



NEHRU ARTS AND SCIENCE COLLEGE

(Autonomous)

(Reaccredited With “A” Grade by NAAC, ISO 9001: 2008 & 14001: 2004 Certified,
Recognized by UGC with 2(f) & 12(B) and Affiliated to Bharathiar University)
Nehru Gardens, Thirumalayampalayam, Coimbatore - 641 105, Tamil Nadu.



B. Sc. MICROBIOLOGY WITH NANOTECHNOLOGY SCHEME OF EXAMINATION

(Applicable to the students admitted during the academic year 2018– 2019)

Semester	Part	Course Code	Name of the Course	Instruction hours / week	Duration of Examination	Examination Marks			Credits
						CA	ESE	Total	
I	I	18U1TAM101/ 18U1HIN101 / 18U1MAL101/ 18U1FRN101	Language I	5	3	25	75	100	4
	II	18U2ENG101	English I	5	3	25	75	100	4
	III	18U3MNC101	Core Paper I - Fundamentals of Microbiology	6	3	25	75	100	4
		18U3MNP204	Core Paper IV Lab in Fundamentals of Microbiology	5	-	-	-	-	-
		18U3MTA101	Allied Paper I Biostatistics and Computer Applications – I (Theory)	4	3	20	55	75	3
		18U3MTR203	Allied Paper III Biostatistics and Computer Applications - Practical	2	-	-	-	-	-
	IV	18U4ENV101	Ability Enhancement Compulsory course (AECC) Environmental Science	2	3	-	50	50	2
IV	18U4HVY201	Human Excellence – Human Values and Yoga Practice I	1	-	-	-	-	-	
Sub Total				30				425	17
II	I	18U1TAM202/ 18U1HIN202/ 18U1MAL202/ 18U1FRN202	Language II	5	3	25	75	100	4
	II	18U2ENG202	English II	5	3	25	75	100	4
	III	18U3MNC202	Core Paper II – Cell Biology	3	3	25	75	100	3
		18U3MNC203	Core Paper III - Microbial Physiology	4	3	25	75	100	4
		18U3MNP204	Core Paper IV Lab in Fundamentals of Microbiology	5	3	20	55	75	4
		18U3MTA202	Allied Paper II Biostatistics and Computer Applications – II (Theory)	3	3	20	55	75	3
		18U3MTR203	Allied Paper III Biostatistics and Computer	2	3	20	30	50	2

			Applications - Practical						
	IV	18U4HRC202	Human Rights and Constitution of India	2	3	-	50	50	2
	IV	18U4HVY201	Human Excellence – Human Values and Yoga Practice I	1	2	25	25	50	2
			Sub Total	30				700	28
III	I	18U1TAM303/ 18U1HIN303 / 18U1MAL303/ 18U1FRN303	Language III	5	3	25	75	100	4
	II	18U2ENG303	English III	5	3	25	75	100	4
	III	18U3MNC305	Core Paper V - Microbial Diversity	4	3	25	75	100	4
		18U3MNP407	Core Paper VII Lab in Microbial Physiology and Metabolism	3	-	-	-	-	-
		18U3BYA304	Allied Paper IV Biochemistry I (Theory)	3	3	20	55	75	3
		18U3BYR406	Allied Paper VI Biochemistry Practical - I	2	-	-	-	-	-
	IV	18U4MNS301	Skill Based Paper I: Clinical Laboratory Technology	3	3	20	55	75	3
		18U4NM3BT1 / 18U4NM3AT1 / 18U4NM3CAF / 18U4NM3GTS / 18U4NM3WRT	# @Basic Tamil / ##Advanced Tamil / * NME: Consumer Affairs / Gandhian Thoughts / Women's Rights	2	3	50	50	50	2
		18U4MN3ED1/ ED2	EDC - Extra Departmental Course	2	3	-	50	50	2
	IV	18U4HVY402	Human Excellence – Human Values and Yoga Practice II	1	-	-	-	-	-
	IV	18U4MNVALC	Skill Enhancement Add on course – Institute / Industry Linkage	-	-	-	-	-	-
			Sub Total	30				550	22
IV	I	18U1TAM404/ 18U1HIN404 / 18U1MAL404/ 18U1FRN404	Language IV	5	3	25	75	100	4
	II	18U2ENG404	English IV	5	3	25	75	100	4
	III	18U3MNC406	Core Paper VI – Basics of Material Science and Technology	4	3	25	75	100	4
		18U3MNP407	Core Paper VII Lab in Microbial Physiology and Metabolism	5	6	20	55	75	3
		18U3BYA405	Allied Paper V Biochemistry II (Theory)	3	3	20	55	75	3
		18U3BYR406	Allied Paper VI Biochemistry Practical - I	2	3	20	30	50	2
	IV	18U4MNS402	Skill Based Paper II – Diploma in Diagnostic	3	3	20	55	75	3

