

Mahakaushal University, Jabalpur (M.P.)



Scheme & Syllabus For B.Sc. with Research/honors Microbiology 2022-23

Duration of Course: 4 Years
Examination Mode: Semester
Examination System: CBCS

Credit Distribution

SEMESTER SYSTEM			Credits Required								
			Sem	MJ	MI	DSE	GEC/ OEC	AECC	SEC SB/VB	FW	Total Credit
Level 5	Certificate	1 st Year Pass (Sem I+Sem II)	I	6	6		4	4			20
			II	6	6		4	4			20
Level 6	Diploma	2 nd Year Pass (Sem III+Sem IV)	III	6	6		4		4		20
			IV	6	6		4		4		20
Level 7	Degree	3 rd Year Pass (Sem V+Sem VI)	V	6		4			4	6	20
			VI	6		8				6	20
Level 8	Honors/ Research	4 th Year Pass (Sem VII+Sem VIII)	VII	6	4	4				6	20
			VIII	6	4					10	20
Total Credit				48	32	16	16	8	12	28	160

SEMESTER SYSTEM			Credits Required							
			MJ	MI	DSE	GEC/ OEC	AECC	SEC SB/VB	FW	Total Credit
Level 5	Certificate	1 st Year Pass	12	12		8	8			40
Level 6	Diploma	2 nd Year Pass	12	12		8		8		40
Level 7	Degree	3 rd Year Pass	12		12			4	12	40
Level 8	Honors/ Research	4 th Year Pass	12	8	4				16	40
Total Credit			48	32	16	16	8	12	28	160

For Regular Students Course Duration:

Min. Years for Completing UG Degree	3 Years
Min Years for Completing UG (Hons.) Degree	4 Years
Maximum Years for Completing UG Degree	6 Years
Max Years for Completing UG (Hons.) Degree	8 Years

Faculty of Science									
Major: Microbiology									
Sem	Major	Minor	DSE	Open Elective/ Generic Elective	AECC	SEC		FW	Total Credits
						Skill Based	Value Based		
1	MJ-I (4+2)	MN-I (4+2)		OEC-I (4)	AECC-I (4)				20
2	MJ-II (4+2)	MN-II (4+2)		OEC-II (4)	AECC-II (4)				20
3	MJ-III (4+2)	MN-III (4+2)		OEC-III (4)		SECSB-I (4)	5		20
4	MJ-IV (4+2)	MN-IV (4+2)	4+2	OEC-IV (4)		SECSB-II (4)			20
5	MJ-V (4+2)		DSE-I (4)				SECVB (4)	Field Work (6)	20
6	MJ-VI (4+2)		DSE-II (4) DSE-III (4)					Internship (6)	20
7	MJ-VII (4+2)	MN-V (4)	DSE-IV (4)					Minor Project (6)	20
8	MJ-VIII (4+2)	MN-VI (4)						Major Research Project (10)	20
Total Credits	48	32	16	16	8	8	4	28	160

Major/Minor

Course Code	Category	Paper	Credits
BMCB0101-T	MJ	Introduction to Microbiology and Microbial Diversity	4
BMCB0102-T	MI	Introduction to Microbiology and Microbial Diversity	4
BMCB0101-P	MJ	Introduction to Microbiology and Microbial Diversity Lab	2
BMCB0102-P	MI	Introduction to Microbiology and Microbial Diversity Lab	2
BMCB0201-T	MJ	Bacteriology	4
BMCB0202-T	MI	Bacteriology	4
BMCB0201-P	MJ	Bacteriology Lab	2
BMCB0202-P	MI	Bacteriology Lab	2
BMCB0301-T	MJ	Biochemistry	4
BMCB0302-T	MI	Biochemistry	4
BMCB0301-P	MJ	Biochemistry Lab	2
BMCB0302-P	MI	Biochemistry Lab	2
BMCB0401-T	MJ	Virology	4
BMCB0402-T	MI	Virology	4
BMCB0401-P	MJ	Virology Lab	2
BMCB0402-P	MI	Virology Lab	2
BMCB0501-T	MJ	Microbial Physiology and Metabolism	4
BMCB0501-P	MJ	Microbial Physiology and Metabolism Lab	2
BMCB0601-T	MJ	Cell Biology	4
BMCB0601-P	MJ	Cell Biology Lab	2
BMCB0701-T	MJ	Molecular Biology	4
BMCB0701-P	MJ	Molecular Biology Lab	2
BMCB0801-T	MJ	Microbial Genetics	4
BMCB0801-P	MJ	Microbial Genetics Lab	2

Department Specific Elective

BMCB0101D-T	DSE	Environmental Microbiology	4
BMCB0102D-T	DSE	Industrial Microbiology	4
BMCB0103D-T	DSE	Food and Dairy Microbiology	4
BMCB0104D-T	DSE	Medical Microbiology	4
BMCB0105D-T	DSE	Immunology	4
BMCB0106D-T	DSE	Recombinant DNA Technology	4
BMCB0107D-T	DSE	Microbial Biotechnology	4
BMCB0108D-T	DSE	Plant Pathology	4

Enhancement Course (Skill Based) (Any Two)

Course Code	Category	Paper	Credits
BMCB101SB-T	SEC-SB	Microbial Quality Control in Food and Pharmaceutical Industries	4
BMCB102SB-T	SEC-SB	Microbial Diagnosis in Health Clinics	4
BMCB103SB-T	SEC-SB	Biofertilizers and Biopesticides	4
BMCB104SB-T	SEC-SB	Food Fermentation Techniques	4
BMCB105SB-T	SEC-SB	Management of Human Microbial Diseases	4

Open Elective Compulsory Course/ Generic Elective Compulsory Course

Course Code	Category	Paper	Credits
OECC0101-T	OEC	Fundamental of Computer	4
OECC0102-T	OEC	Environmental Studies	4
OECC0103-T	OEC	Entrepreneurship	4
OECC0104-T	OEC	Principle of Management	4
OECC0105-T	OEC	Nutrition and Fitness	4
OECC0106-T	OEC	Current Concerns in Public Health Nutrition	4
OECC0107-T	OEC	Travel and Tourism	4
OECC0108-T	OEC	Tourism Operation Software Skills	4

Course Code	Paper	Credits
ENVT0101-T	Environmental Education	0

Ability Enhancement Compulsory Course

Course Code	Category	Paper	Credits
AECC0101-T	AECC	English Language-I	4
AECC0102-T	AECC	English Language-II	4

Skill Enhancement Course (Value Based) (Any One)

Course Code	Category	Paper	Credits
SECVB0101-T	SEC-VB	Constitution of India	4
SECVB0102-T	SEC-VB	Yoga in Life	4
SECVB0103-T	SEC-VB	National Service Scheme (NSS)	4
SECVB0104-T	SEC-VB	Health & Wellness	4
SECVB0105-T	SEC-VB	Sports	4

Field Work

Course Code	Category	Paper/Description	Credits
BFWF0501-P	FW	Field work is the process of observing and collecting data about people, cultures, and natural environments.	6
BFWI0601-P	FW	The aim of the internship provides a direction to the activities, helps to focus on a result, and to assess the result achieved.	6
BFWP0701-P	FW	The objective of the minor project is to provide an opportunity for students to undertake short research training outside the classroom to solve real-world issues.	6
BFWR0801-P	FW	Project objectives describe the desired outcome of a project, which is often a tangible object. It's beneficial to create objectives for your project because creating a specific goal for you helps everyone know what they're supposed to be working toward.	10