

2012-13

**Procedure in the Event of Failure**

If a candidate fails in a particular subject he/she may reappear for the university Examinations in that subject in subsequent semesters and obtain pass mark.

**I. Course Structure for B.A Economics Degree Course under CBCS**

**I Semester**

	Components	Hours	Credits
Part I	Tamil / Other Language (1 Course)	6	3
Part II	English (1 Course)	6	3
Part III	Core Subjects (2 Course)	10	10
	Micro Economics - I ✓	06	
	Economic Statistics - I ✓	06	
	Allied Subject I (1 Course)	06	5
	Principles of Advertising ✓	04	
Part IV	Environmental Studies (1 Course)	2	2
	<b>Total (6 Course)</b>	<b>30</b>	<b>23</b>

**II Semester**

	Components	Hours	Credits
Part I	Tamil / Other Language (1 Course)	6	3
Part II	English (1 Course)	6	3
Part III	Core Subjects (2 Course)	10	10
	Micro Economics - II	06	
	Economic Statistics - II	06	
	Allied Subject I (1 Course)	06	5
	Principles of Management	04	
Part IV	Social Value Educations (1 Course)	2	2
	<b>Total (6 Course)</b>	<b>30</b>	<b>23</b>

23	30
23	30
22	30
23	30
24	30
25	30
<u>140</u>	<u>180</u>

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## VI Semester

	Components	Hours	Credits
Part III	Core Subjects (4 Course)	24	20
	Macro Economics – II		
	Banking Theory and Practice		
	Indian Economy		
	Public Finance		
	Major Elective (1 Course)	6	5
	Economics of Marketing		
	<b>Total (5 Course)</b>	<b>30</b>	<b>25</b>

Total Number of courses : 34  
 Total Number of Hours : 180  
 Total Number of Credits : 140

Distribution of Marks in Theory between External and Internal Assessment is 75.25  
 Pass minimum of 40% for external and overall components.

## III – SEMESTER

## CORE SUBJECT

### MATHEMATICAL METHODS - I

**II Year**

Maximum : 75 marks

Hours : 6 hrs

**III Sem.**

### Objective

To enrich the students with the important Mathematical devices for research.

### Unit – I Elementary mathematics

Number system – Algebraic Expressions – Sequences and Series – Graphs – Application of Graphs in Economics – Theory of Indices.

### Unit - II Set and relations

Set – meaning – types of sets – Set operations – Venn diagram – Cartesian products.

### Unit – III Functions and equations

Functions- types of functions – application of functions in Economics – Equations – Types of Equations (Linear, Quadratic and polynomial), solving linear and Quadratic Equations – Application of Equations in Economics.

### Unit – IV Analytical geometry

Distance between two points in a plane – slope of a straight line. Different types of Equations of a straight line – Intersection of two lines – Perpendicular lines – Application of straight lines of Economics.

### Unit – V Commercial arithmetics

Percentage – Ratio and proportion – simple interest – Compound Interest – Annuities – depreciation – Discounts – Banker's Discount – True Discount.

### References

1. Mathematical Methods - Dr. Bose
2. Mathematics for Economics - D.R. Agarwal

2016-17

I.Course Structure for B.A Economics Degree course under CBCSI B.A**I Semester**

	Components	Hours	Credits
<b>Part I</b>	Tamil / Other Language ( 1 Course)	06	03
<b>Part II</b>	English (1 Course)	06	03
<b>Part III</b>	<b>Core Subjects ( 2 Course)</b>		
	Micro Economics – I	06	05
	Statistics for Economics I	06	05
	<b>Allied Subject I (1 Course )</b>		
	Principles of Advertising	04	05
<b>Part IV</b>	<b>Environmental Studies ( 1 Course)</b>	02	02
	<b>Total ( 6 Course)</b>	<b>30</b>	<b>23</b>

**II Semester**

	Components	Hours	Credits
<b>Part I</b>	Tamil / Other Language (1 Course)	06	03
<b>Part II</b>	English(1 Course)	06	03
<b>Part III</b>	<b>Core Subjects (2 Course)</b>		
	Micro Economics – II	06	05
	Statistics for Economics - II	06	05
	<b>Allied Subject I (1 Course)</b>		
	Principles of Management	04	05
<b>Part IV</b>	<b>Social Value Educations (1 Course)</b>	02	02
	<b>Total ( 6 Course)</b>	<b>30</b>	<b>23</b>



## II B.A

### III Semester

	Components	Hours	Credits
<b>Part I</b>	Tamil / Other Language ( 1 Course)	06	03
<b>Part II</b>	English ( 1 Course)	06	03
<b>Part III</b>	<b>Core Subjects( 2 Courses)</b>		
	Mathematical Methods – I	06	05
	International Economics – I	06	06
<b>Part IV</b>	<b>Skill based subject ( 1 Course)</b>		
	Salesmanship	04	03
	<b>Non –Major Elective I ( 1 Course)</b>		
	Economics For Competitive Examination	02	02
	<b>Total(6 Course )</b>	<b>30</b>	<b>22</b>

### IV Semester

	Components	Hours	Credits
<b>Part I</b>	Tamil / Other Language ( 1 Course)	06	03
<b>Part II</b>	English ( 1 Course)	06	03
<b>Part III</b>	<b>Core Subjects( 2 Courses)</b>	06	05
	Mathematical Methods – II		
	International Economics – II	06	05
<b>Part IV</b>	<b>Skill based subject ( 1 Course)</b>		
	Entrepreneurial Development	04	04
	<b>Non –Major Elective II ( 1 Course)</b>		
	Issues In Indian Economy	02	02
<b>Part V</b>	<b>Extension Activity ( NCC,NSS,YRC,YWF)</b>		01
	<b>Total(6 Course )</b>	<b>30</b>	<b>23</b>

### **III B.A**

#### **V Semester**

	Components	Hours	Credits
<b>Part III</b>	<b>Core Subjects (2 Course)</b>		
	Macro Economics – I	07	05
	Money and Banking	07	05
	<b>Major Elective (2 Courses)</b>		
	Indian Economy	06	05
	Industrial Economics	06	05
<b>Part IV</b>	<b>Skill based subject (Common)(1 Course)</b>		
	Personality Development	04	04
	<b>Total(6 Course)</b>	<b>30</b>	<b>24</b>

#### **VI Semester**

	Components	Hours	Credits
<b>Part III</b>	<b>Core Subjects(4 Course)</b>		
	Macro Economics – II	07	05
	Public Finance	06	05
	Economy of Planning and development	07	05
	Labour Economics	06	05
	<b>Major Elective ( 1 Course)</b>		
	Health Economics	04	05
	<b>Total (5 Course )</b>	<b>30</b>	<b>25</b>

**Total Number of courses : 34**

**Total Number of Hours : 180**

**Total Number of Credits : 140**

**Distribution of Marks in Theory between External and Internal Assessment is 75.25**

**Pass minimum of 40% for external and overall components.**

✓

**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**  
**UG COURSE – AFFILIATED COLLEGES B.A. ECONOMICS**  
**(Choice Based Credit System)**  
**(with effect from the academic year 2017-2018 onwards)**

**I Semester**

Part I	Subject Status	Subject	Hours	Credits
I	Language	Tamil	06	04
II	Language	English	06	04
III	Core 1	Micro Economics I	06	04
	Core 2	Statistical Methods I	06	04
	Allied I	Principles of Advertisement I	04	03
IV	Common 1	Environmental Studies	02	02
Total			30	21

**II Semester**

Part I	Subject Status	Subject	Hours	Credits
I	Language	Tamil	06	04
II	Language	English	06	04
III	Core 3	Micro Economics II	05	04
	Core 4	Statistical Methods II	06	04
	Allied II	Principles of Advertisement II	03	03
IV	Common 2	Value Based Education	02	02
		Field Work I	02	01
Total			30	22

III Semester

Part I	Subject Status	Subject	Hours	Credits
I	Language	Tamil	06	04
II	Language	English	06	04
III	Core 5	Mathematical Methods I	05	04
	Allied III	Entrepreneurial Development I	03	03
	Skill based Core 1	International Economics I	04	04
IV	Non Major Elective I	Economics for Competitive Examination I	02	02
		Field Work II	02	01
	Common-3	Yoga	02	02
Total			30	24

IV Semester

Part I	Subject Status	Subject	Hours	Credits
I	Language	Tamil	06	04
II	Language	English	06	04
III	Core 6	Mathematical Methods II	05 ✓	04
	Allied IV	Entrepreneurial Development II	03 ✓	03
	Skill based Core 2	International Economics II	04	04
IV	Non Major Elective 2	Economics for Competitive Examination II	02	02
	Common 4	Computers for Digital Era	02	02
		Field Work III	02	01
V	Extension Activities I	NSS, NCC, YRC, YWF		01
Total			30	25

V Semester

Part I	Subject Status	Subject	Hours	Credits
III	Core 7	Macro Economics I	05	04
	Core 8	Public Finance I	05	04
	Core 9	Money and Banking I	05	04
	Core 10	Indian Economy I	04	04
	Major Elective I	Labour Economics	04	04
IV	Skilled based Common I	Personality Development Effective/ Youth Leadership	02	02
		Mini Project I	05	04
Total			30	26

VI Semester

Part I	Subject Status	Subject	Hours	Credits
III	Core 11	Macro Economics II	05	04
	Core 12	Public Finance II	05	04
	Core 13	Money and Banking II	04	04
	Core 14	Indian Economy II	04	04
	Major Elective II	Planning and Growth	04	04
		Major Project I	08	07
Total			30	27

Total Hours: 180

Total Credits: 145

145-04- 141 (Excluding yoga and computer for digital era)

Core Subjects: 14

Major Elective: 02

Allied: 04

Common: 04

Non-Major Elective: 02

Extension Activities: 01

Major Project: 02

Skill Based Common: 01

Mini Project: 01

Field Work: 03 (Optional for non-job oriented UG Programmes)



## APPENDIX – AZ93

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI-12

### M.A., ECONOMICS

Second year syllabus

(CBCS-For colleges)

