

MANONMANIAM SUNDARANAR UNIVERSITY
TIRUNELVELI
 UG COURSES – AFFILIATED COLLEGES

B.A. English

(Choice Based Credit System)

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

SEMESTER - 1

Sem	Part I/II/ III/IV	Sub. No	Subject Status	SUBJECT TITLE	Hrs/ Week	Cre dits	Marks				
							Maximum			Passing Minimum	
							Int.	Ext.	Tot	Ext.	Tot.
I	I	1	Language	TAMIL/OTHER LANGUAGE	6	4	25	75	100	30	40
	II	2	Language	ENGLISH	6	4	25	75	100	30	40
	III	3	Core - 1	INDIAN WRITING IN ENGLISH - I	4	4	25	75	100	30	40
	III	4	Core - 2	BRITISH FICTION	4	4	25	75	100	30	40
	III	5	Core - 3	AUSTRALIAN LITERATURE	4	4	25	75	100	30	40
	III	6	Allied - 1	SOCIAL HISTORY OF ENGLAND	4	3	25	75	100	30	40
	IV	7	Common	ENVIRONMENTAL STUDIES	2	2	25	75	100	30	40
SUB TOTAL					30	25					

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

PART IV- COMPULSORY PAPER

UNIT I: THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, scope and importance

Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems, water conservation and watershed management.
- c) Mineral resources: Use and exploitation, environmental effects.
- d) Food resources: World food problems, changes, effects of modern agriculture, fertilizer-pesticide problems.
- e) Energy resources: Growing energy needs, renewables and non renewable energy sources, alternate energy sources.
- f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.

UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds, rivers, oceans, estuaries)
 - Energy flow in the ecosystem
 - Ecological succession
 - Food Chains, Food Webs and Ecological Pyramids.

UNIT III: BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India

Values of Biodiversity

Biodiversity at global, national and local levels

India as a mega-diversity nation

Hot-Spots of biodiversity

Threats to biodiversity

Endangered and endemic species of India

Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT IV: ENVIRONMENTAL POLLUTION

Definition- Causes, effects and control measures of:-

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

Air (Prevention and Control of Pollution) Act

Water (Prevention and Control of Pollution) Act

Wildlife Protection Act

Forest Conservation Act

Population Explosion — Family Welfare Programme

Human Rights

REFERENCES:

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2. Agarwal. K.C. 2001. Environmental Biology, Nidi Publications Limited, Bikaner.
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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	6	4	25	75	100	30	40
	II	2	Language	English	6	4	25	75	100	30	40
	III	3	Core -1	Calculus	5	4	25	75	100	30	40
		4	Core-2	Classical Algebra	5	4	25	75	100	30	40
		5	Allied-I	Statistics-I OR Physics/ Chemistry/ Computer Science With Practicals	6	3	25	75	100	30	40
					6	4	25	75	100	30	40
IV	6	Common	Environmental Studies	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	3	25	75	100	30	40
	6				4	25	75	100	30	40	
IV	12	Common	Value Based Education/	2	2	25	75	100	30	40	

				Social Harmony							
III	I	13	Language	Tamil/Other Languages	6	4	25	75	100	30	40
	II	14	Language	English	6	4	25	75	100	30	40
	III	15	Core-5	Real Analysis-I	6	4	25	75	100	30	40
		16	Allied-II	Statistics-I	6	3	25	75	100	30	40
				OR Physics /Chemistry With Practicals	6	4	25	75	100	30	40
17	Skilled Based core	Vector Calculus	4	4	25	75	100	30	40		
	IV	18	Non-major Elective	Any one of the following 1.1) Mathematics for Competitive Examinations I 1.2) Fundamentals of Statistics I	2	2	25	75	100	30	40
IV	I	19	Language	Tamil/Other Languages	6	4	25	75	100	30	40
	II	20	Language	English	6	4	25	75	100	30	40
	III	21	Core-6	Abstract Algebra I	5	4	25	75	100	30	40
		22	Allied-II	Statistics II	6	3	25	75	100	30	40
	OR Physics/ Chemistry with Practicals			6	4	25	75	100	30	40	
	IV	23	Non-major Elective	Any one of the following 2.1) Mathematics for Competitive Examinations II 2.2) Fundamentals of Statistics II	2	2	25	75	100	30	40
				24	Common	Personality Development and Yoga	4	4	25	75	100
V		Extension Activities	NCC/NSS/YRC/YWF	-	1	-	-	-	-	-	

V	III	25	Core-7	Abstract Algebra II	5	4	25	75	100	30	40
		26	Core-8	Real Analysis II	6	4	25	75	100	30	40
		27	Core-9	Mechanics	5	4	25	75	100	30	40
		28	Major Elective -I	Any one of the following 1.1. Astronomy -I 1.2.Discrete Mathematics 1.3.Programming in C	4	4	25	75	100	30	40
		29	Major Elective-II	Any one of the following 2.1.Operations Research - I 2.2.Combinatorial Mathematics 2.3.Numerical Methods	4	4	25	75	100	30	40
	III	30	Skilled Based Major	Trigonometry , Fourier series and Laplace transforms	4	4	25	75	100	30	40
	IV	31	Skilled Based Common	Computers for Digital Era	2	2	25	75	100	30	40
VI	III	32	Core-11	Complex Analysis	5	4	25	75	100	30	40
		33	Core-12	Number Theory	4	4	25	75	100	30	40
		34	Core-13	Graph Theory	5	4	25	75	100	30	40
		35	Major Elective-III	Any one of the following 3.1 Astronomy II 3.2Fuzzy Mathematics 3.3 Mathematical Modeling	4	4	25	75	100	30	40
		36	Major Elective-IV	Any one of the following 4.1 Operations Research II 4.2 Coding Theory 4.3 LaTeX	4	4	25	75	100	30	40
		37	Major Project	Group Project	8	8	25	75	100	30	40

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

PART IV- COMPULSORY PAPER

UNIT I: THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, scope and importance

Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
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UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
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Energy flow in the ecosystem
Ecological succession
Food Chains, Food Webs and Ecological Pyramids.

