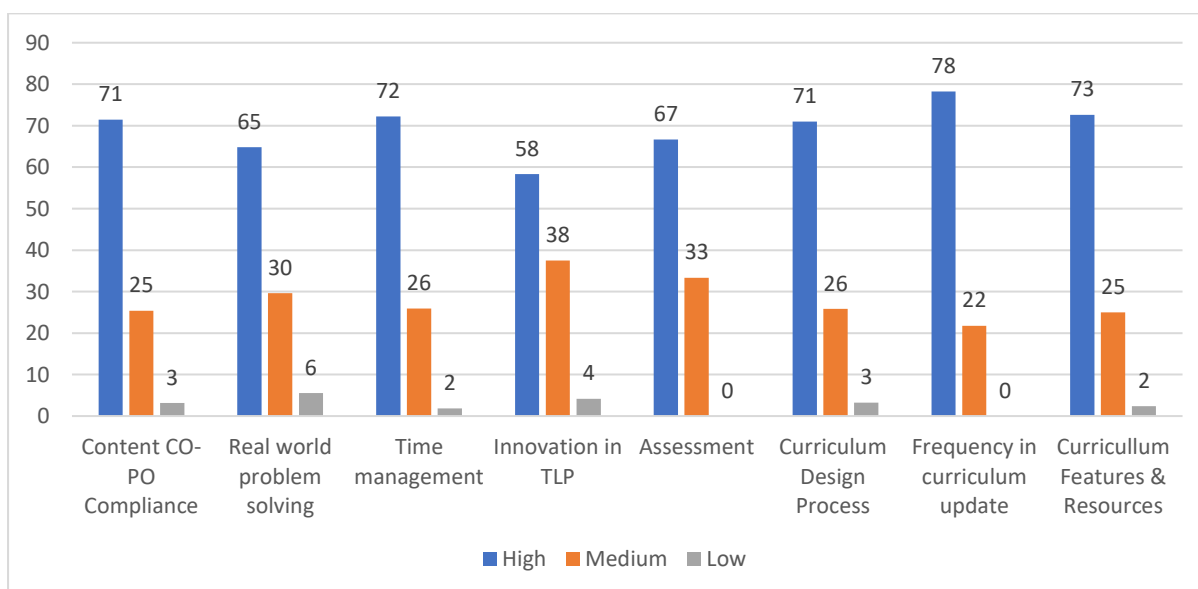




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Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

DEPARTMENT OF BIOMEDICAL ENGINEERING

FEEDBACK ANALYSIS FOR ACADEMIC YEAR 2020-2021



INFERENCE:

1.The Stakeholders are satisfied with the following:

- Content CO PO Compliance
- Curriculum Design process
- Frequency in Curriculum update
- Curriculum features and updates

2.Stakeholder suggests improvements for the following:

- Real World Problem Solving
- Innovation in TLP
- Assessment

3. Stakeholders recommended following features to be included in curriculum

Knowledge	Tools	Skills
Anatomy and Physiology	-	Special Senses such as Skin
Biomedical Product Development	3D Printing Raspberry Pi Python Programming	Internet of Things (IoT) Biomaterials
Medical Robotics	Coding Da Vinci Medical Robots	Control Systems
Instrumentation	LabVIEW Solidworks	Data Acquisition Parallel Processing Interfacing
Biomedical Regulations	Medical Devices such as Critical Care Equipment	Regulatory Services
Artificial Neural Networks	Adaline Madaline	-

Recommendations:

1. Two new courses – i.e., control systems and biomaterials shall be introduced as a program core in the upcoming regulation to respectively address the knowledge gap in robotics and product development
2. Technical communication skills can be improved through group discussions and seminars
3. Value added courses / industry higher learning courses on Raspberry Pi and IoT shall be introduced. 3D printing can be taken as an institute elective course.
4. As the availability of learning resources for students are limited, it is recommended to utilize online open-source resources and also to procure the needed resources through library
5. The availability of lab resources is finite. So, it is recommended to include more lab facilities involving modern tools related to industries.

N.M. Masoodhu

Dr. N.M. Masoodhu Banu
HOD, Biomedical Engineering

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Department of Biomedical Engineering

Stakeholders Feedback Analysis

Academic Year 2020-21

Criteria	High	Medium	Low
Content CO-PO Compliance	71	25	3
Real world problem solving	65	30	6
Time management	72	26	2
Innovation in TLP	58	38	4
Assessment	67	33	0
Curriculum Design Process	71	26	3
Frequency in curriculum update	78	22	0
Curriculum Features & Resources	73	25	2

