

SETHU INSTITUTE OF TECHNOLOGY, PULLOOR, KARIAPATTI – 626115

**4th MEETING OF BOARD OF STUDIES IN
DEPARTMENT OF BIOMEDICAL ENGINEERING**

HELD ON 07.09.2019

MINUTES OF MEETING

The Fourth Meeting of Board of Studies in the Department of Biomedical Engineering held on 07.09.2019 at the Department Seminar Hall at Sethu Institute of Technology, Pulloor, Kariapatti.

S. No	Name	Designation	Status
1.	Dr.K.Kanimozhi	HOD/BME	Chairman
2.	Dr.G.Uma., (External Academic Expert Member)	Professor, Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli.	Anna University Nominee
3.	Dr.S.P. Angeline Kirubha (Member – Other institution)	Assistant Professor (Selection Grade) Department of Biomedical Engineering, SRM Institute of Science and Technology.	Academic External Expert Member
4.	Dr. A. Umarani (External Academic Expert Member)	Professor, KLN College of Engineering, Pottapalayam, Sivaganga Dist.	Academic External Expert Member
5.	Mr. S. Kumar (Industry Expert)	Manager , Biomedical Application, T&M, TMI Systems, Bangalore	Industry Nominee
6.	Dr. K. Hemalatha	Professor	Member
7.	Mr. N. Kins Burk Sunil	Assistant Professor (Sr. Gr.)	Member
8.	Mr.K.Kalanithi	Assistant Professor (Sr. Gr.)	Member
9.	M.M.Manimaran	Assistant Professor	Member
10.	Mrs.R.Nageshwari	Assistant Professor	Member
11.	Dr.E.Maheshwari	Assistant Professor (Sr. Gr.)	Member
12.	Ms. R.Sushmitha	Assistant Professor	Member
13.	Ms.C.Bilna	Assistant Professor	Member

The Agenda for the meeting is

1. To consider and recommend the revised Department Vision, Mission, PEOs, POs and PSOs of the UG and PG Programmes.
2. To present the analysis of the Stakeholders feedback regarding curriculum and syllabi
3. To present Mapping of Curriculum and syllabi with Programme Specific Criteria
4. To present the classification of courses having focus on employability/ entrepreneurship/ skill development
5. To consider and approve for the list of examiners from other colleges who could be invited for conducting practical examination/Project Viva, Question Paper Setting, Paper evaluation, Exam invigilation duties.
6. To consider and approve the value added courses imparting transferable and life skills (beyond curriculum and with 30 or more contact hours)
7. To approve the list of New Courses under Regulation 2019 and approve the suggestions for improving the R2019 curriculum structure.
8. Percentage of change in the Curriculum and for each course in Regulation 2019

The Chairman welcomed the members and presented as per the agenda given above for the Curriculum under Regulation 2019 and Syllabi for first two semesters which is to be followed from 2019-20 batch under Autonomous Regulation for B.E. Biomedical Engineering.

1. Consider and recommend the proposed Department Vision, Mission, PEOs, POs and PSOs

The Vision, Mission, PEOs, POs and PSOs of the B.E Biomedical Engineering Programme are discussed.

- 1.1 The BOS resolved to approve the Vision, Mission, PEOs, POs
- 1.2 The BOS resolved to modify the PSO, the modified PSO is "Analyze, design and develop the systems to supplement and/ or assist human healthcare"

2. Analysis of Stakeholders feedback regarding curriculum and syllabi.

The stakeholders' feedback was obtained regarding curricula and syllabi in various formats and sources. The stakeholder's feedbacks and their suggestions are presented and discussed thoroughly. Based on their suggestions and following resolutions are made

- 2.1 The BOS resolved to modify the proposed course title Biomedical Instruments as Biomedical Instrumentation (19UBM304)
- 2.2 The BOS resolved to include a new core course Biomaterials and Artificial Organs (19UBM701) in the seventh semester.

3. Mapping of Curriculum and syllabi with Programme Specific Criteria

Mapping of curriculum components with PEOs, POs and Programme Specific Criteria is presented and discussed.

- 3.1 The BoS resolved to approve and recommend the mapping of curriculum components with PEOs , POs and Program specific criteria

4. Classification of courses having focus on Employability/ Entrepreneurship/ Skill development.

The categorization of courses in curriculum R2019 based on the employability/ entrepreneurship/ skill development is presented and discussed in detail

- 4.1 The BoS resolved to approve the classification of R2019 courses which focus on employability/ entrepreneurship/ skill development

5. Approval for the list of examiners from other colleges who could be invited for conducting practical examination/Project Viva, Question Paper Setting, Paper evaluation, Exam invigilation duties.

The list of examiners is identified from other colleges for conducting practical examination/Project Viva, Question Paper Setting, Paper evaluation, and Exam invigilation duties.

