



Date: 06 /03/2023

BOARD OF STUDIES (Biotechnology)

MINUTES OF THE MEETING

(3 Pages Only)

1. A meeting of Board of Studies in Biotechnology, Amity Institute of Biotechnology, Amity University Madhya Pradesh was held on 6th March 2023 from 1400 hrs onwards in virtual mode on MS Teams Platform under the Chairmanship of Prof. (Dr.) R.S. Tomar, Director, AIB and Dean (Academics), AUMP. The following members attended the meeting:-

(a) **Chairman:** Prof. (Dr.) R.S. Tomar

Director, AIB and Dean (Academics)

Amity University Madhya Pradesh, Maharajpur, Gwalior

(b) **Members**

i) **Prof. (Dr.) Rajesh Kumar Tiwari (External)**

Professor, AIB & Dean (Academics)

Amity University Lucknow Campus

ii) **Prof (Dr.) G.B.K.S. Prasad (External)**

Professor Biochemistry,

Coordinator, Centre for Studies in Food Technology,

Jiwaji University Gwalior

iii) **Prof (Dr.) Vikas Shrivastava**

Professor & Coordinator, Amity Institute of Biotechnology,

Amity University Madhya Pradesh, Maharajpur, Gwalior

iv) **Prof.(Dr.) Raghvendra Kumar Mishra**

Professor, Amity Institute of Biotechnology,

Amity University Madhya Pradesh, Maharajpur, Gwalior

V. Shrivastava

R. K. Tiwari

G. B. K. S. Prasad

Page 1 of 3

Dwivedi

Prof. (Dr.) Vinay Dwivedi
Director, Amity Institute of Biotechnology
Amity University Madhya Pradesh
Maharajpur, Gwalior-474005

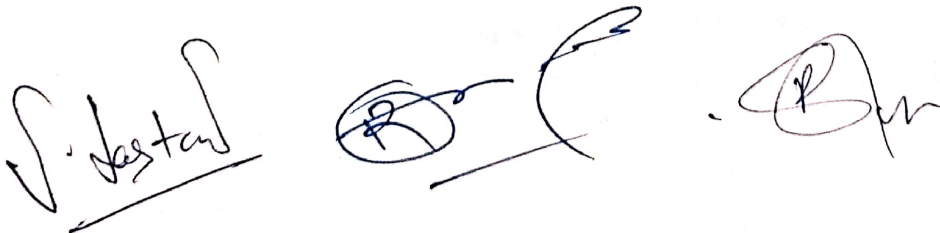
2. Agenda for the BoS meeting 2023:

1. Review & approval of syllabi of B.Sc. Biotechnology (3 Yrs) for the batch 2023-26 and B.Sc. Biotechnology (Hons with Research) (4 Yrs) for the batch 2023-27.
2. Review & approval of syllabi of B.Sc.(Biology) (3 Yrs) for the batch 2023-26 and B.Sc. Biology (Hons with Research) (4 Yrs) for the batch 2023-27.
3. Review & approval of syllabi of B.Sc.-M.Sc.(Biotechnology) Dual Degree for the batch 2023-28.
4. Review & approval of syllabi of B.Tech Biotechnology for the batch 2023-27.
5. Review & approval of syllabi of M.Sc.(Biotechnology) for the batch 2023-25 and M. Tech (Biotechnology) batch 2023-25.
6. Review & approval of syllabi of Ph.D. course work of Ph.D. in Biotechnology for the batch 2023-2024.
7. Review & approval of syllabi of minor tracks in Biotechnology: Biotechnology Management and Conservation Biology for the batch 2023-2026.
8. Any other point with the permission of Chairman of the Board of studies.

3. Recommendations.

As per the New Education Policy 2020 and recommendations of UGC Curriculum and Credit Framework 2022, following undergraduate programmes have been redesigned and approved by BoS.

