

STRUCTURE OF THE SYLLABUS FOR 4 YEAR UG PROGRAMME

SCHOOL NAME - **Royal School of Biosciences (RSBSC)**

DEPARTMENT NAME - **Department of Microbiology**

PROGRAMME NAME - **Undergraduate programme (UG)**

1st SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M101	Fundamentals of Microbiology	100	3	3-0-0
Major (Core)	MIB152M111	Practical on Fundamental Microbiology	100	3	0-0-6
Minor	MIB152N101	Introduction and Scope of Microbiology	100	3	3-0-0
Interdisciplinary (IDC)	IKS992K101	Indian Knowledge System-1	100	3	3-0-0
Ability Enhancement course (AEC-1)	CEN982A101	Communicative English-1	100	1	1-0-0
AEC-2	BHS982A102	Behavioural Science-1	100	1	1-0-0
Skill Enhancement Course (SEC)	MIB152S111	Microbial Quality Control in Water and Food	100	3	3-0-0
Value Added Course (VAC)	VAC-1	VAC- (To choose from a pool of courses)	100	3	3-0-0
*MOOCs	MOOCs 1	*MOOCs/online course will be identified by the	100	3	

		dept. from the list of courses available on the MOOC online platform/SWAYAM portal			
TOTAL CREDIT FOR 1st SEMESTER				23	17-0-6
2nd SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M201	Bacteriology	100	3	3-0-0
Major (Core)	MIB152M211	Practical on Bacteriology	100	3	0-0-6
Minor	MIB152N201	Introductory Virology	100	3	3-0-0
IDC	IKS992K201	Indian Knowledge System-2	100	3	3-0-0
AEC-1	CEN982A201	Communicative English-2	100	1	1-0-0
AEC-2	BHS982A202	Behavioural Science-2	100	1	1-0-0
SEC	MIB152S211	Fermentation Technology and Application	100	3	0-0-3
VAC	VAC-2	VAC- (To choose from a pool of courses)	100	3	3-0-0
*MOOCs	MOOCs 1	*MOOCs/online course will be identified by the dept. from the list of courses available on the MOOC online	100	3	

		platform/SWAYAM portal			
TOTAL CREDIT FOR 2nd SEMESTER				23	14-0-9
3rd SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M301	Biochemistry	200	3	3-0-0
Major (Core)	MIB152M311	Practical on Biochemistry	200	1	0-0-2
Major (Core)	MIB152M302	Cell Biology	200	3	3-0-0
Major (Core)	MIB152C312	Practical on cell Biology	200	1	0-0-2
Minor	MIB152N301	Plant Pathology and plant-microbe interaction	200	4	4-0-0
IDC	MIB152K301	Indian Knowledge System-3	200	3	3-0-0
AEC-1	CEN982A301	Communicative English-3	200	1	1-0-0
AEC-2	BHS982A302	Behavioural Science-3	200	1	1-0-0
SEC	MIB152S311	Biofertilizer and Biopesticide	200	3	1-0-4
*MOOCs	MOOCs 1	*MOOCs/online course will be identified by the dept. from the list of courses available on the MOOC online platform/SWAYAM portal	100	3	

TOTAL CREDIT FOR 3rd SEMESTER				23	16-0-8
4th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M401	Immunology	200	4	4-0-0
Major (Core)	MIB152M402	Microbial Genetics	200	4	4-0-0
Major (Core)	MIB152M411	Practical on Immunology and Microbial Genetics	200	4	0-0-8
Minor-1	MIB152N401	Biosafety and Intellectual property rights	200	3	3-0-0
Minor-2	MIB152N402	Microbial Biotechnology	200	3	3-0-0
AEC-1	CEN982A401	Communicative English-IV	200	1	1-0-0
AEC--2	BHS982A402	Behavioural Science-IV	200	1	1-0-0
*MOOCs	MOOCs 1	*MOOCs/online course will be identified by the dept. from the list of courses available on the MOOC online platform/SWAYAM portal	100	3	
TOTAL CREDIT FOR 4th SEMESTER				23	16-0-8
5th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P

Major (Core)	MIB152M501	Molecular Biology	300	3	3-0-0
Major (Core)	MIB152M511	Practical on Molecular Biology	300	3	0-0-6
Major (Core)	MIB152M502	Phycology Mycology and Virology	300	3	3-0-0
Major (Core)	MIB152M512	Practical on Phycology Mycology and Virology	300	3	0-0-6
Minor	MIB152N501	Medical Microbiology	300	4	4-0-0
Internship	MIB152I501	6 weeks Internship after 4 th sem exam	300	4	0-0-8
TOTAL CREDIT FOR 5th SEMESTER				20	10-0-20
6th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M601	Genetic engineering	300	4	4-0-0
Major (Core)	MIB152M602	Pharmaceutical Microbiology	300	4	4-0-0
Major (Core)	MIB152M603	Inheritance Biology	300	4	4-0-0
Major (Core)	MIB152M604	Practical on Genetic engineering	300	4	0-0-8
Minor	MIB152N601	Food Microbiology	300	4	4-0-0
TOTAL CREDIT FOR 6th SEMESTER				20	16-0-8
7th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P

Major (Core)	MIB152M701	Industrial and food Microbiology	400	4	4-0-0
Major (Core)	MIB152M702	Environmental and Agricultural Microbiology	400	4	4-0-0
Major (Core)	MIB152M703	Microbial Physiology & Metabolism	400	4	4-0-0
Major (Core)	MIB152M704	Practical on Food and Environmental Microbiology	400	4	0-0-8
Minor	MIB152N701	Environmental Microbiology	400	4	4-0-0
TOTAL CREDIT FOR 7th SEMESTER				20	16-0-8
8th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	MIB152M801	Research Methodology and Scientific Writing	400	4	4-0-0
Minor	MIB152N801	Agriculture Microbiology	400	4	4-0-0
Project / Dissertation			400	12	0-0-12
or					
Advanced Microbiology course to be taken in lieu of Dissertation/Research Project	MIB152M802	Microbial enzyme: Current trend in industry and healthcare	400	4	
	MIB152M803	Parasitology, Medical and Veterinary Microbiology	400	4	

	MIB152M804	Microbiome's role in human and plants health	400	4	
TOTAL CREDIT FOR 8th SEMESTER				20	8-0-12