



VIGNAN'S

Foundation for Science, Technology & Research

(Deemed to be University)

-Estd. u/s 3 of UGC Act 1956

DEPARTMENT OF BIOTECHNOLOGY

Date: 05.02.2020.

Minutes of Board of Studies (BOS) meeting of M.Tech Biotechnology program held on 05-02-2020 at the office Head of the department, Department of Biotechnology, VFSTR, Vadlamudi.

Agenda of the meeting:

- 1) To discuss and finalize structure of detailed syllabus for M.Tech Biotechnology program applicable from 2020-21 admitted batch.

Members Present:

S.No	Name	Members	Signature
1.	Prof. S. Krupanidhi, HOD Department of Biotechnology	Chairman, BOS	
2.	Prof. Mukesh Doble, IIT, Madras	Invited member	
3.	Dr. Kutubuddin Ali Molla, Scientist (Agricultural Biotechnology), Crop Improvement Division, ICAR-NRRI	Invited member	not attended
4.	Dr. D. Madhavi, Head/Scientist Institute of Bio-Chemical Technology, Nacharam, Hyderabad	Invited member	
5.	Dr. D. Vijaya Ramu, Professor & Dean Academics	Internal Member	
6.	Dr. M. Indira, Associate Professor	Internal Member	
7.	Dr.D.John Babu, Professor	Internal Member	
8.	Dr. N. Jalaja, Associate Professor	Internal Member	

Minutes of the BOS meeting

1. The chairman welcomed all the members of BOS.
2. The chairman highlighted broad objectives of the proposed changes in the course structure of M.Tech Biotechnology program.
3. The chairman also explained in detail the suggestions and comments received from various stakeholders.
4. The members of the BOS thoroughly looked at the proposals of the Department of Biotechnology in the light of suggestions made by experts and recommended a new course structure for M. Tech Biotechnology program.

After the discussion it is resolved to:

1. Propose and approve course structure for all 2 years of M.Tech. Programme in Biotechnology (Appendix-I).
2. Propose and approve detailed syllabus for the 2 year of M.Tech. Programme in Biotechnology with effect from the academic year 2020-21. The proposed structure and syllabus are applicable for 2020 admitted batch onwards.
3. Stakeholder's feedback is collected, analyzed and given utmost priority while designing the curriculum and their suggestions are implemented.
4. The curriculum follows choice-based credit system.
5. The total percentage of syllabus revision for M.Tech Biotechnology Program is 63.11%.
6. Major restructuring has taken place in the curriculum which is oriented towards project-based learning with the inclusion of Intra and Inter disciplinary projects.
7. Credits were allocated to online courses to promote self-learning among the students.
8. The curriculum is encompassing the courses that enable employability, most of core and elective courses are combined theory with laboratory for better understanding and gain hands on experience.
9. Major restructuring has taken place in the curriculum by emphasizing on exclusively Bioinformatics concepts by introducing courses namely Computational system biology, Biomedical and Health Informatics as interdepartmental electives. Cheminformatics and

pharmacogenomics, Immunotechnology and Informatics was introduced in the elective subjects.

10. Specific activities related to major theory courses were pre-defined to facilitate the students to carry out minor projects in that courses.

Appendix-I
Course Structure

I Year I Semester

Course Title		L	T	P	C
Core course- 1	Upstream and Downstream processing	3	-	-	3
Core Course- 2	Molecular Genetics	3	-	3	5
Core Course - 3	Natural Product Technology	3	-	3	5
Human Values and Gender Equity	Human Values and Gender Equity	-	-	-	-
Core Elective offered by Department	Elective-I	3	-	-	3
Intra Disciplinary Project		-	-	2	2
Credits		12	-	8	18

I Year II Semester

Course Title		L	T	P	C
Core Course- 4	Biochemistry Enzyme Technology	3	-	3	5
Core Course- 5	Cheminformatics and pharmacogenomics	3	-	3	5
Technical Report writing and Research Methodologies	Technical Report writing and Research Methodologies	2	-	-	2
Core Elective offered by Department	Elective-2	3	-	-	3
Core Elective offered by Department	Elective-2	3	-	-	3
Audit Course- 2		-	-	-	-
Employment Orientation Program	Employment Orientation Program	2	-	-	2
Inter Disciplinary Project	Project	2	-	-	2
Credits		18	-	6	22

II Year I Semester

Course Title	L	T	P	C
MOOCs Course-1 (Inter disciplinary nature)	-	-	-	3
MOOCs Course-1 (Inter disciplinary nature)	-	-	-	3
	-	-	-	6

