



VIGNAN'S

Foundation for Science, Technology & Research

(Deemed to be University)

-Estd. u/s 3 of UGC Act 1956

DEPARTMENT OF BIOTECHNOLOGY

Minutes of CDMC Meeting

15-03-2019

The members of Curriculum Design and Monitoring Committee for M.Tech. Biotechnology programme met on 15-03-2019 at ASF04, 'U' block, of VFSTR. The following members attended the meeting

S.No.	Member	Designation	Signature
1	Dr.S.Krupanidhi Professor & Head	Chairman	
2	Dr.D.John Babu	Member	
3	Dr. M.Indira	Member	
4	Dr. N.Jalaja	Member	

Agenda of the meeting

1. Analysis of the feedback collected from various stakeholders such as Alumni, Employers, Faculty, Parents and Students during the academic year 2018-19
2. Any point with the permission of Chair.

The following are the important points of analysis obtained from various stakeholders:

1. The interdisciplinary subjects like computer aided drug design and cancer biology will be required for Bioprocess engineers and Biotechnologists.
2. Introduce more elective courses with integrated laboratory courses to get hands on training.
3. It is advised to keep the Fermentation technology as separate subject and it should be compulsory for the biotechnology students.

4. The courses related to Bioinformatics has to be included as it is very important tool in docking studies
5. Addition of industrial orientation courses are more beneficial in getting placements.
6. For Biotechnology students, it is more appropriate to give skill oriented experimental approaches related to the concepts of Fermentation process in Bioprocess Engineering subject.
7. It is essential to add Industrial Biotechnology, Biochemistry and Enzyme Technology and which are helpful for industrial ready.
8. Introduction of open elective subjects in the curriculum for the student industrial ready is advisable.
9. It is essential to add basics principles of reactor design which are helpful for design of various bioreactors.
10. It is beneficial for students to add Bioinformatics courses like Computational system biology, Biomedical and Health Informatics as interdepartmental. Cheminformatics and pharmacogenomics, Immunotechnology and Informatics.

Detailed feedback analysis report is enclosed as Annexure-I

The outcomes of the meeting will be placed before the BoS for further discussion and recommendations.


Chairman, CDMC



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Annexure 1

Feedback has been received from the students on the following nine parameters:

- Q1. The Course Contents of M.Tech Biotechnology Curriculum is in compliance with the Program Outcomes
- Q2. The Biotechnology Course Contents are designed to enable Technical lab Skills and Core competencies
- Q3. Courses placed in the Biotechnology curriculum serve the needs of aspiring students for higher education.
- Q4. Contact Hour Distribution among the various Course Components (LTP) is Satisfiable.
- Q5. The Electives offered will enrich the passion to learn new technologies in emerging areas.
- Q6. The Curriculum provides an opportunity towards Self-learning to realize the expectations.
- Q7. The Composition of theory and lab Courses and year-long internship is a right mix and satisfiable.
- Q8. Number of Laboratory sessions and Theory Courses in Biotechnology have been sufficient to improve the technical skills
- Q9. Student Orientation program and Research Methodology and Year-long internship offered in Biotechnology have enhanced the technical competency and leadership skills in the management of biotech related firms.

The categorization of rating is as follows: Strongly Agree (5), Agree (4), Moderate (3), Disagree (2) and Strongly Disagree (1).

Feedback Analysis is carried based on Average Satisfaction Rating. Rating categorization is carried based on Excellent (≥ 4); Very Good (≥ 3.5 & < 4); Good (≥ 3 & < 3.5); Moderate (> 2 & < 3) and Unsatisfactory (< 2)

Feedback from Students 2018-19 (Academic Year) - PG – M. Tech (BT)

The results derived in terms of percentage of students with-consensus views, average score, and ratings are presented in Table 1.

