Course Structure

Integrated MBA (5 Year Programme)
BTech. In Information Technology
+
MBA
(For Batch 2023 onward)

ABV-Indian Institute of Information Technology & Management, Gwalior

5 year (10 Semester) Integrated MBA Programme (<u>Total credits: 225</u>)

SEMESTER -1

Sl no	Course Code	Subjects	Credits	L-T-P
1	EE101	Fundamentals of Electrical and Electronics	4	3-0-2
2	PH101	Engineering Physics	4	3-0-2
3	MA101	Engineering Mathematics	4	3-1-0
4	EE102	Engineering Design Principles	3	2-0-2
5	IT/CS101	Principles of Computer Programming	4	3-0-2
6	HS101	Freshman Skills	2	2-0-0
7	HS102	Sports and Physical Education	2	1-0-2
		Total	**23 Credits**	

SEMESTER -2

Sl no	Course Code	Subjects	Credits	L-T-P
1	EE103	Digital Electronics	4	3-0-2
2	MA102	Probability and Statistics	4	3-1-0
3	IT/CS102	Data Structures	4	3-0-2
4	EE104	Hardware Workshop	3	1-0-4
5	IT103	Object Oriented Programming	4	3-0-2
6	HS103	Ecology and Environment Sciences	2	2-0-0
7	CS104	Mobile Application Technologies	2	0-1-2
		Total	**23 credits**	
	MO-1 (Optional)		2/3-0-0	

EXIT AFTER YEAR - 1 ➡ **Certificate in Engineering Sciences (46 credits)**

SEMESTER -3

Sl no	Course Code	Subjects	Credits	L-T-P
1	HS201	Indian Culture, Ethics and Moral Values	2	2-0-0
2	IT201	Discrete Structures	4	3-1-0
3	IT202	Computer Organization and Architecture	4	3-0-2
4	IT203	Design and Analysis of Algorithms	4	3-0-2
5	IT204	Data Communications	4	3-0-2
6	IT205	Database Systems	4	3-0-2
		Total	**22 credits**	

SEMESTER -4

Sl no	Course Code	Subjects	Credits	L-T-P
1	MS201	Entrepreneurship and Innovation	2	2-0-0
2	IT206	Theory of Computation	3	3-0-0
3	IT207	Operating Systems	4	3-0-2
4	IT208	Computer Networks	4	3-0-2
5	EE207	Signals and Systems	4	3-1-0
6	IT209	Graph Theory	4	3-0-2
		Total	**21 credits**	
	MO-2 (Optional)		2/3-0-0	

EXIT AFTER YEAR - 2 ➡ **Diploma in Information Technology (89 credits)**

	Sl no	Course Code	Subjects	Credits	L-T-P
SEMESTER -5	1	MS301	Business Economics	3	3-0-0
	2		Multidisciplinary/Open Elective- 1	3	3-0-0
	3	EE303	Microprocessor and Interfacing	4	3-0-2
	4	IT302	Compiler Design	4	3-0-2
	5	IT303	Computer Graphics	4	3-0-2
	6	IT304	Trustworthy Artificial Intelligence	4	3-0-2
			Total	**22 credits**	

	Sl no	Course Code	Subjects	Credits	L-T-P
SEMESTER -6	1	ENXXX	Art of Engineering Research	2	2-0-0
	2		Multidisciplinary/Open Elective- 2/MOOC 1	3	3-0-0
	3	IT0XX	Department Elective-1	3	3-0-0
	4	IT305	Optimization Techniques	4	3-1-0
	5	IT306	Machine Learning	4	3-0-2
	6	IT307	Wireless Communication Technologies	4	3-0-2
			Total	**20 credits**	

BTech Project allocation to be done during 6th Semester

EXIT AFTER YEAR - 3 ⟹ **BSc in Information Technology (131 credits)**

Focus of the IMG Programme (4th and 5th Year)

Focus of IMG-I to III Year: The students shall be learning the foundation and specialization of technological impetus from in-house class teaching-learning, industrial exposure, live projects, interaction, laboratory experiments and other as deemed fit time to time by blowing through the undergraduate curriculum of B.Tech (IT) upto 3rd year that to be integrated with another two years (4th and 5th Year) of Management Programme to award the IMG Degree.

