

**J.J College of Arts and Science(Autonomous)**  
**Sivapuram post, Pudukkottai-622 422**  
**(Re-Accredited by NAAC-4th cycle)**  
**Affiliated to Bharathidasan University, Tiruchirappalli**

**PG and Research Department of Biochemistry**

**Minutes of the Board of Studies Meeting**

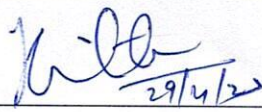

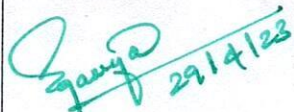
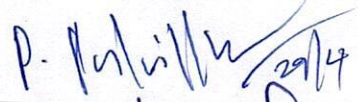
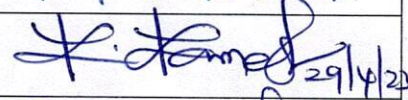
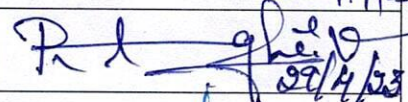


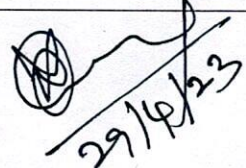
**Meeting No:7**

**Date: 29.04.2023**

**Time: 10.30 a.m.**

The meeting of the Board of Studies in Biochemistry (U.G. and P.G.) for the seventh revision of the curricula to be implemented from 2023-2024, was conducted at 10.30 a.m. on Saturday, 29.04.2023.

Members Present

S.No.	Name	Designation	Signature
1.	<b>Dr. S. Kanitha</b> Asst. Professor & Head	Chairperson	 29/4/23
2.	<b>Dr. V. Ravikumar</b> Associate Professor & Head Department of Biochemistry Bharathidasan University Tiruchirappalli	University Nominee	 29/4/23
3.	<b>Dr. S. Sivasangari Ramya</b> Principal Sri Sarada Niketan College for Women Karaikudi	Subject Expert	 29/4/23
4.	<b>Mr. P. Palaniappan</b>	Faculty member	 29/4
5.	<b>Dr. R. Ramesh</b>	Faculty member	 29/4/23
6.	<b>Ms. V. Raghavi</b>	Faculty member	 29/4/23
7.	<b>Dr. A.S. Vijayakumar</b>	Faculty member	 29/4/23
8.	<b>Dr. M. Sivakumar</b> Managing Director Ariviya Technology Pvt. Ltd., Pattukkottai	Representative from Industry	
9.	<b>Dr. J. Christinal</b> Reader Department of Biochemistry Rajas Dental College and Hospital Kavalkinaru, Tirunelveli	Alumnus	 29/4/23

The Chairperson Dr. S. Kanitha chaired the meeting and welcomed all the members to the seventh BoS meeting. As part of our Autonomy, the Curricula for all the Programmes offered in the College have to be revised once in every three years. Though the Curriculum is revised in 2022, the Current Revision is necessary based on the Notification received from the Parent University to adapt TANSCHÉ Model Syllabus.

Hence, this meeting is called for.

### Resolutions of the BOS in Biochemistry

The **Seventh Board of Studies Meeting** of the Department of **BIOCHEMISTRY** was held on **29.04.2023 at 10.30 a.m.** in the Department.

The following resolutions were proposed, discussed, finalized and passed in the Board of studies meeting of Biochemistry for the **B. Sc Biochemistry Programme and M. Sc Biochemistry Programme** which is to be implemented from the ensuing Academic year 2023 – 2024 onwards, pertaining to the approval from the Academic Council of the college.

1. As per the instructions from **TANSCHÉ and the Parent University**, it is resolved to include **75 % of mandatory inclusion** content from model syllabus and **25 % of Preferential inclusion** by our Department to preserve equivalence in U.G. and P.G. Degree Programmes to enable student Mobility to be implemented from the academic year 2023 – 2024 onwards is framed and restructured following the guidelines laid down by the UGC - LOCF and Tamil Nadu State Council for Higher Education (TANSCHÉ) and the Parent University.
2. It is resolved to evaluate the Syllabus followed during the Academic Year 2022 – 2023 based on the first Semester Results.
3. It is also resolved to analyze the previous Curriculum based on the feedback received from the Teachers, Employers, Students and the Alumni.
4. It is resolved to convene a Board of Studies meeting in the coming days (if the need arises) to incorporate the Modifications / Updatations in the Curriculum based on the communication from the Parent University / TANSCHÉ.
5. It is resolved to have the following 16 core courses for UG semester-wise as recommended by TANSCHÉ.