UNIT III: BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India

Values of Biodiversity

Biodiversity at global, national and local levels

India as a mega-diversity nation

Hot-Spots of biodiversity

Threats to biodiversity

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Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

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Definition- Causes, effects and control measures of:-

- a) Air Pollution
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- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

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Population Explosion — Family Welfare Programme

Human Rights

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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
Part I	1	Language	Tamil/Other Languages	6	6	0	0	4
Part II	2	Language	English	6	6	0	0	4
Part III	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-1	Allied Physics Paper-1	4	4	0	0	4
	7	Allied.Practical-1-1	AlliedPractical-1	2	0	0	2	2
Part IV	8	Common	Environmental Studies	2	2	0	0	2
			Total	30				26
Part I	9	Language	Tamil/Other Languages	6	6	0	0	4
Part II	10	Language	English	6	6	0	0	4
Part III	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-1-2	Practical-2	2	0	0	2	2
Part IV	16	Common	Value Based education	2	2	0	0	2
			Total	30				26

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

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MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

UG COURSES – AFFILIATED COLLEGES

B.Sc. Chemistry

(Choice Based Credit System)

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

Sem	Pt	Sub No	Subject Status	Subject Title	Con Tact Hrs/wk	L Hrs/wk	P Hrs/wk	Credits
I	I	1	Language	Tamil/Other Languages	6	6	0	4
	II	2	Language	English	6	6	0	4
	III	3	Core – Paper I	Inorganic Chemistry - I	4	4	0	4
	III	4	Core – Paper - II	Physical Chemistry - I	4	4	0	4
	III	5	Major Practical - I	Volumetric Analysis - I	2	0	2	2
	III	6	Allied I- Paper – I	Allied Chemistry - I	4	4	0	3
	III	7	Allied Practical-I	Allied Chemistry Practical- I	2	0	2	2
	IV	8	Common	Environmental Studies	2	2	0	2
			Subtotal	30	26	4	25	
II	I	9	Language	Tamil/Other Languages	6	6	0	4
	II	10	Language	English	6	6	0	4
	III	11	Core –Paper III	Inorganic Chemistry - II	4	4	0	4
	III	12	Core – Paper IV	Organic Chemistry - I	4	4	0	4
	III	13	Major Practical II	Volumetric Analysis - II	2	0	2	2
	III	14	Allied 1 -Paper – II	Allied Chemistry - II	4	4	0	3
	III	15	Allied Practical-II	Allied Chemistry Practical- II	2	0	2	2
	IV	16	Common	Social Value Education	2	2	0	2
			Subtotal	30	26	4	25	
III	I	17	Language	Tamil/Other Languages	6	6	0	4
	II	18	Language	English	6	6	0	4
	III	19	Core – Paper V	Organic Chemistry - II	4	4	0	4
	III	20	Major Practical - III	Inorganic Qualitative Analysis	2	0	2	2
	III	21	Allied - II	Allied Chemistry - I	4	4	0	3
	III	22	Allied Practical - II	Allied Chemistry Practical- I	2	0	2	2
	III	23	Skilled Based-I Core	Agro Chemistry/Food Chemistry	4	4	0	4
	IV	24	Non-Major Elective -I	Food Chemistry /Water Management	2	2	0	2
			Subtotal	30	26	4	25	
IV	I	25	Language	Tamil/Other Languages	6	6	0	4
	II	26	Language	English	6	6	0	4
	III	27	Core – Paper VI	Physical Chemistry - II	4	4	0	4
	III	28	Major Practical IV	Organic Analysis	2	0	2	2
	III	29	Allied - II	Allied Chemistry - II	4	4	0	3
	III	30	Allied Practical II	Allied Chemistry Practical- II	2	0	2	2
	IV	31	Skilled Based II Common	Personality Development and Yoga	4	4	0	4

	IV	32	Non-Major Elective - II	Dairy Chemistry / Applied Chemistry	2	2	0	2
	V		Extension Activity	NCC/NSS/YRC/YWF	-	-	-	1
				Subtotal	30	26	4	26
V	III	33	Core – Paper VII	Organic Chemistry - III	5	5	0	4
	III	34	Core – Paper VIII	Physical Chemistry - III	5	5	0	4
	III	35	Major Elective-I	Polymer Chemistry / Bio Inorganic Chemistry	5	5	0	4
	III	36	Major Elective - II	Analytical Chemistry / Pharmaceutical Chemistry	5	5	0	4
	III	37	Major Practical V	Inorganic Preparation and Physical Constant Determination	8	0	8	6
	III	38	Major Practical VI	Organic Estimation				
	III	39	Major Practical VII	Physical Chemistry Estimations				
	IV	40	Skill Based III Common	Computer	2	2	0	2
					Subtotal	30	22	8
VI	III	41	Core Paper IX	Inorganic Chemistry - III	6	6	0	4
	III	42	Core Paper X	Organic Chemistry - IV	6	6	0	4
	III	43	Core Paper XI	Physical Chemistry - IV	5	5	0	4
	III	44	Major Practical VII, VIII and IX	Gravimetric Estimation	8	0	8	6
	III	45	Major Practical VIII	Organic Preparation				
	III	46	Major Practical IX	Physical Chemistry Experiments - II				
	III	47	Group Project	Group Project	5		5	4
Subtotal					30	17	13	22
Grand Total					180	143	37	147

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

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**MANONMANIAM SUNDARANAR
UNIVERSITY TIRUNELVELI**

**Syllabus for B.Sc. Chemistry Major &
Allied Chemistry (I & II Semesters)**

(With effect from the academic year 2020-2021
onwards)

(I& II Semesters)

1. Objectives

- ★ To impart theoretical and practical skills that underpins the various branches of the Science of Chemistry
- ★ To enable the students to have a thorough understanding and knowledge of different branches of Chemistry
- ★ To make the students to develop the ability to think analytically and solve problems.
- ★ To facilitate the students of B.Sc Chemistry to join PG courses which in turn offer them job opportunities and research pursuits.
- ★ To apply the skills and knowledge gained through the subject to real life situations and face competitive examinations with confidence at National level.
- ★ To create an awareness to ecofriendly microscale experiments in practical courses.