Specific Comments on Topics / Skills / Tools

	Knowledge	Tools	Skills
Industry	Anatomy and Physiology	-	Special Senses such as Skin
	Biomedical Product Development	3D Printing, Raspberry Pi and Python Programming	Internet of Things (IoT) and Biomaterials
	Medical Robotics	Coding and Da Vinci Medical Robots	Control Systems
	Instrumentation	LabVIEW and Solidworks	Data Acquisition, Parallel Processing and Interfacing
	Biomedical Regulations	Medical Devices such as Critical Care Equipment	Regulatory Services
	Artificial Neural Networks	Adaline, Madaline	-

Feedback Report of Faculty

Criteria	High	Medium	Low
Content CO-PO Compliance			
Course content is relevant to the course mapping	7	1	0
Course outcome contribution towards PO attainment	6	2	0
Course is relevant to the PSC	5	3	0
Course outcome levels are relevant to the course content	6	2	0
Real world problem solving			
Course content demand usage of modern tools	3	5	0
Course content addresses current industry practice	5	3	0
Course content will serve for future industry practice	5	2	1
Time management			
Adequate time available to deliver content	8	0	0
Adequate time available to conduct Assessment	7	1	0
Innovation in TLP			
Provision to introduce new TLP method	5	3	0
Availability resources in internet	7	1	0
Availability of resources in local library	2	5	1
Assessment			
All assessment questions are as per blooms taxonomy and CO level	7	1	0
Questions are relevant to CO	6	2	0
There is less/ no deviation among internal and external question paper	3	5	0

Feedback Report of Student			
Criteria	High	Medium	Low
Curriculum Design			
BoS is taking care of current and Relevance of the offering Programme	9	6	0
Active participation in providing suggestions in curriculum design	9	4	2
Curriculum design methodology followed by department	9	6	0
Frequency in curriculum update			
The curriculum is updated regularly	11	4	0
Improvements in lab experiments	9	5	1
Suggestions and Improvements			
Time available for course preparation	9	5	1
Availability of course reference materials (List non availability of reference materials)	11	3	1



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School of Electrical & Communication

Department of Biomedical Engineering

FEEDBACK ON CURRICULUM

AY2020-21

1. Name : Dr. J. Samson Isaac,
2. Position : Assistant Professor,
3. Organization : Karunya Institute of Technology, Coimbatore
4. Contact No. : 9597778204
5. Email ID : samsonisaac@karunya.edu

The curriculum of all the B.Tech programs of our university are developed from the Washington Accord Graduate attributes that clearly describe the expected qualities in terms of Engineering Knowledge and Skills, and attitude to be demonstrated by the students during exit of the programme. Our curriculum and syllabus as well as we are preparing ourselves for adapting CBCS system.

This CBCS aims to shift the focus from teacher centric to student centric learning. It allows the students to prepare various career options such as employment in engineering industries, IT industries, higher education in reputed institutions and career in research organizations.

We request you to go through our curriculum which is attached as annexure I and give your valuable suggestions to enrich the curriculum further.

1. Are any specific/ New/ Advanced topics to be included to or removed from any of the Course(s)/ Subjects. If yes, please mention the topics to be included/ removed against each Course(s)/ Subjects as given in the following table.

Title of Course(s)/ subjects	Topics to be included	Topics to be removed
1152BM106 Rehabilitation Engineering	3D Printing	-
1152BM107 Robotics in	Study on DaVinci Medical	-



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Medicine	Robot, Tele-Robots	
Microprocessor and Microcontroller Laboratory	IoT based experiments	

2. If you have identified any specific skills, required for graduates of our branch/ department, to be imparted through the curriculum, please list them.

- Developing technical communication skills through seminar, group discussion
- Develop mini project

3. May we request you to suggest some of the value-added courses; professional certification for those, industries will give preference during recruitment of freshers?

Course on Critical care equipment's

Medical device regulatory services

} Offered by IBSC, Vishagapatnam,

4. Specify some industries, Research centers, R&D labs and reputed institutions either in India or Abroad for our faculty to visit and observe best practices.

Vital Biosystems, Chennai.

Lub Dub Medical Technologies Pvt Ltd, Chennai

Wipro GE healthcare, Bangalore

5. Could you suggest some of innovative instructional (teaching) techniques to enhance students learning?

Prefer to use video based lectures compared to conventional white board could be preferred for few topics.

6. Could you mention professional certification, training programs to improve our faculty competency?

Certified Biomedical Engineer- Offered by IBSC-Valid by Govt of India, and many other training are offered for faculty.



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Any other Comments:

Curriculum is well designed and caters to the student needs in knowledge and application.
It also includes courses for placement and career developments.