II Year II Semester

Course Title	L	T	P	C
Project / Internship Phase-I	-	-	-	10
Project / Internship Phase-II	-	-	-	16
	-	-	-	26

Total Credits – 72

Course Title		L	T	P	C
Core Elective	Plant metabolism	3	-	-	3
Core Elective	Plant Biotechnology	3	-	-	3
Core Elective	Animal Biotechnology	3	-	-	3
Core Elective	Industrial Biotechnology and Metabolic Engineering	3	-	-	3

Core Elective	Bioinformatics and Molecular Modeling	3	-	-	3
Core Elective	Advanced Bio-process Engineering	3	-	-	3
Core Elective	Immunotechnology and Informatics	3	-	-	3
Core Elective	r-DNA Technology	3	-	-	3
Core Elective	Cancer Biology and Therapy	3	-	-	3
Core Elective	Cheminformatics and pharmacogenomics	3	-	-	3
Core Elective	Bioactive compounds and Natural Products	3	-	-	3
Core Elective	Biosensors	3	-	-	3
Core Elective	Computational system Biology	3	-	-	3
Core Elective	Biomedical and Health Informatics	3	-	-	3
Core Elective	Environmental Biotechnology	3	-	-	3
Core Elective	Advanced Fermentation Technology	3	-	-	3

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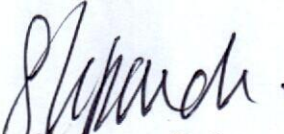
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DEPARTMENT OF BIOTECHNOLOGY**APPENDIX - II****List of courses that enable employability or entrepreneurship or skill development in the R-20 M.Tech – Biotechnology**

S.No	Semester (Year)	Core/Elective	Course Name	Employability/ Entrepreneurship/ Skill development
1.	Semester I (First Year)	Professional Core	Upstream and Downstream processing	Employability
2.	Semester I (First Year)	Professional Core	Molecular Genetics	Skill development
3.	Semester I (First Year)	Professional Core	Natural Product Technology	Employability
4.	Semester I (First Year)	Professional Core	Cheminformatics and pharmacogenomics	Skill development
5.	Semester I (First Year)	Professional Core	Biochemistry and Enzyme Technology	Employability
6.	First Year	Professional Core - Intra Department Elective	Immunotechnology and Informatics	Skill development
7.	First Year	Professional Core - Intra Department Elective	Plant Biotechnology	Employability
8.	First Year	Professional Core - Intra Department Elective	Animal Biotechnology	Skill development
9.	First Year	Professional Core - Intra Department Elective	rDNA Technology	Employability
10.	First Year	Professional Core - Intra Department Elective	Bioinformatics and Molecular Modeling	Employability
11.	First Year	Professional Core - Intra Department Elective	Advanced Bio-process Engineering	Employability

S.No	Semester (Year)	Core/Elective	Course Name	Employability/ Entrepreneurship/ Skill development
12.	First Year	Professional Core - Intra Department Elective	Environmental Biotechnology	Skill development
13.	First Year	Professional Core - Intra Department Elective	Industrial Biotechnology and Metabolic Engineering	Employability
14.	First Year	Professional Core - Intra Department Elective	Bioactive compounds and Natural Products	Employability
15.	First Year	Professional Core - Inter Department Elective	Biosensors	Employability
16.	First Year	Professional Core - Inter Department Elective	Computational system Biology	Employability
17.	First Year	Professional Core - Inter Department Elective	Biomedical and Health Informatics	Skill development
18.	First Year	Professional Core - Inter Department Elective	Cancer Biology and Therapy	Skill development


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APPENDIX - III

List of new courses in the R-20
M.Tech – Biotechnology Curriculum

S.No	Semester (Year)	Course Name
1.	Semester I (First Year)	Upstream and Downstream processing
2.	Semester I (First Year)	Molecular Genetics
3.	Semester I (First Year)	Natural Product Technology
4.	Semester I (First Year)	Cheminformatics and pharmacogenomics
5.	Semester I (First Year)	Biochemistry and Enzyme Technology
6.	First Year	Immunotechnology and Informatics
7.	First Year	Plant Biotechnology
8.	First Year	Animal Biotechnology
9.	First Year	rDNA Technology
10.	First Year	Bioinformatics and Molecular Modeling
11.	First Year	Advanced Bio-process Engineering
12.	First Year	Environmental Biotechnology
13.	First Year	Industrial Biotechnology and Metabolic Engineering
14.	First Year	Bioactive compounds and Natural Products
15.	First Year	Biosensors
16.	First Year	Computational system Biology
17.	First Year	Biomedical and Health Informatics
18.	First Year	Cancer Biology and Therapy

Chairman BoS