Table 1: Analysis of feedback from students 2018 – 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	0	100	0	0	0	4	Excellent
Q2	100	0	0	0	0	5	Excellent
Q3	0	100	0	0	0	4	Excellent
Q4	66.7	0	0	0	33.33	3.668	Very Good
Q5	0	100	0	0	0	4	Excellent
Q6	0	100	0	0	0	4	Excellent
Q7	0	100	0	0	0	4	Excellent
Q8	100	0	0	0	0	5	Excellent
Q9	0	100	0	0	0	4	Excellent

The highest score of 5.00 was given to the parameters namely “The Biotechnology Course Contents are designed to enable Technical lab Skills and Core competencies”, “Contact Hour Distribution among the various Course Components (LTP) is Satisfiable” and “Number of Laboratory sessions and Theory Courses in Biotechnology have been sufficient to improve the technical skills” are rated as Excellent. It clearly shows that courses designed to improve the technical competencies of students, contact hour distribution meticulously done and also number of theory courses and laboratory sessions were sufficient to acquire the required technical skills for obtaining better opportunities in the field of Biotechnology.

It is clearly visible from the Table 1 that the remaining all parameters viz., “The Course Contents of M.Tech Biotechnology Curriculum is in compliance with the Program Outcomes” , “Courses placed in the Biotechnology curriculum serve the needs of aspiring students for higher education”, “The Curriculum provides an opportunity towards Self learning to realize the expectations”, The Composition of theory and lab Courses and year-long internship is a right mix and satisfiable” and “Student Orientation program and Research Methodology and Yearlong internship offered in

Biotechnology have enhanced the technical competency and leadership skills in the management of biotech related firms” were rated 4.00 with excellent grading.

An average score of 3.668 for the parameter “The Electives offered have enabled the passion to learn new technologies in emerging areas” with very good rating shows that more professional electives in emerging areas are required for students.

The feedback analysis reveals that curriculum is in good compliance with program outcomes, introduction of integration of theory with laboratory, student Orientation Program, the course namely Research Methodology and yearlong internship will certainly help to improve the student’s technical skills.

Feedback has been received from the employer on the following five parameters:

- Q1. The Course Contents of M.Tech Biotechnology Curriculum are in tune with the Program Outcomes
- Q2. The relevance of the Course Contents is applicable with the Biotech, Biologics and Pharma Industry.
- Q3. The Professional Electives and Open Electives offered to students are in-line with the technology advancements in the biotech related firms.
- Q4. Applicability of the tools and technologies described in the curriculum will be enough to practice in Industry.
- Q5. Student orientation program, Research methodology and yearlong internship acquired by students through the course contents will enable them to be placed in MNC.

The categorization of rating is as follows: Strongly Agree (5), Agree (4), Moderate (3), Disagree (2) and Strongly Disagree (1).

Feedback Analysis is carried based on Average Satisfaction Rating. Rating categorization is carried based on Excellent (≥ 4); Very Good (≥ 3.5 & < 4); Good (≥ 3 & < 3.5); Moderate (> 2 & < 3) and Unsatisfactory (< 2)

Feedback from Employer 2018-19 (Academic Year) - PG – M. Tech (BT)

The results derived in terms of percentage of employer with consensus views, average score, and ratings are presented in Table 2.

Table 2: Analysis of feedback from Employers 2018 - 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	87.5	12.5	0	0	0	4.875	Excellent
Q2	87.5	12.5	0	0	0	4.875	Excellent
Q3	75	12.5	12.5	0	0	4.625	Excellent
Q4	75	25	0	0	0	4.75	Excellent
Q5	87.5	12.5	0	0	0	4.875	Excellent

The highest scores of 4.875 and 4.75 were given to the parameters namely “The Course Contents of M.Tech Biotechnology Curriculum are in tune with the Program Outcomes”. “The relevance of the Course Contents is applicable with the Biotech, Biologics and Pharma Industry”. “Student Orientation program, Research Methodology and year-long internship acquired by the students through the course contents will enable them to be placed in MNC” and “Applicability of the tools and technologies described in the curriculum will be enough to practice in Industry” had been rated as Excellent.