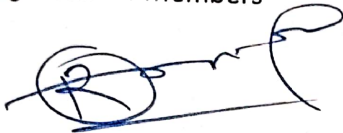
- (i) Syllabus of B.Sc. Biotechnology (3 Yrs) for the batch 2023-26 and B.Sc. Biotechnology (Hons With Research) (4 Yrs) for the batch 2023-27 (Annexure-1)
- (ii) Syllabus of B.Sc. Biology (3 Yrs) for the batch 2023-26 and B.Sc. Biology (Hons With Research) (4 Yrs) for the batch 2023-27 (Annexure-2)
- (iii) Syllabus of B.Sc-M.Sc.(Biotechnology) Dual Degree batch 2023-28 as per modification suggested in point (i) for B.Sc. Biotechnology (3 Yrs)
- (iv) Syllabus of B.Tech Biotechnology being followed in batch 2022-26 is recommended for batch 2023-2027 without any change
- (v) Syllabus of M.Sc. (Biotechnology) being followed in batch 2022-24 is recommended for batch 2023-2025 without any change.
- (vi) Syllabus of M.Tech (Biotechnology) being followed in batch 2022-24 is recommended for batch 2023-2025 without any change.
- (vii) Syllabus of Ph.D. course work of Ph.D. in Biotechnology being followed in batch 2022-23 is recommended for batch 2023-2024 without any change.
- (viii) Syllabi of minor tracks; Biotechnology Management and Conservation Biology for batch 2023-2026 have been redesigned as per Annexure-3



(i) Summary of changes is given below:-

- a. B.Sc. Biotechnology (3 Yrs) for the batch 2023-26 and B.Sc. Biotechnology (Hons with Research) (4 Yrs) for the batch 2023-27 (Annexure-1)
- b. Syllabus of B.Sc. Biology (3 Yrs) for the batch 2023-26 and B.Sc. Biology (Hons With Research) (4 Yrs) for the batch 2023-27 (Annexure-2)
- c. Syllabi of minor tracks in Biotechnology: Biotechnology Management and Conservation Biology for the batch 2023-2026 (Annexure-3).

Signature of Members



Prof. (Dr.) Raghvendra Kumar Mishra
Professor AIB



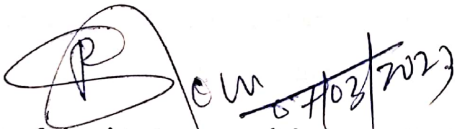
Prof. (Dr.) Vikas Shrivastava
Coordinator AIB



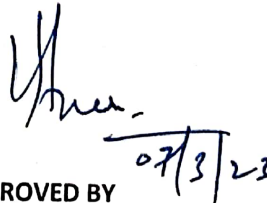
Prof. (Dr.) Rajesh Kumar Tiwari
Professor-AIB & Dean (Academics)
Amity University Lucknow



Prof. (Dr.) G.B.K.S. Prasad (Absent)
Professor Biochemistry,
Coordinator, Centre for Studies in Food
Technology,
Jiwaji University Gwalior



Prof. (Dr.) R.S. Tomar (Chairman-BoS)
Director-AIB & Dean (Academics)
Amity University Madhya Pradesh



APPROVED BY
Hon'ble Vice Chancellor
AUMP, Gwalior





AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

PROGRAMME STRUCTURE: B.Sc. Biotechnology-3YDC/ B.Sc. Biotechnology (Honours with Research)-4YDC

