



Shiv Chhatrapati Shikshan Sanstha's  
**Rajarshi Shahu Mahavidyalaya (Autonomous), Latur**  
**MINUTES BOOK**

**Faculty of Science**  
**Board of Studies : BIOTECHNOLOGY**

20-04-2022

Meeting of BOS Biotechnology

Business

1. Syllabus framing of B.Sc.BT I year and M.Sc.BT.I year (which will be implemented from academic year 2022-23)
2. APPROVAL of the Syllabi
3. Any other subject with permission of the chair

A meeting of BOS in Biotechnology was held on 20-04-2022 at 11:00 am through offline and online mode.

Following members were present for this meeting.

1. Dr. S.S. Kulkarni	Chairman	
2. Dr. M.A. Dhotre	Member	
3. Mr. U.P. Sirdeshmukh	Member	
4. Dr. R.B. Ade	Member	
5. Dr. S.S. Kshirsagar	Member	
6. Mr. S.D. Kadam	Member	
7. Miss S.R. Surwase	Member	
8. Miss Swati Swami	Member	
9. Mr. Akash Waghmare	Member	



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10. Miss. A. M. Devershe	Member	
11. Mr. Sanket Bansode	Member	
12. Miss. Shubhangi Bansode	Member	
13. Miss. Karuna Kumatwar	Member	
14. Dr. Rahul P. Bhagat	Subject expert from outside the parent University	
15. Dr. Rajesh. Jorgewad	-11-	
16. Dr. G. H. Kalthate	-11-	
17. Prof. T. A. Kadam	Expert by V.C.	
18. Mr. Abhay Desai	Expert from Industry	
19. Dr. Santosh Narwade	PG. Alumnus	
20. Dr. K. S. Raut	Other member	

[Link : <https://us04web.zoom.us/j/75476536358?pwd=BCZaQ6bG9fPzVAaDlHOFEdGlnX2Fya4.1>]  
Meeting ID. 754 76 53 6358  
Passcode : 25mlbt

Minutes of meeting  
The following resolutions were made in the Board of studies meeting held on 20-04-2022 at 11:00 am in the department of Biotechnology through online/offline mode.





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1. The Syllabi of B.Sc. BT. I year (I & II Sem.) & M.Sc. BT. I. year (I & II Sem.) of the Programme for the Students admitting during the academic year 2022-23 and onwards were approved.

(i) It is resolved to modify the course structure of Bachelor of Science in Biotechnology & Master of Science in Biotechnology.

(ii) It is resolved to modify the course content of theory and practical papers

(iii) it is resolved to introduce Generic elective for the I and II semester of M.Sc. BT. I year

2. The Scheme of Examination of the CBCS were discussed

3. The Syllabi of I and II Semester of the UG and PG I year Biotechnology Programme were for the Students admitting during academic year 2022-2023 & onwards were approved.



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4. DSE (Discipline specific Elective) for M.Sc. BT-I and II Semester were introduced.
5. Students who complete Swayam course relevant to Life science and produce the course completion & Examination certificate as evidence are recommended by Board members for extra credits.
6. The updation in the programme outcomes (POs), programme specific outcomes (PSOs), Learning objectives and Course outcomes were discussed & approved.
7. It is resolved that there are no changes recommended in the existing Scheme of Examination.

BOS chairman.

Dr. S. S. Kulkarni





# Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

## Department of Biotechnology

Restructured CBCS curriculum with effective from June- 2022

Details on subject-wise revision/ modification suggested and approved in the Board of  
Studies for B.Sc. Biotechnology

	Code	Title of the paper	OLD/ New	% Change	Description
<b>SEMESTER - I</b>					
AECC1	U-	Communicative English I			
CCT1	U-	Cell Biology	OLD	30	Major portion retained as such with revision of unit I and Unit VI updating Reference Books, Text Books and Web resources.
CCT2	U-	Introduction to Physiology	NEW	100	A new title is introduced as a course from June 2022, All four units are new containing physiology of plants and animals in details. All units are designed in such a way that all possible basics of physiology are covered, which helps in future academic examinations and designing research problems.
CCT3	U-	Introductory Microbiology	OLD	30	Major portion retained as such with revision of unit I and Unit VI updating Reference Books, Text Books and Web resources.
CCT4	U-	Basics of Chemistry and Physics	NEW	100	New paper covers basics in organic chemistry and physics which is useful for the IIT-JAM Biotechnology examination and other competitive examinations.
CCP1	U-LAC-	Lab Course I (Practical Based on Cell Biology)	OLD	30	Major practicals retained with the addition of a few practicals

