



SEETHALAKSHMI RAMASWAMI COLLEGE

(Autonomous)

Affiliated to Bharathidasan University

Tiruchirappalli

Accredited with A+ by NAAC (4th Cycle)



M.Sc. BIOCHEMISTRY

CBCS - OBE – LOCF Curriculum Structure

(For Students admitted from 2024 onwards)

SEM	COURSE	COURSECODE	COURSE TITLE	HRS	CRD	INT/EXT	INT	EXT	TOTAL
I	Core course-I		Biomolecules of Life	6	5	EXT	25	75	100
	Core course-II		Analytical Biochemistry	6	5	EXT	25	75	100
	Core course-III		Cellular Mechanism	6	5	EXT	25	75	100
	MBE-I		Pharmaceutical Biochemistry and Neurophysiology	6	4	EXT	25	75	100
	Core Practical I		Practical-I:Biochemical Analysis	3	-	-	-	-	-
	Core Practical II		Practical-II:Assay of Enzyme activity	3	-	-	-	-	-
			Total credits and marks	30	19				400

II	Core course-IV		Hormonal Biochemistry	6	5	EXT	25	75	100
	Core course-V		Enzyme and Enzyme Technology	6	5	EXT	25	75	100
	MBE-II		Bioinformatics and Nanotechnology	6	4	EXT	25	75	100
	Core Practical I		Practical-I:Biochemical Analysis	3	4	EXT	40	60	100
	Core Practical II		Practical-II:Assay of Enzyme activity	3	4	EXT	40	60	100
	NME		Offered by the other Departments	6	4	INT	25	75	100
			Total credits and marks	30	26				600
	EXTRA CREDIT COURSE		Community Outreach Activity (during I Semester vacation- Report, Photo & Feedback from beneficiaries) (MANDATORY)		1	INT			100
III	Core course-VI		Energetics and Metabolic Regulation	6	5	EXT	25	75	100
	Core course-VII		Genetics and Molecular Biology	6	5	EXT	25	75	100
	Core course-VIII		Advanced clinical Biochemistry	6	5	EXT	25	75	100
	MBE-III		Research Methodology	6	4	EXT	25	75	100
	Core Practical III		Practical-III:Clinical Biochemistry	3	-	-	-	-	-
	Core Practical IV		Practical-IV:Plant Biochemistry	3	-	-	-	-	-
			Total credits and marks	30	19				400
			Value Added Course – offered to the same department (beyond class hours) (MANDATORY)	2	2	INT	25	75	100

	EXTRA CREDIT COURSE		Internship-I (during II Semester vacation) online/offline - certificate, Report & Photo (MANDATORY)	-	2	INT	-	-	100
			Online (MOOC/SWAYAM/NPTEL) - Before III Semester (OPTIONAL)	-	2	INT	-	-	100
IV	Core course-IX		Immunology	6	5	EXT	25	75	100
	Core course-X		Genetic Engineering	6	5	EXT	25	75	100
	Entrepreneurship based Course		Phytochemistry and applications	6	4	EXT	25	75	100
	Core Practical III		Practical-III: Clinical Biochemistry	3	4	EXT	40	60	100
	Core Practical IV		Practical-IV: Plant Biochemistry	3	4	EXT	40	60	100
	Project		Project	6	4	EXT	20	80	100
			Total credits and marks	30	26				600
			GRAND TOTAL	120	90				2000
	EXTRA CREDIT COURSE		Certificate Course (IKS) offered by other departments (beyond class hours) (MANDATORY)	2	2	INT	25	75	100
		Internship-II (during III Semester vacation) online/offline - certificate, Report & Photo (OPTIONAL)							

TOTAL DISTRIBUTION OF HOURS, CREDITS & MARKS FOR PG PROGRAMME

SEMESTER	HOURS	CREDITS	TOTAL MARKS
I	30	19	400
II	30	26	600
III	30	19	400
IV	30	26	600
TOTAL	120	90	2000

LIST OF MAJOR BASED ELECTIVE COURSES

SEM	GROUP	COURSE CODE	COURSE TITLE
I	I (Choose any one course)		(A) Pharmaceutical Biochemistry and Neurophysiology (B)Nutritional Biochemistry (Optional)
II	II(Choose any one course)		(A) Bioinformatics and Nanotechnology (B)Microbial Biochemistry (Optional)
III	III(Choose any one course)		(A) Research methodology (B) Human physiology (Optional)

