



VIGNAN'S

Foundation for Science, Technology & Research

(Deemed to be UNIVERSITY)

-Est'd. u/s 3 of UGC Act 1956



DEPARTMENT OF BIOTECHNOLOGY

Action Taken Report on B. Tech Bioinformatics Program R19 & R21 Feedback Implemented in R22 introduced in the AY 2022 – 23

Action taken based on the suggestions from Students:

1. The Course Contents of Bioinformatics Curriculum are in tune with the Program Outcomes
2. The Bioinformatics Course Contents are designed to enrich laboratory skills and core competencies.
3. The Courses placed in the Bioinformatics curriculum serve the needs of both advanced and slow learners.
4. Contact Hour Distribution among the various Course Components (LTP) is satisfiable.
5. The Electives offered will enrich the passion to learn new technologies in emerging areas.
6. The Curriculum provides an opportunity towards Self learning to realize the expectations.
7. The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is a right mix and satisfiable.
8. No. of Laboratory sessions Integrated with Theory Courses in Bioinformatics have been sufficient to improve the technical skills.
9. Integration of Minor Project with Theory Courses offered in Bioinformatics have enhanced the technical competency and leadership skills in the management of biotech related firms

Analysis of Overall Feedback given by the Students on R19 & R21

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	53	25	13	4	2	4.14	Excellent
Q2	50	25	18	3	1	4.11	Excellent
Q3	53	28	10	4	2	4.17	Excellent
Q4	54	21	17	3	2	4.13	Excellent
Q5	51	22	15	6	3	4.03	Excellent
Q6	56	23	15	3	0	4.23	Excellent

Q7	55	24	16	1	1	4.22	Excellent
Q8	57	16	18	1	5	4.1	Excellent
Q9	55	24	13	2	3	4.17	Excellent

Itemized responses given to the Suggestions of Students

Suggestion: Increase the lab periods and lab works to enhance grip on the core concepts

Action Taken: The curriculum is modified to include more real world practical based courses and in module based curriculum practices were designed by covering all core concepts of Bioinformatics.

Suggestion: Please provide sufficient lab hours at flexible times for computational biology courses

Action Taken: In R22 curriculum all computational biology courses such as Biological Databases, Algorithms in Bioinformatics, Molecular Modeling and Simulations practice based courses

Suggestion: We need more coding related IT related subjects in curriculum

Action Taken: In R22 curriculum three mandatory IT related courses such as Basic Coding Competency, Data Structures and Advanced Coding Competency were introduced. In addition to mandatory courses computational biology courses such as Python Programming for Biologists, R Programming for Biological Data Sciences were also included.

Action taken based on the suggestions from Alumni:

1. The Curriculum laid a good foundation in understanding the basic engineering concepts in Bioinformatics.
2. The Course Contents of Bioinformatics Curriculum are in tune with the Program Outcomes.
3. The Bioinformatics Curriculum encompasses all the required Job Oriented Skills.
4. Professional and Open Electives of Curriculum serve the technical advancements needed in the Biotech, Biologies, Pharma and Information Technology industry.
5. The Tools and Technologies learnt during laboratory sessions will enrich the repository and retrieval of gene and satellite DNA information for the purpose of paternity testing and forensic investigations.
6. While comparing with your peers from other Universities, our curriculum provided technical skills.
7. Current Curriculum is superior than your studied Curriculum.

Analysis of Overall Feedback given by the Alumni on R19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	98.6	0	1.4	0	0	4.972	Excellent

Q2	98.6	0	1.4	0	0	4.972	Excellent
Q3	98.6	0	0	0	1.4	4.944	Excellent
Q4	98.6	0	0	1.4	0	4.958	Excellent
Q5	98.6	0	0	0	1.4	4.944	Excellent
Q6	97.2	1.4	0	1.4	0	4.944	Excellent
Q7	100	0	0	0	0	5	Excellent

Itemized responses given to the suggestions of Alumni

Suggestion: Improve problem solving abilities

Action Taken: The current R22 curriculum is a practice oriented curriculum. In this students will be trained for solving the toughest problems in the relevant field.

Suggestion: Let there be more emphasis on computational subjects.

Action Taken: In R22 curriculum three mandatory IT related courses such as Basic Coding Competency, Data Structures and Advanced Coding Competency were introduced. In addition to mandatory courses computational biology courses such as Python Programming for Biologists, R Programming for Biological Data Sciences were also included

Suggestion: Add more practices in the curriculum

Action Taken: R-22 has been redesigned to inculcate concept oriented and practice based learning in which a dedicated practice sessions and continuous assessment will be carried out.

