



BIOMEDICAL ENGINEERING

Department Of Electronics and Communication Engineering

Action Taken Report on B. Tech BM Program R 19 Feedback Implemented in R21 introduced in the AY 2021 - 22

Action Taken Based on Suggestions from the students:

- Q1. Course Contents of Curriculum are in tune with the Program Outcomes.
- Q2. Course Contents are designed to enable Problem Solving Skills and Core competencies
- Q3. Courses placed in the curriculum serves the needs of both advanced and slow learners.
- Q4. Contact Hour Distribution among the various Course Components (LTP) is satisfiable.
- Q5. The electives offered in relation to the Technological advancements in Biomedical and allied fields.
- Q6. The design of courses in the Curriculum is considered the extra learning or self-learning.
- Q7. Composition of Basic Sciences, Engineering, Humanities and Management Courses is a right mix and satisfiable.
- Q8. Laboratory sessions are sufficient to improve the technical skills of students.
- Q9. Inclusion of Minor Project/ Mini Projects improved the technical competency and leadership skills among the students

Analysis of Overall Feedback given by the Students on R 19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Average Rating	Grade
Q1	74.8	21	2.5	0.8	0	4.671	Excellent
Q2	57.1	39.5	1.7	0.8	0	4.502	Excellent
Q3	58.8	37	0.8	2.5	0	4.494	Excellent
Q4	72.3	25.2	0.8	0.8	0	4.663	Excellent
Q5	63.9	32.8	0	0.8	1.7	4.54	Excellent
Q6	73.1	25.2	0	0.8	0	4.679	Excellent
Q7	73.1	24.4	0.8	0.8	0	4.671	Excellent
Q8	65.5	31.9	0	0.8	0.8	4.575	Excellent

Q9	67.2	30.3	0	0.8	0.8	4.596	Excellent
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Itemized responses given to the suggestions of students

Suggestion: We need python programming courses / object oriented programmes.

Action Taken: IT Courses related to python programing, database management, Datastructures are added.

Suggestion: Network theory subject should be given by keeping biomedical applications in mind.

Action Taken: Applications are added to the network theory course

Suggestion: We need industrial visits to biomedical companies and hospitals and we need workshops on biomedical entrepreneurship

Action Taken: Consistently past in past tree batches Industrial tours and visits to hospitals are in regular practice.

Suggestion: Biomechanics laboratory with simulation or practical is required.

Action Taken: Comsol Multiphysics Simulations based practical experiments are introduced to Biomechanics Laboratory.

Action Taken Based on Suggestions from the faculty:

Q1. Course Contents of Curriculum are in tune with the Program Outcomes

Q2. The depth of the course content is adequate to have significant learning outcomes.

Q3. Curriculum is sufficient to bridge the gap between industry standards /current global scenarios and academics

Q4. To practically enable to develop experimental, design, problem solving and analysis skills of the students.

Q5. The timely coverage of syllabus is possible in the mentioned number of hours.

Q6. The Curriculum providing opportunity towards Self learning to realize the expectations

Q7. Rate the capability of the curriculum for improving ethical values in students

Q8. The number of theoretical courses and laboratory sessions sufficient to improve the technical skills of students

Q9. Electives enable the passion to learn new technologies in emerging area

Analysis of Overall Feedback given by the faculty on R 19

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	53.8	46.2	0	0	0	4.538	Excellent
Q2	61.5	38.5	0	0	0	4.615	Excellent
Q3	61.5	38.5	0	0	0	4.615	Excellent
Q4	76.9	23.1	0	0	0	4.769	Excellent
Q5	61.5	38.5	0	0	0	4.615	Excellent
Q6	38.5	61.5	0	0	0	4.385	Excellent
Q7	53.8	46.2	0	0	0	4.538	Excellent
Q8	61.5	38.5	0	0	0	4.615	Excellent
Q9	61.5	38.5	0	0	0	4.615	Excellent

Itemized responses given to the suggestions of faculty

Suggestion: Medical Imaging processing techniques and medical applications are to improved.

