PAAVAI ENGINEERING COLLEGE
(Autonomous)
NH 44, PACHAL, NAMAKKAL-637018

DEPARTMENT OF MEDICAL ELECTRONICS

ACTION TAKEN REPORT- STAKEHOLDERS FEEDBACK ON CURRICULUM & SYLLABUS
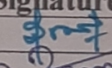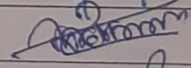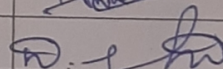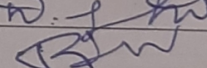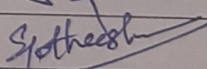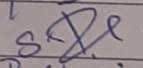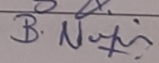
Academic Year 2022-2023

Date: 06.8.22

1. Feedback was collected.
2. The feedback was analyzed and reviewed through Internal Committee.
3. The Proposed draft of syllabus was put forth to DAC. The Constructive suggestions were taken from the Stake holder's feedback.
4. After detailed deliberation and discussion, the proposed draft of syllabus with modification was presented to BoS for final Approval.
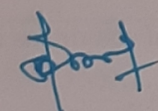5. After BoS recommendations, the curriculum and syllabus came into implementation.

Feedback was requested from following Stakeholders
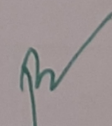
S.No.	Stake Holders	No of feedback form received
1.	Students	59
2.	Teachers	6
3.	Alumni	20
4.	Employer	2

Name of the course	Recommended by	Recommendation	Action Taken
Students Feedback			
Medical Image Processing	Kaviya.A	Need to include biomedical related applications	Forwarded the suggestion for the approval of DAC
Medical Informatics	Kishore.M	To elaborate with medical codes related to ISO, Indian regulation standards (2017)	Recommendation considered and forwarded to the approval of DAC.
Diagnostic and Therapeutic Equipment	Mahesh.M	Needs Hands on training for advanced therapeutic equipment.	Planned to arrange training.
Faculty Feedback			
Medical Ethics Standards and Safety	Mr. Murugesan. D	IEC60601 basic standards to be included in unit 3.	Planned to add basic standards in unit 3.
Artificial Intelligence for Biomedical Engineering	Dr. Rajasekaran. S	Need to add more algorithms in unit 4.	Planned to add algorithms in unit 4.

Embedded systems and IoT in healthcare	Dr. Jayanthi. N	Healthcare applications and case studies can be included in unit 5.	Forwarded the suggestion for the approval of DAC.

Alumni Feedback

Machine Learning in Biomedical Engineering	Kavinnilavan. K	Unit 2 is outdated. New contents to be added.	Forwarded the suggestion for the approval of DAC.
Medical imaging techniques and radio therapy	Ragul. M	Need local visit of scanning center/ hospital for students to enrich their practical knowledge	Planned to arrange local visits.
Telehealth Technology	Vaishnavi. B. M	Telemedicine topics to be included	Recommendation considered and forwarded to the approval of DAC.

Employer Feedback

Hospital Internship	Mr.S.Kumar (TMI Systems)	Student feedback about the teaching in hospital must be collected and external evaluation must be needed.	Recommendation considered and forwarded to the approval of DAC.
Smart Wearable systems	Boopathi Sakthivel (Prashan Medical Technologies)	Need to include as professional core.	Recommendation considered and forwarded to the approval of DAC.

S.No	Name of the Member	Designation	Role	Signature
1	Dr.T. Arun Kumar	HOD	Chairman/BOS	
2	Mr.D.Murugesan	ASP	Member	
3	Mrs. N. Jayanthi	AP	Member	
4	Dr.S.Rajasekaran	ASP	Member	
5	Mr.S.Jotheeshwaran	AP	Member	
6	Mrs.S.Praveena	AP	Member	
7	Mrs. B. Niranjana Devi	AP	Member	

HOD/MDE

PRINCIPAL

PAAVAI ENGINEERING COLLEGE
(Autonomous)
DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING

Minutes of Fifth Board of Studies Meeting
Venue: Online mode through Microsoft Teams platform
Date and Time: 06.08.2022, 10.30 a.m

Minutes of Fifth Board of Studies meeting held on August 6th 2022 at 10.30 a.m through online mode using Microsoft Teams platform.