#### **Semester-I**

- **Nutritional Biochemistry (U1R3BCCC1):** It is the **Core Course newly introduced.**
- **Core Practical-I (U1R3BCCC2P):** It is the **Core Course newly introduced.**

#### **Semester-II**

- **Cell Biology (U2R3BCCC3):** It is the **Core Course newly introduced.**
- **Core Practical-II (U2R3BCCC4P):** It is the **Core Course newly introduced.**

#### **Semester-III**

- **Biomolecules (U3R3BCCC5):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Core Practical-III (U3R3BCCC6P):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.

#### Semester-IV

- **Biochemical Techniques (U4R3BCCC7):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Core Practical-IV (U4R3BCCC8P):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.

#### Semester-V

- **Enzymes (U5R3BCCC9):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Intermediary Metabolism (U5R3BCCC10):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Clinical Biochemistry (U5R3BCCC11):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Core Practical-V (U5R3BCCC12P):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.

#### Semester-VI

- **Molecular Biology (U6R3BCCC13):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Human Physiology (U6R3BCCC14):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Plant Biochemistry and Plant Therapeutics (U6R3BCCC15):** It is the Core Course newly introduced.
- **Core Project (U6R3BCCC16PW):** It is the Core Course newly introduced.

6. It is resolved to have the following 08 Allied Courses for UG semester-wise

#### Semester-I

- **Chemistry-I (U1R3CHAC1):** It is the Allied Course newly introduced.
- **Allied Practical-I (U1R3CHAC2P):** It is the Allied Course newly introduced.

#### Semester-II

- **Chemistry-II (U2R3CHAC3):** It is the Allied Course newly introduced.
- **Allied Practical-II (U2R3CHAC4P):** It is the Allied Course newly introduced.

#### Semester-III

- **Fundamentals of Biology (U3R3BCAC5):** This Allied Course of previous curriculum is retained as such.
- **Allied Practical-III (U3R3BCAC6P):** This Allied Course of previous curriculum is retained as such.

#### **Semester-IV**

- **Microbiology (U4R3MBAC7):** It is the Allied Course newly introduced.
- **Allied Practical-IV (U4R3MBAC8P):** It is the Allied Course newly introduced.

#### **7. It is resolved to offer the following Non-Major Elective Courses**

- **Medicinal Diet (Semester I):** It is the Non-Major Elective Course newly introduced.
- **Lifestyle diseases (Semester II):** It is the Non-Major Elective Course newly introduced.
- **Health and Nutrition (Semester II):** It is the Non-Major Elective Course newly introduced.

#### **8. It is resolved to offer the following Elective courses**

- **Immunology (Semester V):** This Elective Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Biochemical Pharmacology (Semester V):** It is the Elective Course newly introduced.
- **Research Methodology (Semester V):** It is the Elective Course newly introduced.
- **Bioentrepreneurship (Semester VI):** It is the Elective Course newly introduced.
- **Bioinformatics (Semester VI):** It is the Elective Course newly introduced.
- **Biotechnology (Semester VI):** It is the Elective Course newly introduced.

#### **9. It is resolved to offer the following Skill Enhancement Courses**

- **Biomedical Instrumentation (Semester III):** It is the Skill Enhancement Course newly introduced.
- **First Aid (Semester II):** It is the Skill Enhancement Course newly introduced.
- **Basics of forensic science (Semester IV):** It is the Skill Enhancement Course newly introduced.
- **Medical Laboratory technology (Semester III):** It is the Skill Enhancement Course newly introduced.
- **Tissue culture (Semester IV):** It is the Skill Enhancement Course newly introduced.
- **Medical coding (Semester IV):** It is the Skill Enhancement Course newly introduced.
- **Microbial techniques (Semester II):** It is the Skill Enhancement Course newly introduced.

#### **10. It is resolved to newly introduce the “Foundation Course” in the first semester for the undergraduate students.**

11. It is resolved to newly introduce "Ability Enhancement Compulsory Courses" in the first 4 semesters for the undergraduate students.
12. It is resolved to newly introduce "Internship Programme" for the undergraduate students in their 5<sup>th</sup> semester for the undergraduate students.
13. It is resolved to newly introduce "Professional competency skill" in the 6<sup>th</sup> semester for the undergraduate students.
14. It is resolved to have the following 15 Core Courses for PG Programme semester-wise.