(For those who joined the course from the Academic year 2012-2013 onwards)

#### SCHEME OF EXAMINATION

III

#### III SEMESTER

		Hrs.	Credits
1.	Development Economics	- 6	5
2.	Public Economics	- 6	5
3.	Rural Development	- 6	5
4.	Human Resource Development	- 6	5
5.	Project (Individual Project)	- 6	4

#### IV SEMESTER

IV

1.	Indian Economy	- 6	4
2.	Environmental Economics	- 6	4
3.	Industrial Economics	- 6	4
4.	Demography	- 6	5
5.	Indian Banking System	- 6	4

Total Number of Courses : 20

Total Number of Hours : 120

Total Number of Credits : 90

I Sem

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**PG COURSES - AFFILIATED COLLEGES**

**Course Structure for M.A. (Economics)**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

m.	Sub./ Pr. No.	Subject status	Subject Title	Hrs/ week	Cre dits	Marks				
						Maximum			Passing Minimum	
						Int.	Ext	Tot.	Ext.	Tot
I	1	Core - 1	Advanced Micro Economic Theory I	6	5	25	75	100	38	50
	2	Core - 2	Macro Economic Theory and Analysis I	6	5	25	75	100	38	50
	3	Core - 3	Mathematical Methods for Economists	6	4	25	75	100	38	50
	4	Core - 4	Monetary Economics	6	4	25	75	100	38	50
	5	Elective	International Economics	6	4	25	75	100	38	50
		Subtotal		30	22	-	-	-	-	-

**MANONMANIAM SUNDARANAR UNIVERSITY**

**TIRUNELVELI-12**

**PG COURSES – AFFILIATED COLLEGES**

**Course Structure for M.A. (Economics)**

**(Choice Based Credit System)**

**(With effect from the academic year 2016-2017 onwards)**

II Sem

Sem.	Sub. No.	Subject status	Subject Title	Hrs/ week	Credits	Marks				
						Maximum			Passing minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
II	6	Core - 5	Advanced Micro Economic Theory – II	6	4	25	75	100	38	50
	7	Core - 6	Macro Economic Theory and Analysis - II	6	4	25	75	100	38	50
	8	Core - 7	Statistical Methods for Economists	6	5	25	75	100	38	50
	9	Core - 8	Indian Economy	6	5	25	75	100	38	50
	10	Elective -II	Computer Applications in Economists	6	5	25	75	100	38	50

III Sem

Core Subjects {

- Eco of Growth & Devt
- Public Econm
- Research Methodology
- Financial Econm
- Human Resorce
- (Elective) Managemet

5 Papers

II<sup>nd</sup> YR. B.Com.,

JUNE 2017 onwards.

**MANONMANIAM SUNDARANAR UNIVERSITY,  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Com.**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

**( 44<sup>th</sup> SCAA meeting held on 30.05.2016)**

Sem.	Pt. I / II/ III/ IV/V	Sub. No.	Subject Status	Subject Title	Hrs. per week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
III	III	13	Core – 5	ADVANCED FINANCIAL ACCOUNTING - I	6	4	25	75	100	30	40
	III	14	Core - 6	BUSINESS STATISTICS	6	4	25	75	100	30	40
	III	15	Core -7	BANKING	6	4	25	75	100	30	40
	III	16	Allied -III	COMPANY ORGANISATION	6	5	25	75	100	30	40
	IV	17	Skill Based -I (Any One)	(A) BUSINESS COMMUNICATION	4	4	25	75	100	30	40
				(B) OFFICE MANAGEMENT							
	IV	18	Non – Major Elective – I (Any One)	(A) INTRODUCTION TO ACCOUNTANCY	2	2	25	75	100	30	40
				(B) CONSUMER AWARENESS							
			SUBTOTAL			30	23				



Sem.	Pt. I / II/ III/ IV/V	Sub. No.	Subject Status	Subject Title	Hrs per week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
IV	III	19	Core - 8	ADVANCED FINANCIAL ACCOUNTING - II	6	4	25	75	100	30	40
	III	20	Core - 9	BUSINESS MATHEMATICS	6	4	25	75	100	30	40
	III	21	Major Elective-I (Any One)	(A). BUSINESS TAXATION	6	5	25	75	100	30	40
				(B). STOCK MARKET							
				(C). INVESTMENT MANAGEMENT							
				(D). OFFICE AUTOMATION (Theory- 4Hrs, *Practical – 2 Hrs) Internal : Theory- 20 marks Practical and Record Works-5marks							
	III	22	Allied-IV	COMPUTER APPLICATIONS IN BUSINESS	6	5	25	75	100	30	40
	IV	23	Skill Based -II (Any One)	(A) BUSINESS MODELS	4	4	25	75	100	30	40
				(B). CAREER PLANNING							
				(C). ENTREPRENEURSHIP DEVELOPMENT							
	IV	24	Non – Major Elective –II (Any One)	(A). FINANCIAL ACCOUNTING	2	2	25	75	100	30	40
				(B).HUMAN RIGHTS							
	V		Extension Activity	NSS/NCC/YRC/YWF	-	1	-	-	-	-	-
	SUBTOTAL				30	25					

**\*There is no external examination for practical**

# **B.COM - IV SEMESTER**

Components	Hours	Credits
<b>Part-III- Core Subjects (2Courses)</b>		
1. Advanced Financial Accounting –II <b>GMCO41</b>	6	4
2. Business Statistics <b>GMCO42</b>	6	4
<b>Skill Based Subject (Allied Related)(1 course )(Any One)</b>		
1. Entrepreneurship Development	4	4
2. Career Planning <b>GISCO4B</b>		
<b>Non-major Elective (1Course) (Any One)</b>		
1. Financial Accounting <b>GNCO4A</b>		
2. Human Rights	2	2
<b>Major Elective (1course ) (Any one)</b>		
1. Indirect Tax <b>GMCO4B</b>		
2. Stock Market		
3. Investment Management		
4. Office Automation, Theory-4 Hours, Practical -2 hours	6	5
<b>Allied Subject-II (1 Course)</b>		
1. E-Commerce <b>GIACO41</b>	6	5
<b>Part –V Extension Activity (NCC, NSS,YRC, YWF)</b>		1
<b>Total (6 courses)</b>	<b>30</b>	<b>25</b>

### III.B.Com-V Semester

Components	Hours	Credits
<b>Part-III- Core Subjects ( 3 Courses)</b>		
1. Corporate Accounting I <b>GMCO51</b>	7	5
2. Cost Accounting <b>GMCO52</b>	7	5
3. Business Law <b>GMCO53</b>	6	6
<b>Major Elective ( 1 Course) (Any One)</b>		
1. Income Tax ,Law & Practice I <b>GMCO5A</b>		
2. Applications of Tally in Accounting (Theory 4 hours, Practical 2 hours)	6	5
3. Logistics Management		
<b>Common Skilled Based Subject (1 Course) (Any One)</b>		
1. Effective Communication	4	4
2. Personality Development <b>GCSB 5A</b>		
<b>Total (5 Courses)</b>	<b>30</b>	<b>25</b>

### III B.Com-VI Semester

Components	Hours	Credits
<b>Part-III - Core Subjects (4 Courses)</b>		
1. Corporate Accounting II <b>GMCO61</b>	6	5
2 Management Accounting <b>GMCO62</b>	6	5
3. Industrial Law <b>GMCO63</b>	6	5
4. Auditing <b>GMCO64</b>	6	5
<b>Major Elective ( 1Course) (Any One)</b>		
1. Income Tax, Law & Practice II <b>GMCO6A</b>		
2. Introduction to RDBMS (Theory 4, practical 2 hours)	6	5
3. Retail Management		
<b>Total ( 5 courses)</b>	<b>30</b>	<b>25</b>

**MANONMANIAM SUNDARANAR UNIVERSITY****TIRUNELVELI****CHOICE BASED CREDIT SYSTEM****COURSE STRUCTURE FOR B.Com****(With effect from the Academic Year 2017-2018 onwards)****I. B.Com – I Semester**

Sem (1)	Pt. I/II/ III/IV/ V (2)	Sub. No. (3)	Subject Status (4)	Subject Title (5)	Contact Hours/ Weeks (6)	L HRS/ Week (7)	T HRS/ Week (8)	P HRS/ Week (9)	C Credits (10)
I	I	1	Language	Tamil/other language	6	6	0	0	4
	II	2	Language	English	6	6	0	0	4
	III	3	Major Core 1	Financial Accounting I	5	5	0	0	4
	III	4	Major Core 2	Business Organisation	5	5	0	0	4
	III	5	Allied I	Business Economics	6	6	0	0	3
	IV	6	Common	Environmental Studies	2	2	0	0	2
	Sub Total				30	30	0	0	21

**I. B.Com – II Semester**

Sem (1)	Pt. I/II/ III/IV/ V (2)	Sub. No. (3)	Subject Status (4)	Subject Title (5)	Contact Hours/ Weeks (6)	L HRS/ Week (7)	T HRS/ Week (8)	P HRS/ Week (9)	C Credits (10)
II	I	7	Language	Tamil/ other language	6	6	0	0	4
	II	8	Language	English	6	6	0	0	4
	III	9	Major Core 3	Financial Accounting II	5	5	0	0	4
	III	10	Major Core 4	Principles of Management	5	5	0	0	4
	III	11	Allied II	Marketing	4	4	0	0	3
	IV	12	Common	Value Based Education/ Social Harmony	2	2	0	0	2
	IV	13		Field work	2	2	0	0	2
	Sub Total				30	30	0	0	23



**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Mathematics**

**(Choice Based Credit System)**

(with effect from the academic year 2016-2017 onwards)

(44<sup>th</sup> SCAA meeting held on 30.05.2016)