FIRST SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-----------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 101 | Cell Biology | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSB 102 | Maths & Biostatistics | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| BSB 103/ BSB 104 | Plant Sciences - I/ Animal Sciences-I | Discipline Specific (Elective) | 3 | - | - | 3 |
| BSB 105 | Chemistry - I | Discipline Specific (Minor 1) | 2 | - | - | 2 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSB 120 | Biotechnology Lab - I | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSB 121 | Chemistry Lab - I | Discipline Specific (Minor 1) Lab | - | - | 2 | 1 |
| BSB 122/ BSB 123 | Plant Sciences Lab - I/ Animal Sciences Lab-I | Discipline Specific (Elective) Lab | - | - | 2 | 1 |
| BCU 141 | Communication Skill - I | Ability Enhancement Course (AEC) | 2 | - | - | 2 |
| EVS 142 | Environmental Studies - I | Value Added Course (VAC) | 2 | - | - | 2 |
| FLU 144 FLU 145 FLU 146 FLU 147 FLU 148 | Foreign Language - I French - I German Spanish Japanese Chinese | Skill Enhancement Course (SEC) | 2 | - | - | 2 |
| | TOTAL | | | | | 22 |

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Prof. (Dr.) Vinay Dwivedi
Director, Amity Institute of Biotechnology
Amity University Madhya Pradesh
Kharajpura, Gwalior-474005

SECOND SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-----------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 201 | Bioanalytical Techniques | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 202 | Introductory Biochemistry & Biophysics | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| BSB 203/ BSB 204 | Plant Sciences – II/ Animal Sciences-II | Discipline Specific (Elective) | 3 | - | - | 3 |
| BSB 205 | Chemistry – II | Discipline Specific (Minor 1) | 2 | - | - | 2 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSB 221 220 | Biotechnology Lab - II | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSB 222/221 BSB 223 | Chemistry Lab – II | Discipline Specific (Minor 1) Lab | - | - | 2 | 1 |
| BSB 122/222 BSB 123 | Plant Sciences Lab - II / Animal Sciences Lab-II | Discipline Specific (Elective) Lab | - | - | 2 | 1 |
| BCU 241 | Communication Skill – II | Ability Enhancement Course (AEC) | 2 | - | - | 2 |
| EVS 242 | Environmental Studies - II | Value Added Course (VAC) | 2 | - | - | 2 |
| FLU 244 FLU 245 FLU 246 FLU 247 FLU 248 | Foreign Language - II French - II German Spanish Japanese Chinese | Skill Enhancement Course (SEC) | 2 | - | - | 2 |
| | TOTAL | | | | | 22 |

- Vocational training for Certificate in bio-Instrumentation (04 Credit) as NTCC.

V. Desai 

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

THIRD SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-----------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 301 | Genetics | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 302 | Microbiology | Discipline Specific Course (core 2) | 3 | - | - | 3 |
| BSB 303/ BSB 304 | Anatomy & Plant Physiology/ Animal Physiology-I | Discipline Specific (Elective) | 3 | - | - | 3 |
| BSB 305 | Chemistry – III | Discipline Specific (Minor 1) | 2 | - | - | 2 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSB 320 | Biotechnology Lab - III | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSB 321 13/13/322-1 | Anatomy & Plant Physiology Lab/ Animal Physiology Lab-I | Discipline Specific (Elective) Lab | - | - | 2 | 1 |
| BSB 322 321 | Chemistry Lab – III | Discipline Specific (Minor 1) Lab | - | - | 2 | 1 |
| BCU 341 | Communication Skill – III | Ability Enhancement Course (AEC) | 2 | - | - | 2 |
| BSU343 | Behavioural Science – III | Value Added Course (VAC) | 2 | - | - | 2 |
| FLU 344 FLU 345 FLU 346 FLU 347 FLU 348 | Foreign Language – III French - III German Spanish Japanese Chinese | Skill Enhancement Course (SEC) | 2 | - | - | 2 |
| TOTAL | | | | | | 22 |