CCP2	U-LAC-	Lab Course II (Practical Based on Introduction to Physiology)	NEW	100	Major practicals on plant anatomy, physiology, reproduction and qualitative analysis of biomolecules are included in the syllabus.
CCP3	U-LAC-	Lab Course III (Practical Based on Introductory Microbiology)	OLD	30	Major Practicals retained with the addition of few practicals that provides hands on experience on pure culture and biochemical techniques
CCP4	U-LAC-	Lab Course IV (Practical Based on Basics of Chemistry and Physics)	NEW	100	New paper covering in-depth information on good laboratory practices and preparation of standard solutions.

#### SEMESTER - II

	Code	Title of the paper	OLD/ New	% Change	Description
AECC1	U-	Communicative English II			
CCT1	U-	Bioinstrumentation	NEW	100	New paper covering the working principle and methodology for analytical instruments used in biological sciences.
CCT2	U-	Inheritance Biology	OLD	20	Title of the course revised from Genetics to Inheritance biology. History of genetic newly introduced in syllabus. Environmental, hormonal control of sex determination, Dosage compensation and genome organization newly included in the revised syllabus.
CCT3	U-	Introduction to Biomolecules	OLD	30	Major portion retained as such with revision of all units and updating Reference Books, Textbooks and web resources. New content introduced on Vitamins, minerals and hormones.
CCT4	U-	Biomathematics, Biostatistics, and Computer	OLD	30	Major portion retained as such with revision of unit IV and updating Reference Books, Text Books, and Web resources.
CCP1	U-LAC-	Lab Course V (Practical Based on Bioinstrumentation)	OLD	30	Major Practicals retained with the addition of few practicals related to problems on



					microscopy,radioactivity and spectroscopy
CCP2	U-LAC-	Lab Course VI (Practical Based on Inheritance Biology)	OLD	30	Three practicals related with probability, Student's t test,chi square test and cytogenetics were added in the syllabus.
CCP3	U-LAC-	Lab Course VII (Practical Based on Introduction to Biomolecules)			Major Practicals retained with the addition of few practicals that provide hands-on experience on estimation of biomolecules.
CCP4	U-LAC-	Lab Course VIII (Practical Based on Biomathematics, Biostatistics, and Computer)	OLD	30	Major practicals retained with the addition of a few practicals
Generic Elective		Moral Education (NCBC)			



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## Department of Biotechnology

Restructured CBCS curriculum with effective from June- 2022

Details on subject-wise revision/ modification suggested and approved in the Board of  
Studies for M.Sc. Biotechnology

	Code	Title of the paper	OLD/ New	% Change	Description
<b>SEMESTER - I</b>					
CCT1	P-	Cell and Developmental Biology	NEW	100	New paper covers cell organelles, cell signalling, cell cycle & cell division along with developmental biology of model organisms.
CCT2	P-	Biochemistry	OLD	30	Major portion retained as such with revision of all units and updating Reference Books and Textbooks New content introduced on Vitamins
CCT3	P-	Microbial Physiology	OLD	30	Major portion retained as such with revision of unit-II, unit-III, and unit-IV with updating Reference Books, Text Books and Web resources. New content introduced on Microbial Nutrition, Environmental factors affecting Growth of microorganisms and Transport Mechanism.
DSE1	P-	Bioinstrumentation and Emerging Technologies	NEW	100	New paper covering the working principle and methodology for analytical instruments and emerging techniques used for the analysis of molecules in biological sciences.
	P-	Stem Cell Technology	NEW	100	New paper covers, Introduction and Types of stem cells, Pluripotency and




					Reprogramming In Vitro, Adult Stem Cells and Regeneration, Clinical applications in Stem Cell Biology
CCP1	P- LAC-	Lab Course I (Practical Based on Cell and Developmental Biology)	OLD	30	Major practicals retained with the addition of a few practicals that provides hands on experience on Cellular techniques
CCP2	P-LAC-	Lab Course II (Practical Based on Biochemistry )	OLD	25	Major Practicals retained with the addition of few practicals that provides hands on experience on estimation of biomolecules Qualitatively and Quantitatively
CCP3	P-LAC-	Lab Course III (Practical Based on Microbial Physiology )	OLD	25	Major Practicals retained with the addition of few practicals that enhances the knowledge and practical techniques in the isolation and identification of microorganisms.
DSEP1	P-LAC-	Lab Course IV (Practical Based on Bioinstrumentation and Emerging Technologies )	OLD	25	Major Practicals retained with the addition of few practicals Bioinstrumentation and Emerging Technologies related to problems on spectroscopy,centrifugation and microscopy.
		Lab Course IV (Practical Based on Stem Cell Technology )	NEW	100	New paper covers, practicals related to Hands on cell culture Techniques.
Generic Elective	P-	Human Rights/ Constitution of India			