The following members were present

|	Name	Designation	Position in committee	College/University/Industry
1	Dr. T. Arunkumar	Professor and Head, Medical Electronics	Chairman	Paavai Engineering College
2	Dr. M. Ganesh Madan	Professor and Head, Department of ECE	University Nominee	Madras Institute of Technology, Chennai
3	Dr. V. G. Sangam	Principal	Academic Expert	B.L.D.E.A's V.P. Dr P.G.H College of Engineering & Technology, Vijayapur.
4	Dr. Vanithamani. R	Professor, Department of Biomedical Instrumentation Engineering	Academic Expert	Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
5	Mr. S. Kumar	Manager, Medical Electronics	Industrial Expert	TMI Systems, Bangalore.
6	Mr. D.Murugesan	Associate Professor/ Medical Electronics		
7	Ms. N. Jayanthi	Associate Professor/ Medical Electronics		
8	Ms. S. Senthamil	Asst.Professor/ Medical Electronics	Members	Paavai Engineering College
9	Ms. B. Niranajna Devi	Asst.Professor/ Medical Electronics		
10	Ms. F. Sharmila Banu	Asst.Professor/ Medical Electronics		

AGENDA

The following agenda are discussed

1. Chairman –BoS introduced the members of the Board of Studies,
2. Chairman –BoS briefed the members about the agenda
3. The Curriculum and syllabus (CBCS) under R2019, 7th and 8th semester for the students admitted in the academic year 2019-2020
4. The Curriculum and syllabus under R2019 (CBCS) 5th and 6th semester syllabus for the students admitted in the academic year 2020-2021
5. The list of one credit courses under R 2019

   AMENDMENTS:

- EVS for lateral entry students – VI semesters
- Examination pattern, degree classification and Grading for 2021-2022 admitted
- One credit course (soft skills I and II)
- The list of Value added courses under R 2019.
- Panel of examiners as follows,

1
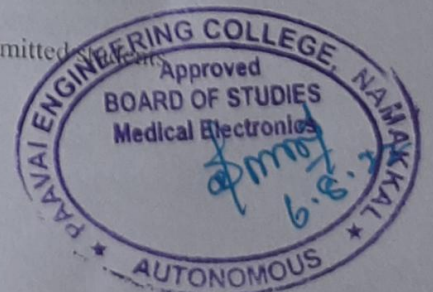
S.No	Name of The Examiner	College Name
1	Mr.R.Prabu, Department of Biomedical Engineering	Velalar college of engineering and Technology (Autonomus) Erode.
2	Dr. K. Prabakar, Professor and Head, Department of Biomedical Engineering.	Sona College of technology (Autonomus), Salem.
3	Dr. Balasubramaniam.T, Professor, Department of Biomedical Engineering.	Segunthur Engineering college (Autonomus), Erode.
4	Mr. M.Manikandan, Associate Professor, Department of Biomedical Engineering.	Sona College of technology (Autonomus), Salem
5	Prof. Muhammaedu Sadhik Raja, Professor and Head, Department of Medical Electronics.	Segunthur Engineering college (Autonomus), Thiruchengode.
6	Dr. Rajalaxmi. S, Associate Professor and Head	Mahendra College of Enginnering, Salem.
7	Dr. Selvam. K, Assistant Professor	Mahendra College of Enginnering, Salem.
8	Dr. M. Prabhu, Associate Professor and Head, Department of Biomedical Engineering	Mahendra Institute of Technology (Auonomus), Erode.

The following are the suggestions given by the Members of Board of Studies

R 2019 - CURRICULUM & SYLLABUS:

