

**B.Sc. Biotechnology: Course Structure under CBCS****(For the candidates admitted from the academic year 2016-2017 onwards)**(NAAN MUDHALVAN SCHEME was Implemented from 4<sup>th</sup> onwards for 2021-22 Batch)

Semester	Part	Course	Title	Inst. Hours/ Week	Credit	Exam Hours	Marks		Total
							Int	Ext	
I	I	Language Course-I (LC) – Tamil*/Other Languages + #		6	3	3	25	75	100
	II	English Language Course-I (ELC)		6	3	3	25	75	100
	III	Core Course-I (CC)	Cell Biology	6	4	3	25	75	100
		Core Practical – I (CP)	Cell Biology (P)	3	3	3	40	60	100
		First Allied Course-I (AC)	Basic Microbiology	4	4	3	25	75	100
		First Allied Course-II (AP)	Microbiology (P)	3	-	-	-	-	-
		Add on Course – I ##	Professional English I	6	4	3	25	75	100
	IV	Value Education	Value Education	2	2	3	25	75	100
	<b>Total</b>			<b>30</b>	<b>23</b>				<b>700</b>
II	I	Language Course-II (LC)– Tamil*/Other Languages + #		6	3	3	25	75	100
	II	English Language Course-II (ELC)		6	3	3	25	75	100
	III	Core Course-II (CC)	Molecular Biology	6	4	3	25	75	100
		Core Practical – II (CP)	Molecular Biology (P)	3	3	3	40	60	100
		First Allied Course-II (AP)	Microbiology (P)	4	2	3	40	60	100
		First Allied Course-III (AC)	Applied Microbiology	3	3	3	25	75	100
		Add on Course – II ##	Professional English II	6	4	3	25	75	100
	IV	Environmental Studies	Environmental Studies	2	2	3	25	75	100
	<b>Total</b>			<b>30</b>	<b>24</b>				<b>800</b>

III	I	Language Course – III (LC)– Tamil*/Other Languages + #		6	3	3	25	75	100
	II	English Language Course-III (ELC)		6	3	3	25	75	100
	III	Core Course – III (CC)	rDNA Technology	6	4	3	25	75	100
		Core Practical – III (CP)	rDNA Technology (P)	3	3	3	40	60	100
		Second Allied Course – I (AC)	Biomolecules	4	4	3	25	75	100
		Second Allied Course-II (AP)	Biochemistry (P)	3	-	-	-	-	-
	IV	Non Major Elective I-for those who studied Tamil under Part-I  a) Basic Tamil for other language students  b) Special Tamil for those who studied Tamil upto +2 but opt for other languages in degree programme	Biotechnology for Human Welfare @	2	2	3	25	75	100
Total			30	19				600	
IV	I	Language Course –IV (LC) - Tamil*/Other Languages + #		6	3	3	25	75	100
	II	English Language Course – IV (ELC)		6	3	3	25	75	100
	III	Core Course – IV (CC)	Immunology	5	4	3	25	75	100
		Core Practical – IV (CP)	Immunology (P)	3	3	3	40	60	100
		Second Allied Course - II (AP)	Biochemistry (P)	3	2	3	40	60	100
		Second Allied Course - III	Applied Biochemistry	3	3	3	25	75	100
	IV	Non Major Elective II-for those who studied Tamil under Part I  a) Basic Tamil for other language students  b) Special Tamil for those who studied Tamil upto +2 but opt for other languages in degree programme	Food Processing @	2	2	3	25	75	100
		Skill Based Elective - I	Skill Based Elective - I	2	2	3	25	75	100
	VI	Naan Mudhalvan Scheme (NMS) @@	Digital Skills for Employability	-	2	3	25	75	100
	Total			30	24				900