Signature

N.M.M. 
20/11/2020

Dr. N.M. Masoodhu Banu
HOD, Biomedical Engineering

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Department of Biomedical Engineering

Faculty Feedback on Curriculum (2020-21)

Name: Dr. THIYAN DEEPA kula
ID No: TTS 2572
Designation: Asst. Prof.
D.O.J: 27th May 2019

S.No	Criteria	High	Medium	Low
Content – CO-PO- Compliance				
1	Course content is relevant to the course mapping	✓		
2	Course outcome contribution towards PO attainment	✓		
3	Course is relevant to the PSC	✓		
4	Course outcome levels are relevant to the course content	✓		
Real World Problem Solving				
5	Course content demand usage of modern tools			
6	Course content addresses current industry practice		✓	
7	Course content will serve for future industry practice		✓	
Time Management				
8	Adequate time available to deliver content	✓		
9	Adequate time available to conduct Assessment	✓		
10	Students are attentive in class	✓		
Innovation in TLP				
11	Provision to introduce new TLP method			
12	Availability resources in internet	✓	✓	
13	Availability of resources in local library		✓	
Assessment				
14	All assessment questions are as per blooms taxonomy and CO level	✓		
15	Questions are relevant to CO	✓		
16	There is less/no deviation among internal and external question paper	✓		
Curriculum Design				
17	BOS is taking care of Current and Relevance of the offering Programme	✓		
18	Employability skills are addressed in curriculum	✓		
19	Active participation in providing suggestions in curriculum design	✓		
20	Curriculum design methodology followed by department	✓		
21	The curriculum is updated regularly	✓		

Kindly provide suggestions to improve (Answers marked with Medium and Low)

K-level for Hospital Management can be increased so that the students can apply the horizontal knowledge

[Signature]
Signature



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Department of Biomedical Engineering

Students Feedback

Name: M.D. Azaharuddin Aneari

ID No.: 10493

Year: 2020-2021

Batch: 2017-2021

S.No	Questions	High	Medium	Low	NA
1	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course	✓			
2	How do you rate the allocation of the credits to the courses	✓			
3	Rate the size of the syllabus in terms of the load on the student	✓			
4	How do you rate the availability of course reference materials	✓			
5	How do you rate the course outcomes stated for each of the course	✓			
6	How do you rate the lab experiments designed for the respective course	✓			
7	How do you rate the time available for course preparation	✓			
8	How do you rate the facilities of the lab you performed for the respective course		✓		
9	Board of studies is taking care of Current and Relevance of the offering Programme	✓			
10	Active participation in providing suggestions in curriculum design				
11	The curriculum is updated regularly				✓
	Kindly provide suggestions to improve (Answers marked with Medium and low)				

Azaharuddin Aneari
SIGNATURE

N.M.M. Masoodhu Banu

Dr. N.M. Masoodhu Banu
HOD, Biomedical Engineering

Vel Tech
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1) Do you like the curriculum in biomedical **Vel Tech** if yes/no what is the reason?

⇒ Yes, because it covered most of the courses which is needed for biomedical students.

2) When you joined in the Veltech what was promised to you in curriculum?

⇒ It was promised that I will be taught all the important concepts theoretically as well as practically which is useful for me to become biomedical engineer and it will also help me for doing job as well as for higher studies.

3) Do you know the list of laboratories in the curriculum?

⇒ Yes, I know ^{the} list of laboratories in the curriculum.

4) Any laboratories in the curriculum has not yet been established. If so list them

⇒ Yes, Biomaterial lab, Biomechanics lab, DPE lab

5) Any extra curricular laboratories you would like to include. If so list them

⇒ Yes, Sensors and Transducer lab and Control system lab

6) Any ~~extra~~ curricular changes you would like to have. List what changes are required.

7) ~~Self Biomedical processing Instrumental~~

⇒ I think Bio signal processing Instruments (BSP LAB) is not really needed. Because most of the concept are already taught in Microprocessor and microcontroller course and practically it was implemented in MPMela

Instead of Bsp lab, I would ~~any~~ like to suggest to add ~~Bioinformatics~~ or tissue engineering course which ~~will~~ help a student to explore in artificial organ domain if he/she wants to study it as postgraduate.

~~Any~~ Any ~~one~~ programming language should be taught which helps

Any one programming language among Python, Matlab or C should be taught in the department inst of expecting student will learn ~~it~~ ^{it} by themselves.

7) Have you ever compared ~~your~~ ^{your} curriculum with other university/colleges. ~~Yes~~ If so list the university and college.

⇒ Yes, I have compared my curriculum with other universities/colleges. The list of these universities and colleges.

- i) College of Biomedical Engineering and Applied Science (Kathmandu, Nepal)
- ii) SRM institute of Science and Technology (Chennai, India)

A 8) From Q. no 7 what do you infer.

⇒ Some courses are missing in our curriculum which should be offered by our department. like biomechanics, control systems.

~~Answer~~
~~Answer~~