Sem.	Pt. I/II/III/ IV/V	Sub No.	Subject status	Subject Title	Hrs./ week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int	Ext.	Tot.	Ext.	Tot.
III	I	13	Language	Tamil/Other Language <b>JTL31</b>	6	3	25	75	100	30	40
	II	14	Language	English <b>J2EN31</b>	6	3	25	75	100	30	40
	III	15	Core - 5	REAL ANALYSIS - I	6	5	25	75	100	30	40
		16	Allied – III	STATISTICS -I / PHYSICS/ CHEMISTRY	6	5	25	75	100	30	40
			For Other UG Programme	Mathematics – ALGEBRA AND DIFFERENTIAL EQUATIONS (For Science Students) <b>JAMAII.</b>							
			For the Current UG Programme	STATISTICS –I (For Mathematics Students)							
	IV	17	Skilled Based Subject -I	VECTOR CALCULUS <b>JSHA3A</b>	4	4	25	75	100	30	40
	IV	18	Non-Major Elective –I (any one of the following )	(A) MATHEMATICS FOR COMPETITIVE EXAMINATIONS- I (or) (B)FUNDAMENTALS OF STATISTICS - I <b>JNMA3B</b>	2	2	25	75	100	30	40
Subtotal					30	22					

**JHMA31**

**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Mathematics**

(Choice Based Credit System)

(with effect from the academic year 2017-2018 onwards)

Sem	Part	Sub. No	Subject Status	Subject title	Hrs / Week	Credits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
I	I	1	Language	Tamil/Other Languages <i>SITL II</i>	6	4	25	75	100	30	40
	II	2	Language	English <i>SAEN II</i>	6	4	25	75	100	30	40
	III	3	Core -1	Calculus <i>SHMA II</i>	5	4	25	75	100	30	40
		4	Core-2	Classical Algebra <i>SHMA12</i>	5	4	25	75	100	30	40
		5	Allied-I	Statistics-I OR <i>SAST II</i>	6	3	25	75	100	30	40
	IV	6	Common	Physics/ Chemistry/ Computer Science With Practicals	6	4	25	75	100	30	40
				Environmental Studies <i>SEVS II</i>	2	2	25	75	100	30	40
II	I	7	Language	Tamil/Other Languages	6	4	25	75	100	30	40
	II	8	Language	English	6	4	25	75	100	30	40
	III	9	Core-3	Analytical Geometry of Three Dimensions	5	4	25	75	100	30	40
		10	Core-4	Differential Equations	5	4	25	75	100	30	40
		11	Allied-I	Statistics -II OR Physics/ Chemistry/ Computer Science With Practicals	6 6	3 4	25 25	75 75	100 100	30 30	40 40
	IV	12	Common	Value Based Education/	2	2	25	75	100	30	40

	Total(6 Courses)	30	23
Total hours per semester: 450			
<b>Semester II</b>			
	<b>Components</b>	<b>Hours/ week</b>	<b>Credits</b>
Part I	Tamil/ Other language	6	3
Part II	English	6	3
Part III	<b>Major Paper 3:</b> Vector Calculus GUNNA 21	5	5
	<b>Major Paper 4:</b> Differential Equations GUNNA 22, and Fourier Series	5	5
	<b>Allied</b> GAST 21	6	5
	<b>I:Paper2:</b> Physics/StatisticsII/Chemistry		
Part IV	Value Based Education GVB 21	2	2
	Total (6 Courses)	30	23
Total hours per semester : 450			

I year : Sem 1 : Tamil : C1TL 11

English : C2EN 11.

Sem 2 : Tamil : C1TL 21

English : C2EN 21

II year : Sem 3 : Tamil : C4TL 31.

English : C2EN 31

Sem 4 : Tamil : C1TL 41

English : C2EN 41.



Semester III			
	Components	Hours/ week	Credits
Part I	Tamil/ Other languages	6	3
Part II	English	6	3
Part III	<b>Major Paper 5:</b> Sequences and Series & Trigonometry <i>AMMA31</i>	6	5
	<b>Allied II: Paper 1:</b> Statistics-I/Physics/Chemistry	6	5
Part IV	<b>Skill based Subject:</b> Application of Differential equations <i>ASHA3A</i>	4	4
	<b>Non-Major Elective:</b> Mathematical techniques for social sciences	2	2
	Total(6 Courses)	30	22

Total hours per semester: 450

Semester IV			
	Components	Hours/ week	Credits
Part I	Tamil/ Other language	6	3
Part II	English	6	3
Part III	<b>Major Paper 6:</b> Abstract Algebra <i>AMMA41</i>	5	5
	<b>Allied II: Paper 2:</b> Statistics-II/Physics/Chemistry	6	5
Part IV	<b>Skill based Subject:</b> Numerical Methods <i>ASHA4A</i>	4	4
	<b>Non-Major Elective:</b> Mathematical Models(O.R) <i>AMMA4A</i>	2	2
Part V	Extension Activities (NCC,NSS,YRC,YWF)	1	1
	Total(6 Courses)	30	23

Total hours per semester: 450

Semester V			
	Components	Hours/Week	Credits
Part III	<b>Major Paper 7:</b> Linear Algebra <i>AMMA51</i>	7	5
	<b>Major Paper 8:</b> Real Analysis <i>AMMA52</i>	7	5
	<b>2 Major Electives:</b>		
	<b>Major Paper 9</b>		
	<b>Elective: 1</b> (any one of the following)		
	1.1. Astronomy <i>AMMA5A</i>		
	1.2. Combinatorial Mathematics <i>AMMA5B</i>	6	5
	1.3. Discrete Mathematics <i>AMMA5C</i>		
	<b>Major Paper 10:</b>		
	<b>Elective: 2</b> (any one of the following)		
	2.1. Programming in C(Theory + Practical)		
	2.2. Coding Theory	6	5



	2.3. Fuzzy sets and Logic	GNHA 5F		
Part IV	Skill Based Subject(Common)	GCSB5A	4	4
	Total(5 courses)	(personality development)	30	24
Total hours per semester: 450				
<b>Semester VI</b>				
Part III	<b>Major Paper 11:</b> Complex Analysis	GNHA 61	6	5
	<b>Major Paper 12:</b> Linear Programming	GNHA 62	6	5
	<b>Major Paper 13:</b> Mechanics	GNHA 63	6	5
	<b>Major Paper 14:</b> Graph Theory	GNHA 64	6	5
	<b>1 Major Elective:</b>			
	<b>Major Paper 15</b>			
	<b>Elective: 3</b> (any one of the following)			
	3.1. Number Theory			
	3.2. Operations Research	GNHA 6A		
	3.3. Mathematical Programming with JAVA(Theory+ Practical)	GNHA 6B	6	5
	Total(5 courses)		30	25
Total hours per semester: 450				

#### 4. Course structure for B.Sc (Mathematics) under CBCS

<b>Semester I</b>			
	<b>Components</b>	<b>Hours/week</b>	<b>Credits</b>
Part I	Tamil/ Other languages	6	3
Part II	English	6	3
Part III	<b>Major Paper 1:</b> Calculus	5	5
	<b>Major Paper 2:</b> Algebra	5	5
	<b>Allied I: Paper 1:</b> Physics/ <u>Statistics I</u> /Chemistry	6	5
Part IV	Environmental Studies	2	2

## APPENDIX - AZ44

MANONMANIAM SUNDARANAR UNIVERSITY - TIRUNELVELI

DEGREE OF BACHELOR OF SCIENCE

B.Sc. PHYSICS

CBCS

CHOICE BASED CREDIT SYSTEM NORMS AND PATTERN AS  
IMPLEMENTED IN ALL AFFILIATED COLLEGES FROM THE ACADEMIC  
YEAR 2012-2013

### Components of the B.Sc Physics (Major) Programme:

Total number of courses: 40    Theory: 33 Courses    Practical: 7 Courses

Total number of hours: 180 hours

Total number of Credits: 140

Distribution of marks between External and Internal Assessment is

➤ For Theory 75 : 25

➤ For Practical 60 : 40

Pass minimum of 40% for external and overall components.

Major Practical hours may be adjusted as 2Hrs/3Hrs.

Internal Marks for Practical shall be allotted in the following manner

Experimental work :	20 marks
Record:	10 marks
Model test:	10 marks
<b>Total:</b>	<b>40 marks</b>



Internal Marks for Theory shall be allotted in the following manner

The average of the best two from three compulsory tests. Each test is of one hour duration.	20 marks
Assignment	05 marks
<b>Total:</b>	<b>25 marks</b>

**Common course structure for B.Sc Degree course under CBCS**

**I Semester**

	Components	Hours	Credits
Part I	Tamil (1 course)	6	3
Part II	English (1 course)	6	3
Part III	Core Subjects (2 Courses) 2 Theory 1 Practical	8 2	8 -----
	Allied Subject I (1 Course)	4 2	4 -----
Part IV	Environmental Studies (1Course)	2	2
	Total(6 Courses)	30	20

**II Semester**

	Components	Hours	Credits
Part I	Tamil (1 course)	6	3
Part II	English (1 course)	6	3
Part III	Core Subjects (2 Courses) 2 Theory 1 Practical	8 2	8 2
	Allied Subject I (1 Course)	4 2	4 2
Part IV	Value Based Education (1Course)	2	2
	Total(6 Courses)	30	24

	Components	Hours	Credits
Part I	Tamil (1 course)	6	3
Part II	English (1 course)	6	3
Part III	Core Subjects(1 Course)	4	8 -----
	1 Theory	2	
	1 Practical		
	Allied Subject II (1 Course)	4	4 -----
		2	
Part IV	Skilled Based Subject(1Course)	4	4
	Non-Major Elective (1 Course)	2	2
	Total(6 Courses)	30	20

#### IV Semester

	Components	Hours	Credits
Part I	Tamil (1 course)	6	3
Part II	English (1 course)	6	3
Part III	Core Subjects(1 Course)	4	4
	1 Theory	2	2
	1 Practical		
	Allied Subject II (1 Course)	4	4
		2	2
Part IV	Skilled Based Subject(1Course)	4	4
	Non-Major Elective (1 Course)	2	2
Part V	Extension Activity (NCC,NSS,YRC,YWF)		1
	Total (6 Courses)	30	25



