

 KAZI NAZRUL UNIVERSITY			FACULTY OF SCIENCE, TECHNOLOGY & VOCATIONAL STUDIES		3-Year UG Degree /4-Year UG Degree (Honours) / 4-Year UG Degree (Honours with Research)			WITH EFFECT FROM THE ACADEMIC SESSION: 2023-24										
Abbreviated Degree	Discipline	Degree Programme	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks		
											Practical	Theoretical	Practical	Theoretical				
3-year UG Degree			I	Bacteriology	MAJOR	BSCMCBMJ101	MJC-1	3 - 0 - 4	5	20	30	15	20	35	100	350		
				Choose from the Pool of Minor Courses offered in 1st Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-1	See Pool	5		See Pool				100			
				Choose from the Pool of Multidisciplinary Courses offered in 1st Semester across the faculties	MD	See Pool	MDC-1	2 - 1 - 0	3			15		35	50			
				English/MIL Communication	AE	See Pool	AEC-1	4 - 0 - 0	4			15		35	50			
				Microbial World and Principles of Microbiology	SE	BSCMCBSE101	SEC-1	0 - 1 - 4	3		30		20		50			
			II	Biochemistry	MAJOR	BSCMCBMJ201	MJC-2	3 - 0 - 4	5	20	30	15	20	35	100	350		
				Choose from the Pool of Minor Courses offered in 2nd Semester by other Disciplines within the faculty	MINOR	Corresponding Course Code of Minor opted in 1st Semester	MNC-2	See Pool	5		See Pool				100			
				Choose from the Pool of Multidisciplinary Courses offered in 2nd Semester across the faculties	MD	See Pool	MDC-2	2 - 1 - 0	3			15		35	50			
				Environment Studies	VA	VA201	VAC-1	4 - 0 - 0	4			15		35	50			
				Microbial Techniques and Instrumentation	SE	BSCMCBSE201	SEC-2	0 - 1 - 4	3		30		20		50			
			Student exiting the programmes after securing 40 credits will be awarded UG Certificate in the relevant Discipline/Subject provided they secure following 4 credits in work based vocational courses / summer internship during 1st year															
			II	Vocational Course	Any One	VC	VC201	VCC-1	0 - 0 - 8	4	24	30		20			50	400
				Summer Internship		SI	SI201	SIC-1										
			III	Cell Biology	MAJOR	BSCMCBMJ301	MJC-3	3 - 0 - 4	5	22	30	15	20	35	100	400		
				Molecular Biology	MAJOR	BSCMCBMJ302	MJC-4	3 - 0 - 4	5		30	15	20	35	100			
				Choose from the Pool of Minor Courses offered in 3rd Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-3	See Pool	5		See Pool				100			
				Choose from the Pool of Multidisciplinary Courses offered in 3rd Semester across the faculties	MD	See Pool	MD-3	2 - 1 - 0	3			15		35	50			
				MIL /English Communication	AE	See Pool	AEC-2	4 - 0 - 0	4			15		35	50			
			Students who opted English in SEM-I have to opt for any course from MIL (Bengali/Hindi/Urdu/Alternative English) in SEM -III and Students who opted MIL (Bengali/Hindi/Urdu/Alternative English) in SEM -I have to opt English in SEM -III															
			IV	Microbial Diagnostics and Public Health	MAJOR	BSCMCBMJ401	MJC-5	3 - 0 - 4	5	22	30	15	20	35	100	400		
Industrial Microbiology	MAJOR	BSCMCBMJ402		MJC-6	3 - 0 - 4	5	30	15	20		35	100						
Choose from the Pool of Minor Courses offered in 4th Semester by other Disciplines within the faculty	MINOR	See Pool		MNC-4	See Pool	5	See Pool				100							
Microbial Physiology and Metabolism	SE	BSCMCBSE401		SEC-3	0 - 1 - 4	3	30		20			50						
Choose from the Pool of Value Added Course offered in 4th Semester	VA	See Pool		VAC-2	See Pool	4		15			35	50						
Student exiting the programmes after securing 84 credits will be awarded UG Diploma in the relevant Discipline/Subject provided they secure following 4 credits in work based vocational courses / summer internship during 2nd year																		
IV	Vocational Course	Any One	VC	VC401	VCD-1	0 - 0 - 8	4	26	30		20			50	450			
	Summer Internship		SI	SI401	SID-1													