The parameter “The Professional Electives and Open Electives offered to students are in-line with the technology advancements in the biotech related firms” obtained average score of 4.625 and rated as Excellent.

Feedback has been received from the faculty on the following nine parameters:

- Q1. The Course Contents of M. Tech Biotechnology Curriculum are in tune with the Program Outcomes.
- Q2. The Course Contents along with the laboratory skills will enhance biomedical and Core competencies.
- Q3. The allocation of Credits to the respective Courses is satisfiable.
- Q4. The Contact Hour Distribution among the various Course Components (LTP) is Satisfiable.
- Q5. Electives will enable the passion to learn new technologies in emerging areas of Biotechnology.

- Q6. The Curriculum provides an opportunity towards Self learning to realize the expectations.
- Q7. The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is satisfiable?
- Q8. The number of theoretical courses amalgamated with laboratory sessions is sufficient to improve the Genetic Engineering and Bioprocess technical skills of students.
- Q9. The year-long internship will improve the technical and professional competency and leadership skills among the students.

The categorization of rating is as follows: Strongly Agree (5), Agree (4), Moderate (3), Disagree (2) and Strongly Disagree (1).

Feedback Analysis is carried based on Average Satisfaction Rating. Rating categorization is carried based on Excellent (≥ 4); Very Good (≥ 3.5 & < 4); Good (≥ 3 & < 3.5); Moderate (> 2 & < 3) and Unsatisfactory (< 2)

Feedback from Faculty 2018-19 (Academic Year) - PG – M. Tech (BT)

The results derived in terms of percentage of faculty with consensus views, average score, and ratings are presented in Table 3.

Table 3: Analysis of feedback from faculty 2018 – 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	50	42.9	7.1	0	0	4.429	Excellent
Q2	64.3	32.1	0	3.6	0	4.571	Excellent
Q3	53.6	46.4	0	0	0	4.536	Excellent
Q4	60.7	28.6	10.7	0	0	4.5	Excellent
Q5	57.1	42.9	0	0	0	4.571	Excellent
Q6	50	39.3	7.1	3.6	0	4.357	Excellent
Q7	64.3	28.6	7.1	0	0	4.572	Excellent
Q8	57.1	35.7	7.1	0	0	4.496	Excellent
Q9	64.3	28.6	3.6	3.6	0	4.539	Excellent

The highest scores of 4.572, 4.571, 4.539 and 4.536 were given to the parameters namely "The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is satisfiable?". "Electives will enable the passion to learn new technologies in emerging areas of Biotechnology". "The year-long internship will improve the technical and professional competency and leadership skills among the students." "The allocation of Credits to the respective Courses is satisfiable." and had been rated as Excellent.

The parameters "The Contact Hour Distribution among the various Course Components (LTP) is Satisfiable." obtained an average score of 4.5 and rated as Excellent.

The parameters namely "The number of theoretical courses and laboratory sessions offered are sufficient to improve the Bioprocess technical skills of students". "The Course Contents of M.Tech Biotechnology Curriculum are in tune with the Program Outcomes". "The Curriculum provides an opportunity towards Self learning to realize the expectations" obtained average scores of 4.496, 4.429 and 4.357 respectively and rated as Excellent.

Feedback has been received from the alumni on the following seven parameters:

- Q1. The Curriculum laid a good foundation in understanding the basic engineering concepts in Biotechnology.
- Q2. The Course Contents of Biotechnology Curriculum are in tune with the Program Outcomes.
- Q3. The Biotechnology Curriculum encompasses all the required Job Oriented Skills.
- Q4. Professional and Open Electives of Curriculum serve the technical advancements needed in the Biotech, Biologics and Pharma industry.
- Q5. The Tools and Technologies learnt during laboratory sessions will enrich the quality control and quality assurance in Biotechnology industry.
- Q6. While comparing with your peers from other Universities, our curriculum provided technical skills.
- Q7. Current Curriculum is superior than your studied Curriculum.