V Semester

	Components	Hours	Credits
Part III	Core Subjects (Courses)		
	2 Theory	8	8
	2 Major Elective	10	10
	3 Practical	6	-----
		2	-----
Part IV	Skilled Based Subject Common (1 Course)	4	4
	Total(6 Courses)	30	22

VI Semester

	Components	Hours	Credits
Part III	Core Subjects( Courses)		
	3 Theory	12	
		5	12
	1 Major Elective	5	5
	3 Practical	6	
		2	12
	Total(7 Courses)	30	29

BSc Physics Syllabus Semester III, IV, V and VI  
**III Semester**

**Core Paper V** Electricity and Magnetism

**Skill Based Subject (any ONE)**

1. Maintenance of electric equipment
2. Applied Physics- Numerical methods

**Non Major Elective (any ONE)**

1. Basic physics I
2. Energy physics

Practical II

**IV Semester**

**Core Paper VI** Object Oriented Programming with C++

**Skill Based Subject (any ONE)**

1. Maintenance of Electronic equipment
2. Physics for Competitive examinations

**Non Major Elective (any ONE)**

1. Basic Physics II
2. Descriptive Physics (No derivation)

Practical II

**V Semester**

**Core Paper VII** Atomic Physics

**Core Paper VIII** Basic Electronics

**Major Elective Paper (any TWO)**

1. Acoustics
2. Quantum Mechanics
3. Solid State Physics

Practical III

Practical IV

Practical V

**MANONMANIAM SUNDARANAR UNIVERSITY**  
**TIRUNELVELI**  
 UG COURSES – AFFILIATED COLLEGES  
**B.Sc. Physics**  
 (Choice Based Credit System)  
 (with effect from the academic year 2016-2017 onwards)

Sem	Pt I/ II/ III/ IV	Sub No.	Subject status	SUBJECT TITLE	Hrs /we ek	Cre dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
I	I	1	Language	TAMIL/OTHER LANGUAGE	6	3	25	75	100	30	40
	II	2	Language	ENGLISH	6	3	25	75	100	30	40
	III	3	Core - 1	PROPERTIES OF MATTER AND ACOUSTICS	4	4	25	75	100	30	40
		4	Core - 2	OPTICS	4	4	25	75	100	30	40
		5	Core Practical - I	PRACTICALS -I & II SEMESTERS	2	-	Practical exams in the even semester				
		6	Allied - I	ALLIED PHYSICS -I	4	4	25	75	100	30	40
		7	Allied Practical - I	ALLIED PRACTICALS I & II /III & IV SEMESTERS	2	-	Practical exams in the even semester				
	IV	8	Common	ENVIRONMENTAL STUDIES	2	2	25	75	100	30	40
SUBTOTAL					30	20					

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Physics**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

Sem.	Pt. I/II/ III/ IV	Sub. No.	Subject status	Subject Title	Hrs. / week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
II	I	9	Language	TAMIL/OTHER LANGUAGE	6	3	25	75	100	30	40
	II	10	Language	ENGLISH	6	3	25	75	100	30	40
	III	11	Core - 3	MECHANICS AND RELATIVITY	4	4	25	75	100	30	40
	III	12	Core - 4	THERMAL PHYSICS AND STATISTICAL MECHANICS	4	4	25	75	100	30	40
	III	13	Major Practical - I	PRACTICALS -I(I & II SEMESTERS	2	2	25	75	100	30	40
	III	14	Allied - II	ALLIED PHYSICS -II	4	4	25	75	100	30	40
			For other UG Programme								
	III	15	Allied Practical - I	ALLIED PRACTICALS -I (I & II SEMESTERS)	2	2	25	75	100	30	40
	IV	16	Common	VALUE BASED EDUCATION/ சமூக ஒழுக்கவாதம்/ பண்பாட்டு வெழுப்பாக்களம்/ SOCIAL HARMONY	2	2	25	75	100	30	40
SUBTOTAL					30	24					



**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Physics**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

**(44<sup>th</sup> SCAA meeting held on 30.05.2016)**

Sem.	Pt. I/II/ III/ IV/ V	Sub No.	Subject status	Subject Title	Hrs/ week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
III	I	17	Language	Tamil/Other Language	6	3	25	75	100	30	40
	II	18	Language	English	6	3	25	75	100	30	40
	III	19	Core - 5	ELECTRICITY AND MAGNETISM	4	4	25	75	100	30	40
		20	Practical – III	(Practical List enclosed) ( No examination in the third Semester)	2	-	50	50	100	20	40
		21	Allied -III	ALLIED PHYSICS - I	4	4	25	75	100	30	40
		22	Allied Practical-III ( No examination in the third Semester )	ALLIED PRACTICALS I & II/III & IV SEMESTERS)	2	-	50	50	100	20	40
	IV	23	Skilled Based subject-I	(A) MAINTANACE OF ELECTRICAL APPLICANCES (or) (B) ASTROPHYSICS	4	4	25	75	100	30	40
	IV	24	Non-Major Elective-I	(A) BASIC PHYSICS - I (OR) (B) ENERGY PHYSICS	2	2	25	75	100	30	40
Sub-total					30	20					

Sem.	Pt. I/II/ III/ IV/V	Sub. No.	Subject status	Subject Title	Hrs. / week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
IV	I	25	Language	Tamil/Other Language	6	3	25	75	100	30	40
	II	26	Language	English	6	3	25	75	100	30	40
	III	27	Core - 6	COMPUTER PROGRAMMING IN C++	4	4	25	75	100	30	40
		28	Major Practical- IV	PRACTICAL - II	2	2	50	50	100	20	40
		29	Allied -IV	ALLIED PHYSICS - II	4	4	25	75	100	30	40
		30	Allied Practical- IV	ALLIED PRACTICALS I & II/III & IV SEMESTERS)	2	2	50	50	100	20	40
	IV	31	Skill Based Subject -II	(A)MAINTANACE OF ELECTRONIC APPLIANCES (or) (B)PHYSICS OF HUMAN ANATOMY	4	4	25	75	100	30	40
	IV	32	Non-Major Elective-II	(A)BASIC PHYSICS - II (OR) (B) SPACE PHYSICS	2	2	25	75	100	30	40
V			Extension Activity	NCC,NSS, YRC, YWF		1					
Subtotal					30	25					

**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. PHYSICS**

(Choice Based Credit System)

(with effect from the academic year 2017-2018 onwards)

	Sub. No:	Subject status	Subject Title	Contact Hrs/week	L Hrs/week	T Hrs/week	P Hrs/week	Credits
<b>Part I</b>	1	Language	Tamil/Other Languages	6	6	0	0	4
<b>Part II</b>	2	Language	English	6	6	0	0	4
<b>Part III</b>	3	Core-1	Mechanics and relativity	4	4	0	0	4
	4	Core-2	Properties of matter and acoustics	4	4	0	0	4
	5	Major .Practical-I	Practical-I	2	0	0	2	2
	6	Allied Paper-I	Allied Physics Paper-I	4	4	0	0	4
	7	Allied.Practical-I	AlliedPractical-I	2	0	0	2	2
<b>Part IV</b>	8	Common	Environmental Studies	2	2	0	0	2
			<b>Total</b>	<b>30</b>				<b>26</b>
<b>Part I</b>	9	Language	Tamil/Other Languages	6	6	0	0	4
<b>Part II</b>	10	Language	English	6	6	0	0	4
<b>Part III</b>	11	Core-3	Thermal physics and statistical mechanics	4	4	0	0	4
	12	Core-4	Optics	4	4	0	0	4
	13	Major .Practical-II	Practical-II	2	0	0	2	2
	14	Allied Paper-2	Allied Physics Paper-2	4	4	0	0	4
	15	Allied.Practical-I-2	Practical-2	2	0	0	2	2
<b>Part IV</b>	16	Common	Value Based education	2	2	0	0	2
			<b>Total</b>	<b>30</b>				<b>26</b>



**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**  
**M.Sc., PHYSICS (CBCS)**

**(Effective from the Academic year 2012-2013 )**

**STRUCTURE OF THE PROGRAMME & SCHEME OF EXAMINATION**

Semester	Title of the paper	Teaching Hours	Credits	Theory/ Practical	Exam hours	Internal Mark	External Mark	Total Marks
I	1. Classical Mechanics and Relativity	6	5	T	3	25	75	100
	2. Mathematical Physics-I	6	5	T	3	25	75	100
	3. Electronic Devices	6	5	T	3	25	75	100
	Elective I 4.a. Renewable energy sources OR 4.b. Optoelectronics and Lasers	6	4	T	3	25	75	100
	Practical 1 - Physics-I	6	3	P	6	40	60	100
II	5. Mathematical Physics-II	6	5	T	3	25	75	100
	6. Electromagnetic Theory	6	5	T	3	25	75	100
	7. Microprocessor and Microcontroller	6	5	T	3	25	75	100
	Elective II 8.a. Nonlinear Dynamics and Chaos OR 8.b. Communication Electronics	6	4	T	3	25	75	100
	Practical 2 - Electronics	6	3	P		40	60	100



Semester	Title of the paper	Teaching Hours	Credits	Theory/ Practical	Exam hours	Internal Mark	External Mark	Total Marks
III	9. Quantum Mechanics-I	6	5	T	3	25	75	100
	10. Solid State Physics	6	5	T	3	25	75	100
	11. Statistical Mechanics	6	5	T	3	25	75	100
	Elective III –Project	6	4	Project	4	40	60	100
	Practical 3 - Physics -II	6	4	P	6	40	60	100
IV	12. Quantum Mechanics-II	6	5	T	3	25	75	100
	13. Molecular Spectroscopy	6	5	T	3	25	75	100
	14. Nuclear and Particle Physics	6	5	T	3	25	75	100
	Elective IV 15.a. Material Science OR 15.b. Physics of Nano Materials	6	4	T	3	25	75	100
	Practical 4 - Computer Programming C++ and Microprocessor	6	4	P	6	40	60	100
	Total for all semester	120	90					

### Internal Assessment Mark

Components	Theory	Practical
The average of the best two tests from three compulsory tests, each of one hour duration	15	
Assignment	4	
Seminar (15-20 minutes)	6	
Experimental work		20
Record		10
Model test		10
Total Mark	25	40