V	III	Core Course – V (CC)	Plant Biotechnology	5	5	3	25	75	100
		Core Course – VI (CC)	Animal Biotechnology	5	5	3	25	75	100
		Core Course – VII (CC)	Biostatistics and Biosafety	5	5	3	25	75	100
		Core Practical – V (CP)	Plant and Animal Biotechnology (P)	4	4	3	40	60	100
		Major Based Elective – I	Bioinstruments	5	5	3	25	75	100
	IV	Skill Based Elective – II	Skill Based Elective - II	2	2	3	25	75	100
		Skill Based Elective – III	Skill Based Elective – III	2	2	3	25	75	100
		Soft Skills Development	Soft Skills Development	2	2	3	25	75	100
	VI	Naan Mudhalvan Scheme (NMS) @@	Advanced Technology for Employability in Life science – Bio Tech / Microbiology	-	2	3	25	75	100
	<b>Total</b>			<b>30</b>	<b>32</b>				<b>900</b>
VI	III	Core Course – VIII (CC)	Microbial Biotechnology	6	6	3	25	75	100
		Core Course – IX (CC)	IPR and Bioethics	6	6	3	25	75	100
		Core Practical – VI (CP)	Microbial Biotechnology (P)	5	4	3	40	60	100
		Major Based Elective II	Food Technology	6	6	3	25	75	100
		Major Based Elective III	Immunotechnology	6	6	3	25	75	100
	V	Extension Activities **	Extension Activities	-	1	-	-	-	-
		Gender Studies	Gender Studies	1	1	3	25	75	100
	VI	Naan Mudhalvan Scheme (NMS) @@	Bioinformatics for Employability	-	2	3	25	75	100
	<b>Total</b>			<b>30</b>	<b>32</b>				<b>700</b>
	<b>Grand Total</b>			<b>180</b>	<b>154</b>				<b>4600</b>

Language Part – I	-	4	
English Part –II	-	4	
Core Paper	-	9	
Core Practical	-	6	
Add-on Course	-	2	
Allied Paper	-	4	
Allied Practical	-	2	
Non-Major Elective	-	2	
Skill Based Elective	-	3	
Major Based Elective	-	3	
Environmental Studies	-	1	
Value Education	-	1	
Soft Skill Development	-	1	
Gender Studies	-	1	
Extension Activities	-	1	(Credit only)
Naan Mudhalvan Scheme	-	3	

\* For those who studied Tamil upto 10<sup>th</sup> +2 (Regular Stream).

+ Syllabus for other Languages should be on par with Tamil at degree level.

# Those who studied Tamil upto 10<sup>th</sup> +2 but opt for other languages in degree level under Part- I should study special Tamil in Part – IV.

## The Professional English – Four Streams Course is offered in the 1<sup>st</sup> and 2<sup>nd</sup> Semester in all UG Courses. It will be taught apart from the Existing hours of teaching / additional hours of teaching (1 hour /day) as a 4 credit paper as an add on course on par with Major Paper and completion of the paper is must to continue his / her studies further. The Extra 6 hrs / cycle will be utilized for the Add on Professional English Course. (As per G.O. No. 76, Higher Education (K2) Department dated: 18.07.2020).

@ NCC Course is one of the Choices in Non-Major Elective Course. Only the NCC cadets are eligible to choose this course. However, NCC Course is not a Compulsory Course for the NCC Cadets.

\*\* Extension Activities shall be outside instruction hours.

@@ Naan Mudhalvan Scheme as per Government instruction.

Non Major Elective I & II – for those who studied Tamil under Part I

a) Basic Tamil I & II for other language students

b) Special Tamil I & II for those who studied Tamil upto 10<sup>th</sup> or +2 but opt for other languages in degree programme

**Note:**

	Internal Marks	External Marks
1. Theory	25	75
2. Practical	40	60
3. Separate passing minimum is prescribed for Internal and External marks		

**FOR THEORY**

The passing minimum for CIA shall be 40% out of 25 marks [i.e. 10 marks]

The passing minimum for University Examinations shall be 40% out of 75 marks [i.e. 30 marks]

**FOR PRACTICAL**

The passing minimum for CIA shall be 40% out of 40 marks [i.e. 16 marks]

The passing minimum for University Examinations shall be 40% out of 60 marks [i.e. 24 marks]

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