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

FOURTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 401 | Molecular Cell Biology | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 402 | Bioinformatics | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| BSB 403/ BSB 404 | Plant Breeding, Embryology, Pathology & Economic Botany/ Animal Physiology-II | Discipline Specific (Elective) | 3 | - | - | 3 |
| BSB 405 | Chemistry – IV | Discipline Specific (Minor 1) | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSB 420 | Biotechnology Lab - IV | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSB 421/ BSB 422 | Plant Breeding, Embryology, Pathology & Economic Botany Lab/ Animal Physiology Lab-II | Discipline Specific (Elective) Lab | - | - | 2 | 1 |
| BSB 450 440 | Term Paper (Review Article) | AEC | - | - | - | 2 |
| BSB 440? | Behavioural Science – IV | VAC | 2 | - | - | 2 |
| FLU 444 FLU 445 FLU 446 FLU 447 FLU 448 | Foreign Language – IV French - IV German Spanish Japanese Chinese | Skill Enhancement Course (SEC) | 3 | - | - | 3 |
| | TOTAL | | | | | 23 |

- Vocational training for diploma in clinical biochemistry (4 credit) as NTCC.

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

FIFTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|-------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 501 | Plant Biotechnology | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 502 | Animal Biotechnology | Discipline Specific Course (core 2) | 3 | - | - | 3 |
| BSB 503 | Biochemistry and Metabolic Regulation | Discipline Specific Course (core 3) | 3 | - | - | 3 |
| BSB 504 | Recombinant DNA Technology | Discipline Specific Course (core 4) | 3 | - | - | 3 |
| BSB-505 | Enzyme Technology | Inter/ Multi-Disciplinary Course | 2 | - | - | 2 |
| | Minor Track (CBCS) | Minor 2 | 3 | - | - | 3 |
| BSB- 521 | Plant Biotechnology Lab | Discipline Specific Course (core 1) Lab | - | - | 2 | 1 |
| BSB-522 | Animal Biotechnology lab | Discipline Specific Course (core 2) Lab | - | - | 2 | 1 |
| BSB- 523 | Biochemistry and Metabolic Regulation Lab | Discipline Specific Course (core 3) Lab | - | - | 2 | 1 |
| BSB-524 | Recombinant DNA Technology Lab | Discipline Specific Course (core 4) Lab | - | - | 2 | 1 |
| | TOTAL | | | | | 21 |

V. Dastidar

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AMITY UNIVERSITY

MADHYA PRADESH

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SIXTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|---------------------------------|------------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 601 | Environmental Biotechnology | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 602 | Industrial Biology | Discipline Specific Course (core 2) | 3 | - | - | 3 |
| BSB 603 | Immunology & Immunotechnology | Discipline Specific Course (core 3) | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 (Project) | - | - | - | 1 |
| BSB 620 | Environmental Biotechnology Lab | Discipline Specific Course (core 1) Lab | - | - | 2 | 1 |
| BSB 621 | Industrial Biology lab | Discipline Specific Course (core 2) Lab | - | - | 2 | 1 |
| BSB 622 | Immunology and immunology lab | Discipline Specific Course (core 3) Lab | - | - | 2 | 1 |
| BSB 660* | Project (6-8 Week) | Field Project/ Summer Internship Project | - | - | - | 6 |
| | TOTAL | | | | | 19 |

*Summer Internship Program of 6-8 Weeks duration to be conducted during 6th Semester in conjunction with Institute/Industry. This is Non-Teaching Credit Course (NTCC).

V. Dastgir

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

SEVENTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|----------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 701 | Advanced Microbial Technology | Discipline Specific Course (core 1) | 3 | 1 | - | 4 |
| BSB 702 | Advanced Cell Biology and Genetics | Discipline Specific Course (core 2) | 3 | 1 | - | 4 |
| BSB 703 | Advanced Biophysics & Bioanalytical Techniques | Discipline Specific Course (core 3) | 3 | 1 | - | 4 |
| BSB 704 | Advanced Biostatistics for Biologist | Discipline Specific Course (core 4) | 3 | 1 | - | 4 |
| BSB 720 | Advanced Microbial Technology Lab | Discipline Specific Course (core 1) Lab | - | - | 2 | 1 |
| BSB 721 | Advanced Cell Biology and Genetics Lab | Discipline Specific Course (core 2) Lab | - | - | 2 | 1 |
| BSB 722 | Advanced Biophysics & Bioanalytical Techniques lab | Discipline Specific Course (core 3) Lab | - | - | 2 | 1 |
| | TOTAL | | | | | 19 |