Focus of IMG-IV Year: The fourth year of the programme is to intend to impart the general management principles and practices along with analytical ability required for modern businesses.

Focus of IMG-V Year: The fifth year of the programme is intended to provide the specialized and sectorial management ability on the blend of technology embedded analytics canvas. The students can flexibly choose their area of specialization the six baskets of electives. While the four massive open online courses of the complements the chooses basket of elective openly to meet the business need as student fore

Credit Requirement: First Year (Semester VII+VIII+ Summer Term): 24+24=48
Second Year (Semester IX+X): 04+24+18=46

	Sl	Code	Title of the Course	Credits	L-T-P
SEMESTER - 7	1	MS601	Principles and Practices of Management	3	3-0-0
	2	MS604	Business and Legal Environment	3	3/4-0-0
	3	MS605	Financial Reporting and Control	3	3/4-0-0
	4	MS606	Organizational Behavior	3	3-0-0
	5	MS607	IoT and Big Data Management	3	3-0-0
	6	MS608	Strategic Management	3	3-0-0
	7	MS617	Business Data Mining	3	3-0-0
	8	MS0XX	**Department Elective-I**	**3**	**3-0-0**
	9		Computational laboratory (based on semester courses)	Part of course credit	
			Total Credits	24	

	Sl	Code	Title of the Course	Credits	L-T-P
SEMESTER - 8	1	MS610	Operations Management	3	3-0-0
	2	MS611	Marketing Management	3	3-0-0
	3	MS612	Financial Engineering and Management	3	3-0-0
	4	MS613	Business Research Methods	3	3-0-0
	5	MS622	Could Computing	3	3-0-0
	6	MS0XX	**Department Elective-II**	**3**	**3-0-0**
	7		Multidisciplinary/Open elective/ MOOC-1	3	3-0-0
	8	MS596	Mini project (industry project/case study, self-study, term paper etc.)	3	0-0-6
	9		Computational laboratory (based on semester courses)	Part of course credit	
			Total Credits		**24**

Summer Term

	Sl	Code	Title of the Course	Credits	L-T-P
1	**MS597**	Summer term of 6-8 weeks (Industry project. R&D Project etc.)	4	0-0-8

Summer Term Evaluation: To be evaluated during 9th semester of the IMG programme
Abrupt EXIT after 4 years (179 credits) leads to B.Sc. in Information Technology (IT) + One year Diploma in Management

	Sl	Code	Title of the Course	Credits	L-T-P
SEMESTER - 9	1	MS618	International Business	3	3-0-0
	2	MS620	Business Process Management	3	3-0-0
	3	MS621	Business Ethics and Sustainability	3	3-0-0
	4	MS0XX	**Department Elective-III**	3	3-0-0
	5	MS0XX	**Department Elective-IV**	3	3-0-0
	6		Multidisciplinary/Open elective/ MOOC-2	3	3-0-0
	7	MS598	Major Thesis Part- 1	6	0-0-12
			Total Credits		**24**

	Sl	Code	Title of the Course	Credits	L-T-P
SEMESTER - 10	1		Multidisciplinary/Open elective/ MOOC-3	3	3-0-0
	2	MS599	Major Thesis Part- 2	15	0-0-24
			Total Credits		**18**

EXIT after 5 years (221 credits) leads to BTech. in IT + MBA

Composition of Electives: A student has to choose 07 electives from the basket of 04 MOOC courses and 05 Departmental Electives. The composition of electives shall be as minimum 03 from the departmental electives, minimum 02 from MOOC electives and remaining two electives may be flexible chosen either from the department or from MOOC electives.

