



MINUTES BOOK

Faculty of Science

Board of Studies : BIOTECHNOLOGY

16-03-2023

- 1) Syllabus framing of B.Sc. BT-II & M.Sc. BT-II as per existing CBCS pattern which will be implemented A.Y-2023-24
- 2) Finalization of Under Graduate Curriculum frame work (UGCF) Under "NEP-2020" for B.Sc. Hons. in Biotechnology
- 3) Syllabus framing of B.Sc. BT-I Under "NEP-2020" as per proposed UGCF.
- 4) Approval of the syllabi
- 5) Any other Subject with permission of the Chair

A meeting of BoS in Biotechnology was held on 16-03-2023 at 01:00 PM in Department of Biotechnology

Following members were present for this meeting

1). Dr. S. S. Kulkarni	Chairman	
2) Dr. M. A. Dhotre	Member	
3) Mr. U. P. Sirdeshmukh	—	
4) Dr. R. B. Ade	—	



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MINUTES BOOK

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5) Dr. S.S. Kshirsagar	Member	
6) Mr. S.D. Kadam	— " —	
7) Dr. S.R. Surwase	— " —	
8) Miss. Swati Swami	— " —	
9) Mr. Akash Waghmare	— " —	
10) Miss. A.M. Devarshhe	— " —	
11) Mr. Sanket Bonsode	— " —	
12) Miss. Karuna Komatwar	— " —	
13) Dr. Rahul P. Bhagat	Subject Expert from outside the Parent University	Online Present
14) Dr. Rajesh. Jorgewad	— " —	Online Present
15) Dr. G.H. Kathwate	— " —	Online Present
16) Prof. T.A. Kadam	Expert by V.C	Online Present
17) Mr. Abhay Desai	Expert from Industry	Online Present
18) Dr. Santosh Narwade	P.G. Alumni	Online Present
19) Dr. K.S. Raut	Other Member	Online Present
20) Dr. M.N. Kothari	Same University	Online Present

Link : surl.li/fvbob or msteams.link/OJ7Y



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Minutes of Meeting

The following resolutions were made in the Board of Studies meeting held on 16-03-2023 at 01:00 PM in the department of Biotechnology through Online/offline mode

The Respected BoS members were briefed about the discussion held in Curriculum Design and Development Committee (CDDC) meeting and NEP-2020 Implementation Committee at Institute level.

1) The Syllabi of B.Sc. BT-II year (III & IV SEM.) & M.Sc. BT-II year (III & IV SEM.) of the programme for the students admitting during the academic year 2023-24 and onwards were approved.

2) A presentation of UGC F under NEP-2020 and Course curriculum of Biotechnology programme (B.Sc. Hons.) as per 'NEP-2020' Guideline was done before the BoS member, after observation/suggestion the frame work (UGC F) for B.Sc. Hons. in Biotechnology have been finalized and approved.

3) After detail discussion the BoS, have unanimously



MINUTES BOOK

Faculty of Science

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resolved to implement the UGCF under NEP-2020 for B.Sc Hons. in Biotechnology as per school specific courses (SSC), According to proposed skeleton given by UGC & Maharashtra Government.

Following other details of Courses (SSE)

$$\begin{array}{lcl} 1) \text{ Major Subject} & - & \text{Th} = 22 \times 3 = 66 \\ & & \text{Pr} = 22 \times 1 = 22 \end{array} \left. \vphantom{\begin{array}{l} \text{Th} \\ \text{Pr} \end{array}} \right\} 88$$

$$\begin{array}{lcl} 2) \text{ Minor Subject} & - & \text{Th} = 6 \times 3 = 18 \\ & & \text{Pr} = 6 \times 1 = 6 \end{array} \left. \vphantom{\begin{array}{l} \text{Th} \\ \text{Pr} \end{array}} \right\} 24$$

$$3) \text{ AEC} \quad - \quad \text{Th} = 5 \times 2 = 10$$

$$\begin{array}{lcl} 4) \text{ VSC} & - & \text{Th} = 2 \times 2 = 4 \\ \text{(select any one from pool)} & & = 1 \times 4 = 4 \end{array} \left. \vphantom{\begin{array}{l} \text{Th} \\ \text{Pr} \end{array}} \right\} 8$$

5) SSE (select any one from pool each semester from second year)

$$6) \text{ Internship / Field project / mini project} = 16$$

$$7) \text{ GE (select any one from pool) each}$$



MINUTES BOOK

Faculty of Science

Board of Studies : BIOTECHNOLOGY

4) Course Titles of proposed programme were discussed and approved for the implementation from academic year 2023-24.