- 5.1 The BoS resolved to approve the list of examiners proposed by the Chairperson

6. Approval of value added courses imparting transferable and life skills

The chairman has presented the list of value added courses beyond curriculum and with 30 or more contact hours.

- 6.1 The BoS recommended to introduce the following value added courses

- Medical Coding and Transcription
- PCB Design
- Mimics - 3D Medical Image Processing Software
- Embedded C programming
- Arduino based design of Basic Medical Equipments.

7. To approve the list of New Courses under Regulation 2019 for B.E Biomedical Engineering and approve the suggestions for improving the R2019 curriculum

The List of Courses included under Regulation 2019 is presented and discussed

- 7.1 The BOS resolved to introduce the following core courses in the curriculum:

- 19UBM206 - Electrical Circuits and measurements
- 19UBM205 - Introduction to Biomedical Engineering
- 19UBM424 - Probability and Statistics.
- 19UBM701 - Biomaterials and Artificial Organs
- 19UBM801 - Hospital Management and Finance

7.2 The BOS resolved to introduce the following elective courses in the curriculum:

- 19UBM903 - Tissue Engineering and Artificial Organs
- 19UBM908 - Medical Technology
- 19UBM910 - Genetic Engineering
- 19UBM915 - Rehabilitation Engineering and Robotics
- 19UBM918 - Brain Computer Interface and virtual reality
- 19UBM921 - Smart Healthcare Engineering and Artificial Intelligence
- 19UBM922 - Body Area Networks and Mobile Healthcare
- 19UBM923 - Regenerative Medicine and Ergonomics

7.3 The BOS resolved to introduce the following skill and knowledge enhancement courses in the curriculum:

- Interpersonal Skills Laboratory
- 19UGM331 - Technical Seminar
- 19UGM531 - Creative Thinking and Innovation
- 19UGM232 - Summer Internship

7.4 The BOS resolved to introduce the following Mandatory courses in the curriculum:

- 19UGM131 - Induction Program
- 19UGM231 - Biology for Engineers
- 19UGM431 - Gender Equality
- 19UGM631 - Indian Constitution and Essence of Indian Traditional Knowledge

7.5 The BOS resolved to introduce the following one credit courses in the curriculum:

- 19UBM869 - Occupational Emergency Care
- 19UBM870 - Intellectual Property Rights
- 19UBM871 - Entrepreneurship in Biomedical Engineering
- 19UBM872 - Troubleshooting and Quality Control in Medical Equipments
- 19UBM873 - Regulation Perspective of Medical Research
- 19UBM874 - Introduction to Fuzzy Logic and Genetic Algorithms
- 19UBM875 - Numerical methods for Biomedical Engineers

7.6 The BOS resolved to introduce a new open elective course 19UBM955 - Occupational Safety and Health in Public health Emergencies.

7.7 The proposed syllabi for II semester professional core courses offered by the department are presented and discussed. The BOS resolved to modify the syllabus of the following courses in Semester – II

- The BoS resolved to approve the syllabus proposed for Introduction to Biomedical Engineering.
- It is resolved to introduce Electrical Instruments as 5th unit in 19UBM206 - Electrical Circuits and Measurements instead of Analyzing Three Phase Circuits.
- It is resolved to remove the Transducer experiments and add additional experiments from electrical circuits in the laboratory course 19UBM211 - Electrical Circuits Laboratory.

7.8 The following general suggestions are given by the members which will be taken in to account while framing the higher semester syllabi.

- The latest edition of the text book shall be included in syllabus
- Practical components shall be included for elective courses and case study shall be included in each courses.

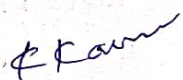
8. Percentage of change in the Curriculum and second semester syllabus in Regulation 2019.

8.1 The Percentage of change in the curriculum for Regulation 2019 is proposed and discussed. The BOS resolved to approve the changes listed below:

Category	Total No. of Courses in the Curriculum	No. of courses modified	Percentage of change
Humanities and Social Sciences including Management courses	7	2	29 %
Basic Science courses	9	2	22 %
Engineering Science courses including workshop, drawing, basics of electrical / mechanical / computer etc.	8	3	38 %
Professional core courses	28	3	11 %
Professional Elective courses relevant to chosen specialization/branch	24	8	33 %
Open Electives	5	1	20 %
Project work, seminar and internship in industry or elsewhere	5	3	60 %
Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	5	3	60 %
One Credit Courses	15	7	47 %
Inter Disciplinary Courses	3	-	-
TOTAL	109	32	29 %

8.2 The percentage change in the proposed syllabi for II semester professional core courses offered by the department are presented and discussed. The BOS resolved to approve the changes listed below:

Semester	Course code	Name of the Course	% Change in Syllabus
II	19UBM208	Electrical Circuits and Measurements	30 %
	19UBM209	Introduction to Biomedical Engineering	100 %
	19UBM211	Electrical Circuits Laboratory	50 %


Chairman
Board of Studies