#### SEMESTER - II

	Code	Title of the paper	OLD/ New	% Change	Description
CCT1	P-	Molecular Biology	OLD	40	Major portion retained as such with revision of unit III and Unit VI updating, Reference Books, Text Books and Web resources.
CCT2	P-	Immunology and Immunotechniques	OLD	30	Major portion retained as such with revision of all units and updating Reference Books.
CCT3	P-	Bioinformatics and Biostatistics	NEW	100	New paper covers, basic and advanced aspects of bioinformatics and applications of computational science in biotechnology in

					unit I,II, III and statistical aspects and their applications in unit IV
DSE1	P-	Bioprocess Engineering	OLD	25	Major portion retained as such with revision of unit-III, and unit-IV with updated Reference Books. New content introduced on microbial and death kinetics.
		Medical Biotechnology	New	100	New paper covers, Introduction to Medical Biotechnology, Microbial Pathogenesis, Bacteriology, mycology, virology, Introduction to Clinical Research.
CCP1	P-LAC-	Lab Course V(Practical Based on Molecular Biology)	OLD	30	Major practicals retained with the addition of few practicals that provides hands -on Molecular techniques
CCP2	P-LAC-	Lab Course VI (Practical Based on Immunology and Immunotechniques)	OLD	30	Major practicals retained with the addition of few practicals that provides hands-on immunotechniques
CCP3	P-LAC-	Lab Course VII (Practical Based onBioinformatics and Biostatistics)	NEW	100	New paper covers, practicals related to basic and advanced aspects of bioinformatics in unit I,II, III and statistical applications in unit IV
DSEP1	P-LAC-	Lab Course VIII (Practical Based on Bioprocess Engineering)	OLD	25	Major practicals retained with the addition of few practicals that provide hands-on upstream processing and downstream processing
		Lab Course VIII (Practical Based on Medical Biotechnology)	NEW	100	Major Practicals retained with the addition of few practicals that provide hands-on; isolation and identification of pathogens from clinical specimens, techniques for diagnosis of viral, parasitic and fungal infection
Generic Elective	P-RM-	Research Methodology and Scientific Report Writing	New	100	New paper covers the basic understanding of research methods and scientific report writing

  
 BOS chairman  
 Dr. S.S. Kulkarni





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30-09-2022

Meeting of BOS Biotechnology

1. Finalization of Proposed Scheme for Choice Based Credit System (CBCS) in B.Sc. (Hons.) Biotechnology
2. Shifting of Course Titles according to proposed Scheme.
3. Any other subject with permission of the chair

A meeting of BOS in Biotechnology was held on 30-09-2022 at 11:00 am in Biotechnology Department

Following members were present for this meeting

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|--------------------------|----------|--|
| 1. Dr. S. S. Kulkarni    | Chairman |  |
| 2. Dr. M. A. Dhote       | Member   |  |
| 3. Mr. V. P. Sirdeshmukh | Member   |  |
| 4. Dr. R. B. Ade         | Member   |  |
| 5. Dr. S. S. Kshirsagar  | Member   |  |
| 6. Mr. S. D. Kadam       | Member   |  |
| 7. Dr. S. R. Surwase     | Member   |  |
| 8. Miss. S. G. Swami     | Member   |  |
| 9. Mr. Akash Waghmare    | Member   |  |





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10. Miss. A.M. Devershe	Member	<i>Ashwini</i>
11. Mr. Sauket Bansode	Member	<i>Sauket</i>
12. Miss. Shubhangi Bansode	Member	<i>Bansode</i>
13. Miss. Karuna Komatwar	Member	<i>Kamatwar</i>
14. Dr. Rahul P. Bhagat	Subject expert from outside the parent university	<i>R. P. Bhagat</i>
15. Dr. Rajesh Jargewad	-11-	<i>Rajesh Jargewad</i>
16. Dr. G. H. Kathwate	-11-	<i>G. H. Kathwate</i>
17. Prof. T. A. Kadam	Expert by V.C.	<i>T. A. Kadam</i>
18. Mr. Abhay Desai	Expert from Industry	<i>Abhay Desai</i>
19. Dr. Santosh Narwade	P4 Alumnus	<i>Santosh Narwade</i>
20. Dr. K.S. Raut	Other member	<i>K.S. Raut</i>
21. Dr. Mangesh Kothari	Subject expert	<i>Mangesh Kothari</i>

### Minutes of meeting

The following resolutions were made in the Board of Studies meeting held on 30-09-2022 at 11:00 am in the Department of Biotechnology.

