

**MINUTES OF THE SECOND MEETING OF THE BOARD OF STUDIES IN
BIOTECHNOLOGY HELD IN THE COLLEGE ON 25TH & 26TH SEPTEMBER 2015**

Date: 25th & 26th September 2015

Time: 10:30 am

Venue: Conference room, Parvatibai Chowgule College of Arts and Science (Autonomous), Margao, Goa

The Chairman of the Board of Studies, Ms. Liesl De Silva welcomed the members and thanked them for attending the meeting. She provided a brief introduction of the core and elective courses in Biotechnology to be introduced in semesters III and IV.

Confirming the minutes of the First Board of Studies meeting held on 20th December 2014:

The Chairman briefly spoke about the decisions taken at the previous meeting and went through the course structure again, explaining the selection of elective courses along with core courses and the level of choice given to each student. She also spoke about the implementation of autonomy in the current academic year.

Ms. Liesl De Silva and Ms. Madhavi Motankar gave feedback on the current progress of autonomy with regard to the First year courses. The members asked a few questions regarding the challenges faced and also whether the syllabus had been completed effectively. They also enquired whether there is a system for obtaining student feedback regarding the course. Dr. Jayanth Sridhar suggested that we have a system for feedback on the present course for first year students and Dr. Tamal Raha suggested the use of 'Survey Monkey' for group statistical pattern analysis. Dr. Smitha Hegde suggested that we have a meritorious student representative from the current batch who will provide feedback on the course. Ms. Liesl De Silva responded, saying that all courses would go through an academic audit where syllabus, examination papers, continuous assessment and other related areas would

be verified. Also, she said that the college has a system in place for obtaining student feedback on teacher's performance with respect to the knowledge of the subject and teaching methodology.

Resolution on the Minutes of the first Board of Studies in Meeting:

We take that the Minutes of the First Board of Studies meeting in Biotechnology have been approved and passed.

The Chairman, Ms. Liesl De Silva presented the agenda of the meeting and the business was transacted as per the agenda.

Agenda

1. Review of the list of core and elective courses for undergraduate program in Biotechnology.
2. Approval of the syllabi of Semester III and IV for the academic year 2016 - 2017.
3. Discussion and Resolution on the Question paper pattern of Semester End Examination.
4. Any Other Business (A.O.B.)

Proceedings:

- 1. Agenda Item 1: REVIEW THE LIST OF CORE AND ELECTIVE COURSES FOR UNDERGRADUATE PROGRAM IN BIOTECHNOLOGY.**

1.1 Discussion on the list of proposed core and elective courses

Discussion Summary: Members felt that the core papers were fine but some elective papers needed to be taught in semester III and IV as opposed to Semester V and VI and hence had to be shifted or re-titled. The important changes that were made are detailed in the discussion below.

Details of the Discussion:

In the course of the discussion, the following suggestions were made:

1. In semester III, the paper on Introduction to Research: Paper BIO-III.E-2 was eliminated due to the fact that the students would be completing an entire paper on Research methodology as a foundation course in semester II. It was replaced by Molecular Genetics: BIO-IV.E-7 which was shifted from semester IV.
2. In semester III, Evolution and Ecology: BIO-III.E-4 was re-titled as Evolution and Anthropology. Also the section on Ecology was clubbed with Biodiversity and moved to the semester IV as BIO-IV.E-7. The members felt that it was a more effective way of covering important topics in both the subjects of Evolution and Ecology.
3. In semester V, the paper on Environmental Biotechnology and Biodiversity: BIO-V.E-10 was split, with Environmental Biotechnology being retained as BIO-V.E-10 and Biodiversity was clubbed with Ecology in semester IV. The members felt that Environmental Biotechnology would be a vast area and would not be effectively covered in combination with another course.
4. In semester VI, Food Biotechnology: BIO-VI.E-13 was re-titled as Advanced Microbiology in order to include various applications of microbes in the food as well as other industries.
5. In semester VI, Applications of Biotechnology: BIO-VI.E-15 was eliminated as most of the members felt that the topics of this paper could be re-distributed in the other papers.
6. In semester VI the core paper on Plant Tissue Culture and Animal Cell Culture: BIO-VI.C-8 was split into Plant Biotechnology: BIO-VI.E-15 and Animal Cell culture: BIO-VI.E-16. Most members felt that each course was extremely vast and hence would be more effectively taught as separate papers.
7. In semester VI the papers were reshuffled, such that Bioethics and Biosafety: BIO-VI.E-16 would be floated as a core paper and that students would have

