

J.J. College of Arts and Science (Autonomous)

Sivapuram Post, Pudukkottai – 622 422

(Re-Accredited by NAAC with B++ – 4th Cycle)

Affiliated to Bharathidasan University, Tiruchirappalli

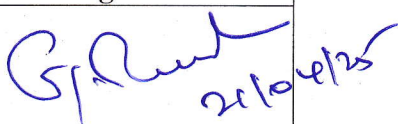
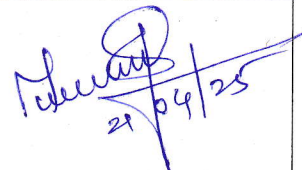
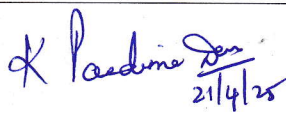
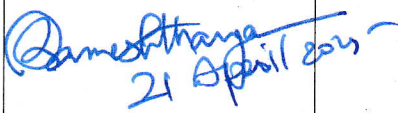
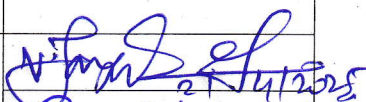
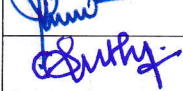
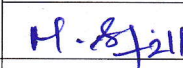
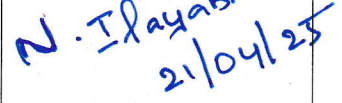
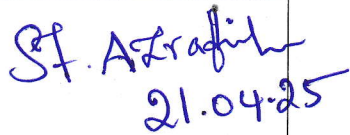
PG & Research Department of Biotechnology

Minutes of the Board of Studies Meeting

Meeting No: 10

Date: 21.04.2025 & Time: 11.00 a.m.

The Meeting of the Board of Studies in Biotechnology (U.G. and P.G.) for the **current revision of the curricula (R3)** to be implemented from **2024-2025**, is conducted at 11.00 a.m. on Monday **21.04.2025**.

Sl. No.	Name	Designation	Signature
1	Dr. G. Manigandan Head, Dept. of Biotechnology J.J. College of Arts and Science Pudukkottai – 622 422	Chairman	 21/04/25
2	Dr. M. Muthuselvem Associate Professor Department of Biotechnology Bharathidasan University Tiruchirappalli - 622 024	Nominee from the Parent University	 21/04/25
3	Dr.K. Pandima Devi Professor, Department of Biotechnology Alagappa University Karaikudi - 630003	Subject Experts Outside the Parent University	 21/4/25
4	Dr.P.Ramesh Thangam Associate Professor of Biotechnology & Head i/c, Department of Nutrition and Dietetics, Alagappa University Karaikudi - 630003	Subject Experts Outside the Parent University	 21 April 2025
5	Dr. V. Jayaramanathan	Senior Faculty members of the Department	 21/4/25
6	Ms. P. Priyadarshini		 21/4/25
7	Dr. V. Subramaniyan		 21/4/25
8	Ms. C. Sumathi		 21/4/25
9	Ms. M. Sakthipriya		 21/4/25
10	Mr. N. Ilaya Bharathi Executive Quality Control Virchow Biotech Private Limited No. 172, Gagillapur, Telangana - 500043 Hyderabad.	Representative from Industry / Corporate	 21/04/25
11	S.I. Azra Firdous Coordinator and Biology Staff (NEET) Paripoorna Academy of foundation and NEET, Trichy	Post Graduate Meritorious Alumnus	 21.04.25



The Chairman, **Dr. G. Manigandan** chaired the meeting and welcomed all the members to the tenth BoS Meeting. After the brief introduction, the agenda items listed below were taken up for discussion and the following resolutions were passed.

- 1 It is resolved to introduce a course titled **“Health and Wellness ”- U3R3HW** (under Part- V) in the third semester of the U.G Programme for students admitted from the Academic Year 2024-2025 in keeping with the instructions from the Parent University.(Vide . Letter from Registrar i/c No.692/CCCD/BDU/C-1/2024,dated 30.12.2024). The syllabus will be as indicated by TANSCH and the evaluation would be as follows, with no formal examination.

