

Minutes of the Eighth Board of Studies Meeting

Venue: The Legend Hall

Date: 02.05.2023

Meeting ID: 835 5408 3908


Time: 1.30 PM to 4.30 PM

Agenda:

To discuss and pass the

1. Discussion on the minutes of previous BoS meeting and action taken
2. Stakeholders' inputs on Curriculum Design
3. Regulations 2021 - BE - Honours and Minor degrees
4. Professional Electives offered in different verticals under Regulations 2021
5. Open electives offered to other branches under Regulations 2021
6. Amendments if any in R2019 UG programme Curriculum and Syllabus
7. Suggest Methodologies for innovative teaching and evaluation techniques
8. MOOC / Online Courses
9. Industrial Training / Internship
10. Industry oriented courses (one credit courses)
11. Value added courses
12. Any other matter brought by the Chair

Members Present:

S.No	Name of the member with Designation	Category	Signature
1.	Dr. D. Ganesh Kumar Professor and Head, Department of BME, KPRIET, Coimbatore	Chairman	
2.	Dr. M. Santhanalakshmi Associate Professor, Department of Electronics and Communication Engineering, PSG College of Technology, Peelamedu, Coimbatore	University Nominee	<i>M. Santhanalakshmi</i>
3.	Dr. Kunal Pal Associate Professor and Head, Department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela	Academic Expert- 1	ONLINE

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4.	Dr. G. Muralidhar Bairy Associate Professor & HOD, Department of Biomedical Engineering, Manipal Institute of Technology, Secretary, Biomedical Engineering Society of India, Manipal	Academic Expert- 2	ONLINE
5.	Dr. J. Purusothaman General Manager, Helix Corporation, Bengaluru, Karnataka.	Industry Expert – Biomedical Products (Special Invitee - 1)	ONLINE
6.	Mr. D. Rajesh Leader – Program Management Office, Emergency Care Business, Philips, Pune	Industry Expert – Research and Development of Medical Equipment (Special invitee - II)	J. Rajesh
7.	Dr. V R Saravanan Chief Retina & Vitreous Services, Aravind Eye Care Hospital, Coimbatore	Industry Expert – Expert from Hospital (Special Invitee – III)	ABSENT
8.	Dr. P.Sreelatha Professor, Department of BME, KPRIET	Faculty Member	P. Sreelatha
9.	Dr. K. Rajasekaran Professor, Department of BME, KPRIET	Faculty Member	ABSENT
10.	Dr. A. Allwyn Gnanadas Assistant Professor (Sl.G), Department of BME, KPRIET	Faculty Member	A. Allwyn Gnanadas
11.	Dr. T. Gayathri Assistant Professor (Sl.G), Department of BME, KPRIET	Faculty Member	T. Gayathri 21/5/23
12.	Dr. S. Logesh Kumar Assistant Professor (Sl.G), Department of BME, KPRIET	Faculty Member	S. Logesh Kumar 21/5/23
13.	Dr. N. Rajasingam Assistant Professor (Sl.G), Department of BME, KPRIET	Faculty Member	N. Rajasingam 21.5.23
14.	Mr. V. Bharath Assistant Professor (Sr.G), Department of BME, KPRIET	Faculty Member	V. Bharath 21/5/23
15.	Ms. M. Swathy Assistant Professor (Sr.G), Department of BME, KPRIET	Faculty Member	M. Swathy 21/5/23
16.	Mr. John Amose Assistant Professor (Sr.G), Department of BME, KPRIET	Faculty Member	J. Amose 21/5/23

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	Department of BME, KPRIET		
17.	Dr. P. Arun Kumar Assistant Professor (Sr.G), Department of BME, KPRIET	Faculty Member	<i>PA 2/1/23</i>
18.	Ms. B. Priya Darshini Assistant Professor, Department of BME, KPRIET	Faculty Member	<i>BP 2/1/23</i>
19.	Mr. R. Krishna kumar Assistant Professor, Department of BME, KPRIET	Faculty Member	<i>RR 2/1/23</i>
20.	Ms. K. Priyadarshni Associate Analyst, Zifo RnD Solutions, Chennai	Alumna (Batch 2018 – 2022)	ONLINE

Minutes of the 8th Meeting of the Board of Studies:

The meeting started with the Chairman, Department of Biomedical Engineering welcoming the members of the Board of Studies and continued with a presentation on Vision, Mission, POs, PEOs, PSOs, Syllabus content of Professional Electives and Open Electives under Regulations 2021.

Following points were discussed at the Board of Studies.