Finalized Course Title are as follows.

[I] SEM-I :-

A) Major Subject :-
1) Cell Biology
2) plant and Animal physiology
3) Introductory microbiology

B) Minor Subject :- i) Biomathematics & Biostatistics

C) EVLSC :- Constitution of India

D) GE (select any one from the pool) :-

i) ICT

ii) Chemistry for Biology

iii) IPR and Patenting

iv) Plant Diversity and Human Welfare

v) Green Technology

[II] SEM-II :-

A) Major Subject :- i) Bioinstrumentation

ii) Biochemistry



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MINUTES BOOK

Faculty of Science

Board of Studies : BIOTECHNOLOGY

16-03-2023

iii) Applied Microbiology


B) Minor Subject :- i) Herbal Technology

c) EVLSC :- CESR

D) Internship/ project :- Mini project

5) The Syllabus for B.Sc. (Hons.) in Biotechnology as per UGCF under NEP-2020 was finalized and approved for the student admitting during the Academic year 2023-24

6) It was resolved to do necessary changes in UGCF Under NEP-2020. after receiving revised guideline from UGC & Government of Maharashtra.


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Department of Biotechnology

Restructured CBCS curriculum with effective from June- 2023

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

	Co de	Title of the paper	OLD/ New	% Chang e	Description	Modification/ Recommendation Suggested By	Issues addressed
SEMESTER - II							
AECC 3	U-	Communicative English III					
CCT1	U-	Applied Microbiology	OLD	20	Major portion retained as such with revision of all units and updating Reference Books, Textbooks etc.	Most of the modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified as per the need of Local, regional employers, research scholars need also the recent global developments and advancements in the given subjects for Research, Employability etc,
CCT2	U-	Immunology and Virology	OLD	10	Major portion retained as such with revision of all units and updating Reference Books, Textbooks etc.	Most of the modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject as per industrial need.

CCT3	U-	Molecular Biology	OLD	20	Major portion retained as such with revision of Unit IV and by updating Reference Books, Text Books.	Most of the modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with regional employers need and the recent global developments and advancements in the given subject based on needs in research and Industry.
CCT4	U-	Metabolism	OLD	20	Major portion retained as such with revision of unit II and Unit III updating Reference Books	The modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for competitive examinations.
CCP1	U-LAC -	Lab Course IX (Practical Based on Applied Microbiology)	OLD	10	Major practicals retained with the addition of a few practicals	Suggestions from Bos members and alumni working in Basic and Fundamental sciences who are helping us in capacity of our employers and Research Scholars	The given syllabus is modified in tune with regional employers need and the recent global developments and advancements in the given subject
CCP2	U-LAC -	Lab Course X (Practical Based on Immunology and Virology)	OLD	20	Major practicals retained with the addition of a few practicals used in Diagnosis.	Suggestions from Bos members and alumni working in Industry are helping us in capacity of our employers and Research Scholars	The given syllabus is modified in tune with regional employers need and the recent global developments and advancements in the given subject

CCP3	U-LAC	Lab Course XI (Practical Based on Molecular Biology)	OLD	20	Major Practicals retained with the addition of few practicals that provides hands on experience on checking purity of DNA.	Most of the modifications covered includes the suggestions from BoS members and the alumni students who are helping us in capacity of our employers	The given syllabus is modified in tune with regional employers need and the recent global developments and advancements in the given subject
CCP 4	U-LAC	Lab Course XII (Practical Based on Metabolism)	OLD	30	Major Practicals retained with the addition of few practicals that provides hands on experience on Qualitative and Quantitative analysis of Metabolite	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject.
SSC1		Good Laboratory Practices/Human Excellence Development	OLD	20	Major Practicals retained with the addition of few practicals that provide laboratory records compliant with current industry standards.	Most of the modifications covered include the suggestions from BoS members, the alumni students and industry experts.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject.

SEMESTER - IV

	Co de	Title of the paper	OLD/ New	% Change	Description		
AECC 4	U-	Communicative English IV					
CCT1	U-	Biodiversity and Systematics	OLD	20	Major portion retained as such with revision of Unit III and updating Reference Books, Textbooks etc.	The modifications covered includes the suggestions from BoS members and the alumni students who are helping us in capacity of our employers	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject for

