



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

DEPARTMENT OF BIOTECHNOLOGY

Minutes of CDMC Meeting

10-04-2017

The members of Curriculum Design and Monitoring Committee for M.Tech. Biotechnology programme met on 10-04-2017 at ASF04, 'U' block, of Vignan's University. The following members attended the meeting

S.No.	Member	Designation	Signature
1	Dr.D. Vijaya Ramu Associate professor & Head	Chairman	
2	Mr.D.John Babu	Member	
3	Mrs.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 2016-17
2. Any point with the permission of Chair.

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

1. The Chairman-CDMC briefed the draft curriculum of R-17 M.Tech Biotechnology to the members
2. It is advised to incorporate Skill based practices which are required for industry demands.
3. Inclusion of small projects related to core courses will be useful for understanding the core concepts.

4. It is beneficial for students to add courses like rDNA Technology, Upstream and Downstream for the industry readiness.
5. More courses associated with Plant, Animal and Microbial technologies need to be introduced as these courses are grabbing highest percentage of job market in biotechnology industries.
6. Addition of industrial orientation courses are more beneficial in getting placements.
7. Better to include one-year industry internship to reduce gap between industry and academic institution and to obtain training to the students
8. Introduce project-based learning to improve technical skills of the students.
9. The industrial/research options available for the students passing out from this course has to get expertise in the industrial fermentation process. In this line it is required to include the optional subjects related to fermentation in the elective stream.
10. It is essential to add basics principles of reactor design which are helpful for design of various bioreactors.
11. It may be better to include analysis of actions of alternative medicines under cancer therapy, since the Govt is initiating integrated research now-a-days.

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 I

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 2016-17 (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 2016 – 17

	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	100	0	0	0	0	5	Excellent
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 Electives offered have enabled the passion to learn new technologies in emerging areas”, “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 Year-long 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.

Time to time meetings were conducted at the department level to leverage new and advanced techniques to combat the learning difficulties of the 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 2016-17 (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 2016 – 17

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	14.3	85.7	0	100	0	4.413	Excellent
Q2	85.7	14.3	0	0	0	4.857	Excellent
Q3	0	85.7	14.3	25	0	3.857	Very Good
Q4	0	100	0	0	0	4	Excellent
Q5	100	0	0	50	0	5	Excellent

The highest scores of 5 and 4 were given to the parameters namely “Student orientation program, Research methodology and yearlong internship acquired by students through the course contents will enable them to be placed in MNC” and “Course contents are in tune with program outcomes” and “relevance of the course contents is applicable with the Biotech, Biologics and Pharma Industry” and “Applicability of the tools and technologies described in the curriculum will be enough to practice in Industry” all of them 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 3.875 and rated as Very good.

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 2016-17 (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 2016 – 17

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	53.6	39.3	7.1	0	0	4.465	Excellent
Q2	64.3	32.1	0	3.6	0	4.571	Excellent
Q3	60.7	39.3	0	0	0	4.607	Excellent
Q4	60.7	25	14.3	0	0	4.464	Excellent
Q5	57.1	42.9	0	0	0	4.571	Excellent
Q6	53.6	35.7	7.1	3.6	0	4.393	Excellent
Q7	67.9	25	7.1	0	0	4.608	Excellent
Q8	50	42.9	7.1	0	0	4.429	Excellent
Q9	71.4	21.4	3.6	3.6	0	4.606	Excellent

The highest scores of 4.608, 4.607 and 4.606 were given to the parameters namely “The number of theoretical courses” and “laboratory sessions offered are sufficient to improve the Bioprocess technical skills of students”. “The year-long internship will improve the technical and professional competency and leadership skills among the students” and all had been rated as Excellent

The parameters “The Course Contents of M.Tech Biotechnology Curriculum are in tune with the Program Outcomes”. “The Contact Hour Distribution among the various Course Components (LTP) is Satisfiable”. “The number of theoretical courses and laboratory sessions offered are sufficient to improve the Bioprocess technical skills of students” obtained average score of 4.465, 4.464, 4.429 and all were 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 2016-17 (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 2016 - 17

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	50	50	0	0	0	4.5	Excellent
Q2	50	50	0	0	0	4.5	Excellent
Q3	50	50	0	0	0	4.5	Excellent
Q4	0	100	0	0	0	4	Excellent
Q5	50	50	0	0	0	4.5	Excellent
Q6	0	100	0	0	0	4	Excellent
Q7	100	0	0	0	0	5	Excellent

The highest score of 5 was given to the parameter namely “Current Curriculum is superior than your studied Curriculum” and rated as Excellent.

The parameters namely “The Curriculum laid a good foundation in understanding the applied engineering concepts in Biotechnology”. “The Course Contents of Biotechnology Curriculum are in compliance with the Program Outcomes”, “The Biotechnology Curriculum imparts all the required Job Oriented Skills” and “The Tools and Technologies learnt during laboratory sessions will enrich the Bioprocess skills in Biotechnology industries” were rated as Excellent with an average score of 4.5.

“Professional electives of Curriculum suit to the technical advancements needed to serve in the Biotech, Biologics and Pharma industry” and “While comparing with your peers from other Universities, our curriculum provided technical skills” secured the 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 2016-17 (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 2016 – 17

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	50	0	50	0	0	4	Excellent
Q2	50	25	25	0	0	4.25	Excellent
Q3	50	25	25	0	0	4.25	Excellent
Q4	50	0	50	0	0	4	Excellent
Q5	50	0	50	0	0	4	Excellent

The highest score of 4.25 was given to parameters such as "Overall assessment of technical knowledge in Biotechnology discipline acquired by your ward who is pursuing his/her M.Tech program in our Institution" and "The Academic and Emotional Progression of your ward are satisfying as per your expectations". "Competency of your ward in Biotechnology is on par with the students from other Universities/Institutes" and Course Contents of our M.Tech Biotechnology Curriculum are in tune with the Industry demand" and rated as Excellent.



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