1. **PC - MD19702 - MEDICAL IMAGE PROCESSING**
    - To include biomedical related applications in last unit
    - To include 3D Imaging.
2. **PC – MD19703 – MEDICAL INFORMATICS**
    - To elaborate with medical codes related to ISO, Indian Regulation Standards (2017), Medical Regulation of India in unit 3.
3. **PC – MD19704 –FUNDAMENTALS OF BIOMEDICAL NANOTECHNOLOGY**
    - To rename Unit 5 topic as applications of nanotechnology in biomedical instead of nanotechnology in biomedical industry.
4. **PE – MD19351 – SMART WEARABLE SYSTEM**
    To replace the topic wireless health systems by protocols in health system in unit 4.
5. **PE – MD19352- REHABILITATION ENGINEERING**
    - To change the title as concepts in sensory rehabilitation engineering in unit 2.
    - To change the title as Prosthetics and orthotics in unit 3.
    - To include legal aspect of Rehabilitation Amputation in unit 5.
6. **PE – MD19353–INTRODUCTION TO CLOUD COMPUTING**
    - Course title to be renamed as cloud computing for healthcare.
    - Unit 4 and 5 need to add more healthcare related contents.
7. **PE – MD19354 – PHYSIOLOGICAL MODELING**
    - In unit 5 introduction to digital control systems to be removed.
8. **PE – MD19451 –MEDICAL DEVICES REGULATION**
    - To change Unit 4 title as standards and regulations
    - Indian medical regulations to be included in syllabus.
9. **PE – MD19452 – ARTIFICIAL INTELLIGENCE IN BIOMEDICAL ENGINEERING.**
    - To change Course name as Artificial Intelligence in health care.
    - Learning algorithms need to be added.
10. **PE – MD19352 - ELECTRICAL SAFETY AND QUALITY ASSURANCE IN HEALTHCARE**
    - Unit 2 contents to be reframed.
11. **MD19704 - MEDICAL IMAGE PROCESSING LAB**
    - Experiments meant to be related to medical images.
    - Steganography can be removed and replaced with water masking experiment.
12. **PE19551 – ARTIFICIAL ORGANS AND IMPLANTS**
    - Springer e-books can be taken as reference book.

2
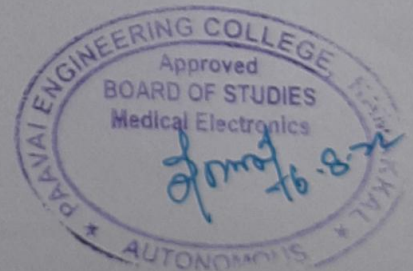
13. **PE – MD19553 – MEDICAL ETHICS STANDARDS AND SAFETY**
   - To include ISO 13485 regulations
14. **PE – MD19554 – EMBEDDED SYSTEM & IoT IN HEALTH CARE**
   - To rename Unit 3 title as IoT devices
   - To rename Unit 4 title as IoT communication protocols.
   - To include in Unit 5 healthcare applications are suggested and to remove smart agriculture and smart cities.
15. **PE – MD19651 – VIRTUAL BIOINSTRUMENTATION**
   - Healthcare applications can be included instead of Virtual Instrumentation applications.
16. **PE – MD19652 – DIGITAL VIDEO PROCESSING**
   - To interchange Motion estimation as unit 3 and video analysis and tracking as unit 4.
17. **PE – MD19653 – QUALITY CONTROL IN BIOMEDICAL ENGINEERING**
   - To rename Unit 2 title as Quality Development instead of Development System in Quality.
18. **PE - MD19654 – BRAIN COMPUTER INTERFACE AND ITS APPLICATIONS**
   - The course is suggested to be a core subject.

GENERAL DISCUSSIONS:

- Hospital Training, Project Phase I, Project Phase II, Bio signal Processing Laboratory and Diagnostic and Therapeutic Equipment Laboratory – course objectives relevant to course outcomes are discussed and got approved respectively.
- One credit course is discussed and approved.
- Value added courses are discussed and approved.
- Discussions regarding R 19 (19-20), R 19 (20-21) are made and clarified.

UG Regulations 2019 (Amendments)

To include **Environmental Science and Engineering** in 6th semester of regulation 2019 for the students admitted in the year 2020-2021 and to include in the 4th semester of regulation 2019 for the students admitted in the year 2021-2022 onwards.

Name list of students readmitted in III sem 2022 and VII sem 2022

S.no	Register no	Name of the student
1	20110016	M. RAGHUL
2	18110005	M. HARISH DEVA

Examination pattern for relative grading:

Anna University- Uniform Evaluation Method of Students based on Relative Grading – Letter No.4040/AU/CAC/Relative Grading/2022 dated on 25.6.22 is followed for the students admitted in the year 2021-2022.

List of one credit courses

S.No	COURSE CODE	COURSE NAME
1	BM19951	Embedded Programming using ARDUINO
2	BM19952	PC Hardware Assembling and Troubleshooting
3	BM19953	Basic Electronic Circuit Design using Multisim
4	BM19954	MATLAB Programming

3