

**B.Tech.**  
**in**  
**Biotechnology**

**COURSE AND CREDIT STRUCTURE**



Department of Biotechnology  
School of Engineering and Technology  
SHARDA UNIVERSITY

## SUMMARY SHEET

**Teaching Department** : Biotechnology (SET)  
**School** : School of Engineering and Technology  
**Name of Course** : B.Tech. in Biotechnology  
**Duration** : Four Years  
**Total number of Credits** : 160  
**Date of Meeting of BOS** : June 12, 2018

### Member of BOS:

1. Prof. Rita Singh Majumdar, Prof & HoD Chairperson
2. Dr. Shравan Kumar  
Institute of Nuclear Medicine and Allied Science  
DRDO Ext. Member
3. Dr. Neetu Kumar,  
Department of Basic and Applied Science  
NIFTEM Ext. Member
4. Dr V K Baranwal, Principle Scientist & Head  
Dept. of Plant Pathology, IARI, PUSA Ext. Member
5. Prof Shahana Majumdar Int. Member
6. Dr Pankaj Taneja Int. Member
7. Dr Garima Chouhan Int. Member
8. Mrs. Monika Jain Int. Member

**Status:**

**Approved**

  
12/06/18

Dr. Shравan Kumar

  
12/6/18

Dr. Neetu K. Taneja

  
12/6/18

Prof. Rita S. Majumdar

  
(S. Majumdar)

## AGENDA FOR BOS

**Agenda 1:** New course structure of B Tech in Biotechnology for all four years admitted in 2018 and minor updates in course structure of B Tech in Biotechnology admitted in 2016 and 2017.

**Agenda 2:** Course structure of B Tech- M Tech Integrated in Plant Biotechnology and Course structure of B Tech- M Tech Integrated in Animal Biotechnology

**Agenda 3:** Approval of new courses.

- Python is a High level language of programming for software development. B. Tech (Biotechnology) student are user's not developers. In place of this more of open source database and analytical tools may add.

  
12/06/18.

Course Structure for B.Tech.- M.Tech. Integrated Programme in Biotechnology with Specialization in Plant Biotechnology (2015-16 batch)

Sem.	COURSE STRUCTURE										Courses	L	T	P	Weekly Contact	Credits	
	Mathematics (B) (3-2-0) 4	Functional English-I (2-0-2) 3	Logic Building and Problem Solving using 'C' (3-1-2) 5	Physical Chemistry (3-1-2) 5	Macromolecular Biology (3-1-4) 6												
I	Mathematics (B) (3-2-0) 4	Functional English-I (2-0-2) 3	Logic Building and Problem Solving using 'C' (3-1-2) 5	Physical Chemistry (3-1-2) 5	Macromolecular Biology (3-1-4) 6												
II	Physics (5) (3-1-2) 5	Functional English-II (2-0-2) 3	Advanced Concepts in C Programming (3-0-2) 4	Organic Chemistry (3-1-0) 4	Introduction to Biotechnology (3-1-2) 5												
III	Cell Biology (3-0-2) 4	Instrumentation and Bioanalytical Techniques (3-0-2) 4	Genetics (3-1-0) 4	Intermediary Metabolic Pathway (3-1-0) 4	Communication Practices I (2-0-2) 3												
IV	Object Oriented Programming using JAVA (3-1-2) 5	Microbiology (3-0-2) 4	Immunology (3-1-0) 4	Department Elective-I (3-1-0) 4	Economics for Engineers (3-0-0) 3												
V	Bioprocess Engineering-I (3-1-2) 5	Molecular Biology (3-1-2) 5	Biochemistry (3-0-2) 4	Professional Skills Enhancement (2-0-4) 4	Basic Computational Biology (3-1-0) 4												
VI	Management for Engineers (3-0-0) 3 HMM305	Basic Plant Biotechnology (3-1-2) 5 BTY309	Recombinant DNA Technology (3-1-2) 5 BTY310	Animal Biotechnology (3-1-0) 4 BTY311	Stem Cells (3-0-0) 3 BTY403												
VI	Management for Engineers (3-0-0) 3 HMM305	Basic Plant Biotechnology (3-1-2) 5 BTY309	Recombinant DNA Technology (3-1-2) 5 BTY310	Animal Biotechnology (3-1-0) 4 BTY311	Stem Cells (3-0-0) 3 BTY403												
VII	Department Elective-II (3-1-0) 4 Gene and genome	Department Elective-III (3-1-0) 4 Signal transduction	Department Elective-IV (3-1-0) 4 Biopharmaceutical	Open Elective-I (4-0-0) 4	Communication Practices II (3-0-0) 3												
Summer Training (0-0-4) 2 BTY391											1						
TOTAL UG Credits											160						



**Course Structure for B.Tech.- M. Tech. Integrated Programme in Biotechnology with Specialization in Plant Biotechnology (2015-16 batch)**

Sem.	COURSES (L-T-P)										Credits		
	Techniques in Plant Biotechnology (3-0-0) 3	Plant Development Biology (3-0-0) 3	Applied Bioinformatics (3-0-0) 3	Proteomics (3-0-0) 3	PG project (0-0-4) 4	Practical (Plant Biotechnology Lab) (0-0-4) 2	Seminar (0-0-4) 2	Courses	L	T		P	Weekly Contact
VIII	Enzyme Technology (3-1-0) 4	Applied Genetic Engineering (3-0-0) 3	Advances in Bioprocess Engineering (3-0-0) 3		Technical Presentation (0-0-4) 2	Practical (Enzyme & Genetic Engineering Lab) (0-0-4) 2	Dissertation -1 (0-0-16) 8	7	12	0	11	23	20
IX								6	10	1	22	33	22
X	Dissertation Part-2 (0-0-24) 18							1	0	0	24	24	18
<b>Total PG Credits</b>												<b>60</b>	

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