The respected BOS members were briefed about the Discussions held in Curriculum Design and Development Committee (CDDC) meeting at institute level.





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1. It was resolved to implement the course structure according to propose scheme for choice Based Credit System (CBCS) in B.Sc. Honors and M.Sc. Biotechnology. Following are the details of courses under B.Sc. (Honors)

$$\begin{array}{l} \text{a) Core Courses (CC)} = Th = 14 \times 4 = 56 \\ P = 14 \times 2 = 28 \end{array} \quad \left. \vphantom{\begin{array}{l} Th \\ P \end{array}} \right\} 84$$

$$\begin{array}{l} \text{b) Ability Enhancement} = Th = 2 \times 4 = 08 \\ \text{Compulsory courses} \\ \text{(AECC)} \end{array}$$

$$\begin{array}{l} \text{c) Skill enhancement} = 2 \times 4 = 08 \\ \text{Courses (SEC)} \end{array}$$

d) Elective courses

$$\begin{array}{l} \text{i) Discipline Specific} = Th = 4 \times 4 = 16 \\ \text{Elective Courses (DSE)} \quad P = 2 \times 4 = 08 \end{array} \quad \left. \vphantom{\begin{array}{l} Th \\ P \end{array}} \right\} 24$$

$$\begin{array}{l} \text{ii) Generic Elective (GE)} = Th = 4 \times 4 = 16 \\ P = 2 \times 4 = 08 \end{array} \quad \left. \vphantom{\begin{array}{l} Th \\ P \end{array}} \right\} 24$$

Total Credits of all courses:

$$84 + 08 + 08 + 24 + 24 = \underline{\underline{148}}$$

2. It is resolved to finalize and shift the course titles according to CBCS B.Sc. honors Scheme.

Finalized course titles for UG Programs

I Semester

CC 1 Cell Biology





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CC2 General Microbiology / Introductory Microbiology  
GE1 Basics of chemistry and physics  
Biotechnology and Human welfare  
AECC1 Communicative English  
Certificate course: Introduction to Physiology

II Semester

CC3 Introduction to Biomolecules  
CC4 Inheritance Biology  
GE2 Biomathematics, Biostatistics and computer  
Bioethics and Biosafety  
AECC2 Communicative English  
Certificate course: Bioinstrumentation / Analytical techniques

III Semester

CC5 Immunology and Virology  
CC6 Metabolism  
CC7 Applied Microbiology  
GE3 Development Biology  
Entrepreneurship Development  
SEC1

IV Semester

CC8 Molecular Biology  
CC9 Enzymology



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CC10 Process Biotechnology  
GE4 Evolution and Diversity in life forms  
Medical Microbiology  
SEC 2

**V Semester**

CC11 Recombinant DNA Technology  
CC12 Industrial Biotechnology  
DSE 1 Environment and Environment Biotechnology  
DSE 2 Plant Biotechnology / Animal Biotechnology  
Nano Biotechnology  
Food Nutrition

**VI Semester**

CC13 Introduction to Bioinformatics  
CC14 Agriculture Biotechnology  
DSE 3 Pharmaceutical Biotechnology  
DSE 4 Project work  
Genomics and proteomics  
Medical Biochemistry

**Note:**

- i) SKilled Enhanced Courses are introduced in  
Second year (III & IV)
- ii) DSE : any Two per Semester





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- iii) AECC : introduce in first year (I & II Sem.)
3. It is resolved that the Finalized Scheme will be implemented from Next academic year
4. The V.C. Nominee expert Hon. Dr. T. A. Kadam highlighted important aspects of National Education Policy (NEP) and CBCS
5. The other members of BOS emphasized on the content development of Finalized course title according to Skill based / Job oriented.
6. It was resolved to modify the marking scheme of all the courses from 50 to 100.

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