

UBC-1
KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)
 Re-accredited by NAAC with 'A' Grade Status – 3.64 CGPA (3rd Cycle)
 College of Excellence (UGC)
 Coimbatore - 641029.Tamil Nadu, India
Course Name: B.Sc. Biochemistry
Curriculum and Scheme of Examination under CBCS
(Applicable to Students Admitted for the Academic Year 2018-2019)

Semester	Part	Subject Code	Title of the Paper	Instruction hours/cycle	Exam. Marks			Duration of Exam (hours)	Credits
					CIA	ESE	TOTAL		
I	I	18TML101	Language I@	6	25	75	100	3	3
	II	18ENG101	English –I	6	25	75	100	3	3
	III	18UBC101	C.P.1 Chemistry of Biomolecules	7	25	75	100	3	6
			C. Pr. I - Biochemistry	2	-	-	-	-	-
		18UZO1A1	Allied A1- Zoology I	5	20	55	75	3	4
			A. Pr. 1 Zoology	2	-	-	-	-	-
	IV	18EVS101	Environmental Studies**	2	-	50	50	3	2
II	I	18TML202	Language II@	6	25	75	100	3	3
	II	18ENG202	English –II	6	25	75	100	3	3
	III	18UBC202	C.P.2 Bioanalytical Techniques	7	25	75	100	3	6
		18UBC2CL	C.Pr. 1 Biochemistry	2	40	60	100	3	2
		18UZO2A2	Allied A. 2 Zoology II	5	20	55	75	3	4
		18UZO2AL	A. Pr. 1 Zoology	2	20	30	50	3	2
	IV	18VED201	Value Education- Moral and Ethics**	2	-	50	50	3	2
III	I	18TML303	Language III@	6	25	75	100	3	3
	II	18ENG303	English –III	6	25	75	100	3	3
	III	18UBC303	C. P. 3 – Enzymes and Enzyme Technology	4	25	75	100	3	5
			C.Pr. 2 Biochemistry	3	-	-	-	-	-
		18UCH3A3	Allied B. 1. Chemistry I	5	20	55	75	3	4
			A.Pr.2 Chemistry	2	-	-	-	-	-
	IV	18UGA3S1	Skill Based Subject 1- General Awareness	2	25	75	100	3	3
		18TBT301/ 18TAT301/ 18UHR3N1	Basic Tamil* Advanced Tamil** (OR) Non-Major Elective- I**	2	75		75	3	2
IV	I	18TML404	Language IV@	6	25	75	100	3	3
	II	18ENG404	English –IV	6	25	75	100	3	3
	III	18UBC404	C. P. 4 Intermediary Metabolism	4	25	75	100	3	4
		18UBC4CM	C. Pr.2. Biochemistry	3	40	60	100	3	2
		18UCH4A4	Allied B.2 Chemistry II	5	20	55	75	3	4
		18UCH4AL	A. Pr.2. Chemistry	2	20	30	50	3	2

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	IV	18UBC4S2	Skill Based Subject 2- Common Human Diseases	2	25	75	100	3	3
		18TBT402/ 18TAT402/ 18UWR4N2	Basic Tamil*/ Advanced Tamil** (OR) Non-Major Elective- II**	2	75		75	3	2
V	III	18UBC505	C.P.5 Human Physiology	4	25	75	100	3	4
		18UBC506	C.P.6 Cell Biology	4	25	75	100	3	4
		18UBC507	C.P.7 Clinical Biochemistry	4	25	75	100	3	4
		18UBC508	C.P.8 Molecular Biology	4	25	75	100	3	4
	III	18UBC5E1	Major Elective I	4	25	75	100	3	5
	III	-	C.Pr.3. Biochemistry	4	-	-	-	-	-
		-	C.Pr.4. Biochemistry	2	-	-	-	-	-
		-	C.Pr.5. Biochemistry	2	-	-	-	-	-
	IV	18UBO/UZ O/ UBT5X1	Extra Departmental Course	2	25	75	100	3	3
	-	18UBC5IT	Internship Training	Grade ****					
VI	III	18UBC609	C.P.9 Plant Biochemistry	4	25	75	100	3	4
		18UBC610	C.P.10 Immunology and Immuno Techniques	4	25	75	100	3	4
		18UBC611	C.P.11 Genetic Technology	4	25	75	100	3	4
	III	18UBC6E2	Major Elective II -	4	25	75	100	3	5
		18UBC6Z1	Project ***	4	20	80	100	-	5
	III	18UBC6CN	C.Pr.3. Biochemistry	4	40	60	100	6	3
		18UBC6CO	C.Pr.4. Biochemistry	2	40	60	100	4	2
		18UBC6CP	C.Pr.5. Biochemistry	2	40	60	100	4	2
	IV	18UBC6S4	Skill Based Subject 4- Techniques in Genomics and Proteomics	2	25	75	100	3	3
	V	18NCC / NSS / YRC / PYE101	Extension Activities *	-	50	-	50	-	1
Total				180			3800		140

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Hindi/Malayalam/ French/ Sanskrit – 18HIN/18MLM/18FRN/18SAN101 - 404 * -

No End-of-Semester Examinations. Only Continuous Internal Assessment (CIA) ** -

No Continuous Internal Assessment. Only End-of-Semester Examinations (ESE)

***- Project Report – 60 marks; Viva voce – 20 marks; Internal – 20 marks

****- The students shall undergo an Internship training/field work for minimum period of 2 weeks at the end of the fourth semester during summer vacation and submit the report in the fifth semester. The report will be evaluated for 100 marks along with the internal viva voce by the respective faculty. According to their marks, the grades will be awarded as given below.