2. Eligibility for Admission

The minimum eligibility conditions for admission to the **B.Sc Chemistry** program are given below.

The candidates for admission into the first semester of the **B.Sc Chemistry** course will be required to have qualified the Higher Secondary Examination conducted by the Board of Higher Secondary Education, Government of Tamil Nadu or any other Examinations accepted by the syndicate of the Manonmaniam Sundaranar University as equivalent there to in Science subject.

3. Duration of the Course

The students shall undergo the prescribed course of study for a period of not less than three academic years (Six semesters). The semester contains 90 working days.

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVEI
UG – COURSES – AFFILIATED COLLEGES

B.Sc. Chemistry
(Choice Based Credit System)
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SEM	Part	SUB. No	SUBJECT STATUS	SUBJECT TITLE	contact hrs /wk	L hrs /wk	P hrs /wk	Credits
I	I	1	Language	Tamil/Other Languages	6	6	0	4
	II	2	Language	Communicative English	6	6	0	4
	III	3	Core – Paper I	Physical Chemistry – I	4	4	0	4
	III	4	Major Practical - I	Inorganic Quantitative (Volumetric) Analysis - I	2	0	2	2
	III	5	Add on Major (Mandatory)	Professional English for Physical Sciences – I	4	4	0	4
	III	6	Allied Paper – I	Allied Chemistry – I	4	4	0	3
	III	7	Allied Practical-I	Allied Chemistry Practical- I	2	0	2	2
	IV	8	Common Paper	Environmental Studies	2	2	0	2
			SUB TOTAL		30	26	4	25
II	I	9	Language	Tamil/Other Languages	6	6	0	4
	II	10	Language	English	6	6	0	4
	III	11	Core – Paper II	Inorganic Chemistry – I	4	4	0	4
	III	12	Major Practical - II	Inorganic Quantitative (Volumetric) Analysis - II	2	0	2	2
	III	13	Add on Major (Mandatory)	Professional English for Physical Sciences-II	4	4	0	4
	III	14	Allied Paper – II	Allied Chemistry – II	4	4	0	3
	III	15	Allied Practical-II	Allied Chemistry Practical- II	2	0	2	2
	IV	16	Common Paper	Value Based Education /சமூகஒழுக்கங்களும் பண்பாட்டு விழுமியங்களும் / Social Harmony	2	2	0	2
			SUB TOTAL		30	26	4	25

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UNDER GRADUATE COURSES -

PART IV- COMPULSORY PAPER

UNIT I: THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, scope and importance

Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems, water conservation and watershed management.
- c) Mineral resources: Use and exploitation, environmental effects.
- d) Food resources: World food problems, changes, effects of modern agriculture, fertilizer-pesticide problems.
- e) Energy resources: Growing energy needs, renewables and non renewable energy sources, alternate energy sources.
- f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.

UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds, rivers, oceans, estuaries)
Energy flow in the ecosystem
Ecological succession
Food Chains, Food Webs and Ecological Pyramids.

UNIT III: BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India

Values of Biodiversity

Biodiversity at global, national and local levels

India as a mega-diversity nation

Hot-Spots of biodiversity

Threats to biodiversity

Endangered and endemic species of India

Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT IV: ENVIRONMENTAL POLLUTION

Definition- Causes, effects and control measures of:-

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

Air (Prevention and Control of Pollution) Act

Water (Prevention and Control of Pollution) Act

Wildlife Protection Act

Forest Conservation Act

Population Explosion — Family Welfare Programme

Human Rights

REFERENCES:

1. G.S. Vijayalakshmi, A.G. Murugesan and N. Sukumaran. 2006. Basics of Environmental Science, Manonmaniam Sundaranar University Publications, Tirunelveli , pp.160.
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4. Jadhav,H. and Bhosale, V.M.1995. Environmental Protection and Laws, Himalaya Publishing House, Delhi. pp284.
5. Odum, E.P.1971. Fundamentals of Ecology, W.B.Saunders Co., USA. pp.574.

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

B.Sc.CHEMISTRY (Affiliated Colleges)

LEARNING OUTCOME BASED CURRICULUM

(For those who joined from 2021-2022 onwards)

VISION AND MISSION OF THE UNIVERSITY

VISION

" To provide quality education to reach the unreached "

MISSION

- To conduct research, teaching and outreach programmes to improve conditions of human living
- To create an academic environment that honours women and men of all races, caste, creed, cultures and an atmosphere that values intellectual curiosity, pursuit of knowledge, academic freedom and integrity
- To offer a wide variety of off-campus educational and training programs, including the use of information technology, to individuals and groups.
- To develop partnership with industries and government so as to improve the quality of the workplace and to serve as catalyst for economic and cultural development
- To provide quality / inclusive education, especially for the rural and un-reached segments of economically downtrodden students including women, socially oppressed and differently abled

VISION AND MISSION OF DEPARTMENT

VISION

To make the students excel in the fields of education, fundamental and advanced research in Chemistry by providing quality education so that they can compete and contribute to the varying *technology*.

MISSION

1. To teach the students to analyze problems ranging from the basics of Chemistry to advanced level.
2. To give the students adequate hands on experience to work in applied fields.

3. To train the students to act as a useful member or effective leader of a team in multidisciplinary setting.

PREAMBLE

The B.Sc Chemistry programme is fundamental to the revolution taking place in Science and Technology. The aim of the programme is to impart basic skills and knowledge on the principles of all branches of Chemistry to cater to need of Society, Scientific Organization and Industries in the context of developing needs of our country by providing extensive coverage on the fundamental aspects of chemistry relating applications of chemistry to life systems. This course provides intensive practical training to develop associate and apply various aspects of chemistry in day to day life .The programme prepares the students to achieve success in competitive examinations and make developments of needs of their life.

Eligibility for the B.Sc Chemistry Programme

B.Sc Chemistry is a three year Undergraduate course which one can apply after completing 12th from science stream. Eligibility for the course says that the interested must have science with subjects as Physics, Chemistry, Mathematics, Biology or Computer Science as their main subjects from any recognized board.