							Competitive Examinations
CCT2	U-	Enzymology	OLD	10	Major portion retained as such with revision of all units and updating Reference Books, Textbooks etc.	The modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for competitive examinations, Employability, Entrepreneurship and Research
CCT3	U-	Process Biotechnology	OLD	20	Major portion retained as such with revision of all units and updating Reference Books, Textbooks and web resources.	The modifications covered include the suggestion of BOS members and the alumni students.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for competitive examinations.
CCT4	U-	Environmental Biotechnology	OLD	10	Major portion retained as such with updating Reference Books, Textbooks etc.	The modifications covered include the suggestions from BoS members and the alumni students who are helping us incapacity of our students.	The given syllabus is modified in tune with local and global developments and advancements in the given subject
CCP1	U-LAC	Lab CourseXIII (Practical Based on Biodiversity and Systematics)	OLD	20	Major Practicals retained with the addition of few practicals related to Field Visits etc.	The modifications covered includes the suggestions from BoS members and the alumni students who are helping us in capacity of our employers	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject



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Department of Biotechnology

Restructured CBCS curriculum with effective from June- 2023

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	Modification/ Recommendation/ Suggested By	Issues addressed
SEMESTER - III							
CCT 1	P-	Genetic Engineering	OLD	10	Major portion retained as such with revision of all units and updating Reference Books.	The modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for competitive examinations. It also covers major research areas in Biotechnology.
CCT 2	P-	Microbial Biotechnology	OLD	10	Major portion retained as such with revision of all units and updating Reference Books.	The modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is in tune with local, regional and global developments and advancements in the given subject for Employability and Entrepreneurship

CCP2	U-LAC -	Lab Course XIV (Practical Based on Enzymology)	OLD	20	Major Practicals retained with the addition of few practicals that provides hands on experience on Production and Purification of Enzymes	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject.
CCP3	U-LAC -	Lab Course XV (Practical Based on Process Biotechnology)	OLD	20	Major Practicals retained with the addition of few practicals that provide hands-on experience on the production process.	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for employability, entrepreneurship etc.
CCP4	U-LAC -	Lab Course XVI (Practical Based on Environmental Biotechnology)	OLD	10	Major practicals retained with the addition of a few practicals	The modifications covered include the suggestions from BoS members and the alumni students who are helping us incapacity of our students.	The given syllabus is modified in tune with local and global developments and advancements in the given subject
SSC2		Algal Cultivation Technology/ Mushroom Cultivation	OLD	10	Major practicals retained with the addition of a few practicals that provide hands-on production of different algae	The modifications covered include the suggestions from BoS members, alumni students and Industry experts.	The given syllabus is modified in tune with local and regional employer's needs and the recent global developments and advancements in the given subject for commercial production of algae.

					Downstream Techniques	and Industry experts	and advancements in the given subject .
CCP 3	P-LAC-	Lab Course XI (Practical Based on Advanced Pharmaceutical Biotechnology)	OLD	25	Major Practicals retained with the deletion of one practical i.e.Study of dug action by using zebra fish as a model organism	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject.
DSE P1	P-LAC-	Lab CourseXII (Practical Based on Plant and Agricultural Biotechnology)	NEW	100	New paper covers practicals related with plant resource development, plant pathology, plant breeding, plant tissue culture etc.	The modifications covered include the suggestions from BoS members, the alumni students and employers who are working in this field.	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject
SEC		Research Methodology and Scientific Report Writing	OLD	20	Major Practicals retained with the addition of few practicals that enhances the knowledge and presentation techniques and skills in report writing and research papers.	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject.

SEMESTER - IV

	Code	Title of the paper	OLD / New	% Change	Description		
CCT 1	P-	Animal and Livestock Biotechnology	NEW	100	A newly introduced course includes Unit I and II on animal biotechnology.It includes fundamentals of animal tissue cultures and its industrial and commercial	Most of the aspects covered in the paper includes the suggestions from BoS members and the alumni students, Research Scholars in the field of animal biotechnology	Designing of paper syllabus carried out as per the need of regional and global applications of industrial and research needs.Syllabus also includes introductory

CCT 3	P-	Advanced Pharmaceutical Biotechnology	OLD	30	Major portion retained as such with revision of unit-II, unit-III, and unit-IV with updating ,FDA is added in Unit IV.Reference Books,Text Books and Web resources. New reference introduced i.e.Biotechnology Expanding Horizon by B.D.Singh,Kalyani Publication,Delhi	Most of the modifications covered include the suggestions from BoS members and the alumni students.	The given syllabus is modified in tune with local and regional employers' needs and the recent global developments and advancements in the given subject.
DSE 1	P-	Plant and Agricultural Biotechnology	NEW	100	New paper covers the basics of plant resource development, plant pathology, principles of plant Biotechnology & Agricultural Biotechnology	The modifications covered include the suggestions from BoS members, the alumni students and employers who are working in this field.	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject
CCP 1	P- LAC-	Lab CourseIXI (Practical Based onGenetic Engineering)	OLD	30	Major practicals retained with the addition of a few practicals	The modifications covered include the suggestions from BoS members, the alumni students and employers who are working in this field.	The modification in the subject is carried out as per the local and regional employers' needs and the recent global developments and advancements in the given subject such as in Vaccine development, genetically modified food and product.
CCP 2	P- LAC-	Lab Course X (Practical Based on Microbial Biotechnology)	OLD	20	Major Practicals retained with the addition of few practicals that provides hands on experience on Upstream and	Most of the modifications covered include the suggestions from BoS members and the alumni students	The given syllabus is modified in tune with local, regional and global developments


