

Mahakaushal University, Jabalpur (M.P.)



Scheme & Syllabus

For

B.Sc (Data Science)

**with Research/honors Bachelor of
Computer Applications**

2022-23

Duration of Course: 4 Years

Examination Mode: Semester

Examination System: CBCS

Mahakaushal University

Village-Aithakheda, Mukunwara Road, Post-Tilwara Jabalpur

(M.P.) 482003

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Credit Distribution

SEMESTERSYSTEM						CreditsRequired					
			Sem	MJ	MI	DSE	GEC/ OEC	AECC	SEC SB/VB	FW	Total Credit
Level5	Certificate	1 st Year Pass (SemI+SemII)	I	6	6		4	4			20
			II	6	6		4	4			20
Level6	Diploma	2 nd Year Pass (SemIII+SemIV)	III	6	6		4		4		20
			IV	6	6		4		4		20
Level7	Degree	3 rd Year Pass (SemV+SemVI)	V	6		4			4	6	20
			VI	6		8				6	20
Level8	Honors/ Research	4 th YearPass (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

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Faculty of Computer Application									
Major/Minor: B.sc AIMI									
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)			20
4	MJ-IV(4+2)	MN-IV (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

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Major/Minor

Course Code	Category	Paper	Credits
BDSC0101T	MJ	Programming in c	4
BDSC0101P	MJ	Programming in c lab	2
BDSC0102T	MN	Data base management system	4
BDSC0102P	MN	Data base management system LAB	2
BDSC0201T	MJ	Object oriented programming with C++	4
BDSC0201P	MJ	C++ Lab	2
BDSC0202T	MN	Discrete Mathematics	6
BDSC0301T	MJ	Object Oriented Concepts using JAVA	4
BDSC0301P	MJ	JAVA Lab	2
BDSC0302T	MN	Data mining	4
BDSC0302P	MN	Data mining lab	2
BDSC0401T	MJ	Digital electronics and computer organization	4
BDSC0401P	MJ	Digital electronics Lab	2
BDSC0402T	MN	Machine learning technique	4
BDSC0402P	MN	Machine learning technique Lab	2
BDSC0501T	MJ	Python Programming	4
BDSC0501P	MJ	Python Programming Lab	2
BDSC0601T	MJ	Ethics and Privacy in Data Science	4
BDSC0601P	MJ	Ethics and Privacy Lab	2
BDSC0701T	MJ	R Programming	4
BDSC0701P	MJ	R Programming Lab	2
BDSC0702T	MN	Optimization technique	3
BDSC0702P	MN	Optimization technique Lab	1
BDSC0801T	MJ	BigDataAnalytics Web technology	4
BDSC0801P	MJ	BigDataAnalytics Lab	2
BDSC0802T	MN	Ethics and Human values	4

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Major/Minor

Course Code	Category	Paper	Credits
BDSC0101T	MJ	Programming in c	4
BDSC0101P	MJ	Programming in c lab	2
BDSC0102T	MN	Data base management system	4
BDSC0102P	MN	Data base management system LAB	2
BDSC0201T	MJ	Object oriented programming with C++	4
BDSC0201P	MJ	C++ Lab	2
BDSC0202T	MN	Discrete Mathematics	6
BDSC0301T	MJ	Object Oriented Concepts using JAVA	4
BDSC0301P	MJ	JAVALab	2
BDSC0302T	MN	Data mining	4
BDSC0302P	MN	Data mining lab	2
BDSC0401T	MJ	Digital electronics and computer organization	4
BDSC0401P	MJ	Digital electronics Lab	2
BDSC0402T	MN	Machine learning technique	4
BDSC0402P	MN	Machine learning technique Lab	2
BDSC0501T	MJ	Python Programming	4
BDSC0501P	MJ	Python Programming Lab	2
BDSC0601T	MJ	Ethics and Privacy in Data Science	4
BDSC0601P	MJ	Ethics and Privacy Lab	2
BDSC0701T	MJ	R Programming	4
BDSC0701P	MJ	R Programming Lab	2
BDSC0702T	MN	Optimization technique	3
BDSC0702P	MN	Optimization technique Lab	1
BDSC0801T	MJ	BigDataAnalytics Web technology	4
BDSC0801P	MJ	BigDataAnalytics Lab	2
BDSC0802T	MN	Ethics and Human values	4

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Department Specific Elective

BDSC0101D-T	DSE	Digital marketing analysis	4
BDSC0102D-T	DSE	Cloud services for IOT	4
BDSC0103D-T	DSE	Augmented reality & virtual reality	4
BDSC0104D-T	DSE	Image processing and Analysis	4
BDSC0105D-T	DSE	Text Analytics	4
BDSC0106D-T	DSE	Cyber forensic analytics	4
BDSC0107D-T	DSE	AI and Data Science in Finance	4
BDSC0108D-T	DSE	High-dimensional data analysis	4

Skill Enhancement Course (Skill Based) (Any Two)

Course Code	Category	Paper	Credits
BDSC0101SB-T	SEC-SB	Internet of Things	4
BDSC0102SB-T	SEC-SB	Ethical Hacking	4
BDSC0103SB-T	SEC-SB	Predictive modeling analysis	4
BDSC0104SB-T	SEC-SB	Data Manipulation and Cleaning	4
BDSC0105SB-T	SEC-SB	Natural Language Processing(NLP)	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

Ability Enhancement Compulsory Course

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

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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
BFWF-501-P	FW	Field work is the process of observing and collecting data about people, cultures, and natural environments.	6
BFWI-601-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
BFWP-701-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
BFWR-801-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 help sever yoneknowwhatthey're supposedtobeworkingtoward.	10

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