory and laboratory courses of VII and VII semester under R2020.
 2. The UG programme coordinator presented the syllabus of "Immunology Laboratory" course. Dr. K. Rajeshwari, the industry nominee, suggested to form the Animal ethical committee for animal studies. The UG programme coordinator replied that the work has been already started and it will be completed by this semester. Dr. K. Geetha, Subject Expert informed that the experiments related to handling of animal are only theory based.
 3. The UG programme coordinator presented that the syllabus for all the professional elective courses of R2020. In this, he mentioned that the "Bio-conjugate Technology" course syllabus was framed by the guidance given by industry nominee in the previous BoS meeting.
 4. The UG programme coordinator presented the syllabus of all the OE courses of R2020 which will be offered to other departments by the Department of Biotechnology.
 5. Dr. N. Ayyadurai, Academic council nominee suggested to provide the students training regarding analytical data interpretation. The UG programme coordinator replied that the intensive training can be given for the students before starting of their project work.
 6. Dr. K. Rajeshwari, the industry nominee enquired about the time duration for the "Summer Internship" and "Project Work". The UG programme coordinator replied that the time duration for Summer Internship was 2 weeks and 3 months for Project Work. Dr. N. Ayyadurai, Academic council nominee suggested that a minimum of 6 months duration will be most appropriate. The UG programme coordinator mentioned that the placement drive will start in the VII semester. Hence 6 months duration will not be feasible for the Project Work. It was informed that students are encouraged to continue their research/ project work after completion of the academic session. Dr. K. Rajeshwari, the industry nominee also mentioned that, the time extension for Industrial Project will become tedious due to cost expenses.
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- The UG programme coordinator presented the syllabus for the special elective papers to be offered for the doctoral program. All the BoS members accepted the same
 - Dr. I. Ganesh Moorthy, NBA coordinator of the department proposed the Vote of thanks to all the members.


Signature of the BoS Coordinator


Signature of the BoS Chairman

Dr. R. Shyam Kumar