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

DEPARTMENT OF BIOTECHNOLOGY

Minutes of CDMC Meeting

16-03-2016

The members of Curriculum Design and Monitoring Committee for M.Tech. Biotechnology programme met on 16-03-2016 at ASF04, 'U' block, of Vignan;s University. The following members attended the meeting

S.No.	Member	Designation	Signature
1	Dr.S. Krupanidhi 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 2015-16.
2. Any point with the permission of Chair.

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

1. Introduce more elective courses in one specific area of students' interest.
2. Inclusion of small projects related to core courses will be useful for understanding the core concepts.
3. Connection between theory courses and laboratory is required for better understanding of the concept.

4. Include hands on training on fermenter for better understanding of Bioprocess parameters control.
5. Addition of industrial orientation courses are more beneficial in getting placements.
6. Include reactor design concepts in Advanced Biochemical Reaction Engineering course.
7. Introduce project-based learning to improve technical skills of the students.
8. 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.
9. Add more courses on Plant Biotechnology and Genetic Engineering.
10. 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 2015-16 (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 2015 – 16

	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	66.7	33.3	0	0	0	4.667	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 4.667 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 2015-16 (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 2015 - 16

	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	0	100	0	0	0	4	Excellent
Q5	100	0	0	0	0	5	Excellent

The highest score of 5 was 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" and "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" all have been rated 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 2015-16 (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 2015 – 16

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	47.6	42.9	9.5	0	0	4.381	Excellent
Q2	47.6	42.9	9.5	0	0	4.381	Excellent
Q3	61.9	38.1	0	0	0	4.619	Excellent
Q4	57.1	38.1	4.8	0	0	4.523	Excellent
Q5	52.4	47.6	0	0	0	4.524	Excellent
Q6	42.9	42.9	14.3	0	0	4.29	Excellent
Q7	52.4	42.9	4.8	0	0	4.48	Excellent
Q8	61.9	33.3	4.8	0	0	4.571	Excellent
Q9	57.1	38.1	0	4.8	0	4.475	Excellent

The highest score of 4.619 was given to the parameters namely "The allocation of Credits to the respective Courses is satisfiable" had been 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" and "The Contact Hour Distribution among the various Course Components (LTP) is Satisfiable". "Electives will enable the passion to learn new

technologies in emerging areas of Biotechnology". The parameters obtained average score of 4.571and 4.524, 4.523 rated as Excellent.

The parameters namely The year-long internship will improve the technical and professional competency and leadership skills among the students and "The Course Contents of M.Tech Biotechnology Curriculum are in tune with the Program Outcomes" and "The Course Contents along with the laboratory skills will enhance biomedical and Core competencies". The parameters obtained average score of 4.475 and 4.381, 4.381rated 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 2015-16 (Academic Year) - PG – M. Tech (BT)

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

Table 4: Analysis of feedback from alumni 2015 – 16

	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	50	50	0	0	0	4.5	Excellent
Q5	50	0	50	0	0	4	Excellent
Q6	50	50	0	0	0	4.5	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 was rated as Excellent.

The five 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" and "While comparing with your peers from other Universities, our curriculum provided technical skills" secured an average score of 4.5 and all these five parameters were rated as Excellent.

The parameter namely "The Tools and Technologies learnt during laboratory sessions will enrich the quality control and quality assurance in Biotechnology industry" was with an average score of 4.0 and was 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 2015-16 (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 2015 – 16

	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 all the five 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", "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.

HOD, BT