**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**

PG COURSES – AFFILIATED COLLEGES

Course Structure for **M.Sc. Physics**

(Choice Based Credit System)

(with effect from the academic year 2016-2017 onwards)

SEM	SUB NO.	SUBJECT STATUS	SUBJECT TITLE	HRS /WE EK	CR E DITS	MARKS				
						MAXIMUM			PASSING MINIMUM	
						INT.	EXT	TOT.	EXT.	TOT
I	1	Core - 1	Classical Mechanics	6	5	25	75	100	38	50
	2	Core - 2	Mathematical Physics I	6	5	25	75	100	38	50
	3	Core - 3	Integrated Electronics	6	5	25	75	100	38	50
	4	Elective - 1	Renewable Energy Sources (or) Optoelectronics and Lasers (or) Nonlinear Dynamics ✓	6	4	25	75	100	38	50
	5	Practical	General Physics Experiments I	6	-	Practical exam in the even Semester				
	6	Practical	General Physics Experiments I	-	-					
		Subtotal		30	19	-	-	-	-	-

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI-12

PG COURSES – AFFILIATED COLLEGES

Course Structure for **M.Sc. (Physics)**

(Choice Based Credit System)

(with effect from the academic year 2016-2017 onwards)

Sem.	Sub. No.	Subject status	Subject Title	Hrs/ week	Cre-dits	Marks				
						Maximum			Passing minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
II	7	Core - 4	Mathematical Physics II	6	5	25	75	100	38	50
	8	Core - 5	Condensed Matter Physics	6	5	25	75	100	38	50
	9	Core - 6	Microprocessor 8085 and Microcontroller 8051	6	5	25	75	100	38	50
	10	Elective -II	a) Numerical Methods and Programming in C++ (or) b) Materials Science (or) c) Nano Physics	6	4	25	75	100	38	50
	11	Practical –I *	General Physics Experiments - I	3	3	25	75	100	38	50
	12	Practical –II *	Electronics Experiments	3	3	25	75	100	38	50

\* Practical examinations are held in the even semesters (II /IV) only.



Sem.	Sub. No.	Subject Status	Subject Title	Contact Hrs./ Week	Credits
(1)	(2)	(3)	(4)	(5)	(6)
III	14	Core - 14	Quantum Mechanics I	6	4
	15	Core - 15	Electromagnetic Theory	6	4
	16	Core - 16	Statistical Mechanics	5	4
	17	Core - 17	Research Methodology	5	4
	18	Core - 18 Practical - 5	Advanced Physics Experiments I	4	2
	19	Core - 19 Practical - 6	Microprocessor Experiments	4	2
	<b>Subtotal</b>			<b>30</b>	<b>20</b>
IV	20	Core - 20	Quantum Mechanics II	4	4
	21	Core - 21	Spectroscopy	4	4
	22	Core - 22	Nuclear and Particle Physics	4	4
	23	Core - 23 Practical - 7	Advanced Physics Experiments II	4	2
	24	Core - 24 Practical - 8	C++ Programming	4	2
	25	Elective - 1	Elective / Field Work / Study Tour	3+3	3
	26	Core - 25	Project	7+9	8
<b>Subtotal</b>				<b>30</b>	<b>27</b>
<b>Total</b>				<b>120</b>	<b>90</b>

+ Extra hours for the Field Work/Study Tour/Project

For the Project, flexible credits are b/w 5 – 8 & Hours per week are b/w 10 - 16.

Total number of credits $\geq 90$	:	90
Total number of Core Courses	:	25 ( 15 T + 8 P + 1 Prj. + 1 FW. )
Total number of Elective Courses / F.W. / S.T.:	:	1
Total hours	:	120



**Table - 3 : Common Course Structure for P.G. Degree Programme in Science – M.Sc. (General) #**

(with effect from the academic year 2017-2018 onwards)

**M.SC. PHYSICS**

Sem.	Sub. No.	Subject Status	Subject Title	Contact Hrs./ Week	Credits
(1)	(2)	(3)	(4)	(5)	(6)
I	1	Core - 1	Classical Mechanics	6	4
	2	Core - 2	Mathematical Physics I	6	4
	3	Core - 3	Integrated Electronics	5	4
	4	Core - 4	Non Linear Dynamics	5	4
	5	Core - 5 Practical - 1	General Physics Experiments I	4	2
	6	Core - 6 Practical - 2	Electronics Experiments I	4	2
	<b>Subtotal</b>			<b>30</b>	<b>20</b>
II	7	Core - 7	Mathematical Physics II	5	4
	8	Core - 8	Condensed Matter Physics	5	4
	9	Core - 9	Microprocessor & Microcontroller	4	4
	10	Core - 10	Numerical Methods & C++ Programming	4	4
	11	Core - 11	Field Work	4+2	3
	12	Core - 12 Practical - 3	General Physics Experiments II	4	2
	13	Core - 13 Practical - 4	Electronics Experiments II	4	2
<b>Subtotal</b>				<b>30</b>	<b>23</b>

#

1.) Bio-Chemistry	2.) Biotechnology
3.) Botany	4.) Dietics and Food Management
5.) Electronics	6.) Electronics & Communication
7.) Geology	
8.) Hotel Management and Catering Science and Applied Nutrition	
9.) Nutrition and Dietics	10.) Physics
11.) Zoology	

three academic years (six semesters). The semester contains 90 working days.

#### 4. Scheme of the Course

	Components	Hours	Credits
<b>I Semester</b>			
<b>Part I</b>	Tamil / Other Language (1 Course)	6	3
<b>Part II</b>	English (1 Course)	6	3
<b>Part III</b>	Core Subjects (Theory – T) (2 Courses)	8	8
	Paper 1. Inorganic Chemistry – I		
	Paper 2. Organic Chemistry – I		
	Practical (P) I (Volumetric analysis)	2	—
	Allied Subject I (1 Course)	4	
	Practical	2	
<b>Part IV</b>	Environmental Studies (1 Course)	2	2
	<b>TOTAL</b> (6 Courses)	30	20
<b>II Semester</b>			
<b>Part I</b>	Tamil / Other Language (1 Course)	6	3
<b>Part II</b>	English (1 Course)	6	3
<b>Part III</b>	Core Subjects (2 Courses)	8	8
	Paper 3. Inorganic Chemistry -II		
	Paper 4. Physical Chemistry -I		
	Practical I (Volumetric analysis)	2	2
	Allied Subject I (1 Course)	4	4
	Practical	2	2
<b>Part IV</b>	Value Based Education (1 Course)	2	2
	<b>TOTAL</b> (6 Courses)	30	24

III Semester			
Part I	Tamil / Other Language (1 Course)	6	3
Part II	English (1 Course)	6	3
Part III	Core Subjects (1 Course)	4	4
	Paper 5. Physical Chemistry -II	2	--
	Practical II (Qualitative Analysis)		
	Allied Subject II (1 Course)	4	4
	Practical	2	--
Part IV	Skill Based Subject (1 Course)	4	4
	Agrochemistry / Food Chemistry		
	Non-major Elective (1 Course)	2	2
	Water management/ Food Chemistry		
	<b>TOTAL</b> (6 Courses)	30	20
IV Semester			
Part I	Tamil / Other Language (1 Course)	6	3
Part II	English (1 Course)	6	3
Part III	Core Subjects (1 Course)	4	4
	Paper 6. Organic Chemistry -II	2	2
	Practical II (Qualitative Analysis)		
	Allied Subject II (1 Course)	4	4
	Practical	2	2
Part IV	Skill Based Subject (1 Course)	4	4
	Chromatography / Dairy Chemistry		
	Non-major Elective (1 Course)	2	2
	Clinical Chemistry / Applied Chemistry		
Part V	Extension activity (NCC, NSS, YRC, YWF)		1
	<b>TOTAL</b> (6 Courses)	30	25

V Semester			
Part III	Core Subjects (2 Courses) Paper 7. Organic Chemistry - III Paper 8. Physical Chemistry - III Practical III Practical IV Practical V	8  3 P (3+3+2 = 8)	8  --
	Major Elective Elective I ✓ (1 Course) Polymer Chemistry / Industrial Chemistry Elective II ✓ (1 Course) Analytical Chemistry / Pharmaceutical Chemistry	10	10
Part IV	Skill Based Subject (1 Course) Effective Communication / Personality Development	4	4
	<b>TOTAL</b> (5 Courses)	30	22

VI Semester			
Part III	Core Subjects (3 Courses) Paper 9. Inorganic Chemistry-III Paper 10. Organic Chemistry -IV Paper 11. Physical Chemistry -IV Practical III Gravimetric Estimation & Inorganic preparation Practical IV Organic Analysis, Organic preparation & Determination of physical constants Practical V Physical Chemistry experiments	5 6  <u>5 P</u> 6 (3+5+2 = 8)	5 12  7
	Major Elective (1 course) Bio Chemistry / Applied Chemistry	5	5
	<b>TOTAL</b> (7 Courses)	30	29

Total No. of courses : 36; Total credits : 140



**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Chemistry**

(Choice Based Credit System)

(with effect from the academic year 2016-2017 onwards)

Sem.	Pr. I/II/ III/ IV	Sub. No.	Subject status	Subject Title	Hrs./ week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
II	I	9	Language	Tamil/ Other Language	6	3	25	75	100	30	40
	II	10	Language	English	6	3	25	75	100	30	40
	III	11	Core - 3	INORGANIC CHEMISTRY - II	4	4	25	75	100	30	40
	III	12	Core - 4	ORGANIC CHEMISTRY -I	4	4	25	75	100	30	40
	III	13	Major Practical - I	INORGANIC QUANTITATIVE ANALYSIS- (VOLUMETRIC)	2	2	25	75	100	30	40
	III	14	Allied - II	ALLIED CHEMISTRY -II	4	4	25	75	100	30	40
	III	15	Allied Practical - I	QUANTITATIVE ANALYSIS	2	2	25	75	100	30	40
	IV	16	Common	Value Based Education/ சொசைட்டி உணர்வு / சமூக சமத்துவம் / Social Harmony	2	2	25	75	100	30	40
SUBTOTAL					30	24					