BSC	Microbiology	V	Environmental Microbiology and Microbial Ecology	MAJOR	BSCMCBMJ501	MJC-7	3 - 0 - 4	5	20	30	15	20	35	100	400		
			Microbial Genetics	MAJOR	BSCMCBMJ502	MJC-8	3 - 0 - 4	5		30	15	20	35	100			
			Virology	MAJOR	BSCMCBMJ503	MJC-9	3 - 0 - 4	5		30	15	20	35	100			
			Choose from the Pool of Minor Courses offered in 5th Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-5	See Pool	5		See Pool			100				
		VI	Medical and Veterinary Microbiology	MAJOR	BSCMCBMJ601	MJC-10	3 - 0 - 4	5	22	30	15	20	35	100	450		
			Immunology	MAJOR	BSCMCBMJ602	MJC-11	3 - 0 - 4	5		30	15	20	35	100			
			Food and Dairy Microbiology	MAJOR	BSCMCBMJ603	MJC-12	3 - 0 - 4	5		30	15	20	35	100			
			Hereditry and Evolution	MAJOR	BSCMCBMJ603	MJC-13	3 - 0 - 4	5		30	15	20	35	100			
			Summer Internship	SI	SI601	SIMC-1	0 - 0 - 4	2		30		20		50			
		Total Credit and Marks			TOTAL CREDIT				126	TOTAL MARKS					2350		
		Students who want to undertake 3-year UG programme will be awarded UG Degree in the relevant Discipline / Subject upon securing 126 credits															
		4 - Year UG Degree (Honours)	VII	Microbial Products in Agriculture	MAJOR	BSCMCBMJ701	MJC-14	3 - 0 - 4	5	25	30	15	20	35	100	500	
				Biostatistics and Bioinformatics	MAJOR	BSCMCBMJ702	MJC-15	3 - 0 - 4	5		30	15	20	35	100		
				Genetic Engineering and Applications	MAJOR	BSCMCBMJ703	MJC-16	3 - 0 - 4	5		30	15	20	35	100		
				Advance Microbiology	MAJOR	BSCMCBMJ704	MJC-17	3 - 0 - 4	5		30	15	20	35	100		
				Choose from the Pool of Minor Courses offered in 7th Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-6	See Pool	5		See Pool			100			
			VIII	Microbial Biotechnology	MAJOR	BSCMCBMJ801	MJC-18	3 - 0 - 4	5	22	30	15	20	35	100	500	
				Pharmaceutical Microbiology	MAJOR	BSCMCBMJ802	MJC-19	2 - 0 - 4	4		30	15	20	35	100		
				Research Methodology and Ethics	MAJOR	BSCMCBMJ803	MJC-20	4 - 0 - 0	4			30		70	100		
				Project Work on Microbiology of Societal Importance	MAJOR	BSCMCBMJ804	MJC-21	0 - 0 - 8	4		60		40		100		
				Choose from the Pool of Minor Courses offered in 8th Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-7	See Pool	5		See Pool			100			
		Total Credit and Marks			TOTAL CREDIT				173	TOTAL MARKS					3350		
		Students who want to undertake 4-year UG Honours program will be awarded UG Degree (Honours) in the relevant Discipline / Subject provided they secure 173 credits															
4 - Year UG Degree (Honours with Research)	VII	Microbial Products in Agriculture	MAJOR	BSCMCBMJ701	MJC-14	3 - 0 - 4	5	25	30	15	20	35	100	500			
		Biostatistics and Bioinformatics	MAJOR	BSCMCBMJ702	MJC-15	3 - 0 - 4	5		30	15	20	35	100				
		Genetic Engineering and Applications	MAJOR	BSCMCBMJ703	MJC-16	3 - 0 - 4	5		30	15	20	35	100				
		Advance Microbiology	MAJOR	BSCMCBMJ704	MJC-17	3 - 0 - 4	5		30	15	20	35	100				
		Choose from the Pool of Minor Courses offered in 7th Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-6	See Pool	5		See Pool			100					
	VIII	Microbial Biotechnology	MAJOR	BSCMCBMJ801	MJC-18	3 - 0 - 4	5	22	30	15	20	35	100	500			
		Research Methodology	RP	BSCMCBRP801	RPC-1	4 - 0 - 0	4			30		70	100				
		Dissertation	RP	BSCMCBRP802	RPC-2	0 - 0 - 16	8		120		80		200				
		choose from the Pool of Minor Courses offered in 8th Semester by other Disciplines within the faculty	MINOR	See Pool	MNC-7	See Pool	5		See Pool			100					
	Total Credit and Marks			TOTAL CREDIT				173	TOTAL MARKS					3350			
Students who want to undertake 4-year UG Honours with Research program will be awarded UG Degree (Honours with Research) in the relevant Discipline / Subject provided they secure 173 credits																	