List of suggested courses for MOOC: MOOC courses should be relevant to the area of management programs catering the need of specialization and relevant to the frontier areas of technology, information technology or management fulfilling the modern business needs and are not being offered as in-house courses of ABV-IIITM Gwalior.

Specialization in the MBA degree: A student will be able to earn specialization in a particular area(s) by earning a minimum of ***09 credits (ordinarily equal to 03 courses) through in-house elective courses***. Details of specialization will be part of the transcript issued to a student.

Exit Option from IMG Program: A student can exercise the exit option from the IMG after completing the 3rd year as per the 'exit provision' of IMG program ordinance. However, in case a student makes an abrupt exit at the end of 4th year, he/she will be awarded **B.Sc. in Information Technology (IT) + One year Diploma in Management** upon completion of the required credits.

List of indicative electives proposed to be offered in Odd and Even Semesters

Specialization Basket 01: Information Technology and Systems

Sl	lCode	Title of the Course	L-T-P	Credits	Semester
1	MS001	Digital Production System	3-0-0	3	Odd
2	MS002	IT Products and Intellectual Property Rights	3-0-0	3	Even
3	MS003	Management of Digital Technologies	3-0-0	3	Odd
4	MS004	Knowledge Management	3-0-0	3	Even
5	MS005	Service-Oriented Computing	3-0-0	3	Odd
6	MS006	Social Networks Analytics	3-0-0	3	Even
7	MS007	Software Project Management	3-0-0	3	Odd
8	MS008	Software Quality Management	3-0-0	3	Even
9	MS009	Programming for Business Intelligence	3-0-0	3	Odd
10	MS010	Strategic Planning of Information Systems	3-0-0	3	Even

Specialization Basket 02: Technology and Operations Management

Sl	lCode	Title of the Course	L-T-P	Credits	Semester
1	MS011	Business Systems Simulation	3-0-0	3	Odd
2	MS012	Service Operations Management	3-0-0	3	Even
3	MS013	Sustainable Supply Chain Management	3-0-0	3	Odd
4	MS014	Technology Management	3-0-0	3	Even
5	MS015	Technology and Operations Strategy	3-0-0	3	Odd
6	MS016	Total Quality Management	3-0-0	3	Even
7	MS017	World Class Production Systems	3-0-0	3	Odd
8	MS018	Emerging Areas in Technology and Operations Management	3-0-0	3	Even
9	MS019	New Products and Services Development	3-0-0	3	Odd
10	MS020	Project Management			

Specialization Basket 03: Human Resource Management

Sl	Code	Title of the Course	L-T-P	Credits	Semester
1	MS021	Compensation Management	3-0-0	3	Odd
2	MS022	Change Management	3-0-0	3	Even
3	MS023	Corporate Social Responsibility	3-0-0	3	Odd
4	MS024	Competency Management	3-0-0	3	Even
5	MS025	Human Resource Information System	3-0-0	3	Odd
6	MS026	Emerging Areas in Human Resource	3-0-0	3	Even
7	MS027	Organization Theory and Development	3-0-0	3	Odd
8	MS028	Leadership and Talent Management	3-0-0	3	Even
9	MS029	Training and Development	3-0-0	3	Odd
10	MS030	Management of Employee Relations	3-0-0	3	Even

Specialization Basket 04: Finance

Sl	Code	Title of the Course	L-T-P	Credits	Semester
1	MS031	Corporate Restructuring	3-0-0	3	Odd
2	MS032	Corporate Tax Planning	3-0-0	3	Even
3	MS033	Economic and Financial Modeling	3-0-0	3	Odd
4	MS034	Entrepreneurial Finance	3-0-0	3	Even
5	MS035	Management of Financial Services	3-0-0	3	Odd
6	MS036	Financial Risk management	3-0-0	3	Even
7	MS037	Personal Wealth Management	3-0-0	3	Odd
8	MS038	International Finance	3-0-0	3	Even
9	MS039	Project Appraisal and Finance	3-0-0	3	Odd
10	MS040	Security Analysis and Portfolio Management	3-0-0	3	Even