PROGRAMME STRUCTURE

SEM	Part	SUB. No	SUBJECT STATUS	SUBJECT TITLE	contact hrs /wk	L hrs /wk	P hrs /wk	credits
I	I	1	Language	Tamil/Other Languages	6	6	0	4
	II	2	Language	Communicative English – I	6	6	0	4
	III	3	Core I	Inorganic Chemistry – I	4	4	0	4
	III	4	Core II	Professional English for Physical Science –I	4	4	0	4
	III	5	Major Practical I	Inorganic quantitative (Volumetric) Analysis – I	2	0	2	2
	III	6	Allied Course I	Allied Chemistry – I	4	4	0	3
	III	7	Allied Practical I	Allied Chemistry Practical- I	2	0	2	2
	IV	8	Common	Environmental Studies	2	2	0	2
			SUB TOTAL			30	26	4
II	I	9	Language	Tamil/Other Languages	6	6	0	4
	II	10	Language	Communicative English – II	6	6	0	4
	III	11	Core III	Organic Chemistry – I	4	4	0	4
	III	12	Core IV	Professional English for Physical Science-II	4	4	0	4
	III	13	Major Practical II	Inorganic quantitative (Volumetric)Analysis – II	2	0	2	2
	III	14	Allied Course II	Allied Chemistry – II	4	4	0	3
	III	15	Allied Practical-II	Allied Chemistry Practical- II	2	0	2	2
	IV	16	Common	Social Value Education	2	2	0	2
			SUB TOTAL			30	26	4

III	I	17	Language	Tamil/Other Languages	6	6	0	4
	II	18	Language	English	6	6	0	4
	III	19	Core V	Physical Chemistry – I	4	4	0	4
	III	20	Major Practical III	Organic Preparation & Inorganic Qualitative Analysis - I	2	0	2	2
	III	21	Allied Course II	Allied Chemistry – I	4	4	0	3
	III	22	Allied Practical II	Allied Chemistry Practical- I	2	0	2	2
	III	23	Skilled Based Course I	Green Chemistry/Food Chemistry	4	4	0	4
	IV	24	Non-Major Elective I	Food Science /Water Management	2	2	0	2
	IV	25	Common	Yoga	2	2	0	2
			SUBTOTAL	30+2	26+2	4	27	
IV	I	26	Language	Tamil/Other Languages	6	6	0	4
	II	27	Language	English	6	6	0	4
	III	28	Core VI	Inorganic Chemistry – II	4	4	0	4
	III	29	Major Practical IV	Inorganic Qualitative Analysis – II	2	0	2	2
	III	30	Allied Course II	Allied Chemistry – II	4	4	0	3
	III	31	Allied Practical II	Allied Chemistry Practical- II	2	0	2	2
	IV	32	Skilled Based Course II	Pharmaceutical chemistry/ Industrial Chemistry	4	4	0	4
IV	33	Non-Major Elective II	Dairy Chemistry / Chemistry in Everyday life	2	2	0	2	
IV	34	Common	Computers for Digital Era	2	2	0	2	
V	35	Extension Activity	NCC/NSS/YRC/YWF	-	-	-	1	
			SUBTOTAL	30+2	26+2	4	28	
III	36	Core VII	Organic Chemistry – II	6	6	0	4	

V	III	37	Core VIII	Physical Chemistry – II	6	6	0	4
	III	38	Major Elective I	Polymer Chemistry / Bio Chemistry	4	4	0	4
	III	39	Major Elective II	Modern Instrumental Analytical Techniques/ Applied Chemistry	4	4	0	4
	III	40	Major Practical V	Organic Analysis & Physical Constant Determination	8	0	8	4
	III	41	Major Practical VI	Gravimetric Estimation & Inorganic Preparation				
	IV	42	Skill Based Common	Personality Development / Effective Communication / Youth Leadership	2	2	0	2
				SUBTOTAL	30	22	08	22
VI	III	43	Core IX	Inorganic Chemistry – III	5	5	0	4
	III	44	Core X	Organic Chemistry - III	5	5	0	4
	III	45	Core XI	Physical Chemistry – III	5	5	0	4
	III	46	Major Elective III	Textile Chemistry / Nano Chemistry	4	4	0	4
	III	47	Major Practical VII	Physical Chemistry Experiments	4	0	4	2
	III	48	Major Project	Major Project	7		7	7
			SUBTOTAL	30	19	11	25	
			GRANDTOTAL	180+4	145+4	35	152	

Skill Based Course

One among the two given course will be selected.

Non-Major Elective

One among the two given course will be selected.

Major Elective

One among the two given course will be selected.

Major Project

Group Project –Maximum of five students per group

Extension Program for the Department

Apart from the curriculum, to enrich the skill development of the students following courses in

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

PART IV- COMPULSORY PAPER

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Definition, scope and importance

Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
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UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds, rivers, oceans, estuaries)
Energy flow in the ecosystem
Ecological succession
Food Chains, Food Webs and Ecological Pyramids.

UNIT III: BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India

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Hot-Spots of biodiversity

Threats to biodiversity

Endangered and endemic species of India

Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT IV: ENVIRONMENTAL POLLUTION

Definition- Causes, effects and control measures of:-

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

Air (Prevention and Control of Pollution) Act

Water (Prevention and Control of Pollution) Act

Wildlife Protection Act

Forest Conservation Act

Population Explosion — Family Welfare Programme

Human Rights

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MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

UG COURSES – AFFILIATED COLLEGES

B.Sc . COMPUTER SCIENCE

Learning Outcome Based Curriculum

(With effect from the academic year 2021-2022 onwards)

Introduction

Outcome Based Education is incorporated into the curriculum based on the requirements of NAAC – UGC-Quality Mandate .To fulfill these requirements, the Program Educational Objectives(PEO's) ,Program Outcomes (POs) and Program Specific Outcomes(PSOs) and Course Outcomes(CO) were framed for all programs in alignment with the Vision and Mission of the respective departments and in-turn with the Vision and Mission and Educational Objectives of the University.