ENTREPRENUERSHIP/INDUSTRY BASED COURSE

SEM	COURSE CODE	COURSE TITLE
IV		(A) Phytochemistry and applications (B) Ecology and Environmental science (Optional)

NON MAJOR ELECTIVE OFFERED TO OTHER DEPARTMENTS

SEM	GROUP	COURSE CODE	COURSE TITLE
II	I		Clinical Diagnosis

VALUE ADDED COURSE
Extra Credit Course for Skill Development

SEM	COURSE	COURSE CODE	COURSE TITLE
III	I		Developmental Biology

CERTIFICATE COURSE OFFERED TO OTHER DEPARTMENTS
Extra Credit Course for Skill Development

SEM	COURSE	COURSE CODE	COURSE TITLE
IV	I		Phytotherapeutics

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(CBCS - OBE – LOCF System)

(For Students admitted from June 2024 onwards)

SUBJECT	NO. OF COURSES	HOURS	CREDIT
CORE COURSE	10	60	50
CORE PRACTICAL	4	24	16
MBE	3	18	12
ENTREPRENURESHIP BASED COURSE	1	6	4
NME	1	6	4
PROJECT	1	6	4
TOTAL	20	120	90

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EXTRA CREDIT COURSES FOR SKILL DEVELOPMENT

SEM	COURSE	COURSE CODE	COURSE TITLE	HRS	CRD	INT/ EXT	CIA	SE	TOT
II	EXTRA CREDIT COURSES		Community Outreach activity (I Semester vacation) – Report, Photo & Feedback from beneficiaries (MANDATORY)	-	1	INT	-	-	100
III			Internship – I - (II Semester vacation) Online/Offline - Certificate, Report & Photo (MANDATORY)	-	2	INT	-	-	100
III			Value Added Course – Offered to the same department – (beyond Class hours) (MANDATORY)	2	2	INT	25	75	100
III			Online Course (MOOC/SWAYAM/NPTEL) – Before III Semester (OPTIONAL)	-	2	INT	-	-	100
IV			Internship –II (III Semester vacation) - Online/Offline -Certificate, Report & Photo (OPTIONAL)	-	2	INT	-	-	100
IV			Certificate Course (IKS) – offered to other departments(beyond class hours) (MANDATORY)	2	2	INT	25	75	100
				TOTAL		11			

The extra credit courses have been introduced in the OBE-CBCS Curriculum pattern to be implemented from 2024 onwards based on the recommendations of the apex bodies namely **TANSCHÉ, UGC, Bharathidasan University(Parent University), NAAC.**

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MANDATORY EXTRA CREDIT COURSES FOR SKILL DEVELOPMENT

SEM	COURSE CODE	COURSE TITLE	HRS	CRD	INT/ EXT	CIA	SE	TOT
II		Community Outreach activity (I Semester vacation) – Report, Photo & Feedback from beneficiaries	-	1	INT	-	-	100
III		Internship – I - (II Semester vacation) Online/Offline - Certificate, Report & Photo	-	2	INT	-	-	100
III		Value Added Course – Offered to the same department – (beyond Class hours)	2	2	INT	25	75	100
IV		Certificate Course (IKS) – offered to other departments(beyond class hours)	2	2	INT	25	75	100
		TOTAL NO. OF COURSES 4	4	7				400

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OPTIONAL EXTRA CREDIT COURSES FOR SKILL DEVELOPMENT

SEM	COURSE CODE	COURSE TITLE	HRS	CRD	INT/ EXT	CIA	SE	TOT
III		Online Course (MOOC/SWAYAM/NPTEL) – Before III Semester	-	2	INT	-	-	100
IV		Internship –II (III Semester vacation) - Online/Offline -Certificate, Report & Photo	-	2	INT	-	-	100
		TOTAL NO. OF COURSES 2		4				200

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EXTRA CREDIT COURSES FOR SKILL DEVELOPMENT (Common/Subject Specific)

COURSE TITLE	Common/Subject Specific	NO. OF COURSES	CREDIT
Community Outreach activity (During I Semester vacation) (MANDATORY)	Subject Specific	1	1
Internship – I - (During II Semester vacation) (MANDATORY)	Subject Specific	2	4
Internship – II - (During III Semester vacation) (OPTIONAL)			
Online Course (MOOC/SWAYAM/NPTEL) (OPTIONAL)	Subject Specific	1	1
Value Added Course (MANDATORY)	Subject Specific	1	1
Certificate Course (IKS) (MANDATORY)	Subject Specific	1	1
TOTAL		6	11

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