Specialization Basket 05: Marketing Management

S	Code	Title of the Course	L-T-P	Credits	Semester
1	MS041	Consumer Behavior	3-0-0	3	Odd
2	MS042	Advertisement and Sales Promotion Management	3-0-0	3	Even
3	MS043	Product and Brand Management	3-0-0	3	Odd
4	MS044	E-marketing	3-0-0	3	Even
5	MS045	Retail Management	3-0-0	3	Odd
6	MS046	International Marketing	3-0-0	3	Even
7	MS047	Sales and Distribution	3-0-0	3	Odd
8	MS048	Marketing Research	3-0-0	3	Even
9	MS049	Service Marketing	3-0-0	3	Odd
10	MS050	Strategic Marketing	3-0-0	3	Even

Specialization Basket 06: Management of Social Sector

Sl	Code	Title of the Course	L-T-P	Credits	Semester
1	MS051	Public Policy and Processes	3-0-0	3	Odd
2	MS052	Public Private Partnerships	3-0-0	3	Even
3	MS053	Sustainable Development	3-0-0	3	Odd
4	MS054	Management of Rural and Social Sector	3-0-0	3	Even
5	MS055	Information Technology Enabled Services	3-0-0	3	Odd
6	MS056	Management of Non-Formal Organization	3-0-0	3	Even
7	MS057	Healthcare System Management	3-0-0	3	Odd
8	MS058	Emerging Areas in Management of Social Sector	3-0-0	3	Even
9	MS059	Infrastructure Management	3-0-0	3	Even

Minor in Management (21 credits) - Tentative

A student from B.Tech/IMT needs to earn a total of minimum 21 credits from the below list of courses (composition of the courses is 50% from the list of core courses and 50% is from the list of elective courses) for a Minor in Management from the list of the offered courses. This is over and above the credit requirement for the respective BTech/IMT degree.

List of Core courses for Minor in Management (50%)					
Sl	**Code**	**Title of the Course**	**L-T-P**	**Credits**	**Semester**
1	MS601	Principles and Practices of Management	3-0-0	3	Odd
2	MS605	Financial Reporting and Control	3-0-0	3	Odd
3	MS606	Organizational Behavior	3-0-0	3	Odd
4	MS607	IoT and Big Data Management	3-0-0	3	Odd
5	MS617	Business Data Mining	3-0-0	3	Odd
6	MS610	Operations Management	3-0-0	3	Even
7	MS611	Marketing Management	3-0-0	3	Even
8	MS612	Financial Engineering and Management	3-0-0	3	Even
9	MS613	Business Research Methods	3-0-0	3	Even
10	MS622	Could Computing	3-0-0	3	Even

List of Elective courses for Minor in Management (50%)					
S. No	**Course Code**	**Title of the Course**	**L-T-P**	**Credits**	**Semester**
1	MS001	Digital Production System	3-0-0	3	Odd
2	MS006	Social Networks Analytics	3-0-0	3	Even
3	MS013	Sustainable Supply Chain Management	3-0-0	3	Odd
4	MS012	Service Operations Management	3-0-0	3	Even
5	MS028	Leadership and Talent Management	3-0-0	3	Odd
6	MS022	Change Management	3-0-0	3	Even
7	MS035	Management of Financial Services	3-0-0	3	Odd
8	MS040	Security Analysis and Portfolio Mgt.	3-0-0	3	Even
9	MS049	Service Marketing	3-0-0	3	Odd
10	MS048	Marketing Research	3-0-0	3	Even

NOTE: A Minor in Management is open to student(s) from other discipline subject to successful completion of the minimum total of 21 credits in Management minor with a minimum of 6 CGPA. A student can opt for the courses depending on the convenience. For example: MS601 and MS605 are offered in 7th semester. A student can opt for these courses along with his regular courses in 7th semester OR he can take one of the two courses in 7th semester and the other in his 9th semester. This reduces the credit load in a particular semester. In addition, if a given course is floated in summer semester, the student can also opt for the same in summer semester.