VIGNAN'S
Foundation for Science, Technology & Research
UNIVERSITY
(Estd u/s 3 of UGC Act of 1956)

BIOMEDICAL ENGINEERING

Department Of Electronics and Communication Engineering

Action Taken Report on B. Tech BM Program R 13 Feedback Implemented in R16 introduced in the AY 2016 - 17

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 13

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	63	37	0	0	0	4.63	Excellent
Q2	40.2	59.8	0	0	0	4.402	Excellent
Q3	35.4	62.2	2.4	0	0	4.33	Excellent
Q4	59.8	36.2	3.9	0	0	4.555	Excellent
Q5	42.5	57.5	0	0	0	4.425	Excellent

Q6	52	48	0	0	0	4.52	Excellent
Q7	54.3	45.7	0	0	0	4.543	Excellent
Q8	42.5	57.5	0	0	0	4.425	Excellent
Q9	37.8	62.2	0	0	0	4.378	Excellent

Itemized responses given to the suggestions of students

Suggestion: Electronic core subjects such as network theory and signals and systems should be limited to biomedical applications rather than teaching the subject in the view point of ECE applications.

Action Taken: In signals & Systems and in Network theory, applications related to biomedical engineering are added to laboratory and minor projects.

Suggestion: Scope of Electronics Engineering subject should be eased as majority of the students are from BIOLOGY background.

Action Taken: Advanced topics that are related to ECE and Mathematics and not relevant to biomedical are removed from the syllabus of Network theory and signals and systems.

Suggestion: Courses on over all organ diseases and treatment options should be added.
Action Taken: Basic clinical sciences which covers the diseases of organ systems has been added to cover the topics on neurological, cardiac and GI diseases.

Suggestion: Human biology related subjects re needed in the first year.
Action Taken: Fundamentals of Anatomy of Physiology is shifted to first year to introduce the student to core subjects

Action Taken Based on Suggestions from the Parents:

Q1. Your ward is sensitized towards issues like gender equality, environment and sustainability, ethics and values etc., through relevant courses in the curriculum

Q2. The academic flexibility embedded in the curriculum provides opportunities to students to pursue their interest by choosing from a vast number of pathways / electives from own area/specialization as well as from other areas.

Q3.Competency of your ward is on par with the students from other Universities/Institutes.

Q4. The curriculum has been designed to make your ward industry ready by imparting analytical and reasoning, language and soft skills in addition to technical competencies, as desired by the biomedical and allied industries.

Q5. Course Curriculum is of the global standard and is in tune with the needs of electrical and allied industries.

Analysis of Overall Feedback given by the parents on R 13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Rating
Q1	50	50	0	0	0	4.5	Excellent
Q2	50	40	10	0	0	4.4	Excellent
Q3	40	50	10	0	0	4.3	Excellent
Q4	70	30	0	0	0	4.7	Excellent
Q5	50	50	0	0	0	4.5	Excellent

Itemized responses given to the suggestions of parents

Suggestion: Students should be taken to industrial visits and hospital visits.
Action Taken: Industrial visits and industrial tours are planned in end of every end of 6th semester

Suggestion: Students should have general hospital visit exposure in real-time.
Action Taken: To get exposure to hospitals all the students are to be sent every weekend on rotational basis.

Suggestion: Additional programming languages should be taught to students because of placements in software companies.
Action Taken: Other than core language programs, students will participate in hackathons and other competitions so that they learn in summer breaks.

Suggestion: Students communication skills should be improved.
Action Taken: Professional ethics, English laboratory, Cambridge examinations are intensified.

Suggestion: . Other talent activities should be improved.
Action Taken: One credit activities are planned for student, so that they can explore their talents.

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 13

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	37.5	62.5	0	0	0	4.375	Excellent
Q2	25	75	0	0	0	4.25	Excellent
Q3	50	50	0	0	0	4.5	Excellent
Q4	62.5	37.5	0	0	0	4.625	Excellent
Q5	37.5	62.5	0	0	0	4.375	Excellent
Q6	0	100	0	0	0	4	Excellent
Q7	25	75	0	0	0	4.25	Excellent
Q8	37.5	62.5	0	0	0	4.375	Excellent
Q9	0	100	0	0	0	4	Excellent

Itemized responses given to the suggestions of faculty

Suggestion: Biostatistics course offered has had major topics clubbed into one big unit. Some units should be eliminated in order for the course to be reasonable for biology background students.

Action Taken: Biostatistics syllabus is modified.

Suggestion: Practical sessions in the FAP subject should be limited to laboratory experiments as there are no options for the dissections.

Action Taken: Dissections are removed from the syllabus and electrophysiology experiments are added

Suggestion: Modular courses should be conducted.

Action Taken: Modular courses from industrial experts are introduced so that industrial trends and standards will be understandable..

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 13

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	28.6	71.4	0	0	0	4.286	Excellent
Q2	14.3	85.7	0	0	0	4.143	Excellent
Q3	14.3	85.7	0	0	0	4.143	Excellent
Q4	28.6	71.4	0	0	0	4.286	Excellent
Q5	42.9	57.1	0	0	0	4.429	Excellent

Itemized responses given to the suggestions of Employers

Suggestion: focus should be on on skill based outcomes. The minor projects will help students to gain practical knowledge on those subjects rather than subjects alone with laboratories.

Action Taken: Introduction of minor projects in every semester for every 3 subjects helps them to attain practica knowledge on top of laboratory sessions.

Suggestion: Over all curriculum is good in the terms of research and job oriented exposure.

Action Taken: Over all curriculum is good in the terms of research and job oriented exposure.

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 13

Parameters	Rating 5	Rating 4	Rating 3	Rating 2	Rating 1	Average Score	Rating
Q1	40	60	0	0	0	4.4	Excellent
Q2	60	40	0	0	0	4.6	Excellent
Q3	40	60	0	0	0	4.4	Excellent
Q4	50	40	10	0	0	4.4	Excellent
Q5	50	50	0	0	0	4.5	Excellent
Q6	70	10	20	0	0	4.5	Excellent
Q7	70	30	0	0	0	4.7	Excellent

Itemized responses given to the suggestions of Alumni

Suggestion: Pathology and microbiology should be replaced by Basic clinical sciences in the 2nd semester as the students should be aware of the diseases before studying subjects in next semester.

Action Taken: Since there was a dire need to know the problems of human body, basic clinical science subject was introduced as to attain knowledge on diseases and their causes.

Suggestion: The new curriculum is satisfactory and should emphasize more on workshop/ value added courses. oriented training.

Action Taken: Value added courses and workshops are introduced as to improve on their skills.

Signature of the coordinator

HOD ECE