Activities (Observation during Practice) : 40 Marks

Attendance : 20 Marks

Report : 40 Marks

The weightage for this course will be 01 credit – 02 teaching hours per week.

- 2 To review the existing curricula and courses and make changes wherever necessary in the light of stakeholder’s feedback.
- 3 It is resolved to motivate the Students to do concurrent Courses under SWAYAM / MOOCS.
- 4 It is resolved to continue with the Value Added Courses offered by the Department with modifications, wherever necessary.
- 5 It is resolved to modify and follow a total of **44 courses, 4400 marks with 142** credits for the U.G. Programmes and **21 courses, 2100 marks with 90** credits for the P.G. Programmes.

- 6 It is resolved to include certain topics in UG Practical’s

- i. **Practical V-U5R3BTCC12P - Semester V**
- ii. **Practical VI- U6R3BTCC14P - Semester VI**

- 7 It is resolved to continue the current curricula, as they have been found to be effective in their implementation.



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Distribution of Courses and Credits - U.G.

Sl. No.	Part	Courses	No. of Courses	No. of Credits	Marks
1.	I	Language Courses	4	12	400
2.	II	English Courses	4	12	400
3.	III	Core Courses	8	37	800
4.		Core Practical	6	28	600
5.		Project Work	1	04	100
6.		Discipline Specific Elective Courses	8	24	800
7.	IV	Internship	1	02	100
8.		Skill Enhancement Courses	7	14	700
9.		Value Education	1	02	100
10.		Environmental Studies	1	02	100
11.		Foundation Course	1	02	100
12.	V	Gender Studies	1	01	100
13.		Extension Activity	-	01	-
		Health and Wellness	1	01	100
Total			44	142	4400

Distribution of Courses and Credits - P.G.

Sl.No.	Types of the Courses	No. of Courses	No. of Credits	Marks
1.	Core Courses	12	58	1200
2.	Project Work	01	10	100
3.	Discipline Specific Elective Courses	05	15	500
4.	Internship	01	03	100
5.	Skill Enhancement Courses	02	04	200
Total		21	90	2100

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DEPARTMENT OF BIOTECHNOLOGY

B.Sc., BIOTECHNOLOGY

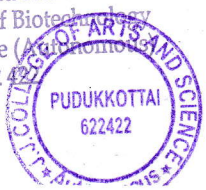
Proposed Course Structure based on **TANSCH** and **UGC - LOCF**

(Choice Based Credit System)

(Applicable for the Candidates admitted from academic Year **2023-2024** Onwards)

Sem	Part	Course Code	Course Title	Ins. Hrs/ Week	Credit	Exam Hrs	Marks		Total
							Int.	Ext.	
I	I	U1R3TL1/HL1/FL1	Language Course - I(Tamil/ Hindi/ French	6	3	3	25	75	100
	II	U1R3EL1	Language II - English	6	3	3	25	75	100
	III	U1R3BTCC1	Cell and Molecular Developmental Biology	5	5	3	25	75	100
		U1R3BTCC2P	Practical - I (Cell and Molecular Developmental Biology)	5	5	3	40	60	100
		U1R3BTDSE1:1/1:2	Biological Chemistry / Anatomy & Physiology	4	3	3	25	75	100
	IV	U1R3CSSEC1(NME)	Office Automation	2	2	3	25	75	100
		U1R3BTFC	Good Laboratory Practices (GLP)	2	2	3	25	75	100
Total				30	23	-	-	-	700
II	I	U2R3TL2/HL2/FL2	Language Course - I(Tamil/ Hindi/ French	6	3	3	25	75	100
	II	U2R3EL2	Language II - English	6	3	3	25	75	100
	III	U2R3BTCC3	Genetics	5	5	3	25	75	100
		U2R3BTCC4P	Practical-II (Covering CC-3)	5	5	3	40	60	100
		U2R3BTDSE2	Microbiology	4	3	3	25	75	100
	IV	U2R3MASEC2	(NME2) - Quantitative Aptitude II	2	2	3	25	75	100
		U2R3BTSEC3:1/3:2	Marine Biotechnology/ Stem cell technology	2	2	3	25	75	100
Total				30	23	-	-	-	700
III	I	U3R3TL3/HL3/FL3	Language Course - I(Tamil/ Hindi/ French	5	3	3	25	75	100
	II	U3R3EL3	Language II - English	5	3	3	25	75	100
	III	U3R3BTCC5	Immunology and Immunotechnology	5	5	3	25	75	100
		U3R3BTCC6P	Practical - III (Covering CC5)	5	5	3	40	60	100
		U3R3BTDSE3:1/3:2	Bioinstrumentation/ Bioresource technology	4	3	3	25	75	100
	IV	U3R3VE	Value education	2	2	3	25	75	100
		U3R3BTSEC4:1/4:2	Aquatic Biotechnology/ Vermitechnology	2	2	3	25	75	100
V	U3R3HW	Health and Wellness	2	1	-	-	-	100	
Total				30	24	-	-	-	800