the option of selecting any one or both Plant Biotechnology and Animal Cell Culture as elective papers.

1.2 Resolution on the list of core and elective courses:

The list of core and elective course was reviewed and accepted by all members present, along with suggestions. The necessary changes made have been incorporated and included in Annexure I.

2. Agenda Item 2: APPROVAL OF THE SYLLABI OF SEMESTER III AND SEMESTER IV FOR THE ACADEMIC YEAR 2016-17

2.1 Discussion of the proposed syllabi of Semester III and Semester IV for the Academic Year 2016 - 2017

Discussion Summary: The members felt that the structure of the syllabus needed modification. Dr. Jayanth Sridhar suggested that a provision should be made to explain the modes of continuous assessment in the syllabus. Dr. Smitha Hegde stressed on the importance of good documentation and also the fact that the syllabus cannot be changed for 3 years after it has been constituted. She also said that the NAAC committee would require to review documentation and hence its importance. She suggested that a complete copy of the syllabus should be submitted to the library as library copy so that any further reference if required can be made. She also suggested that a uniform transcript be followed, purpose of the transcript to include a preamble, objectives/focus of the course, structure of the course, course content. Mr. Madappa suggested that a year-wise explanation of the syllabus could be given. He also suggested that each course should have at least one good reference book of publication after 2010 which should be available in the library for faculty and students. For the practical components of certain papers, Mr. Madappa also suggested that the College could register free with Amrita University Virtual Labs in order to further enhance learning and understanding of practical concepts. Dr.

Smitha Hegde and Mr. Madappa both stated that a minimum of 12 practical sessions should be completed in a semester.

Dr. Smitha Hegde also said that the ideal Teacher : Student ratio for a paper is 1:13, as according to the UGC guidelines. She suggested we follow the Teacher : Student ratio. She also suggested that we could alternatively adopt the option of recruiting guest faculty as experts in specific fields. This would benefit the students as well as help with the Teachers' workload. Mr. Madappa suggested that we could specify a minimum number of students required for a course to be run as this would assist in management of the workload and also the cost involved in the practical component of each paper.

Each course for semester III and semester IV was discussed, details of which are as follows:

Details of the Discussion:

Semester III

1. In semester III, the core course Immunology: BIO-III.C-5 was discussed. The members felt that the course content was well constructed however the order of the topics were reshuffled.
2. The elective course Basics of Plant and Animal Sciences: BIO-III.E-1 required a few topics to be clubbed together and a few title changes of sub topics.
3. The elective course Molecular Genetics: BIO-III.E-2 was well constructed and the order of the topics was reshuffled.
4. The elective course Biostatistics: BIO-III.E-3 was reviewed and Dr. Jayanth Sridhar had quite a few positive suggestions. He put forth a modified reconstruction of the topics that could be included in the paper in order to equip the students with more advanced concepts of Biostatistics that could help them in research and related areas. The paper is constructed in a way that it will be an offshoot from the foundation course in Statistical Methods and will not overlap with the same.

5. Elective paper Evolution and Anthropology: BIO-III.E-4 required framing of syllabus in theory and practical for the anthropology section as the title was changed from its original, Evolution and Ecology. The members contributed immensely to the structuring of the course.