Action Taken: Medical applications are added to the existing Medical Image processing laboratory.

Suggestion: Comsol should be intensely used for minor projects and laboratory.

Action Taken: Comsol software is introduced into biomechanics and Biomaterials and artificial organs laboratory

Suggestion: In Network Theory, theorems should be split as two units and transient behaviour should be removed as it not necessary for biomedical engineers.

Action Taken: Network Theory theorems are split into chapters and transient responses are removed as they are not much of importance to biomedical Engineers.

Suggestion: DTFT and DFT topics are should be removed from SS and they should be included in BMSP.

Action Taken: Those topics are removed from the Signals and Systems and introduced into the Biomedical Signal Processing.

Suggestion: The essence of Biomedical engineering should not be compromised even after including IT course.

Action Taken: Core courses such as rehabilitation Engineering, and the Biochemistry are not compromised in the drafting of the

Action Taken Based on Suggestions from the Employer:

Q1. Course Contents of Curriculum are in tune with the Program Outcomes

- Q2. Curriculum helps in bridging gap between industry and academic institution.
- Q3. Applicability of the domains and the tools used for designing the experiments in terms of existing practices in the Biomedical Engineering Industry.
- Q4. Professional and Open Electives are in relation to the Technological advancements and fulfilling the needs of biomedical and allied industries.
- Q5. Curriculum develops skills to model and analyze the biomedical and allied industrial issues.

Analysis of Overall Feedback given by the Employers on R 19

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	60	40	0	0	0	4.6	Excellent
Q2	20	80	0	0	0	4.2	Excellent
Q3	80	20	0	0	0	4.8	Excellent
Q4	60	20	20	0	0	4.4	Excellent
Q5	80	20	0	0	0	4.8	Excellent

Itemized responses given to the suggestions of Employer

Suggestion: In every semester student have to undergo one programming course.

Action Taken: Six IT courses are introduced in the R-21 curriculum

Suggestion: Firm ware Course should be included

Action Taken: Course, microprocessor and microcontroller practical experiments will cover the firmware programing

Suggestion: DBMS should be included in the syllabus.

Action Taken: Data Base management systems is introduced in the R-21 syllabus

Suggestion: Student should study the advanced subjects for the industrial recurrent.

Action Taken: Department electives are further introduced.

Suggestion: Software programming is essential now a day for the students for their future growth.

Action Taken: It courses are extensively introduced in the R-21 Syllabus

Action Taken Based on Suggestions from the Alumni:

Q1. Curriculum has paved a good foundation in understanding the basic engineering concepts.

Q2. Course Contents of Curriculum are in tune with the Program Outcomes

Q3. Curriculum imparted all the required Job Oriented Skills

Q4. Professional and Open Electives of Curriculum served the technical advancements needed to serve in the industry

Q5. Tools and Technologies learnt during laboratory sessions has enriched the problem-solving skills

Q6. Ability to compete with your peers from other Universities

Q7. Current Curriculum is superior to your studied Curriculum

Analysis of Overall Feedback given by the Alumni on R 19

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	80	20	0	0	0	4.8	Excellent
Q2	80	20	0	0	0	4.8	Excellent
Q3	60	40	0	0	0	4.6	Excellent
Q4	60	40	0	0	0	4.6	Excellent
Q5	60	40	0	0	0	4.6	Excellent
Q6	60	40	0	0	0	4.6	Excellent
Q7	100	0	0	0	0	5	Excellent

Itemized responses given to the suggestions of Alumni

Suggestion: Python programming languages and more number of modular course on EMI / EMC testing should be there in R21

Action Taken: Programming courses are introduced and modular courses are on medical equipment test and calibrations are a regular practise for the Branch.

Suggestion: Python programming is necessary for next generation Bio medical engineers.

Action Taken: Python programing is introduced in the R-21 syllabus



Signature of the coordinator


HOD ECE