V. Jaiswal

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AMITY UNIVERSITY

MADHYA PRADESH

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EIGHT SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|----------------------------------------------------------|-------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSB 801 | Genomics and Proteomics | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSB 802 | Drug Delivery System | Discipline Specific Course (core 2) | 3 | - | - | 3 |
| BCH 621 | Management Accounting and Cost Control | Inter/ Multi-Disciplinary Course 1 | 1 | - | - | 1 |
| BCH 622 | Project Management | Inter/ Multi-Disciplinary Course 2 | 1 | - | - | 1 |
| BCH 623 | Principle of management and Entrepreneurship Development | SEC | 1 | - | - | 1 |
| BSB 860* | Project (10-12 Week) | Dissertation | - | - | - | 15 |
| | TOTAL | | | | | 24 |

*Summer Internship Program of 10-12 Weeks duration to be conducted during 8th Semester in conjunction with Institute/Industry. This is Non-Teaching Credit Course (NTCC).

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AMITY UNIVERSITY

MADHYA PRADESH

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PROGRAMME STRUCTURE: B.Sc. Biology-3YDC/ B.Sc. Biology (Honours with Research)-4YDC

FIRST SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|---------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC101 | Plant Sciences – I | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC102 | Animal Sciences-I | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| BSC103 | Chemistry – I | Discipline Specific Course (Core 3) | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC120 | Plant Sciences Lab - I | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSC121 | Animal Sciences Lab-I | Discipline Specific Course (Core 2) Lab | - | - | 2 | 1 |
| BSC122 | Chemistry Lab – I | Discipline Specific Course (Core 3) Lab | - | - | 2 | 1 |
| BCU141 | Communication Skill - I | AEC | 2 | - | - | 2 |
| EVS142 | Environmental Studies - I | VAC | 2 | - | - | 2 |
| FLU 144 | Foreign Language - I | SEC | 2 | - | - | 2 |
| FLU 145 | French - I | | | | | |
| FLU 146 | German | | | | | |
| FLU 147 | Spanish | | | | | |
| FLU 148 | Japanese | | | | | |
| | Chinese | | | | | |
| | TOTAL | | | | | 20 |

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Prof. (Dr.) Vinay Dwivedi
Director, Amity Institute of Biotechnology
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Kharajpura, Gwalior-474005



SECOND SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|----------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC201 | Plant Sciences – II | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC202 | Animal Sciences-II | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| BSC203 | Chemistry – II | Discipline Specific Course (Core 3) | 3 | - | - | 3 |
| BSC204 | Introductory Biochemistry & Biophysics | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC220 | Plant Sciences Lab - I | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSC221 | Animal Sciences Lab-I | Discipline Specific Course (Core 2) Lab | - | - | 2 | 1 |
| BSC222 | Chemistry Lab – I | Discipline Specific Course (Core 3) Lab | - | - | 2 | 1 |
| BCU241 | Communication Skill - I | AEC | 2 | - | - | 2 |
| EVS242 | Environmental Studies - I | VAC | 2 | - | - | 2 |
| FLU 244 | Foreign Language - I | | | | | |
| FLU 245 | French - I | | | | | |
| FLU 246 | German | | | | | |
| FLU 247 | Spanish | SEC | 2 | - | - | 2 |
| FLU 248 | Japanese | | | | | |
| | Chinese | | | | | |
| | TOTAL | | | | | 23 |

- Vocational training for Certificate in bio-instrumentation (04 Credit) as NTCC.