Abbreviations: MA= Major; MJC= Major Course; MN= Minor; MNC= Minor Course; AE= Ability Enhancement; AEC= Ability Enhancement Course; SE= Skill Enhancement; SEC= Skill Enhancement Course; MD= Multidisciplinary; MDC= Multidisciplinary Course; SI= Summer

Abbreviations: MJ= Major, MJC= Major Course, MN= Minor, MNC= Minor Course, AE= Ability Enhancement, AEC= Ability Enhancement Course, SE= Skill Enhancement, SEC= Skill Enhancement Course, MD= Multidisciplinary, MDC= Multidisciplinary Course, SI= Summer Internship; SIC= Summer Internship for Certificate; SID: Summer Internship for Diploma; SIMC= Summer Internship Mandatory Course; RPC= Research Project Course; VA= Value Added; VAC= Value Added Course; VC= Vocational Course; VCC= Vocational Course for Certificate; VCD= Vocational Course for Diploma; CA= Continuous Assessment, ESE= End Semester Examination, L= Lecture Hour; T= Tutorial Hour and P= Practical Hour/ Field Work and NA= Not Applicable

Note: Minor Courses (MNC) : Students of a particular UG Course will choose from the Pool of Minor Courses offered by disciplines other than the major discipline opted by the student within the faculty. The student is required to opt the same Minor Discipline in the 2nd semester which he had opted in 1st semester. Explanation: If a student of Physics Major, opts for a Minor Course offered by Chemistry in 1st semester then that student is required to continue with the Minor Course offered by Chemistry for 2nd semester as Minor Course in the 2nd semester.

Semesterwise Pool of Minor Courses offered by Microbiology for other Disciplines within the Faculty

Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks	
									Practical	Theoretical	Practical	Theoretical			
Microbiology	I	Bacteriology	MINOR	BSCMCBMN101	MNC-1	3 - 0 - 4	5	NA	30	15	20	35	100	NA	
	II	Biochemistry		BSCMCBMN201	MNC-2	3 - 0 - 4	5		30	15	20	35	100		
	III	Fundamentals of Molecular Biology		BSCMCBMN301	MNC-3	3 - 0 - 4	5		30	15	20	35	100		
	IV	Public Health and Microbial Diagnostics		BSCMCBMN401	MNC-4	3 - 0 - 4	5		30	15	20	35	100		
	V	Introduction to Virology		BSCMCBMN501	MNC-5	3 - 0 - 4	5		30	15	20	35	100		
	VI	NA		NA		NA			NA		NA		NA		
	VII	Genetic Engineering		BSCMCBMN701	MNC-6	3 - 0 - 4	5		30	15	20	35	100		
	VIII	Microbiology in Pharmaceutics		BSCMCBMN801	MNC-7	3 - 0 - 4	5		30	15	20	35	100		

Semester wise Pool of Multidisciplinary Courses offered by Microbiology for other Disciplines across the Faculties

Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
									Practical	Theoretical	Practical	Theoretical		
Microbiology	NA	NA	NA	NA										

Pool of Communication Courses offered as Ability Enhancement Courses in Semester-I

Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
									Practical	Theoretical	Practical	Theoretical		
English/MIL Communication	I	Any One	AE	AECE101	AEC-1	4 - 0 - 0	4	NA		15	35	50	NA	
				Bengali Communication										AECB101
				Hindi Communication										AECH101
				Urdu Communication										AECU101
				Alternative English										AECAE101

Pool of Communication Courses offered as Ability Enhancement Courses in Semester-III

Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
									Practical	Theoretical	Practical	Theoretical		
MIL / English Communication	III	Any One	AE	AECE301	AEC-2	4 - 0 - 0	4	NA		15	35	50	NA	
				Bengali Communication										AECB301
				Hindi Communication										AECH301
				Urdu Communication										AECU301
				Alternative English										AECAE301

Students who opted English Communication in SEM-I (AECE101) have to opt for any course from MIL (Bengali/Hindi/Urdu/Alternative English) in SEM -III and Students who opted MIL (Bengali/Hindi/Urdu/Alternative English) in SEM -I have to opt English communication (AECE301)in SEM -III

Semester wise Pool of Multidisciplinary Courses offered for all Disciplines across the Faculties

Offered By Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
									Practical	Theoretical	Practical	Theoretical		