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IV	I	U4R3TL4/HL4/FL4	Language Course - IV (Tamil/ Hindi/ French	5	3	3	25	75	100
	II	U2R3EL4	Language IV - English	5	3	3	25	75	100
	III	U4R3BTCC7	Genetic Engineering	5	5	3	25	75	100
		U4R3BTCC8P	Practical - IV (Covering CC7)	5	5	3	40	60	100
		U4R3BTDSE4:1/4:2	Bioinformatics and Biostatistics/ Bioethics and Biosafety	4	3	3	25	75	100
		U4R3BTSEC5:1/5:2	Bromatology / Food safety and Quality control	2	2	3	25	75	100
	IV	U4R3BTSEC6:1/6:2	Mushroom Technology/ Biofertilizers	2	2	3	25	75	100
		U4R3ES	Environmental Studies	2	2	3	25	75	100
		Total			30	25	-	-	-

V	III	U5R3BTCC9	Plant Biotechnology	5	5	3	25	75	100
		U5R3BTCC10	Animal Biotechnology	5	4	3	25	75	100
		U5R3BTCC11	Industrial Biotechnology	5	4	3	25	75	100
		U5R3BTCC12P	Practical - V (Covering CC9,CC10 & CC11)	5	4	3	40	60	100
		U5R3BTDSE5:1/ 5:2	Cancer Biology / Enzymology	5	3	3	25	75	100
		U5R3BTDSE6:1/ 6:2	Gene Therapy/ Bioenterpreneurship	5	3	3	25	75	100
	IV	U5R3BTINT	Internship	-	2	-	25	75	100
Total				30	25	-	-	-	700
VI	III	U6R3BTCC13	Environmental Biotechnology	5	4	3	25	75	100
		U6R3BTCC14P	Practical VI (Covering CC13)	5	4	3	40	60	100
		U6R3BTCC15PW	Project work	6	4	-	40	60	100
		U6R3BTDSE7:1/ 7:2	Nanobiotechnology/ Forensic Science	5	3	3	25	75	100
		U6R3BTDSE8:1/ 8:2	Agricultural Biotechnology/ Genomics and proteomics	4	3	3	25	75	100
	IV	U6R3BTSEC7:1/7:2	Pharmaceutical Biotechnology/ Diagnostic Biotechnology	3	2	3	25	75	100
		U6R3BTGS	Gender Studies	2	1	-	25	75	100
		-	Extension Activities		1				
Total				30	22	-	-	-	700
Grand Total					142				4400

I. G. R. S.
21/04/25

M. M. S.
21/04/25

R. P. R.
21/04/25

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CC-Core Course / AC – Allied Course / NME – Non Major Elective/ DSE – Discipline Specific Elective

Total Credit - **142**/ Total Marks - **4400**

Extension Activities Shall Be Outside the Instruction Hours.

CORE COURSES - (CC)

- 1) Cell and Molecular Developmental Biology
- 2) Practical I - Cell and Molecular Developmental Biology
- 3) Genetics
- 4) Practical II - Covering CC3
- 5) Immunology and Immunotechnology
- 6) Practical III - Covering CC5
- 7) Genetic Engineering
- 8) Practical IV - Covering CC7
- 9) Plant Biotechnology
- 10) Animal Biotechnology
- 11) Industrial Biotechnology
- 12) Practical IV - Covering CC9,10,11
- 13) Environmental Biotechnology
- 14) Practical V - Covering CC13
- 15) Project work