Vision Of the University

To provide quality education to reach the unreached

Mission Of the University

To conduct research ,teaching and outreach programs to improve conditions of human living

To create an academic environment that honours women and men of all races, caste, creed, cultures and an atmosphere

That values intellectual curiosity ,pursuit of knowledge ,academic freedom and integrity

To offer a wide variety of off campus educational and training programs, including the use of information technology, to individuals and groups

To develop partnership with industries and government so as to improve the quality of the workplace and to serve as

Catalyst for economic and cultural development

To provide quality /inclusive education ,especially for the rural and un-reached segments of economically downtrodden students including women, socially oppressed and differently abled.

Vision and Mission of Computer Science Department

Vision

Empower students to become independent life long learners with originality and high principles of character catering to the ever changing industrial demands and societal needs

Mission

To be the front runner in Computer Science and to foster the students into globally

Outcomes (CO) to be achieved at the end of the course. These Course outcomes are framed to achieve the POs/PSOs.

Surely, this curriculum will aid the student in the basic as well as the recent developments in computer science when the student completes the programme.

Eligibility Norms for Admission

Candidate should have passed the Higher Secondary Examination conducted by the Board of Higher Secondary Education , Government of Tamil Nadu or any other Examinations accepted by the syndicate as equivalent thereto with Mathematics / Computer Science as one of the subjects

Duration of the Course

The students shall undergo the prescribed course of study for a period of not less than three academic years (Six semesters) .

Program Structure

Sem	Part I/II/ III/ IV/ V	Subject No.	Subject Status	Subject Title	Contact Hrs/ Week	L	T	P	Credits
I	I	1	Language	Tamil/Other Language	6	6	0	0	4
	II	2	Language	Communicative English-I	6	6	0	0	4
	III	3	Core	Programming in C	4	3	1	0	4
	III	4	Major Practical - I	Programming in C	4	0	0	4	2
	III	5	Allied - I a) For the B.Sc.(CS) Programme	a) Discrete Mathematics	4	4	0	0	3
				b) For other U.G. Programme*	b) Introduction to Computers MSOffice Practical	4 2	4 0	0 0	0 2
	III	6	Professional English		4	4	0	0	4
IV	7	Common	Environmental Studies	2	2	0	0	2	
Subtotal					30	25	1	4	23
II	I	8	Language	Tamil/Other Language	6	6	0	0	4
	II	9	Language	Communicative English-II	6	6	0	0	4
	III	10	Core	Programming in C++	4	3	1	0	4
	III	11	Major Practical - II	Programming in C++	4	0	0	4	2
	III	12	Professional English		4	4	0	0	4
	III	13	Allied Practical – I a) For the B.Sc.(CS) Programme	a) Linux	4	0	0	4	2
				b) For other U.G. Programme*	b) C Programming C programming lab Lab	4 2	4 0	0 0	0 2

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDERGRADUATE COURSES –

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Definition, scope and importance Natural resources and associated problems:

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- f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.
- g) Role of an individual in conservation of natural resources.
- h) Equitable use of resources for sustainable lifestyles.

UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds rivers, oceans, estuaries) Food Chains, Food Webs and Ecological Pyramids Energy flow in the ecosystem Ecological succession

UNIT III : BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India Values of Biodiversity

Biodiversity at global, national and local levels India as a mega-diversity nation

Hot-Spots of biodiversity

Threats to biodiversity

Endangered and endemic species of India

Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

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Definition- Causes, effects and control measures of:-

- a) Air Pollution
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- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

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B.Sc., ZOOLOGY PROGRAMME
CHOICE BASED CREDIT SYSTEM – CBCS
(with effect from the academic year 2021-2022 onwards)

Sem	Part I/ II/III IV/V	Course Status	Course title	Conta ct Hrs/ Week	Credits	Marks				
						Maximum			Passing minimum	
						Int	Ext	Total	Ext	Total
I	I	Language	Tamil/Other Language	6	4	25	75	100	30	40
	II	Language	Communicative English –I	6	4	25	75	100	30	40
	III	Core	Invertebrata	4	4	25	75	100	30	40
	III	Add on Major (Mandatory)	Professional English for Life Sciences – I	4	4	25	75	100	30	40
	III	Core Practical-I	Invertebrata	2	1	50	50	100	20	40
	III	Allied	Cell Biology, Genetics & Biotechnology/ Industrial Fish and Fisheries-Biology of Fish	4	3	25	75	100	30	40
	III	Allied- Practical- I	Cell Biology, Genetics & Biotechnology/ Industrial Fish and Fisheries-Biology of Fish	2	1	50	50	100	20	40
	IV	Common	Environmental Studies	2	2	25	75	100	30	40
				Sub total	30	23				
II	I	Language	Tamil/Other Language	6	4	25	75	100	30	40
	II	Language	Communicative English-II	6	4	25	75	100	30	40
	III	Core	Chordata	4	4	25	75	100	30	40
	III	Add on Major (Mandatory)	Professional English for Life Sciences – II	4	4	25	75	100	30	40

III	Core Practical-II	Chordata	2	1	50	50	100	20	40
III	Allied	Developmental Zoology, Ecology, Animal Physiology & Evolution/Industrial Fish and Fisheries- Capture Fisheries	4	3	25	75	100	30	40
III	Allied Practical II	Developmental Zoology, Ecology, Animal Physiology & Evolution/Industrial Fish and Fisheries- Capture Fisheries	2	1	50	50	100	20	40
IV	Common	Value Based Education/Social Harmony	2	2	25	75	100	30	40
		Sub total	30	23					

All practical examinations are at the end of each semester

ELIGIBILITY FOR ADMISSION

Those who have passed Higher Secondary Examination conducted by the Board of Hr. Sec. Education - TN/ CBSE/ ICSE or Equivalent examination accepted by the syndicate of MSU with Biology/ Zoology as one of the subjects in Part III are eligible for admission to B.Sc., ZOOLOGY PROGRAMME.

DURATION OF THE PROGRAMME

The students shall undergo the prescribed programme of study for a period of not less than three academic years (Six semesters). Each semester contains 90 working days.

MARK ASSESSMENT

There is a separate passing minimum for the external and overall components. Distribution of marks between **Internal** and **External** Assessment is

For Theory: 25 : 75

For Practical: 50 : 50

Passing minimum of 40% is recommended for external and overall components.