Physics	I	Any One	Physical Science	MD	MDC101	MDC-1	2 - 1 - 0	3	NA	15	35	50	NA
BBA			E-Commerce		MDC102								
Political Science			Human Rights		MDC103								
Geography			Disaster Management		MDC104								
Physical Education			Fitness and Wellness		MDC105								
Zoology			Application of Bio-Science		MDC106								
English			Film Appreciation		MDC107								
Commerce			Accounting for All		MDC108								
History			Exploring Early Medieval Bengal: C.7th Century CE to 1206 CE		MDC109								
Bengali			Bangla Sahitya O Sanskriti		MDC110								
Economics			Money and Banking		MDC111								
Hindi			Patrakarita		MDC112								
Mathematics			Business Mathematics		MDC113								
Sociology			Indian Society		MDC114								
Philosophy			Yoga for Daily Life		MDC115								
Electronics			Electronic Measurements		MDC116								
Computer Science			Information and Communication Technology		MDC117								
Botany			Introduction to Local Flora		MDC118								
Computer Applications			Information and Media Literacy		MDC119								
Commerce			Microeconomics		MDC120								
Geology	A B C D of Geology	MDC121											

Offered By Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks
									Practical	Theoretical	Practical	Theoretical		
Mathematics	II	Any One	MD	Mathematical Science	MDC-2	2 - 1 - 0	3	NA		15	35	50	NA	
BBA				Business Environment										MDC202
Statistics				Basic Statistics										MDC203
History				Understanding Medieval Bengal Select Themes: 1206 CE-1727 CE										MDC204
Commerce				Personal Finance										MDC205
Nutrition				Nutrition and Public Health										MDC206
Education				Educational Philosophy										MDC207
Psychology				Stress Management										MDC208
Computer				Social Media and Cyber Awareness										MDC209
Bengali				Adhunik Bangla Sahitya										MDC210
Nazrul Sangeet				Nazrul Sangeet		MDC211								
Electronics				E-Waste Management		MDC212								
Chemistry				Chemical Science		MDC213								
Sanskrit				Critical Survey of Sanskrit Language		MDC214								
Urdu				Asnaf- E -Adab		MDC215								
Hindi				Anuvad Vigyan		MDC216								
Botany				Herbal Home Remedies		MDC217								
English				Contemporary India: Women and Empowerment		MDC218								
Political Science				Women Empowerment in India: Issues and Dimensions		MDC219								
Physical Education				Yoga-Vyayama		MDC220								
Commerce				Macroeconomics		MDC221								
Geology				The Past Life on Earth		MDC222								
						0- 1 - 4			30	20				

Offered By Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem	CA Marks	ESE Marks	Total Marks	Sem Marks
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Offered By Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Credit	Practical	Theoretical	Practical	Theoretical	Total Marks	Sem Marks	
Geography	III	Any One	MD	MDC301	MDC-3	2 - 1 - 0	3	NA		15		35	50	NA	
Sanskrit				The Vedangas and other Streams of Indian Knowledge System											MDC302
Physics				Indian Astronomy											MDC303
Zoology				Indian Health Sciences											MDC304
Mathematics				Indian Mathematics											MDC305
Education				Indian Education											MDC306
Political Sc				Indian Polity and Economy											MDC307
Philosophy				Methodology of Indian Knowledge System											MDC308
Geology				Remote Sensing and GIS											MDC309
Physical Education				Indian Medical System and Yoga											MDC310
Urdu				Urdu Gajal											MDC311
Commerce				Indian Economy											MDC312
Computer Science				Impact of Artificial Intelligence in Education											MDC313
Physiology				Community Health Care											MDC314

Pool of Value Added Courses offered in Semester-IV for all Disciplines across all Faculties

Offered By Discipline	Semester	Course Name	Course Type	Course Code	Course Details	L - T - P	Course Credit	Sem Credit	CA Marks		ESE Marks		Total Marks	Sem Marks	
									Practical	Theoretical	Practical	Theoretical			
Physiology	IV	Any One	VA	VAC401	VAC-2	4 - 0 - 0	4	NA		15		35	50	NA	
Philosophy				Social Values and Ethics											VAC402
Computer Science				Digital and Technological Solutions											VAC403
History				Understanding India											VAC404
Economics				Sustainable Development: Issues and Challenges											VAC405
Commerce				Goods and Services Tax											VAC406
Political Science				Basics of Indian Constitution											VAC407
Physical Education				Integrated Self Defence		VAC408									0- 2 - 4