RESOLUTIONS:

1. Action taken on the minutes of the 7th BOS meeting:

- i. Stochastic models are included in U21MA406 – Probability and Stochastic Processes.
- ii. The experiment 'Examination of visually evoked potential' is modified as 'Recording of the occipital cortex in response to light stimulus' in the course U21BM604 – Diagnostic and Therapeutic Equipment Laboratory.
- iii. Characterization and analytical techniques for nanomaterials is included in the course U21BMP01 – Nanotechnology in Medicine.
- iv. Included RP20240 Datasheet, A Microcontroller by Raspberry Pi, V1.8, Synopsys, Inc. 2022 as reference guide for the course U21BM501 – Microcontroller and its Applications.
- v. Included the course VLSI for Medical Devices under the vertical Advanced Healthcare Systems.

The minutes of the 7th BOS meeting and the actions taken thereon were approved.

2. Industry/Academic inputs on curriculum design

As per the recommendation from Industry experts the following contents are included and are approved by the BOS members.

- Dr. Anand Shanmugam, Professor and Neuro Surgeon, Government Hospital, Coimbatore suggested to include a topic on molecular guidance for radiation therapy – Included in the course Nuclear Medicine (PEC)
- Mr. Paul Pradeep, Director, MedCuore Medical Solutions Pvt Ltd, Chennai suggested to include a course on Testing and Calibration of medical devices – Included under the Professional Elective Vertical Medical Device Development and Management
- Dr. Bodhisatwa Das, Assistant Professor, Department of Biomedical Engineering, IIT, Ropar suggested to include Patchless transdermal drug delivery system – Included in the course Advances in Drug Delivery (PEC)

3. Regulations 2021 - BE - Honours and Minor degrees

- **Verticals offered by the Department of Biomedical Engineering for Honours and Minor degrees.**

Vertical I : Bio Engineering

Vertical II : Medical Device Development and Management

Vertical III : Biomechanics

Vertical IV : Medical Data Processing

Vertical V : Advanced Healthcare Systems

- **Verticals offered as common for Minor degrees.**

Vertical I : Fintech and Block Chain

Vertical II : Entrepreneurship

Vertical III : Politics and Public Administration

Vertical IV : Business Data Analytics

Vertical V : Environment and Sustainability

Vertical VI : Economics

4. The syllabi for Professional Electives and Open Electives of UG Programme under Regulations 2021

Resolved to approve that the following recommendation may be passed to the standing committee of the Academic Council that the Choice based Credit System based curriculum and syllabi for the B.E Biomedical Engineering program under Regulations 2021 be passed with the following suggestions.

- (i) **Dr. M. Santhanalakshmi** suggested to include a course on Computer Network topics – Included as Network and Communication Systems
- (ii) **Dr. M. Santhanalakshmi** suggested to include real time processing systems as applications/case studies in the course Embedded Systems for Biomedical Engineers – Included the same
- (iii) The members suggested to include courses on financial management – Offered as courses under the common minor vertical Fintech and Blockchain
- (iv) The members suggested to include applications as subtopics for all possible elective courses

5. Open Electives offered to other branches

Following are the suggestions given by BoS members regarding Open Electives offered by the department of BME which shall be presented to the standing committee of the Academic Council for discussions:

Approved without any suggestions.

6. Amendments if any in R2019

No recommendations were presented.

7. Methodologies to improve Innovative Teaching and Evaluation Techniques

The following teaching methods were discussed and suggested to incorporate.

- i. Collaborative Learning
- ii. Flipped classroom
- iii. Context-Based Learning
- iv. Learning By Doing

v. Adaptive Teaching

8. Online Courses

Board recommended the following Online Courses to the standing committee of the Academic Council for discussions:

- i. Fundamentals of Data Analytics
- ii. Industrial IoT

9. Industrial Training / Internship

Following are the suggestions given by BoS members regarding Industrial Training / Internship which shall be presented to the standing committee of the Academic Council for discussions:

- i. To work on real-time problems in hospitals
- ii. To develop products that can help society
- iii. To counsel students to convert their ideas into products and patents

10. Industry Oriented Courses (One Credit Courses)

Board recommended the following One Credit Courses to the standing committee of the Academic Council for discussions:

- (i) Designing of Electronic Circuits
- (ii) Calibration and Testing of Medical Equipment
- (iii) Radiation standards in hospitals
- (iv) Matlab toolbox for AI
- (vi) Solidworks

11. Value Added Courses:

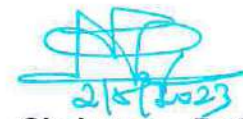
Board recommended the following Value Added Courses to the standing committee of the Academic Council for discussions:

- Design Thinking
- Repair and maintenance of medical equipment
- Biomedical signal and image analysis – MATLAB
- Mobile Application Development

12. Any other subject

It is resolved that the following recommendations may be passed to the standing committee of the Academic Council.

- The reports of Industrial/Hospital training, Internship, Mini project and Main project should be thoroughly evaluated and checked for plagiarism.
- The products developed by the students can be patented, presented in a conference or published as an article in a Scopus/SCI/WOS indexed journal.



Chairman – BoS/BME