#### Semester-I

- **Basics of Biochemistry (P1R3BCCC1):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Biochemical and Molecular Biology Techniques (P1R3BCCC2):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Physiology and Cell Biology (P1R3BCCC3):** It is the Core Course newly introduced.

#### Semester-II

- **Enzymology (P2R3BCCC4):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Cellular Metabolism (P2R3BCCC5):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Clinical Biochemistry (P2R3BCCC6):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Major Practical-I (P2R3BCCC7P):** This is the Core Course of previous curriculum which is modified.
- **Major Practical-II (P2R3BCCC8P):** This is the Core Course of previous curriculum which is modified.

#### Semester-III

- **Industrial Microbiology (P3R3BCCC9):** This Core Course is introduced newly.
- **Molecular Biology (P3R3BCCC10):** The Core Course of previous curriculum is retained as such as it matches almost 100% with the TANSHE syllabus.
- **Gene Editing, Cell and Gene therapy (P3R3BCCC11):** This Core Course is introduced newly.

#### Semester-IV

- **Pharmaceutical Biochemistry (P4R3BCCC12):** This Core Course is introduced newly.
- **Biochemical Toxicology (P4R3BCCC13):** This Core Course is introduced newly.

- **Major Practical-III (P4R3BCCC14P):** This Core Course is introduced newly.
- **Project and Viva (P4R3BCCC15PW):** This Core Course of previous curriculum is retained as such.

**15. It is resolved to offer the following Elective courses for the PG Programme**

- **Microbiology and Immunology (P1R3BCDSE1):** This Elective Course is introduced newly.
- **Energy and Drug Metabolism (P2R3BCDSE2):** This Elective Course is introduced newly.
- **Biostatistics and Data Science (P3R3BCDSE3):** This is the Elective Course of previous curriculum which is modified.
- **Biosafety, Lab safety and IPR (P4R3BCDSE4):** This Elective Course is introduced newly.
- **Developmental Biology (P4R3BCDSE5):** This Elective Course is introduced newly.

**16. It is resolved to offer the following soft skill courses for the PG Programme**


- **Bioinformatics (P1R3AECC1):** This Course of previous curriculum is retained as such.
- **Communication and Scientific writing (P2R3AECC2):** This Course is introduced newly.

**17. It is resolved to offer the following Extra Disciplinary Paper for the PG Programme**

- **Nutritional Biochemistry (P2R3BCED1):** This Course is introduced newly.
- **Molecular basis of disease and therapeutic strategies (P3R3BCED2):** This Course is introduced newly.

**18. It is resolved to retain the Internship Programme as one of the soft skill courses at the end of 2<sup>nd</sup> semester for PG Programme.**

The committee Approved and recommend the enclosed revised Syllabus to be followed by UG & PG Biochemistry of J.J. College of Arts and Science (Autonomous) Pudukkottai for the academic year 2023-24 onwards.

  
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**J.J. COLLEGE OF ARTS AND SCIENCE (Autonomous)**

**DEPARTMENT OF BIOCHEMISTRY**

**B. Sc BIOCHEMISTRY**

Proposed Course Structure under Autonomous Status

Under Choice Based Credit System

(Applicable for the candidates admitted from academic year 2023-2024 onwards)