Signature

Signature

Dwivedi

Prof. (Dr.) Vinay Dwivedi
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AMITY UNIVERSITY

MADHYA PRADESH

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THIRD SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|--------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC301 | Anatomy & Plant Physiology | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC302 | Animal Physiology-I | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| BSC303 | Chemistry – III | Discipline Specific Course (Core 3) | 3 | - | - | 3 |
| BSC304 | Microbiology | Discipline Specific Minor 1 | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC320 | Anatomy & Plant Physiology Lab | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSC321 | Animal Physiology Lab-I | Discipline Specific Course (Core 2) Lab | - | - | 2 | 1 |
| BSC322 | Chemistry Lab – III | Discipline Specific Course (Core 3) Lab | - | - | 2 | 1 |
| BSC323 | Micrbiology Lab | Discipline Specific Minor 1 Lab | - | - | 2 | 1 |
| BCU341 | Communication Skill - III | AEC | 2 | - | - | 2 |
| BSU343 | Behavioural Science - III | VAC | 2 | - | - | 2 |
| FLU 344 | Foreign Language - III | | | | | |
| FLU 345 | French - III | | | | | |
| FLU 346 | German | SEC | 2 | - | - | 2 |
| FLU 347 | Spanish | | | | | |
| FLU 347 | Japanese | | | | | |
| FLU 348 | Chinese | | | | | |
| | TOTAL | | | | | 24 |

V. Jastwal

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Director, Amity Institute of Biotechnology
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Kharajpura, Gwalior-474005



FOURTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-----------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC401 | Plant Breeding, Embryology, Pathology & Economic Botany | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC402 | Animal Physiology-II | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| BSC403 | Chemistry – IV | Discipline Specific Course (Core 3) | 3 | - | - | 3 |
| BSC404 | Bioinformatics | Discipline Specific Minor 1 | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC420 | Plant Breeding, Embryology, Pathology & Economic Botany Lab | Discipline Specific Course (Core 1) Lab | - | - | 2 | 1 |
| BSC421 | Animal Physiology Lab-II | Discipline Specific Course (Core 2) Lab | - | - | 2 | 1 |
| BSC422 | Chemistry Lab-IV | Discipline Specific Course (Core 3) Lab | - | - | 2 | 1 |
| BSC 450 | Term Paper/ (Review Article) | AEC | - | - | - | 2 |
| BSU443 | Behavioral Science - IV | VAC | 2 | - | - | 2 |
| FLU 444 FLU 445 FLU 446 FLU 447 FLU 448 | Foreign Language - IV French - IV German Spanish Japanese Chinese | SEC | 3 | - | - | 3 |
| | TOTAL | | | | | 24 |

- Vocational training for diploma in clinical biochemistry (4 credit) as NTCC.

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

FIFTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|--------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC501 | Plant Biotechnology | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC502 | Genetics & Animal Biotechnology | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| BSC503 | Chemistry – V | Discipline Specific Course (Core 3) | 3 | - | - | 3 |
| BSC504 | Recombinant DNA Technology | Discipline Specific Minor 1 | 3 | - | - | 3 |
| BSC505 | Methods & Instrumentation in Biotechnology | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC520 | Biotechnology Lab | Discipline Specific Minor 1 Lab | - | - | 4 | 2 |
| BSC521 | Chemistry Lab V | Discipline Specific Course (Core 3) Lab | - | - | 2 | 1 |
| | TOTAL | | | | | 20 |

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AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

SIXTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|---------------------------------------|------------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC601 | Plant Ecology | Discipline Specific Course (Core 1) | 3 | - | - | 3 |
| BSC602 | Applied Zoology | Inter/ Multi-Disciplinary Course | 3 | - | - | 3 |
| BSC603 | Chemistry – VI | Discipline Specific Course (Core 2) | 3 | - | - | 3 |
| | Minor Track (CBCS) | Minor 2 | 2 | - | - | 2 |
| BSC620 | Plant Ecology and Applied Zoology Lab | Discipline Specific Course Core 1 Lab | - | - | 4 | 2 |
| BSC621 | Chemistry Lab VI | Discipline Specific Course (Core 2) Lab | - | - | 2 | 1 |
| BSC 660* | Project (6-8 Week) | Field Project/ Summer Internship Project | - | - | - | 6 |
| | TOTAL | | | | | 20 |

*Summer Internship Program of 6-8 Weeks duration to be conducted during 6th Semester in conjunction with Institute/Industry. This is Non-Teaching Credit Course (NTCC).