			Microbiology I						
		18U4NM4BT1 / 18U4NM4AT1 / 18U4NM4GEN	# @Basic Tamil / ##Advanced Tamil / General Awareness	2	3	50		50	2
		18U4HVY402	Human Excellence – Human Values and Yoga Practice II	1	2	25	25	50	2
		18U4MNVALC	Skill Enhancement Add on course – Institute / Industry Linkage	-	-	-	-	-	Grade
			Sub Total	30				675	27
V	III	18U3MNC508	Core Paper VIII – Immunology	4	3	25	75	100	4
		18U3MNC509	Core Paper IX – Medical Microbiology	4	3	25	75	100	4
		18U3MNC510	Core Paper X – Microbial Genetics	4	3	25	75	100	4
		18U3MNC511	Core Paper XI – Introduction to Nanomaterials	4	3	25	75	100	4
		18U3MNE 501/502/503	Discipline Specific Elective Paper I	4	3	25	75	100	4
		18U3MNP615	Core Paper XV Lab in Applied Microbiology and Nanotechnology	6	-	-	-	-	-
	IV	18U4MNS503	Skill Based Paper III – Diploma in Diagnostic Microbiology II	4	3	20	55	75	3
			Sub Total	30				575	23
VI	III	18U3MNC612	Core Paper XII – Nanobiotechnology	4	3	25	75	100	4
		18U3MNC613	Core Paper XIII Bio Medical Applications of Nanomaterials	4	3	25	75	100	4
		18U3MNC614	Core Paper XIV - Food & Dairy Microbiology	4	3	20	55	75	3
		18U3MNE 604/605/606	Discipline Specific Elective Paper II	4	3	25	75	100	4
		18U3MNE 607/608/609	Discipline Specific Elective Paper III	4	3	25	75	100	4
		18U3MNP615	Core Paper XV Lab in Applied Microbiology and Nanotechnology	6	9	20	55	75	3
	IV	18U4MNZ604	Skill Based Paper III – Lab in Diagnostic Microbiology	4	3	20	55	75	3
	V	18U5MN6EXT	Extension Activity	-	-	50	-	50	2
				30				675	27
Total								3600	144
Additional Credit (Optional)				Semester II-VI					8\$

Basic Tamil - Students who have not studied Tamil upto 12th standard.

##**Advance Tamil** – Students who have studied Tamil language upto 12th standard and chosen other languages under part I of the programme but would like to advance their Tamil language skills.

* **NME** – Student shall choose any one course out of three courses.

@ No End Semester Examinations. Only Continuous Internal Assessment (CIA)

\$ - Not included in Total marks & CGPA Calculation

LIST OF DISCIPLINE SPECIFIC ELECTIVE PAPERS:

Discipline Specific Elective Papers	Course code	Group	Name of the Course
Discipline Specific Elective Paper I/ Sem V	18U3MNE501	A	Recombinant DNA Technology
	18U3MNE502	B	Plant Biotechnology
	18U3MNE503	C	Virology
Discipline Specific Elective Paper II/Sem VI	18U3MNE604	A	Environmental and Agricultural Microbiology
	18U3MNE605	B	Fermentation Technology
	18U3MNE606	C	Bioinstrumentation
Discipline Specific Elective Paper III/Sem VI	18U3MNE607	A	Industrial Microbiology
	18U3MNE608	B	Medical Biochemistry
	18U3MNE609	C	Entrepreneurial Microbiology

Extra Departmental Course

S.No.	Course Code	Name of the Course
1	18U4MN3ED1	Mushroom Cultivation Technology
2	18U4MN3ED2	Vermitechnology

Additional Credit Course

Earning Additional credit course is not mandatory for Course Completion

Additional credits: 8

S. No.	Course	Credit/ Course	Total Credits
1	Completion of Certificate Course	1	1
2	Hindi/ other Foreign languages	1	1
3	Self Study Papers	1	2
4	MOOC Courses/Spoken Tutorial prescribed by the Departments	1	3
5	Representation - Sports/Social Activities/ Co curricular/Extracurricular Activities at University/ District/ State/ National/ International levels	1	1
Total			8

Rules: The Students can earn additional credits only if they complete the above during the course period (II to V Sem) and based on the following criteria. Proof of Completion must be submitted to the Office of Controller of Examinations before the commencement of the VI Semester. (Earning Additional credit course is not mandatory for Course Completion)

1. Students can complete Certification Courses for a minimum of 30hrs (II to V Sem only) from reputed centers and the same certificate shall be produced to earn a credit. They shall be guided by the Department if needed.
2. Students can opt Hindi/ any Foreign Language approved by Certified Institutions to earn one credit. The certificate of Hindi must be obtained from Dakshin Bharat Hindi Prachar Sabha and He/ She has to enroll and complete during their course period (II to V Sem only)
3. Students can earn one credit, if they complete One Selfstudy Paper prescribed by the Department. The Departments shall offer two Self Study Papers.

Self Study Paper offered by Microbiology Department

S. No.	Semester	Course code	Course Title
1	Semester II to V	18UMNSS01	Solid waste Management
2		18UMNSS02	Human Anatomy and Human Physiology

4. Students can earn one Credit, if they complete any one MOOC courses/ Spoken Tutorial prescribed by the Department. Students shall earn a maximum of 3 Additional Credits by completing 3 online courses.

List of Online Courses prescribed by Microbiology Department

1. LibreOffice
2. Biopython
3. Cell Designer
4. Jmol Application
5. Avagadro
6. DWSIM

Note: Other than the above mentioned courses, any course from recognized websites with the consent of the Head of the Department will also be accepted.

5. Award Winners in Sports/Social Activities/ Co curricular/ Extra Curricular Activities at University/ District/ State/ National/ International levels can earn One Extra Credit by producing the Certificate.

Chairman
Board of Studies in Microbiology
Nehru Arts and Science College
Coimbatore