SEM	Part	Course code	Course Title	Hrs/ Week	Credit	Exam Hours	Marks		Total Marks
							Int	Ext	
I	I	U1R3TL1/ HL1/FL1	Language Course – I	6	3	3	25	75	100
	II	U1R3EL1	English Language course – I	4	3	3	25	75	100
	III	U1R3BCCC1	Nutritional Biochemistry	4	3	3	25	75	100
		U1R3BCCC2P	Core Practical-I(Covering CC1)	3	3	3	40	60	100
		U1R3CHAC1	Allied Chemistry-I	4	3	3	25	75	100
		U1R3CHAC2P	Allied Chemistry Practical-I	3	2	3	40	60	100
	IV	U1R3BCSEC1 (NME 1)	To be opted from other Department	2	2	3	25	75	100
		U1R3BCFC	Foundation Course	2	2	3	25	75	100
		U1R3AECC1	Soft Skill - I	2	2	3	25	75	100
<b>TOTAL</b>				<b>30</b>	<b>23</b>	-	-	-	<b>900</b>
II	I	U2R3TL2/ HL2/FL2	Language Course – II	6	3	3	25	75	100
	II	U2R3EL2	English Language course – II	4	3	3	25	75	100
	III	U2R3BCCC3	Cell Biology	4	3	3	25	75	100
		U2R3BCCC4P	Core Practical-II (Cell Biology)	3	3	3	40	60	100
		U2R3CHAC3	Allied Chemistry -II	4	3	3	25	75	100
	IV	U2R3CHAC4P	Allied Chemistry Practical -II	3	2	3	40	60	100
		U2R3BCSEC2 (NME2)	To be Opted from other Department	2	2	3	25	75	100
		U2R3BCSEC3	Discipline/Subject Specific	2	2	3	25	75	100
		U2R3AECC2	Soft Skill – II	2	2	3	25	75	100
<b>TOTAL</b>				<b>30</b>	<b>23</b>	-	-	-	<b>900</b>
III	I	U3R3TL3/ HL3/FL3	Language Course – III	6	3	3	25	75	100
	II	U3R3EL3	English Language course – III	4	3	3	25	75	100

Dr. V. Ravikumar  
29/4/23

Dr. S. Sivasangari Ranya  
29/4/23

Dr. J. Christinal  
29/4/23

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III	U3R3BCCC5	Biomolecules	4	3	3	25	75	100	
	U3R3BCCC6P	Core Practical-III (Biomolecules)	3	3	3	40	60	100	
	U3R3BCAC5	Fundamentals of Biology	3	3	3	25	75	100	
	U4R3BCAC6P	Allied Practical-III	3	2	3	40	60	100	
IV	U3R3BCSEC4	Entrepreneurial Based	2	1	3	25	75	100	
	U3R3BCSEC5	Discipline/Subject Specific	2	2	3	25	75	100	
	U3R3AECC3	Soft Skill – III	2	2	3	25	75	100	
		EVS	1	-	-	-	-	-	
<b>Total</b>			<b>30</b>	<b>22</b>				<b>900</b>	
IV	I	U4R3TL4/ HL4/FL4	Language Course – IV	6	3	3	25	75	100
	II	U4R3EL4	English Language course – IV	4	3	3	25	75	100
	III	U4R3BCCC7	Biochemical Techniques	3	3	3	25	75	100
		U4R3BCCC8P	Major Practical IV (Biochemical Techniques)	3	3	3	40	60	100
		U4R3MBAC7	Microbiology	3	3	3	25	75	100
		U4R3MBAC8P	Allied Practical-II	3	2	3	40	60	100
	IV	U4R3BCSEC6	Discipline/Subject Specific	2	2	3	25	75	100
		U4R3BCSEC7	Discipline/Subject Specific	2	2	3	25	75	100
		U4R3AECC4	Soft Skill - 4	2	2	3	25	75	100
		U4R3ES	Environmental Studies	2	2	3	25	75	100
	<b>TOTAL</b>			<b>30</b>	<b>25</b>	-	-	-	<b>1000</b>
	V	III	U5R3BCCC9	Enzymes	6	4	3	25	75
U5R3BCCC10			Intermediary Metabolism	6	4	3	25	75	100
U5R3BCCC11			Clinical Biochemistry	6	4	3	25	75	100
U5R3BCCC12P			Core Practical-V (Clinical Biochemistry)	5	4	3	40	60	100
U5R3BCE1			1A Immunology	5	4	3	25	75	100