Marks%	Grade
85-100	O
70-84	D
60-69	A
50-59	B
40-49	C
<40	U (Reappear)

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Major Elective Papers

(2 papers are to be chosen from the following 6 papers)

1. Microbiology
2. Biotechnology
3. Advanced Clinical Biochemistry
4. Principles of Pharmacology
5. Basics of Bioinformatics
6. Dairy Biochemistry

Non-Major Elective Papers

1. Human Rights
2. Women's Rights
3. Consumer affairs

List of Extra Departmental Courses

1. 18UBO5X1 Medicinal botany
2. 18UZO5X1 Ornamental fish culture technology
3. 18UBT5X1 Molecular diagnostics

Certificate Course

1. Mushroom Technology

Tally Table:

S.No.	Part	Subject	Marks	Credits
1.	I	Language – Tamil/Hindi/Malayalam/ French/ Sanskrit	400	12
2.	II	English	400	12
3.	III	Core – Theory/Practical/Project	1700	65
		Allied (4)	400	20
		Major Electives (2)	200	10
4.	IV	Basic Tamil / Advanced Tamil (OR) Non-major electives	150	4
		Skill Based subjects (4)	400	12
		Environmental Studies	50	2
		Value Education	50	2
5.	V	Extension Activities NCC/NSS/YRC/PYE	50	1
		Total	3800	140

Note :

CBCS – Choice Based Credit System

CIA – Continuous Internal Assessment

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ESE – End of Semester Examinations

25 % CIA is applicable to all theory subjects except JOC, COP and Diploma Courses, which are considered as extra credit courses.

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KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)
COIMBATORE – 641 029.
AFFILIATED TO BHARATHIAR UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY (UG)

CERTIFICATE COURSE IN MUSHROOM TECHNOLOGY

(Curriculum and scheme of examination applicable to students admitted from the academic year 2018-19 onwards)

Subject code/ Question paper code	Title of the Paper	Lecture hours	Exam marks			Duration of exam	Credits
			CIA	ESE	Total		
18CMT0C1	Mushroom Science	30 Hrs	-	100	100	3	2
18CMT0C2	Mushroom Cultivation	30 Hrs	-	100	100	3	2
18CMT0C3	Practical	30 Hrs	-	100	100	3	2
18CMT0C4	Project work	30 Hrs	-	100	100	-	2
Total		120			400		8

CIA- Continuous Internal Assessment;

ESE- End of Semester Examinations

Programme Code:07	B.Sc Biochemistry		
Course Code: 18CMT0C3	PRACTICAL - LAB IN MUSHROOM CULTIVATION		
Batch	Hours / Week	Total Hours	Credits
2018-2019	2	30	2

OBJECTIVES:

1. To provide a hands-on training on the technologies of mushroom tissue culture, spawn production and cultivation.
2. To equip the students with the different techniques and instrumentation.

I. Tissue culture, spawn and mushroom production techniques

1. Sterilization of tissue culture and spawn production utensils.*
2. Media preparation for mushroom tissue culture. *
3. Inoculation of the tissue/culture into the culture media.
4. Subculturing of mycelia from slant/petriplate.
5. Mushroom spawn preparation*
6. Preparation of F₁ and F₂ generation from mother spawn*
7. Substrate processing for mushroom production.*
8. Making of mushroom beds.*

II. Analysis of primary and secondary metabolites

9. Estimation of primary metabolites from powdered mushroom sample.
 - a. Carbohydrate
 - b. Starch
 - c. Total protein
10. Estimation of primary metabolites from powdered mushroom sample.
 - a. Phenols
 - b. Flavonoids

Text Book:

1. S.Sadasivam and A.Manikam (2005). Biochemical Methods. 2nd edition. New Age International (P) Limited Publishers. New Delhi.

References:

1. Mushroom Cultivation, Tripathi, D.P. (2005) Oxford & IBH Publishing Co. Pvt. Ltd, New Delhi.
2. PathakYadavGour (2010). Mushroom Production and Processing Technology, Published by Agrobios (India).
3. Training Manual on Culture Techniques & Spawn Production (2017), S. Krishnakumari, S. Kathiravan, M. Karthik, V. Suganthi, and B. Krishna, Kongunadu Arts and Science College, Coimbatore – 641029, Tamil Nadu, India.