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES - AFFILIATED COLLEGES**

**B.Sc. Chemistry**

(Choice Based Credit System)

(with effect from the academic year 2016-2017 onwards)

Sem	Pt I/ II/ III/ IV	Sub No.	Subject status	Subject Title	Hrs / week	Credits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
I	I	1	Language	TAMIL/OTHER LANGUAGE	6	3	25	75	100	30	40
	II	2	Language	ENGLISH	6	3	25	75	100	30	40
	III	3	Core - 1	INORGANIC CHEMISTRY - I	4	5	25	75	100	30	40
		4	Core - 2	PHYSICAL CHEMISTRY - I	4	5	25	75	100	30	40
		5	Core Practical - I	INORGANIC QUANTITATIVE ANALYSIS (VOLUMETRIC)	2	-	Practical exams in the even semester				
		6	Allied - 1	ALLIED CHEMISTRY - I	4	3	25	75	100	30	40
		7	Allied Practical - I	QUANTITATIVE ANALYSIS	2	-	Practical exams in the even semester				
	IV	8	Common	ENVIRONMEN TAL STUDIES	2	2	25	75	100	30	40
	Subtotal				30	21					

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Chemistry**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

**(44<sup>th</sup> SCAA meeting held on 30.05.2016)**

Pt. I/II/ III/ IV/ V	Sub No.	Subject status	Subject Title	Hrs./ week	Cre- dits	Marks				
						Maximum			Passing minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
I	17	Language	Tamil/Other Language	6	3	25	75	100	30	40
II	18	Language	English	6	3	25	75	100	30	40
III	19	Core - 5	ORGANIC CHEMISTRY- II	4	5	25	75	100	30	40
	20	Major Practical – III	INORGANIC QUANTITATIVE ANALYSIS	3	-	50	50	100	20	40
	21	Allied -III	ALLIED CHEMISTRY- I	4	3	25	75	100	30	40
	22	Allied Practical-III	QUANTITATIVE ANALYSIS	2	-	50	50	100	20	40
IV	23	Skilled Based subject-I	(A) AGROCHEMISTRY (OR) (B) FOOD CHEMISTRY	3	3	25	75	100	30	40
IV	24	Non-Major Elective-I	(A) FOOD CHEMISTRY (OR) (B) WATER MANAGEMENT	2	2	25	75	100	30	40
Subtotal				30	19					

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**PG - COURSES – AFFILIATED COLLEGES**

Course Structure for M.Sc. Chemistry

( Choice Based Credit System)

( with effect from the academic year 2016- 2017 onwards )

(44<sup>th</sup> SCAA meeting held on 30.05.2016)

Sem	Sub No.	Subject status	Subject Title	Hrs/ week	Cre-dits	Marks				
						Maximum			Passing Minimum	
						Int.	Ext	Tot.	Ext.	Tot
III	13	Core - 7	Organic Chemistry -III	5	5	25	75	100	38	50
	14	Core - 8	Inorganic Chemistry- III	5	5	25	75	100	38	50
	15	Core - 9	Physical Chemistry -III	5	5	25	75	100	38	50
	16	Core – 10	Scientific Research Methodology	3	3	25	75	100	38	50
IV	17	Core - 11	Organic Chemistry- IV	5	5	25	75	100	38	50
	18	Core - 12	Inorganic Chemistry -IV	5	5	25	75	100	38	50
	19	Core - 13	Physical Chemistry -IV	5	5	25	75	100	38	50
	20	Practical – IV	Organic Chemistry – II	4	4	50	50	100	25	50
	21	Practical – V	Inorganic Chemistry – II	4	4	50	50	100	25	50
	22	Practical – VI	Physical Chemistry – II	4	4	50	50	100	25	50
	23	Project	Project work and viva-voce	3	3	50	50	100	25	50



**MANONMANIAM SUNDARANAR UNIVERSITY**

**TIRUNELVELI**

PG COURSES – AFFILIATED COLLEGES

Course Structure for **M.Sc. Chemistry**

(Choice Based Credit System)

(with effect from the academic year 2016-2017 onwards)

Sem	Sub No.	Subject status	Subject Title	Hrs/week	Credits	Marks				
						Maximum			Passing minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
I	1	Core - 1	Organic Chemistry -1	6	5	25	75	100	38	50
	2	Core - 2	Inorganic Chemistry -1	6	5	25	75	100	38	50
	3	Core - 3	Physical Chemistry -1	6	5	25	75	100	38	50
	5	Practical	Organic Chemistry -1	4	-	Practical Exams in the even Semester				
	6	Practical	Inorganic Chemistry -1	4	-					
	7	Practical	Physical Chemistry -1	4	-					
		Subtotal		30	15	-	-	-	-	-

Pt. I/II/ III/ IV/V	Sub. No.	Subject status	Subject Title	Hrs. / week	Cre- dits	Marks				
						Maximum			Passing minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
I	25	Language	Tamil / Other Language	6	3	25	75	100	30	40
II	26	Language	English	6	3	25	75	100	30	40
III	27	Core - 6	PHYSICAL CHEMISTRY -II	4	5	25	75	100	30	40
	28	Major Practical- IV	INORGANIC QUANTITATIVE ANALYSIS	3	3	50	50	100	20	40
	29	Allied -IV	ALLIED CHEMISTRY - II	4	3	25	75	100	30	40
	30	Allied Practical- IV	QUANTITATIVE ANALYSIS	2	2	50	50	100	20	40
IV	31	Skill Based Subject -II	(A)CHEMISTRY IN MEDICINE (OR) (B ) INDUSTRIAL CHEMISTRY	3	3	25	75	100	30	40
IV	32	Non-Major Elective-II	(A) DAIRY CHEMISTRY (OR) (C) APPLIED CHEMISTRY	2	2	25	75	100	30	40
V		Extension Activity	NCC,NSS, YRC, YWF		1					
Subtotal				30	25					

B.SC. DEGREE SEMESTER EXAMINATION I & VI SEMESTER (SCODE) PAGE 11  
(For those who joined the course from the academic year July 2012 onwards)

SR	SUB. CODE	TITLE OF THE SUBJECT	CRED.	INT MAX	EXT MIN	EXT MAX	PASS MIN	TOT MAX	TH/R
		DETAILS OF PART I LANGUAGES							
		PART I TAMIL							
	STTL11	Paper I Seyyul, Illakkanam, Urainadai, Sirukathai, Ilakia Varalaru	3	25	30	75	40	100	T
	STTL21	Paper II Seyyul, Illakkanam, Urainadai, Vazhkai Varalaru, Ilakia Varalaru	3	25	30	75	40	100	T
	STTL31	Paper III Seyyul, Urainadai, Naval, Ilakkanam, Ilakia Varalaru, Pothukatturai	3	25	30	75	40	100	T
	STTL41	Paper IV Seyyul, Urainadai, Nadakan, Ilakkanam, Ilakia Varalaru, Pothukatturai	3	25	30	75	40	100	T
		PART I MALAYALAM							
	SMY11	Paper I Poetry	3	25	30	75	40	100	T
	SMY21	Paper II Prose	3	25	30	75	40	100	T
	SMY31	Paper III Theatre Movement and Creative Literature	3	25	30	75	40	100	T
	SMY41	Paper IV Subaltern Literature, Feminist Literature and Advertisement	3	25	30	75	40	100	T
		PART I HINDI							
	SHD11	Paper I Prose, Short Stories, Grammar, Journalism and Comprehension	3	25	30	75	40	100	T
	SHD21	Paper II Drama, Naval, Spoken Hindi, Grammar, Letter Writing and Public Writing	3	25	30	75	40	100	T
	SHD31	Paper III Ancient Poetry, Short Epic, History of Hindi Literature (Ancient Period), Principles of Translation	3	25	30	75	40	100	T
	SHD41	Paper IV Modern Poetry, History of Hindi Literature (Modern Period) Prosody & Poetics, General Essay, Administrative Hindi	3	25	30	75	40	100	T
		PART I SANSKRIT							
		(For B.A., B.Sc., & Public)							
	SBK11	Paper I Fundamental Grammar, History of Sanskrit Literature & Translation	3	25	30	75	40	100	T
	SBK21	Paper II Poetry & History of Sanskrit Literature	3	25	30	75	40	100	T

2. SC. DEGREE SEMESTER EXAMINATION I & VI SEMESTER (SCODE) PAGE 13  
(For those who joined the course from the academic year July 2012 onwards)

SR	SUR. CODE	TITLE OF THE SUBJECT	CRED.	INT	EXT	EXT	PASS	TOT	TH/
				MAX	MIN	MAX	MIN	MAX	TH/
		PART IV - Compulsory Paper on Environ- mental Studies and Value Based Education							
1	GEVS11	Paper I Environmental Studies	2	25	30	75	40	100	T
2	GEVS21	Paper II Value Based Education	2	25	30	75	40	100	T
		or							
2	GEVS21	Paper II Manavalaakkalai Yoga	2	25	30	75	40	100	T
3	SCSS5A	Personality Development	4	25	30	75	40	100	T
4	SCSS5B	Effective Communication	4	25	30	75	40	100	T
		PART V							
5	SEEA41	Extension Activity (HMT, NSS, YRS, etc.)						100	
		PART II ENGLISH							
1	SEEN11	Paper I Prose, Short Stories, Grammar and Usage and Language Skills	3	25	30	75	40	100	T
2	SEEN21	Paper II Prose, One Act Plays, Grammar and Communication Skills	3	25	30	75	40	100	T
3	SEEN31	Paper III Prose, Drama, Fiction, Language Study and Composition	3	25	30	75	40	100	T
4	SEEN41	Paper IV Prose, Poetry, Communicative Grammar and Composition	3	25	30	75	40	100	T
		ELECTRONICS							
1	DEEL11	Paper I Basic Electronic Devices and Digital Circuits	4	25	30	75	40	100	T
2	DEEL21	Paper II Semiconductor Devices	4	25	30	75	40	100	T
3	DEEL31	Paper III Electronic Circuits	4	25	30	75	40	100	T
4	DEEL32	Paper IV Electronic Measurements and Circuits Theory	4	25	30	75	40	100	T
5	DEEL41	Paper V Linear Integrated Circuits	4	25	30	75	40	100	T
		MAJOR ELECTIVE							
6	DEEL44	Paper VI Computer Networks	6	25	30	75	40	100	T
7	DEEL51	Paper VII Microprocessor	6	25	30	75	40	100	T