Internal Marks for Theory (Core, Skill Based Core, Non- Major Elective, Core Elective, Common & Allied) shall be allotted in the following:

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

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MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI
UG COURSES – AFFILIATED COLLEGES
B.Sc. PHYSICAL EDUCATION
(Choice Based Credit System)
(with effect from the academic year 2021-22 onwards)

Vision of the University

To provide quality education to reach the un-reached

Mission of the University

- To conduct research, teaching and outreach programmes to improve conditions of human living.
- To create an academic environment that honours women and men of all races, caste, creed, cultures and an atmosphere that values Intellectual curiosity, pursuit of knowledge, academic freedom and integrity.
- To offer a wide variety of off-campus educational and training programs, including the use of information technology, to individuals and groups.
- To develop partnership with industries and government so as to improve the quality of the workplace and to serve as catalyst for economic and cultural development.
- To provide quality / inclusive education, especially for the rural and un-reached segments of economically downtrodden students including women, socially oppressed and differently abled.

Vision of the Department


Creating a sporty and fit nation through Physical Education and Sports

Mission of the Department

- To conduct research, teaching and outreach programmes to improve health conditions and sports performance of human being.
- To collaborate with stakeholders to improve the standard of living and to serve as catalyst for fitness and wellness.
- To provide quality / inclusive physical education.
- To provide opportunities to develop the knowledge, skills, and personalities necessary to meet their personal and professional goals.
- To move towards a more physically active lifestyle by changing behavioural patterns.
- To create the sports culture at the grass-root level.

Preamble

Physical Education is a form of one of the most effective means of education imparted through physical exercises, recreational activities and sports. It is an integral part of education. Which by mere participation in it gives the outcomes. These outcomes are both instant as well as have strong carry over values in the life. The children as well as the adults and the old enjoy physical activities & sports and gets benefit in the form of stronger muscles and bones, increased energy, coordination level and most importantly the decreased risk of developing chronic diseases.


Department of Physical Education
Nanjil Catholic College of Arts & Science
Kaliyakkavilai - 629 153, Tamil Nadu.

The UNESCO in its General Conference in 1978 was convinced that, everyone should be free to develop and preserve his or her physical, intellectual and moral powers. Physical Education, Health Education and Sports should consequently be assured and guaranteed for all human beings. Physical Education is now a regular feature in the primary and secondary schools as well as it is gaining popularity in the higher education. The course opted for this is elective as well as the core at the college and the university level in India.

The graduate level course in Physical Education, Health Education and Sports contains subjects varying from foundation of Physical Education to Anatomy, Physiology, Kinesiology, Test & Measurement, Nutrition, Rehabilitation, Psychology, Sports Training, Sports Biomechanics, Methods of Teachings etc. which are aimed to give thorough knowledge and skills to the students. Students perusing physical education courses are fit to join the jobs as physical trainers, coaches, game officials, referees, umpires, curators, gym trainers, life guards, personal trainers etc. During their course of education the students also develops the expertise to establish their own business as entrepreneurs in the field of sports, fitness, recreation, adventure sports, camping, event management etc.

Learning Outcomes-Based Curriculum Framework

The learning outcomes-based curriculum framework for a B.Sc degree in Physical Education is intended to provide a broad framework within which Physical Education programme responds to the needs of students and requirements. The framework is expected to assist in the maintenance of standard and uniformity of Physical Education degrees across the country. This will also help in periodic programme review within a broad framework of agreed expected graduate attributes, qualification descriptors, programme learning outcomes and course-level learning outcomes. The framework does seek to bring about uniformity in syllabi for a programme of study in Physical Education, teaching-learning process as well as learning assessment procedures. However, the framework is also intended to allow flexibility and innovation in programme design.

Nature and extent of the B.Sc. degree programme

Physical Education is normally referred to as the science that aims to develop all-inclusive aspects of human personality through physical and sports activities. Physical education is a multidisciplinary subject that cannot be studied in seclusion under the scope of one or two subjects. The scope of Physical Education as a subject is very broad. It caters to the need for developing capability of the students on physical, mental and social aspects. Physical education also aims to develop activity as an alternate and prophylactic medicine. The key areas of study within the Physical Education are *'Exercise Physiology, Sports Psychology, Sports Sociology, Sports Management, Sports Journalism, Kinesiology- Biomechanics, Sports Training, Sports Medicine, Kinanthropometry* etc.

Degree program in Physical Education covers topics that overlap with the areas outlined above and that address the interfaces of Physical Education with other subjects such as Physiology, Bio-Chemistry, Physics, Physiotherapy, Psychology, Management, Sociology along with training pedagogy employed for enhancing the functional status of individuals with varied needs. As a part of the effort, to enhance the employability of graduates of Physical Education, programs include learning experiences that offer opportunities in various spheres of human existence.

Program Specific Outcomes (PSOs)

This would lead the students to understand historical concept of physical education and relationship between Philosophy, Education and Physical Education. The student would further understand the theoretical implications of philosophies of physical education with modern development and social aspects of Physical Education.


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1. The curriculum would enable the pass out to select the inherited talented children for various sports activities.
2. The pass out shall be able to orient children in schools with the fundamental skills of selected sports as per their inherited potential.
3. The pass out shall be able to devise training program for athletes engaged in different sports activities
4. The curriculum shall enable them to officiate, supervise various sports tournaments and orient them in organizing sports events at all levels.
- A. The curriculum would enable the pass out students to be entrepreneur (to start their own fitness centre, gym, spa etc) and device appropriate fitness program for different genders and age groups of people.
5. The curriculum would enable the pass out to devise training program for physically challenged peoples.

Eligibility for Admission to the programme B.Sc Physical Education, Health Education and Sports (3 Years)

- A. Applicants should have passed the +2 examination of the Government of Tamil Nadu or any other equivalent examination recognized by the Government of Tam I Nadu or approved by the concerned University.
- B. School representation in any game or sports is preferred for the applicants. The procedure followed for the selection of B.P.Ed degree should be followed for B Sc., Physical Education, Health Education and Sports Degree candidates.
- C. The candidates should not have completed 21 years of age as on 1st July. However, relaxation of 3 years may be given for SC/ST.