Suggestion: Extend more time for group discussions

Action Taken: Discussion sessions in each course was given in the timetable where in students can clarify their doubts and can make discussions related to the courses which enables learning abilities

Action taken based on the suggestions from Faculty:

1. The Course Contents of Bioinformatics Curriculum are in tune with the Program Outcomes.
2. The Course Contents along with the laboratory skills will enhance Informatics and Core competencies.
3. The allocation of Credits to the respective Courses is satisfiable.
4. The Contact Hour Distribution among the various Course Components (LTP) is Satisfiable.
5. Electives will enable the passion to learn new technologies in emerging areas of Bioinformatics.
6. The Curriculum provides an opportunity towards Self learning to realize the expectations.
7. The Composition of Basic Sciences, Engineering, Humanities and Management Courses in the curriculum is satisfiable?

8. The number of theoretical courses amalgamated with laboratory sessions is sufficient to improve the technical skills of students.
9. The integration of Minor Project with Theory Courses will improve the technical competency and leadership skills among the students.

Analysis of Overall Feedback given by the Faculty on R19 & R21

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	77.8	22.2	0	0	0	4.778	Excellent
Q2	100	0	0	0	0	5	Excellent
Q3	88.9	11.1	0	0	0	4.889	Excellent
Q4	100	0	0	0	0	5	Excellent
Q5	88.9	11.1	0	0	0	4.889	Excellent
Q6	88.9	11.1	0	0	0	4.889	Excellent
Q7	88.9	11.1	0	0	0	4.889	Excellent
Q8	88.9	11.1	0	0	0	4.889	Excellent
Q9	88.9	11.1	0	0	0	4.889	Excellent

Itemized responses given to the suggestions of Faculty

Suggestion: Increase the number of open elective and minor elective streams.

Action taken: Good number of department of elective courses in diversified fields were introduced in R22 curriculum to promote breadth domain knowledge. Further, more number of baskets of minor open electives were also introduced to promote interdisciplinary knowledge.

Suggestion: Biotech courses should be given equal importance as computer courses.

Action taken: The core biotechnology course such as Cell and Molecular Biology, Biochemistry and Enzymology and Microbiology and Fermentation Technology were included in R22 Bioinformatics curriculum to throw focus on core biotechnology knowledge to Bioinformatics students.

Suggestion: Include enzymology related Courses so that students can gain knowledge on the same.

Action taken: A new course namely Biochemistry and Enzymology was introduced in R22 curriculum in place of Biochemistry of previous curriculum.

Suggestion: Microbiology and Fermentation Technology knowledge is required for Bioinformatics students.

Action taken: A new course namely Microbiology and Fermentation Technology was introduced in R22 curriculum in place of Microbiology of previous curriculum.

Action taken based on the suggestions from Employers:

1. The Course Contents of Bioinformatics Curriculum are in tune with the Program Outcomes.
2. The relevance of the Course Contents is applicable with the Biotech, Biologies, Pharma and Information Technology Industry.
3. The Professional Electives and Open Electives offered to students are in-line with the technology advancements in the Bioinformatics related firms.
4. Applicability of the tools and technologies described in the curriculum will be enough to practice in Industry.
5. Laboratory skills and theoretical concepts acquired by the students through the course contents will enable them to be placed in MNC.

Analysis of Overall Feedback given by the Employers on R19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	80	13.3	0	0	0	4.532	Excellent
Q2	80	13.3	0	0	0	4.532	Excellent
Q3	80	13.3	0	0	0	4.532	Excellent
Q4	73.3	20	0	0	0	4.465	Excellent
Q5	66.7	26.7	0	0	0	4.403	Excellent

Itemized responses given to the suggestions of Employers

Suggestions: Include more Bioinformatics related courses along with Biotechnology basic courses. Also courses should be integrated with lab. More emphasis should be on hands on experience and practicals.

Action taken: R22 curriculum of B.Tech Bioinformatics programe is well balanced curriculum and ample weightage was given to basic biotechnology courses. Advanced courses in core bioinformatics were also included in the curriculum.

Suggestions: Needs more emphasis on industry orientation and skill orientation. It should be designed in such a way that employability opportunities and will be more.

Action taken: Increased emphasis has been placed on industry-related courses within the Bioinformatics curriculum to provide students with practical knowledge and skills demanded by the industry. Collaboration with industry experts and professionals has been established to incorporate real-world case studies and examples.



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