SUB. CODE	TITLE OF THE SUBJECT	CRED.	INT MAX	EXT MIN	EXT MAX	PASS MIN	TOT MAX	TH/R
DEPT4A	Creative Art & Textile Furnishing	4	40	24	60	40	100	P
DEPT11	FASHION TECHNOLOGY Paper I Elements and Concepts of Fashion Designing	4	25	30	75	40	100	T
DEPT21	Paper II Technology of Fabric Manufacture	4	25	30	75	40	100	T
DEPTF1	Fashion Drawing and Sketching	4	40	24	60	40	100	P
DEPTF2	Fabric Analysis and Fabric IAD	4	40	24	60	40	100	P
DEVC11	VISUAL COMMUNICATION Paper I Introduction to visual communication	4	25	30	75	40	100	T
DEVC21	Paper II Visual Design	4	25	30	75	40	100	T
DEVC31	Paper III Photography	4	25	30	75	40	100	T
DEVC41	Paper IV Advertisement	4	25	30	75	40	100	T
DEVC51	Paper V Television Production	4	25	30	75	40	100	T
DEVC4A	MAJOR ELECTIVE Fundamentals of Journalism	5	25	30	75	40	100	T
DEVC3A	SCHEDULE BASED Writing for Media	4	40	24	60	40	100	T
DEVC4A	Video Writing	4	40	24	60	40	100	T
DEVC4B	Public Relation	4	40	24	60	40	100	T
DEVCF1	Visual Literacy	4	40	24	60	40	100	T
DEVCF2	Drawing	4	40	24	60	40	100	P
DEVCF3	Photography	4	40	24	60	40	100	P
DEVCF4	Television Production	4	40	24	60	40	100	P
DEPB11	PLANT BIOLOGY & PLANT BIO TECHNOLOGY Paper I Cell Biology, Anatomy & Histotechniques	4	25	30	75	40	100	T
DEPB12	Paper II Algae, Bryophytes & Algal biotechnology	4	25	30	75	40	100	T

B.Sc. DEGREE SEMESTER EXAMINATION I & VI SEMESTER (SCODE) PAGE 114  
(for those who joined the course from the academic year July 2012 onwards)

SR	SUB. CODE	TITLE OF THE SUBJECT	CRED.				EXT	EXT	PASS	TOT	THAT
			MAX	MIN	MAX	MIN					
	DSF801	Paper III Mycology, Plant Pathology & Lichenology	4	25	30	75	40	100	T		
	DSF802	Paper IV Microbial Biotechnology	4	25	30	75	40	100	T		
	DSF803	Paper V Pteridophytes, Gymnosperms & Platanobotany	4	25	30	75	40	100	T		
	DSF804	Paper VI Developmental Botany and Experimental Embryology	4	25	30	75	40	100	T		
	DSF805	Paper VII Taxonomy of Angiosperms	4	25	30	75	40	100	T		
	DSF806	Paper VIII Biochemistry and Biophysics	4	25	30	75	40	100	T		
	DSF807	Major Elective - I (Any One)	5	25	30	75	40	100	T		
	DSF808	Paper IX Techniques in Biotechnology	5	25	30	75	40	100	T		
	DSF809	Paper X Forestry	5	25	30	75	40	100	T		
	DSF810	Major Elective - II (Any One)	5	25	30	75	40	100	T		
	DSF811	Paper XI Marine Biotechnology	5	25	30	75	40	100	T		
	DSF812	Paper XII Horticulture & Plant Breeding	5	25	30	75	40	100	T		
	DSF813	Paper XIII Plant Physiology	4	25	30	75	40	100	T		
	DSF814	Paper XIV Genetics, Biometrics & Bioinformatics	4	25	30	75	40	100	T		
	DSF815	Paper XV Applied Biotechnology	4	25	30	75	40	100	T		
	DSF816	Major Elective - III (Any One)	5	25	30	75	40	100	T		
	DSF817	Paper XVI Environmental Biotechnology	5	25	30	75	40	100	T		
	DSF818	Paper XVII Computer Applications	5	25	30	75	40	100	T		
	DSF819	Practical I	2	40	24	60	40	100	P		
	DSF820	Practical II	2	40	24	60	40	100	P		
	DSF821	Practical-III Taxonomy & Systematics	4	40	24	60	40	100	P		
	DSF822	Practical-IV Biochemistry, Genetics & Biometrics	4	40	24	60	40	100	P		
	DSF823	Practical-V Plant Physiology & Applied Biotechnology	4	40	24	60	40	100	P		

B.Sc. DEGREE SEMESTER EXAMINATION I & VI SEMESTER (GCODE) PAGE 115  
(For those who joined the course from the academic year July 2012 onwards)

SUB. CODE	TITLE OF THE SUBJECT	CRED.	INT. MAX	EXT. MIN	EXT. MAX	PASS MIN	TOT. MARKS	THAT
SEP234	Skilled Based Elective (Any One) Floriculture	4	40	24	60	40	100	T
SEP235	Organic Farming	4	40	24	60	40	100	T
SEP244	Preservation of Fruits & Vegetables	4	40	24	60	40	100	T
SEP248	Herbal Biotechnology	4	40	24	60	40	100	T
QK2011	ZOOLOGY Paper I Animal Diversity I Invertebrata	4	25	30	75	40	100	T
QK2012	Paper II Animal Diversity II Chordata	4	25	30	75	40	100	T
QK2021	Paper III Developmental Zoology	4	25	30	75	40	100	T
QK2022	Paper IV Ecology, Taxicology, Evolution	4	25	30	75	40	100	T
QK2031	Paper V Cell and Molecular Biology	4	25	30	75	40	100	T
QK2041	Paper VI Genetics	4	25	30	75	40	100	T
QK2051	Paper VII Animal Physiology and Biochemistry	4	25	30	75	40	100	T
QK2052	Paper VIII Animal Biotechnology	4	25	30	75	40	100	T
QK205A	Major Elective - I (Any One) Paper IX Sericulture	5	25	30	75	40	100	T
QK205B	Paper IX Economic Entomology	5	25	30	75	40	100	T
QK205C	Paper IX Dairy Farming	5	25	30	75	40	100	T
QK205D	Major Elective - II (Any One) Paper X Apiculture	5	25	30	75	40	100	T
QK205E	Paper X Food & Food Processing Technology	5	25	30	75	40	100	T
QK205F	Paper X Poultry Science	5	25	30	75	40	100	T
QK2061	Paper XI Applied Biotechnology	4	25	30	75	40	100	T
QK2062	Paper XII Immunology and Microbiology	4	25	30	75	40	100	T
QK2063	Paper XIII Biostatistics, Computer Applications & Bioinformatics	4	25	30	75	40	100	T

SRM	SUB. CODE	TITLE OF THE SUBJECT	CRED. INT EXT EXT PASS					TOT	TH/TF
			MAX	MIN	MAX	MIN	MAX		
1/3	GAMA11	Paper I Algebra and Differential Equation	4	25	30	75	40	100	T
2/4	GAMA21	Paper II Vector Calculus	4	25	30	75	40	100	T
3/4	GAMA3	Practical	2	40	24	60	40	100	P
MATHEMATICS WITH COMPUTER APPLICATION									
1	GAMC11	Paper I Introduction to Computer System	5	25	30	75	40	100	T
2	GAMC21	Paper II Programming in C	5	25	30	75	40	100	T
3	GAMC31	Paper III Programming in C++	5	25	30	75	40	100	T
4	GAMC41	Paper IV Data Structure	5	25	30	75	40	100	T
MICROBIOLOGY									
1	GAMI11	Paper I Biotechnology	4	25	30	75	40	100	T
2	GAMI21	Paper II Environmental Monitoring and Assessment	4	25	30	75	40	100	T
3	GAMI31	Paper III Biofertilizer and Biopesticides	4	25	30	75	40	100	T
4	GAMI41	Paper IV Genetic Engineering	4	25	30	75	40	100	T
2	GAMI1P1	Practical I	2	40	24	60	40	100	P
3/4	GAMI1P2	Practical II Biofertilizers, Biopesticides and Genetic Engg.	4	40	24	60	40	100	P
PLANT BIOLOGY & PLANT BIOTECHNOLOGY									
1/3	GAPB11	Paper I Plant Diversity and Medicinal Botany	4	25	30	75	40	100	T
2/4	GAPB21	Paper II Plant Anatomy, Embryology, Physiology and Biotechnology	4	25	30	75	40	100	T
3/4	GAPBP	Practical	2	40	24	60	40	100	P
PHYSICAL EDUCATION									
1	CAPE11	Paper I Allied I - Anatomy and Physiology	4	25	30	75	40	100	T
2	CAPE21	Paper II Allied II - Health Education, Safety Education and First Aid	4	25	30	75	40	100	T
3	CAPE31	Paper III Allied III Computer Application in Physical Education	4	25	30	75	40	100	T



# MANONMANIAM SUNDARANAR UNIVERSITY

B Sc, Zoology Subject of study and scheme of Examinations

(For candidates admitted in the course in the academic year )