Admission shall be made on the basis of ranking for a total of 150 marks as detailed below

1. Qualifying Examination	25 marks
2. Participation in Sports and Games	25 marks
3. Games skill test	50 marks
4. Track and Field Skill test	50 marks

Games and Sports participation:


(Maximum Marks:25)

1. Representation for the Country/National placing	25 marks
2. State Representation (Form II/IV in games/Sports)	20 marks
3. Inter Division (Participation) BDS/RDS Inter District (Participation)/CBSC CLUSTER	15 marks
4. District (BDS/RDS)	10 marks
5. Inter-School Representation	05 marks

All other quota system and rule of reservation of the Government of Tamil Nadu shall be followed.

Course-level learning outcomes

The undergraduate degree program of Physical education will be of three years with six semesters. The Course-level learning outcomes for each course within B.Sc degree programme in Physical Education are given below with content matter (detail syllabus of five units) to be taught in each unit and semester for three years


Head
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 Nanjil Catholic College of Arts & Science
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Scheme of Examination 2021-22(Semester I-VI)

SEMESTER I

PART	Core/Allied	Title	Hours	Credits
Part I	Language	Tamil	6	4
Part II	Language	English	6	4
Part III	Core I	Foundation of Physical Education and Gymnastics	5	4
Part III	Core II	Professional English	4	4
Part III	Major Practical-I	Gymnastics	2	2
Part III	Allied I	Basic Anatomy and Physiology	3	3
Part III	Allied Practical - I	Kinanthropometry	2	2
Part IV		Environmental Studies	2	2
Total			30	25

SEMESTER II

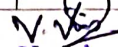
PART	Core/Allied	Title	Hours	Credits
Part I	Language	Tamil	6	4
Part II	Language	English	6	4
Part III	Core III	Theories of Games-I (Kabaddi, Kho-Kho, Handball)	5	4
Part III	Core IV	Professional English	4	4
Part III	Major Practical II	Kabaddi, Kho-Kho & Handball	4	2
Part III	Allied II	Health Education, Safety Education and First aid	3	3
Part IV		Value Based Education	2	2
Total			30	23

SEMESTER III

PART	Core/Allied	Title	Hrs	Credits
Part I	Language	Tamil	6	4
Part II	Language	English	6	4
Part III	Core V	Methods in Physical Education	5	4
Part III	Allied III	Theories of Games-II (Badminton, Ball Badminton & Tennis)	3	3
Part III	Skill Based Core I	Principles of Sports Training	4	4
Part III	Core Practical III	Badminton, Ball Badminton & Tennis	4	2
Part IV	Non Major Elective I	Principles of Physical Literacy	2	2
Part IV	Common	Yoga	2	2
Total			32	25

SEMESTER IV

PART	Core/Allied	Title	Hrs	Credits
Part I	Language	Tamil	6	4
Part II	Language	English	6	4
Part III	Core VI	Organization and Administration in Physical Education	5	4


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MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDERGRADUATE COURSES –

PART IV-COMPULSORY PAPER

UNIT I: THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, scope and importance Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems, water conservation and watershed management.
- c) Mineral resources: Use and exploitation, environmental effects.
- d) Food resources: World food problems, changes, effects of modern agriculture, fertilizer-pesticide problems.
- e) Energy resources: Growing energy needs, renewables and non-renewable energy sources, alternate energy sources.
- f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.
- g) Role of an individual in conservation of natural resources.
- h) Equitable use of resources for sustainable lifestyles.

UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds rivers, oceans, estuaries) Food Chains, Food Webs and Ecological Pyramids Energy flow in the ecosystem Ecological succession

UNIT III : BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.
Biogeographical classification of India Values of Biodiversity
Biodiversity at global, national and local levels India as a mega-diversity nation
Hot-Spots of biodiversity
Threats to biodiversity
Endangered and endemic species of India
Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

V. V. V.
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Nanjil Catholic College of Arts & Science
Kaliyakkavilai - 629 153, Tamil Nadu.

UNIT IV: ENVIRONMENTAL POLLUTION

Definition- Causes, effects and control measures of:-

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution.
- f) Thermal Pollution

Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT V: SOCIAL ISSUES AND THE ENVIRONMENT

Climatic change, global warming, acid rain, ozone depletion.

Wasteland reclamation

Consumerism and Waste products, use and through plastics

Environment Protection Act

Air (Prevention and Control of Pollution Act

Water (Prevention and Control of Pollution) Act

Wildlife Protection Act

Forest Conservation Act

Population Explosion — Family Welfare Programme

Human Rights

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MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

UG COURSES – AFFILIATED COLLEGES

B. Com

(Choice Based Credit System)

(with effect from the academic year 2020-2021 onwards)

Eligibility:

Should have studied Commerce and Accountancy in Higher Secondary School of Examination. 20% reserved for Vocational stream.

Sem	Pt. I/II/III/I V/V	Sub. No.	Subject Status	Subject Title	Contact Hours/ week	Credit
I	I	1	Language	Tamil/other language	6	4
	II	2	Language	Communicative English-I	6	4
	III	3	Core 1	Financial Accounting- I	5	4
	III	4	Core 2	Business Organisation	4	4
	III	5	Add on Major (Compulsory)	Professional English for Commerce & Management	4	4
	III	6	Allied-I	Business Economics	3	3
	IV	7	Common	Environmental Studies	2	2
Sub Total					30	25
II	I	8	Language	Tamil/other language	6	4
	II	9	Language	English	6	4
	III	10	Core 3	Financial Accounting- II	5	4
	III	11	Core 4	Principles of Management	4	4
	III	12	Add on Major (Compulsory)	Professional English for Commerce & Management	4	4
	III	13	Allied-II	Marketing	3	3
	IV	14	Common	Value Based Education/ Social Harmony சமூக ஒழுக்கங்களும் பண்பாட்டு விழுமியங்களும்	2	2
	Sub Total					30

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

SYLLABUS FOR ENVIRONMENTAL STUDIES FOR

UNDER GRADUATE COURSES -

PART IV- COMPULSORY PAPER

UNIT I: THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, scope and importance

Natural resources and associated problems:

- a) Forest resources: Use and over-exploitation, deforestation, timber extraction, dams and their effects on forests and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems, water conservation and watershed management.
- c) Mineral resources: Use and exploitation, environmental effects.
- d) Food resources: World food problems, changes, effects of modern agriculture, fertilizer-pesticide problems.
- e) Energy resources: Growing energy needs, renewables and non renewable energy sources, alternate energy sources.
- f) Land resources: Land as a resource, land degradation, man-induced landslides, soil erosion and desertification.

