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

DEPARTMENT OF BIOTECHNOLOGY

Minutes of CDMC Meeting

15-04-2018

The members of Curriculum Design and Monitoring Committee for B.Tech. Biotechnology programme met on 15-04-2018 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	Dr.D.John Babu	Member	
3	Mrs. M. Indira	Member	
4	Mr. A. Venkata Narayana	Member	
5	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 2017-18
2. Any point with the permission of Chair.

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

1. Include production processes of commercial Bioproducts in Industrial Biotechnology course.
2. Unit operations related to solids handling are missing in Process Engineering Principles course.
3. Encouragement towards extracurricular activities is needed.
4. Advanced topics like PERL and XML are needed to be included in Bioinformatics course.
5. Introduce project-based learning to improve technical skills of the students.

6. Conduct value added courses during the semester break time to get exposure towards industry-related technologies.
7. Add design concepts to Bioprocess Engineering course
8. It is better to include industrially important enzymes in the subject Industrial Biotechnology.
9. Promote self-learning ability of students by encouraging online courses.
10. It is advisable to include more professional electives to get expertise in the particular field.

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

DEPARTMENT OF BIOTECHNOLOGY
Annexure 1

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

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

Q2. The Biotechnology Course Contents are designed to enrich laboratory Skills and Core competencies.

Q3. The Courses placed in the Biotechnology curriculum serve the needs of both advanced and slow learners.

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 Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is a right mix and satisfiable.

Q8. Number of Laboratory sessions Integrated with Theory Courses in Biotechnology have been sufficient to improve the technical skills.

Q9. Integration of Minor Project with Theory Courses 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 2017-18 (Academic Year) - UG – B. 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 2017 – 18

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	79.2	16.1	4.2	0.2	0.2	4.736	Excellent
Q2	51.6	41.8	5.6	0	1	4.43	Excellent
Q3	38.1	52.8	8.3	0.7	0	4.28	Excellent
Q4	44.7	44	10.3	0.5	0.5	4.319	Excellent
Q5	41.1	52.1	5.1	1.2	0.5	4.321	Excellent
Q6	9.3	77.8	11.7	1	0.2	3.95	Very Good
Q7	46.9	46.9	5.4	0.5	0.2	4.395	Excellent
Q8	69.9	23.7	6.1	0	0.2	4.628	Excellent
Q9	72.4	20.8	5.9	0.7	0.2	4.645	Excellent

The highest score of 4.736 was given to the parameter namely "Course Contents of Curriculum are in tune with the Program Outcomes" followed by the parameter namely "The Biotechnology Course Contents are designed to enrich laboratory Skills and Core competencies" with a score of 4.43 and both had been rated as Excellent.

It is clearly visible from the Table 1 that the parameters viz., "Integration of Minor Project with Theory Courses offered in Biotechnology have enhanced the technical competency and leadership skills in the management of biotech related firms" and "Number of Laboratory sessions Integrated with Theory Courses in Biotechnology have been sufficient to improve the technical skills" obtained average scores 4.645 and 4.628 respectively and had been rated as Excellent.

The parameters namely "The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is a right mix and satisfiable" and "Contact Hour Distribution among the various Course Components (LTP) is Satisfiable" shown the scores of 4.395 and 4.319 respectively and has been rated as Excellent, which clearly reflects the benefit towards the student expectations.

Average scores of 3.95, 4.321 and 4.28 were obtained for the parameters namely "The Curriculum provides an opportunity towards Self learning to realize the expectations", "The Electives offered will enrich the passion to learn new technologies in emerging areas" and "The Courses placed in the Biotechnology curriculum serve the needs of both advanced and slow learners" respectively. These three parameters were rated as Excellent and Very good respectively.

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 laboratory sessions help to improve the student's technical skills and the courses placed in the curriculum supports both the advanced learners as well as slow learners.

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

Q1. The Course Contents of 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. Laboratory skills and theoretical concepts acquired by the 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 2017-18 (Academic Year) - UG – B. Tech (BT)

The results derived in terms of percentage of employer with consensus views, average score,

and ratings are presented in Table 2.

<p style="text-align:center">Table 2: Analysis of feedback from Employer 2017 – 18</p>

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	45.5	36.4	0	18.2	0	4.095	Excellent
Q2	45.5	36.4	18.2	0	0	4.277	Excellent
Q3	54.5	27.3	18.2	0	0	4.363	Excellent
Q4	63.6	36.4	0	0	0	4.636	Excellent
Q5	63.6	27.3	0	9.1	0	4.454	Excellent

The highest score of 4.636 and 4.454 was given to the parameters namely "Applicability of the tools and technologies described in the curriculum will be enough to practice in Industry" and "Laboratory skills and theoretical concepts acquired by the students through the course contents will enable them to be placed in MNC" and both 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 4.363 and rated as Excellent. The parameters namely "The Course Contents of Biotechnology Curriculum are in tune with the Program Outcomes" and "The relevance of the Course Contents is applicable with the Biotech, Biologics and Pharma Industry" obtained average scores of 4.095 and 4.277 and rated as Excellent.

