CURRICULUM

M.Sc.: Marine Science (Integrated)

(Choice based credit system)

with effect from the academic year 2017-2018 onwards

Semester	Part I, II, III, IV & V	Subject Status	Subject title	Hours/ Week	Credits	Marks			Passing minimum
						Internal	External	Total	
I	I	Language	Tamil	4	4	25	75	100	50
	II	Language	English	4	4	25	75	100	50
	III	Core 1 - Theory	Animal Diversity - I Invertebrata	4	4	25	75	100	50
	III	Core 2 - Theory	Animal Diversity - II Chordata	4	4	25	75	100	50
	III	Major Practical - II	Paper I & II Practical	4	2	50	50	100	50
	III	Allied - Theory	Chemistry paper-I	3	3	25	75	100	50
	III	Allied - Practical	Allied practical - I	4	2	50	50	100	50
	IV	Common Paper	Environmental studies	2	2	25	75	100	50
					25				

Semester	Part I, II, III, IV & V	Subject Status	Subject title	Hours/ Week	Credits	Marks			Passing minimum
						Internal	External	Total	
II	I	Language	Tamil	4	4	25	75	100	50
	II	Language	English	4	4	25	75	100	50
	III	Core 3 - Theory	Developmental Biology	4	4	25	75	100	50
	III	Core 4 - Theory	Marine Ecology	4	4	25	75	100	50
	III	Major Practical - II	Paper 3 & 4 Practical	4	2	50	50	100	50
	III	Allied - Theory	Chemistry paper-II	3	3	25	75	100	50
	III	Allied - Practical	Allied practical - II	4	2	50	50	100	50
	IV	Common Paper	Value based education	2	2	25	75	100	50
					25				

M. Sc. Marine Biotechnology

Sem. No.	Sub. No.	Subject Status	Subject Title	Credits	Hrs./week	Marks				
						Maximum			Passing Minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
I	1	Core	Biosystematics and Biodiversity	4	3	25	75	100	38	50
	2	Core	Biochemistry	4	3	25	75	100	38	50
	3	Core	Cell and Molecular Biology	4	3	25	75	100	38	50
	4	Core	Microbiology and Microbial applications	4	3	25	75	100	38	50
	5	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50
	6	Elective	Biostatistics and Computer application (or) Biophysics	3	3	25	75	100	38	50
	7	Elective	Nano Science and Technology (or) Marine Biofouling	3	3	25	75	100	38	50
II	8	Core	Developmental Biology	4	3	25	75	100	38	50
	9	Core	Genomics and Bioinformatics	4	3	25	75	100	38	50
	10	Core	Immunology	4	3	25	75	100	38	50
	11	Core	Animal Physiology	4	3	25	75	100	38	50
	12	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50

	13	Elective	Marine Natural Products (or) Bioethics and Bio safety	3	3	25	75	100	38	50
	14	Supportive	EDC	3	3	25	75	100	38	50
III	15	Core	Genetics and rDNA Technology	4	3	25	75	100	38	50
	16	Core	Aquaculture Biotechnology	4	3	25	75	100	38	50
	17	Core	Environmental Biotechnology	4	3	25	75	100	38	50
	18	Core	Bioprocess Technology	4	3	25	75	100	38	50
	19	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50
	20	Elective	Extremophiles (or) Research Methodology	3	3	25	75	100	38	50
	21	Supportive	EDC	3	3	25	75	100	38	50
IV	22		Project	12	-	25	75	100	38	50

M. Sc. Microbiology

Sem. No.	Sub. No.	Subject Status	Subject Title	Credits	Hrs./week	Marks				
						Maximum			Passing Minimum	
						Int.	Ext.	Tot.	Ext.	Tot.
I	1	Core	Biochemistry	4	3	25	75	100	38	50
	2	Core	Cell and Molecular Biology	4	3	25	75	100	38	50
	3	Core	General microbiology	4	3	25	75	100	38	50
	4	Core	Microbial Physiology and Metabolism	4	3	25	75	100	38	50
	5	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50
	6	Elective	Biostatistics and Computer application (or) Aquatic microbiology	3	3	25	75	100	38	50
II	7	Core	Bacteriology and Virology	4	3	25	75	100	38	50
	8	Core	Mycology and Phycology	4	3	25	75	100	38	50
	9	Core	Immunology	4	3	25	75	100	38	50
	10	Core	Microbial Genetics	4	3	25	75	100	38	50
	11	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50
	12	Elective	Food Microbiology (or) Microbial Genomics and Proteomics	3	3	25	75	100	38	50
	13	Supportive	Sports medicine, Physiotherapy & First aid	3	3	25	75	100	38	50
III	14	Core	Recombinant DNA Technology	4	3	25	75	100	38	50
	15	Core	Bioprocess Technology	4	3	25	75	100	38	50
	16	Core	Medical Microbiology	4	3	25	75	100	38	50
	17	Core	Bioremediation	4	3	25	75	100	38	50
	18	Practical	Practical covering above 4 core papers	4	8	25	75	100	38	50

	19	Elective	Bioinformatics (or) Fish processing and Quality Assessment Technology	3	3	25	75	100	38	50
	20	Elective	Bioethics and Bio safety (or) Nano-science and Technology	3	3	25	75	100	38	50
	21	Supportive	EDC	3	3	25	75	100	38	50
IV	22		Project	12	-	25	75	100	38	50

M. Phil. Coastal Aquaculture

Subject code	Subject	Exam hrs	Total marks	Passing min.
Semester I				
LCA1	Paper I - Research Methodology	3	100	50
LCA2	Paper II - Coastal Aquaculture	3	100	50
LCA3	Paper III - Culture and Hatchery techniques	3	100	50
Semester II				
LCAD	Project work (Ext.: 150 + Int. (Viva) : 50)	-	200	100

M.Phil. Marine Biotechnology

Subject code	Subject	Exam hrs	Total marks	Passing min.
Semester I				
LMB1	Paper I - Research Methodology	3	100	50
LMB2	Paper II – Genetic Engineering	3	100	50
LMB3	Paper III – Applied Marine Biotechnology	3	100	50
Semester II				
LMBD	Project work (Ext.: 150 + Int. (Viva) : 50)	-	200	100

M.Phil. Microbial Technology

Subject code	Subject	Exam hrs	Total marks	Passing min.
Semester I				
LMT1	Paper I - Research Methodology	3	100	50
LMT2	Paper II – Microbial Technology - I	3	100	50
LMB3	Paper III – Microbial Technology - II	3	100	50
Semester II				
LMTD	Project work (Ext.: 150 + Int. (Viva) : 50)	-	200	100