UNIT II: ECOSYSTEMS

- a) Forest Ecosystem
- b) Grassland Ecosystem
- c) Desert ecosystem
- d) Aquatic Ecosystem (Ponds, rivers, oceans, estuaries)
Energy flow in the ecosystem
Ecological succession
Food Chains, Food Webs and Ecological Pyramids.

UNIT III: BIODIVERSITY AND ITS CONSERVATION

Introduction Definition: Genetic, species and ecosystem diversity.

Biogeographical classification of India

Values of Biodiversity

Biodiversity at global, national and local levels

India as a mega-diversity nation

Hot-Spots of biodiversity

Threats to biodiversity

Endangered and endemic species of India

Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT IV: ENVIRONMENTAL POLLUTION

Definition- Causes, effects and control measures of:-

- a) Air Pollution
- b) Water Pollution
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- d) Marine Pollution
- e) Noise Pollution.
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Solid Waste Management

Disaster Management: Floods, earthquake, cyclone and landslides.

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Climatic change, global warming, acid rain, ozone depletion.

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**MANONMANIAM SUNDARANAR UNIVERSITY,
TIRUNELVELI - 627012.**

**CHOICE BASED CREDIT SYSTEM BACHELOR OF
BUSINESS ADMINISTRATION**

(With effect from the Academic Year 2020-2021 onwards)

**Programme Structure
(III to VI Semester)**

Sem (1)	Part I/ II/III/ IV/V (2)	Subject Number (3)	Subject Status (4)	Subject Title (5)	L	T	P	C	Maximum marks				
									Internal	External	Total		
I	I	1	Language	Tamil / Other Language				4	25	75	100		
	I	2	Language	Communicative English-1				4	25	75	100		
	III	3	Core-1	Professional English for Commerce and Management-1	3	0	2	4	25	75	100		
	III	4	Core -2	Principles of Management	3	2	0	4	25	75	100		
	III	5	Allied-1	Business Statistics	4	2	0	4	25	75	100		
	IV	6	Common	Environmental studies	2	0	0	2	25	75	100		
Sub Total								22					
II	I	7	Language	Tamil / Other Language				4	25	75	100		
	I	8	Language	Communicative English-1				4	25	75	100		
	III	9	Core-3	Professional English for Commerce and Management-1	3	0	2	4	25	75	100		
	III	10	Core -4	Managerial Economics	3	2	0	4	25	75	100		
	III	11	Allied-2	Business Mathematics	4	2	0	4	25	75	100		
	IV	12	Common	Value based Education/ Mana vazhar kalai	2	0	0	2	25	75	100		
Sub Total								22					
III	III	13	Core5	Financial Accounting	3	2	0	4	25	75	100		
	III	14	Core6	Organizational Behaviour	3	2	0	4	25	75	100		
	III	15	Core7	Business Environment	4	0	0	4	25	75	100		
	III	16	Core 8	Banking and Insurance	4	0	0	4	25	75	100		
	III	17	Allied3	Business Law-I	2	2	0	3	25	75	100		
	III	18	Skill Based Practical -I	Computer Applications in Business I(Practical Subject)	0	0	6	3	50	50	100		
	IV	19	Non Major Elective-I	Advertising	2	0	0	2	25	75	100		
	IV	20	Common	Yoga	2	0	0	2	50	50	100		
Sub Total								20	6	6	24+ 2		
IV	III	21	Core9	Cost Accounting	3	2	0	4	25	75	100		
	III	22	Core10	Marketing Management	4	0	0	4	25	75	100		
	III	23	Core11	Human Resource Management	4	0	0	4	25	75	100		

		24	Core 12	Production and Operations Management	3	2	0	4	25	75	100
	III	25	Allied4	Corporate Law	2	2	0	3	25	75	100
	IV	26	Skill Based Practical -II	Computer Applications in Business II (Practical Subject)	0	0	6	3	50	50	100
	IV	27	Non Major Elective-II	Consumer Behaviour	2	0	0	2	25	75	100
	IV	28	Common	Computer for Digital Era	2	0	0	2	50	50	100
	V	29	Extension Activity	NSS/NCC/PHYSICAL EDUCATION/ YRC	-	-	-	1			
				Sub Total	20	6	6	25			
								+2			

V	III	30	Core13	Management Accounting	3	2	0	4	25	75	100
	III	31	Core14	Research Methodology	3	0	2	4	25	75	100
	III	32	Core15	Digital Business Management	4	0	0	4	25	75	100
	III	33	Core16	Financial Services	4	0	0	4	25	75	100
	III	34	Major Elective I (CHOOSE ANY ONE)	Retail Management <i>Or</i> Services Marketing (CHOOSE ANY ONE)	4	0	0	4	25	75	100
	IV	35	Skill Based Practical- III	Effective Employability Skills- I (Practical Subject)	0	0	4	2	50	50	100
	III	36	Skill Based Subject Common	Personality Development	2	0	0	2	25	75	100
	III	37		Field Study	0	0	2	2	50	50	100
				SubTotal	20	2	8	26			
VI	III	38	Core17	Financial Management	3	2	0	4	25	75	100
	III	39	Core18	Strategic Management	3	2	0	4	25	75	100
	III	40	Core 19	Entrepreneurship Development	4	0	0	4	25	75	100
	III	41	Major Elective-II (CHOOSE ANYONE)	Training and Development <i>Or</i> Industrial Relations and Labour laws (CHOOSE ANY ONE)	4	0	0	4	25	75	100
	IV	42	Skill Based Practical -IV	Effective Employability Skills- II (Practical Subject)	0	0	4	2	50	50	100
	IV	43		Major Project	0	2	6	4	50	50	100
				SubTotal	14	6	10	22			

MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI

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