					Downstream Techniques	and Industry experts	and advancements in the given subject .
CCP 3	P-LAC-	Lab Course XI (Practical Based on Advanced Pharmaceutical Biotechnology)	OLD	25	Major Practicals retained with the deletion of one practical i.e.Study of dug action by using zebra fish as a model organism	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject.
DSE P1	P-LAC-	Lab CourseXII (Practical Based on Plant and Agricultural Biotechnology)	NEW	100	New paper covers practicals related with plant resource development, plant pathology, plant breeding, plant tissue culture etc.	The modifications covered include the suggestions from BoS members, the alumni students and employers who are working in this field.	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject
SEC		Research Methodology and Scientific Report Writing	OLD	20	Major Practicals retained with the addition of few practicals that enhances the knowledge and presentation techniques and skills in report writing and research papers.	Most of the modifications covered include the suggestions from BoS members and the alumni students and Industry experts	The given syllabus is modified in tune with local and regional employers need and the recent global developments and advancements in the given subject.

SEMESTER - IV

	Code	Title of the paper	OLD / New	% Change	Description		
CCT 1	P-	Animal and Livestock Biotechnology	NEW	100	A newly introduced course includes Unit I and II on animal biotechnology.It includes fundamentals of animal tissue cultures and its industrial and commercial	Most of the aspects covered in the paper includes the suggestions from BoS members and the alumni students, Research Scholars in the field of animal biotechnology	Designing of paper syllabus carried out as per the need of regional and global applications of industrial and research needs.Syllabus also includes introductory

					applications. Unit III and IV comprises aspects related with livestock biotechnology. It includes application of molecular markers and transfection technology in livestock biotechnology.	and livestock biotechnology.	research and techniques in livestock biotechnology.
CCT 2	P-	Clinical Research, IPR, Bio Entrepreneurship and Start Up	NEW	100	A newly introduced course includes Unit I and II on Clinical research. It includes phases of clinical research/trials, drug manufacturing process and IPR. Unit III and IV comprises aspects related with new drug discovery process, bio-entrepreneurship and new startups.	Most of the aspects covered in the paper includes the suggestions from BoS members and the alumni students, Research Scholars in the field of Clinical research and bio-entrepreneurship.	The given syllabus is modified in tune with local, regional and global developments and advancements in the given subject for industrial jobs and research as well as new startups.
CCT 3	P-	Food and Nano Biotechnology	OLD	20	Major portion retained as such with revision of Unit II and IV and updating Reference Books.	Most of the modifications covered includes the suggestions from BoS members and the alumni students who are helping us in capacity of our employers	The given syllabus is modified in tune with Local, regional employers need and the recent global developments and advancements in the given subject for Employability, Entrepreneurship and Research
DSE 1	P-	Environmental Biotechnology	OLD	20	Major portion retained as such with revision of all units and	The modifications covered include the suggestions from BoS	The given syllabus is modified in tune with local, regional and

					updating Reference Books.	members and the alumni students.	global developments and advancements in the given subject for competitive examinations
CCP 1	P- LAC-	Lab Course XV	NEW	100	Paper includes practical related skills useful in handling cell lines and research in animal tissue culture, animal biotechnology and livestock biotechnology.	Most of the syllabus covered in the practicals includes the suggestions from BoS members and the alumni students, Research Scholars which are actively working in the field of animal and livestock biotechnology.	practical paper is carried out as per the need of regional and global applications of molecular study and its approach in fundamental research
CCP 2	P- LAC-	Lab Course XVI	OLD	20	Major practicals retained with the addition of few practicals.	The modifications covered include the suggestions from BoS members, the alumni students and employers who are working in this field.	The modification in the subject is carried out as per the local and regional employers' needs and the recent global developments and advancements in the given subject.
CCP 3	P- LAC-	Lab Course XVII (Project Work/Internshi p)					The Project work given to students is as per the local regional employers' needs and the recent global developments and advancements in the given subject.


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