Semester IV

1. In the core course Concepts in Genetic Engineering: BIO-IV.C-6 the members felt that the course content was well constructed however the order of the topics were reshuffled in order to help in better understanding.
2. In the elective course Plant and Animal Physiology: BIO-IV.E-5, Dr. Smitha Hegde advised that the course objective specify that the details of the processes in the animal system would have special emphasis on humans. Some topics in this paper namely in the Plant physiology section were added and modified. There were also some changes to be made in the practical component of the course.
3. In the elective course Applied Biophysics: BIO-IV.E-6, the first 3 units of the course were modified and the rest were re-shuffled in order to place more emphasis on spectroscopy and separation techniques.
4. In the elective course Ecology and Biodiversity: BIO-IV.E-7, the section on Ecology was taken from the paper BIO:III.E-4, titled Evolution and Ecology. An additional section was added and syllabus in theory and practicals for the Biodiversity section was constructed. Dr. Smitha Hegde suggested that small assignments could be given to the students for creating an environmental database in collaboration with other departments such as Botany, Zoology and Computer Science.
5. In the elective course Advanced Biochemistry: BIO-IV.E-8, the course was well constructed. One of the sub-topics was re-titled.

2.2 Resolution of the proposed syllabi of Semester III and Semester IV for the Academic Year 2016 – 2017:

The proposed syllabi of Semester III and Semester IV for the Academic Year 2016 – 2017 was accepted by all members present, along with suggestions and necessary changes. The same have been incorporated and detailed in Annexure II.

3. Agenda Item 3: DISCUSSION AND RESOLUTION ON THE QUESTION PAPER PATTERN OF SEMESTER END EXAMINATION

Discussion Summary: Dr. Smitha Hegde first asked about the distribution of marks for each paper. Ms Liesl De Silva then explained that for each course of 4 credits has a total of 100 marks of which 25 marks is the practical component and 75 marks is the theory component. The theory component is further divided into 2 components: continuous assessment (CA) – 30 marks and semester end examination (SEE) – 45 marks. She then explained that each continuous assessment is different from the other where a variety of methods such as written tests, multiple choice questions (MCQ's), seminars, assignments and other methods may be used to evaluate students.

Dr. Smitha Hegde enquired about the duration of each continuous assessment. Ms. Madhavi Motankar replied saying that it was dependent on the type of assessment, for example MCQ's for 10 marks for selected syllabus was conducted for 10 minutes. Ms. Liesl De Silva said that a written test for 15 marks was conducted for 30 minutes.

Ms. Liesl De Silva explained the structure of the Semester End examination question paper pattern which was put forth by the examination committee of the college. Dr. Smitha Hegde asked a few questions about the distribution of marks and whether the teachers were comfortable with following the prescribed format. The teachers agreed that the format suited them.

3.1 Resolution for approval of question paper pattern:

The question paper pattern proposed by the examination committee of the college was approved and is detailed in Annexure III.

4. Agenda Item 4: ANY OTHER BUSINESS

There were no other issues to be discussed.


The meeting concluded at 12.30 pm on 26th September 2015 and was followed by lunch. The Chairman thanked all the Board of Studies members for being present at the meeting and for their valuable contribution and active participation.

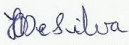
The following members of the Board of Studies in Biotechnology were present at the meeting:

1.	Ms. Liesl De Silva	-Department of Biotechnology	-Chairman
2.	Dr. Jayanth Sridhar	-Academic Council Nominee	-Member
3.	Dr. Smitha Hegde	-Academic Council Nominee	-Member
4.	Mr. Madappa	-Vice-Chancellor Nominee	-Member
5.	Dr. Tamal Raha	-Industrial Representative	-Member
6.	Ms. Madhavi M. Motankar	-Department of Biotechnology	-Member
7.	Ms. Lee-Anne D'Costa	-Department of Biotechnology	-Member Secretary

Ms. Apurva Fernandes conveyed her inability to attend the meeting.

Date: 7th October 2015


Ms. Lee-Anne D'Costa
Member Secretary
BOS (Biotechnology)


Ms. Liesl De Silva
Chairman
BOS (Biotechnology)