2012 – 2013 and afterwards under CBCS

Semester	Course	Title	Teaching Hrs/Hours	Exam. Hours	Internal Marks	External marks		Mid Pas	Total Marks	Credits
						Passing min	Mark max			
I	1.1	Animal Diversity – I Invertebrate	4	3	25	30	75	40	100	4
	1.2	Animal Diversity – II Chordata	4	3	25	30	75	40	100	4
	1.3	Major Practical (1.1&1.2)	2	Exam at the end of the Second Semester						
	1.4	Environmental Studies	2	3	25	30	75	40	100	2
II	2.1	Developmental Zoology	4	3	25	30	75	40	100	4
	2.2	Ecology, Toxicology & Evolution	4	3	25	30	75	40	100	4
	2.3	Major Practical (2.1 & 2.2)	2	Exam at the end of the Second Semester						
		Major Practical Exam I (1.1,1.2,2.1,& 2.2)		3	40	24	60	40	100	2
	2.4	Value Based Education	2	3	25	24	75	40	100	2
III	3.1	Cell and Molecular Biology	4	3	25	24	75	40	100	4
		Major Practical (3.1)	2	Exam at the end of the fourth Semester						
		Skill Based Subjects; (any one)								
	3.2 A	Home Aquarium	4	3	25	24	75	40	100	4
	3.2B	Nutrition and Dietetics								
		Non Major Elective; (any one)								
	3.3 A	Bee keeping	2	3	25	30	75	40	100	4
	3.3 B	Clinical Biology								
IV	4.1	Genetics	4	3	25				100	4
		Major Practical (4.1)	2	Exam at the end of The Fourth Semester						
	4.2	Skill Based Subjects; ( any one	4	3	25	30	75	40	100	4
	A	Biophysics and Bioinstrumentation								
	4.2B	Vermitechnology								
	4.3 A	Non Major Elective; (any one	2	3	25	30	75	40	100	2
		Public Health and Hygiene								
	4.3 B	Community and Social Preventive		3	25	30	75	40	100	2
		Medicine								
		Major Practical Exam. – II (3.1& 4.1)		3	40	24	60	40	100	4

V	5.1	Animal Physiology and Biochemistry	4	3	25	30	75	40	100	4
	5.2	Animal Biotechnology	4	3	25	30	75	40	100	4
		Common Skill Based Subjects; any one )								
	5.3 A	Effective Communication	4	3	25	30	75	40	100	4
	5.3 B	Personality Development		3	25	30	75	40	100	4
		Elective; (any one )								
	5.4A	Sericulture	5	3	25	30	75	40	100	4
	5.4 B	Economic Entomology		3	25	30	75	40	10	4
	5.4 C	Dairy Farming		3	25	30	75	40	100	4
		Elective; (any one )								
	5.5A	Apiculture	5	3	25	30	75	40	100	5
	5.5B	Food and Food Processing Technology								
	5.5C	Poultry Science								
		Practical 5.1	2	Exam at the end of the Sixth Semester Exam at the end of the sixth semester Exam at the end of the sixth semester Exam at the end of the sixth semester						
		Practical 5.2	2							
		Practical 5.4 A/5.4B/5.4C	2							
		Practical 5.5A/5.5B/5.5C	2							
	6.1	Applied Biotechnology	5	3	25	30	75	35	100	4
	6.2	Immunology and Microbiology	6	3	25	30	75	35	100	4
VI	6.3	Bio statistics, Computer applications & bioinformatics	6	3	25	30	75	35	100	4
		Elective; ( any one )								
	6.4A	Aquaculture	Theory 5	3	25	30	75	40	100	5
	6.4B	Medical Laboratory Technology	5	3	25	30	75	40	100	5
	6.4 C	Marine Biology	5	3	25	30	74	40	100	5
		Practical ; 6.1	2	Exam at the end of the Sixth Semester						
		Practical ; 6.2	2	Exam at the end of the Sixth Semester						
		Practical ; 6.3	2	Exam at the end of the Sixth Semester						
		Practical ; 6.4	2	Exam at the end of the Sixth Semester						
		Major Practical Exam – III ( 5.1 & 5.2 )		3	40	24	60	40	100	4
		Major Practical Exam – IV ( 6.1 & 6.2 , 6.3 )		3	40	24	60	40	100	4
		Major Practical Exam V ( 5.4 and one 5.5 any one and 6.4 any one		3	40	24	60	0	100	4

The break up for internal practical shall be ( Practical Test – 20 ; Class work – 5 ; Regularity – 5 & Record – 5 )

**MANONMANIAM SUNDARANAR UNIVERSITY  
TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Zoology**

**(Choice Based Credit System)**

**(with effect from the academic year 2016-2017 onwards)**

**(44<sup>th</sup> SCAA meeting held on-30.05.2016)**

Sem.	Pt. I/II/ III/ IV/ V	Su b N o.	Subject status	Subject Title	Hrs./ week	Cre- dits	Marks				
							Maximum			Passing minimum	
							Int.	Ext.	Tot.	Ext.	Tot.
III	I	17	Language	Tamil/Other Language	6	3	25	75	100	30	40
	II	18	Language	English	6	3	25	75	100	30	40
	III	19	Core - 5	CELL AND MOLECULAR BIOLOGY	4	4	25	75	100	30	40
		20	Major Practical – III	CELL AND MOLECULAR BIOLOGY	2	-	50	50	100	20	40
		21	Allied -III	CELL BIOLOGY, GENETICS AND BIOTECHNOLOGY	4	4	25	75	100	30	40
		22	Allied Practical-III	CELL BIOLOGY, GENETICS AND BIOTECHNOLOGY	2	-	50	50	100	20	40
	IV	23	Skilled Based subject-I	(A) HOME AQUARIUM (OR) (B)NUTRITION AND DIETETICS	4	4	25	75	100	30	40
	IV	24	Non-Major Elective-I	(A)BEE KEEPING (OR) (B)CLINICAL BIOLOGY	2	2	25	75	100	30	40
Subtotal					30	20					



**MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI**

**UG COURSES – AFFILIATED COLLEGES**

**B.Sc. Zoology**

(Choice Based Credit System)

(with effect from the academic year 2017-2018 onwards)

Pt.I/ II/III IV/V	Subject Status	Subject title	Course /paper	Contact Hrs./ Week	C Credits
I	Language	Tamil/Other Language	1	6	4
II	Language	English	1	6	4
III	Core	Animal Diversity-I Invertebrata	1	4	4
III	Core	Animal Diversity-II Chordata	1	4	4
III	Major Practical-I	Animal Diversity-I Invertebrata & Animal Diversity-II Chordata	1	2	2
III	Allied-I	Cell Biology, Genetics and Bio-Technology/Industrial Fish and Fisheries-Biology of Fish	1	4	3
III	Allied Practical-I	Cell Biology, Genetics and Bio-Technology/Industrial Fish and Fisheries-Biology of Fish	1	2	2
IV	Common	Environmental Studies	1	2	2
		<b>Sub total</b>	<b>8</b>	<b>30</b>	<b>25</b>
I	Language	Tamil/Other Language	1	6	4
II	Language	English	1	6	4
III	Core	Developmental Zoology	1	4	4
III	Core	Ecology & Toxicology	1	4	4
III	Major Practical-II	Developmental Zoology & Ecology & Toxicology	1	2	2
III	Allied-II	Developmental Zoology, Ecology, Animal Physiology & Evolution/Industrial Fish and Fisheries-capture Fisheries	1	4	3
III	Allied Practical-II	Developmental Zoology, Ecology, Animal Physiology & Evolution/Industrial Fish and Fisheries-capture Fisheries	1	2	2
IV	Common	Value based education/Social harmony	1	2	2
		<b>Sub total</b>	<b>8</b>	<b>30</b>	<b>25</b>
	Language	Tamil/Other Language	1	6	4
II	Language	English	1	6	4
III	Core	Cell and Molecular Biology	1	4	4
III	Major Practical-III	Cell and Molecular Biology	1	2	2
III	Allied-III	Cell Biology, Genetics and Bio-Technology	1	4	3
III	Allied Practical-III	Cell Biology, Genetics and Bio-Technology	1	2	2
IV	Skilled based- core	(Any one) 1.Home aquarium 2. Nutrition and Dietetics	1	4	4
IV	Non-Major Elective	(Any one) 1.Bee Keeping 2. Clinical Biology	1	2	2
		<b>Sub total</b>	<b>8</b>	<b>30</b>	<b>25</b>



	Language	Tamil/Other Language	1	6	4
	Language	English	1	6	4
II	Core	Genetics	1	4	4
III	Major Practical-IV	Genetics	1	2	2
III	Allied-IV	Developmental Zoology, Ecology, Animal Physiology and Evolution	1	4	3
III	Allied Practical-IV	Developmental Zoology, Ecology, Animal Physiology and Evolution	1	2	2
III	Skilled based	PD/Yoga	1	4	4
IV	Non-Major Elective	(Any one) 1. Public Health and Hygiene 2. Community and Social preventive Medicine.	1	2	2
V	Extension Activity	NCC/NSS/YRC/YW/PE			1
		<b>Sub total</b>	<b>8</b>	<b>30</b>	<b>26</b>
III	Core	Animal Physiology	1	5	4
III	Core	Animal Biotechnology	1	5	4
III	Elective	(Any one) 1. Sericulture 2. Economic Entomology 3. Dairy farming	1	5	4
V	Elective	(Any one) 1. Apiculture 2. Food and Food Processing Technology 3. Poultry Science	1	5	4
III	Major Practical-V	Animal physiology and Biochemistry	1	3	2
III	Major Practical-VI	Animal Biotechnology	1	3	2
III	Major Practical-VII	Corresponding Electives	1	2	2
IV	Skill based common	Computer	1	2	2
		<b>Sub total</b>	<b>8</b>	<b>30</b>	<b>24</b>
III	Core	Evolution	1	6	4
III	Core	Immunology and Microbiology	1	6	4
III	Core	Biostatistics, Computer applications & Bioinformatics	1	5	4
III	Major Practical-VIII	Evolution, Immunology and Microbiology	1	3	2
VI	Major Practical-IX	Biostatistics, Computer applications & Bioinformatics	1	3	2
III	Major Practical-X	Corresponding Electives	1	2	2
III	Project Group		1	5	4
		<b>Sub total</b>	<b>7</b>	<b>30</b>	<b>22</b>

Total number of hours: 180

Total number of Credits: 147