The categorization of rating is as follows: Strongly Agree (5), Agree (4), Moderate (3), Disagree (2) and Strongly Disagree (1).

Feedback Analysis is carried based on Average Satisfaction Rating. Rating categorization is carried based on Excellent (≥ 4); Very Good (≥ 3.5 & < 4); Good (≥ 3 & < 3.5); Moderate (> 2 & < 3) and Unsatisfactory (< 2)

Feedback from Alumni 2018-19 (Academic Year) - PG – M. Tech (BT)

The results derived in terms of percentage of alumni with consensus views, average score, and ratings are presented in Table 4.

Table 4: Analysis of feedback from alumni 2018 - 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	100	0	0	0	0	5	Excellent
Q2	100	0	0	0	0	5	Excellent
Q3	100	0	0	0	0	5	Excellent
Q4	100	0	0	0	0	5	Excellent
Q5	100	0	0	0	0	5	Excellent
Q6	100	0	0	0	0	5	Excellent
Q7	0	100	0	0	0	4	Excellent

The highest score of 5 was given to six parameters namely “The Curriculum laid a good foundation in understanding the basic engineering concepts in Biotechnology”, “The Course Contents of Biotechnology Curriculum are in tune with the Program Outcomes”, “The Biotechnology Curriculum encompasses all the required Job Oriented Skills”, “Professional and Open Electives of Curriculum serve the technical advancements needed in the Biotech, Biologics and Pharma industry”, “The Tools and Technologies learnt during laboratory sessions will enrich the quality control and quality assurance in Biotechnology industry” and “While comparing with your peers from other Universities, our curriculum provided technical skills”. They were all rated as Excellent. The parameter namely “Current Curriculum is superior than your studied curriculum” secured a score of 4.0 and rated as Excellent.

Feedback has been received from the parents on the following five parameters:

- Q1. The theoretical courses and practical sessions offered in our curriculum are satisfiable.
- Q2. Overall assessment of technical knowledge in Biotechnology discipline acquired by your ward who is pursuing his/her M.Tech program in our Institution.
- Q3. The Academic and Emotional Progression of your ward are satisfying as per your expectations.
- Q4. Competency of your ward in Biotechnology is on par with the students from other Universities/Institutes
- Q5. Course Contents of our M.Tech Biotechnology Curriculum are in tune with the Industry demand

The categorization of rating is as follows: Strongly Agree (5), Agree (4), Moderate (3), Disagree (2) and Strongly Disagree (1).

Feedback Analysis is carried based on Average Satisfaction Rating. Rating categorization is carried based on Excellent (≥ 4); Very Good (≥ 3.5 & < 4); Good (≥ 3 & < 3.5); Moderate (> 2 & < 3) and Unsatisfactory (< 2)

Feedback from Parents 2018-19 (Academic Year) - PG – M. Tech (BT)

The results derived in terms of percentage of parents with consensus views, average score, and ratings are presented in Table 5.

Table 5: Analysis of feedback from parents 2018 – 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	100	0	0	0	0	5	Excellent
Q2	100	0	0	0	0	5	Excellent
Q3	0	100	0	0	0	4	Excellent
Q4	100	0	0	0	0	5	Excellent
Q5	100	0	0	0	0	5	Excellent

The highest score of 5 is given to four parameters such as "The theoretical courses and practical sessions offered in our curriculum are satisfiable", "Overall assessment of technical knowledge in Biotechnology discipline acquired by your ward who is pursuing his/her M.Tech program in our Institution", "The Academic and Emotional Progression of your ward are satisfying as per your expectations" and Course Contents of our M.Tech Biotechnology Curriculum are in tune with the Industry demand" and rated as Excellent.

An average score of 4.00 was given to the parameter namely "Competency of your ward in Biotechnology is on par with the students from other Universities/Institutes" and rated as Excellent.


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