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SEVENTH SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|-------------|----------------------------------------------------|-----------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC 701 | Advanced Microbial Technology | Discipline Specific Course (core 1) | 3 | 1 | - | 4 |
| BSC 702 | Advanced Cell Biology and Genetics | Discipline Specific Course (core 2) | 3 | 1 | - | 4 |
| BSC 703 | Advanced Biophysics & Bioanalytical Techniques | Discipline Specific Minor | 3 | 1 | - | 4 |
| BSC 704 | Advanced Biostatistics for Biologist | Discipline Specific Course (core 4) | 3 | 1 | - | 4 |
| BSC 720 | Advanced Microbial Technology Lab | Discipline Specific Course (core 1) Lab | - | - | 2 | 1 |
| BSC 721 | Advanced Cell Biology and Genetics Lab | Discipline Specific Course (core 2) Lab | - | - | 2 | 1 |
| BSC 722 | Advanced Biophysics & Bioanalytical Techniques lab | Discipline Specific Minor Lab | - | - | 2 | 1 |
| | TOTAL | | | | | 19 |

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EIGHT SEMESTER

| Course Code | Course Title | Broad Category of Courses | Lecture (L) Hours Per week | Tutorial (T) Hours Per week | Practical (P) Hours Per week | Total Credit |
|--------------|----------------------------------------------------------|-------------------------------------|----------------------------|-----------------------------|------------------------------|--------------|
| BSC 801 | Genomics and Proteomics | Discipline Specific Course (core 1) | 3 | - | - | 3 |
| BSC 802 | Drug Delivery System | Discipline Specific Minor | 3 | - | - | 3 |
| BCH 621 | Management Accounting and Cost Control | Inter/ Multi-Disciplinary Course 1 | 1 | - | - | 1 |
| BCH 622 | Project Management | Inter/ Multi-Disciplinary Course 2 | 1 | - | - | 1 |
| BCH 623 | Principle of management and Entrepreneurship Development | SEC | 1 | - | - | 1 |
| BSC 860* | Project (10-12 Week) | Dissertation | - | - | - | 15 |
| TOTAL | | | | | | 24 |

*Summer Internship Program of 10-12 Weeks duration to be conducted during 8th Semester in conjunction with Institute/Industry. This is Non-Teaching Credit Course (NTCC).

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Amity Institute of Biotechnology (CBCS Minor Track)

| Semester | Course Name | Vacancies Available | Course Code | Subject | Credit |
|----------|--------------------------|---------------------|-------------|--------------------------------------------------------------------|--------|
| I | Biotechnology Management | 30 | CBA 101 | Life Sciences-I | 2 |
| II | | | CBA 201 | Life Sciences- II | 2 |
| III | | | CBA 301 | Cell Biology | 2 |
| IV | | | CBA 401 | Structural Biology | 2 |
| V | | | CBA 501 | Management of Biotech Industry, Biotech Regulations and Compliance | 3 |
| VI | | | CBA 601 | Project Work (NTCC) | 1 |
| I | Conservation Biology | 30 | CBB 101 | Plant taxonomy and Diversity | 2 |
| II | | | CBB 201 | Animal Taxonomy and Diversity | 2 |
| III | | | CBB 301 | Microbial Taxonomy and Diversity | 2 |
| IV | | | CBB 401 | Ecology and Evolutionary Biology | 2 |
| V | | | CBB 501 | Methods of Conservation | 2 |
| VI | | | CBB 601 | Project Work (NTCC) | 2 |

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