Dr. V. Navikumar  
29/4/23

Dr. S. Swasangi RAMYA  
29/4/23

Dr. J. Chiranjeev  
29/4/23

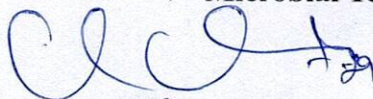
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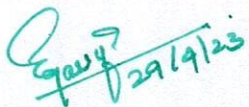
		1B Biochemical pharmacology 1C Research Methodology							
IV	U5R3VE	Value Education	2	2	3	25	75	100	
	U5R3BCIN/IV/FV	Internship/Industrial visit/Field visit	-	2	-	25	75	100	
<b>TOTAL</b>			<b>30</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>700</b>	
VI	III	U6R3BCCC13	Molecular Biology	5	4	3	25	75	100
		U6R3BCCC14	Human Physiology	5	4	3	25	75	100
		U6R3BCCC15	Plant Biochemistry and Plant Therapeutics	5	4	3	25	75	100
		U6R3BCCC16PW	Core Project Work	8	4	-	40	60	100
		U6R3BCE2	2A Biotechnology 2B Bioinformatics 2C Bioentrepreneurship	5	4	3	25	75	100
	IV		Extension Activity	-	1	-	-	-	-
		U6R3BCSEC8	Professional Competency Skill	2	2	3	25	75	100
<b>TOTAL</b>			<b>30</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>600</b>	
<b>Grand Total</b>			<b>140</b>					<b>5000</b>	


### CBCS Pattern

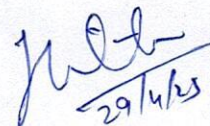
#### Skill Enhancement Courses

- ❖ Biomedical Instrumentation
- ❖ First Aid
- ❖ Basics of forensic science
- ❖ Medical Laboratory technology
- ❖ Tissue Culture
- ❖ Medical coding
- ❖ Microbial Techniques

  
Dr. V. Ravikumar  
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Dr. J. Chirishmal  
29/4/23

  
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**J.J. COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)**  
**PUDUKKOTTAI – 622 422**  
**DEPARTMENT OF BIOCHEMISTRY**  
**M.Sc. BIOCHEMISTRY**

**Proposed Course Structure under Autonomous Status**  
**Under Choice Based Credit System - 2023-2024 onwards**


<i>Sem</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hrs/Week</i>	<i>Credit</i>	<i>Total marks</i>	<i>Exam Hours</i>
I	P1R3BCCC1	Basics of Biochemistry	6	4	100	3
	P1R3BCCC2	Biochemical and Molecular Biology Techniques	6	4	100	3
	P1R3BCCC3	Physiology and Cell Biology	6	4	100	3
	P1R3BCDSE1	Microbiology and Immunology	6	3	100	3
	P1R3AECC1	Soft Skill-1	6	2	100	3
<b>Total</b>			<b>30</b>	<b>17</b>	<b>500</b>	
II	P2R3BCCC4	Enzymology	5	4	100	3
	P2R3BCCC5	Cellular Metabolism	5	4	100	3
	P2R3BCCC6	Clinical Biochemistry	5	4	100	3
	P2R3BCCC7P	Practical-I	3	4	100	6
	P2R3BCCC8P	Practical-II	3	4	100	3
	P2R3BCDSE2	Energy and drug metabolism	3	3	100	3
	P2R3BCED1	Nutritional Biochemistry	3	3	100	3
	P2R3AECC2	Soft Skill-II	3	2	100	3
	P2R3BCIN	*Internship (Clinical Laboratory)	-	2	100	
<b>Total</b>			<b>30</b>	<b>30</b>	<b>900</b>	
III	P3R3BCCC9	Industrial Microbiology	6	4	100	3
	P3R3BCCC10	Molecular Biology	6	4	100	3
	P3R3BCCC11	Gene Editing , Cell and Gene therapy	6	4	100	3


*Dr. V. Navil Kumar*  
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	P3R3BCDSE3	Biostatistics and Data Science	6	3	100	3
	P3R3BCED2	Molecular basis of disease and therapeutics strategies	6	3	100	3
	P3R3AECC3	Industrial visit-Biotech	-	2	100	
<b>Total</b>			<b>30</b>	<b>20</b>	<b>600</b>	
IV	P4R3BCCC12	Pharmaceutical Biochemistry	5	4	100	3
	P3R3BCCC13	Biochemical Toxicology	5	4	100	3
	P4R3BCCC14P	Practical-III	5	4	100	3
	P4R3BCCC15PW	*Project & Viva	9	4	100	3
	P4R3BCDSE4	Biosafety, Lab Safety and IPR	3	3	100	3
	P4R3BCDSE5	Developmental Biology	3	3	100	3
	P4R3AECC4	Industrial visit-Pharma/Food Processing	-	2	100	-
<b>Total</b>			<b>30</b>	<b>24</b>	<b>600</b>	
<b>Grand Total</b>			<b>-</b>	<b>91</b>	<b>2600</b>	

  
29/4/23  
Dr. V. Ravikumar

  
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