DISCIPLINE SPECIFIC ELECTIVE - (DSE)

1. Biological Chemistry
2. Anatomy & Physiology
3. Microbiology
4. Bioinstrumentation
5. Bioresource Technology
6. Bioinformatics & Biostatistics
7. Bioethics and Biosafety
8. Cancer Biology
9. Enzymology
10. Gene therapy
11. Bioenterpreneurship
12. Nanobiotechnology
13. Agricultural Biotechnology
14. Genomics and Proteomics
15. Forensic Science



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SKILL ENHANCEMENT COURSE - (SEC)

1. Office Automation - from CS Department
2. Quantitative Aptitude II - from Maths Department
3. Marine Biotechnology
4. Stem cell technology
5. Aquatic Biotechnology
6. Vermitechnology
7. Bromotology
8. Food Safety & Quality control
9. Mushroom Technology
10. Biofertilizers
11. Pharmaceutical Biotechnology
12. Dignostic Biotechnology

FOUNDATION COURSE

1. Good Laboratory Practices (GLP)

NON-MAJOR ELECTIVES (NME)

FIRST SEMESTER

1. Food and Nutrition
2. Herbal Medicine
3. Public Health and Hygiene
4. Environment Management in Industries
5. Good Laboratory Practices
6. Organic Farming and Health Management
7. Biotechnology for Society
8. Computational Biology

SECOND SEMESTER

9. Concepts of Biotechnology
10. Applications of Biotechnology in Society

HEALTH RELATED COURSE

1. Health and Wellness

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Proposed Course Structure based on TANSCH and UGC - LOCF
(Choice Based Credit System)

(Applicable for the Candidates Admitted from Academic Year 2023-2024 Onwards)

Sem	Course Code	Course Title	Hrs/ Week	Credit	Exam Hrs	Marks		
						Int.	Ext.	Total
I	PIR3BTCC1	Biochemistry	7	5	3	25	75	100
	PIR3BTCC2	Microbiology	7	5	3	25	75	100
	PIR3BTCC3P	Practical - I (Covering CC1,CC2)	6	4	6	40	60	100
	PIR3BTDSE1:1/1:2	Bioinstrumentation / Cell Signaling	5	3	3	25	75	100
	PIR3BTDSE2:1/2:2	Enzymology/ Diagnostic Biotechnology	5	3	3	25	75	100
Total			30	20	-	-	-	500
II	P2R3BTCC4	Molecular Genetics	6	5	3	25	75	100
	P2R3BTCC5	Plant and Animal Biotechnology	6	5	3	25	75	100
	P2R3BTCC6P	Practical -II (Covering CC4,CC5)	6	4	6	40	60	100
	P2R3BTDSE3:1/3:2	Virology / Medical Bacteriology	4	3	3	25	75	100
	P2R3BTDSE4:1/4:2	Environmental Biotechnology / Pharmaceutical Technology /	4	3	3	25	75	100
	P2R3BTSEC1:1/1:2	Genetic Engineering / Food Technology	4	2	3	25	75	100
Total			30	22	-	-	-	600
III	P3R3BTCC7	Bioprocess Technology	6	5	3	25	75	100
	P3R3BTCC8	Immunology	5	5	3	25	75	100
	P3R3BTCC9	Bioinformatics	5	5	3	25	75	100
	P3R3BTCC10P	Practical -III (Covering CC7,CC8 & CC9)	6	5	6	40	60	100
	P3R3BTDSE5:1/5:2	Research Methodology/ Oncology	4	3	3	25	75	100
	P3R3BTSEC2:1/2:2	Nano Biotechnology/Bioethics,Biosafety IPR and System Biology	4	2	3	25	75	100
	P3R3BTINT	Internship	-	3	-	-	-	100
Total			30	28	-	-	-	700
IV	P4R3BTCC11	Stem cells technology	6	5	3	25	75	100
	P4R3BTCC12	Genomics and Proteomics	6	5	3	25	75	100
	P4R3BTCC13PW	Project Work	18	10	-	-	-	100
Total			30	20	-	-	-	300
Grand Total			120	90	-	-	-	2100

1. G. R. Mani
21/04/25

Dr. P. Rameshthangam
21 April 2025

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