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

Q1. The Course Contents of 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 integration of Minor Project with Theory Courses will improve the technical 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 2017-18 (Academic Year) - UG – B. 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 2017 – 18

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	45.8	45.8	8.3	0	0	4.371	Excellent
Q2	62.5	33.3	0	4.2	0	4.541	Excellent
Q3	54.2	45.8	0	0	0	4.542	Excellent
Q4	58.3	29.2	12.5	0	0	4.458	Excellent
Q5	54.2	45.8	0	0	0	4.542	Excellent
Q6	50	41.7	4.2	4.2	0	4.378	Excellent
Q7	66.7	29.2	4.2	0	0	4.629	Excellent
Q8	54.2	37.5	8.3	0	0	4.459	Excellent
Q9	62.5	29.2	4.2	4.2	0	4.503	Excellent

The highest score of 4.629 was given to the parameter namely "The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is satisfiable?" and

has been rated as Excellent. The parameters "The allocation of Credits to the respective Courses is satisfiable" and "Electives will enable the passion to learn new technologies in emerging areas of Biotechnology" obtained an average score of 4.542 and rated as Excellent.

The parameters namely "The Course Contents along with the laboratory skills will enhance biomedical and Core competencies" and "The integration of Minor Project with Theory Courses will improve the technical competency and leadership skills among the students" obtained average scores of 4.541 and 4.503 respectively and rated as Excellent. "The number of theoretical courses amalgamated with laboratory sessions is sufficient to improve the Genetic Engineering and Bioprocess technical skills of students", "The Curriculum provides an opportunity towards Self learning to realize the expectations", and "The Course Contents of Biotechnology Curriculum are in tune with the Program Outcomes" obtained an average score of 4.459, 4.378, and 4.371 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 2017-18 (Academic Year) - UG – B. 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 2017 – 18

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	31.3	62.5	6.3	0	0	4.254	Excellent
Q2	43.8	31.3	25	0	0	4.192	Excellent
Q3	21.9	46.9	21.9	9.4	0	3.816	Very Good
Q4	28.1	53.1	12.5	6.3	0	4.03	Excellent
Q5	21.9	43.8	9.4	25	0	3.629	Very Good
Q6	34.4	43.8	18.8	3.1	0	4.098	Excellent
Q7	40.6	50	9.4	0	0	4.312	Excellent

The highest score of 4.254 was given to the parameter namely "The Curriculum laid a good foundation in understanding the basic engineering concepts in Biotechnology" and followed by score of 4.192 was given to "The Course Contents of Biotechnology Curriculum are in tune with the Program Outcomes" and both were rated as Excellent. "Current Curriculum is superior than your studied Curriculum" obtained an average score of 4.312 and rated as Excellent.

The parameters "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" obtained an average score of 4.03 and 4.098 respectively and rated as Excellent. "The Biotechnology Curriculum encompasses all the required Job Oriented Skills" and "The Tools and Technologies learnt during laboratory sessions will enrich the quality control and quality assurance in Biotechnology industry" obtained an average score of and rated as Moderate.

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

Q1. The theoretical courses and practical sessions offered in our Biotechnology curriculum are satisfiable.

Q2. The overall assessment of technical knowledge in Biotechnology disciplines acquired by your ward who is pursuing his/her program in our institution is satisfiable.

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 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 2017-18 (Academic Year) - UG – B. 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 2017 – 18

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	100	0	0	0	0	5	Excellent
Q2	89.4	10.6	0	0	0	4.894	Excellent
Q3	14.1	85.9	0	0	0	4.141	Excellent
Q4	90.6	9.4	0	0	0	4.906	Excellent
Q5	87.1	12.9	0	0	0	4.871	Excellent

The highest score of 5 was given to the parameter namely "The theoretical courses and practical sessions offered in our Biotechnology curriculum are satisfiable" and rated as Excellent.

The parameters "Competency of your ward in Biotechnology is on par with the students from other Universities/Institutes' and "The overall assessment of technical knowledge in Biotechnology disciplines acquired by your ward who is pursuing his/her program in our institution is satisfiable" and obtained average scores of 4.906 and 4.894 respectively and rated as Excellent.

The parameter "Course Contents of our Biotechnology Curriculum are in tune with the Industry demand" obtained average score of 4.871 and rated as Excellent. The parameters namely "The Academic and Emotional Progression of your ward are satisfying as per your expectations" obtained average score of 4.141 and rated as Excellent.

HOD, BT