Curriculum and Syllabi for
Bachelor of Science Honours in Information Technology & Management
Faculty of Information Technology, University of Moratuwa

Level 01

CourseCode	CourseTitle	Type	Lectures	Labs/ Tutorials	Credits	Min[1]	Max[2]
CM 1120	Essentials of Mathematics	C	2	3/2	2.5		
CM 1130	Elements of Statistics	C	2	3/2	2.5		
IN 1100	Programming Fundamentals	C	3	3	4		
IN 1300	Digital Fundamentals and Computer Systems	C	2	3/2	2.5		
IN 1400	Fundamentals of Databases and Database Design	C	2	3/2	2.5		
IN 1600	Essentials of Multimedia and Web Technologies	C	3	3	4		
IS 1000	Industry Reconnaissance	C			1		
IS 1020	Principles of Economics	C	2	3/2	2.5		
IS 1100	Principles of Management	C	2	3/2	2.5		
IS 1210	Financial Accounting	C	2	3/2	2.5		
IS 1400	Information Systems Management	C	2	3/2	2.5		
IS 1900	Business Project	C			2	31	
				Total Compulsory (GPA)		**31**	
IS 1010	English (Non GPA)	C	2	3	3	**3**	
				Total Compulsory (Non GPA)		**3**	

Level 02

CourseCode	CourseTitle	Type	Lectures	Labs/ Tutorials	Credits	Min[1]	Max[2]
CM 2120	Calculus	C	2	3/2	2.5		
CM 2130	Statistical Distributions and Estimation	C	2	3/2	2.5		
IN 2100	Object Oriented Programming	C	2	3	3		
IN 2110	Data Structures and Algorithms	C	2	3/2	2.5		
IN 2200	Software Engineering Methods	C	2	3	3		
IN 2210	Object Oriented Analysis and Design	C	2	3/2	2.5		
IN 2300	Essentials of Computer Organization and Architecture	C	2	3/2	2.5		
IN 2310	Operating Systems	C	2	3/2	2.5		
IN 2400	Database Management Systems	C	2	3/2	2.5		
IN 2500	Essentials of Computer Communication	C	2	3/2	2.5		
IN 2600	Computer Graphics and Animation	C	2	3/2	2.5		
IS 2000	Industry Visits	C			1		
IS 2010	Scientific Communication	C	1	3	2		
IS 2210	Management Accounting	C	2	3/2	2.5		
IS 2220	Essentials of Law	C	2	3/2	2.5		
IS 2300	Principles of Marketing	C	2	3/2	2.5		
IS 2900	Project on IT Applications	C			2	41	
				Total Compulsory (GPA)		**41**	

Level 03 & 04

CourseCode	CourseTitle	Type	Lectures	Labs/ Tutorials	Credits	Min[1]	Max[2]
CM 4140	Operational Research	C	2	3/2	2.5		
IS 3100	Organizational Behaviour	C	2	3/2	2.5		
IS 3230	Social Aspects of IT	C	2	3/2	2.5		
IS 3420	Software Management	C	2	3/2	2.5		
IS 3430	IT Project Management	C	2	3/2	2.5		
IS 3440	IT Quality Assurance	C	2	3/2	2.5		
IS 3910	Independent Study	C			3		
IS 4200	Professional Practice	C	2	3/2	2.5		
IS 4300	Marketing Management	C	2	3/2	2.5		
IS 4910	Comprehensive Group Project	C			10	33	
				Total Compulsory (GPA)		**33**	
IS 3010	Communication Skills(Non GPA)	C	1	3	2	2	
IS 3000	Industrial Training (Non GPA)	C		-	6	6	
				Total Compulsory (Non GPA)		**8**	

Code	Subject						
CM 3110	Computational Mathematics	E	2	3/2	2.5		
CM 3120	Computational Statistics	E	2	3/2	2.5		
CM 3210	Automata Theory	E	2	3/2	2.5		
CM 3310	Artificial Intelligence	E	2	3/2	2.5		
CM 3320	Logic Programming & Artificial Cognitive Systems	E	2	3/2	2.5		
CM 3330	Fundamentals of Bioinformatics	E	2	3/2	2.5		
CM 4110	Advanced Topics in Mathematics	E	2	3/2	2.5		
CM 4121	Advanced Topics in Statistics	E	2	3/2	2.5		
CM 4130	Mathematical Modelling	E	2	3/2	2.5		
CM 4210	Theory of Computability & Complexity	E	2	3/2	2.5		
CM 4220	Theory of Compilers	E	2	3/2	2.5		
CM 4230	Formal Methods and Software Verification	E	2	3/2	2.5		
CM 4310	Artificial Neural Networks & Evolutionary Computing	E	2	3/2	2.5		
CM 4320	Complex Systems & Agent Technology	E	2	3/2	2.5		
CM 4330	Semantic Web and Ontological Modelling	E	2	3/2	2.5		
CM 4340	Natural Language Processing	E	2	3/2	2.5		
CM 4350	Fuzzy logic	E	2	3/2	2.5		
CM 4360	Robotics	E	2	3/2	2.5		
CM 4370	Machine Learning and Pattern Recognition	E	2	3/2	2.5		
CM 4380	Deep Learning Architectures	E	2	3/2	2.5		
CM 4390	Advanced Topics in Bioinformatics	E	2	3/2	2.5		
CM 4410	Reinforcement Learning	E	2	3/2	2.5		
IN 3100	Enterprise Application Development	E	2	3	3		
IN 3400	Advanced Database Management Systems	E	2	3/2	2.5		
IN 3500	Computer Communication	E	2	3/2	2.5		
IN 3600	Digital Video Production	E	2	3/2	2.5		
IN 4100	Theory of Programming Languages	E	2	3/2	2.5		
IN 4400	Data Mining & Data Warehousing	E	2	3/2	2.5		
IN 4410	Big Data Analytics	E	2	3/2	2.5		
IN 4530	Multimedia Communications	E	2	3/2	2.5		
IN 4600	Multimedia Systems	E	2	3/2	2.5		
IN 4700	Cluster Computing	E	2	3/2	2.5		
IN 4710	Human Computer Interaction	E	2	3/2	2.5		
IN 4720	Geographic Information Systems	E	2	3/2	2.5	5	15.5
IS 3110	Strategic Management	E	2	3/2	2.5		
IS 3400	Management Information Systems	E	2	3/2	2.5		
IS 3710	Behavioural Science I	E	2	3/2	2.5		
IS 4210	Management of Sensitive Projects	E	2	3/2	2.5		
IS 4230	e-Governance	E	2	3/2	2.5		
IS 4310	Business Studies	E	2	3/2	2.5		
IS 4320	eBusiness Management	E	2	3/2	2.5		
IS 4330	Supply chain Management	E	2	3/2	2.5		
IS 4340	Innovation Management	E	2	3/2	2.5		
IS 4400	Management of Technology	E	2	3/2	2.5		
IS 4410	IT Infrastructure Management	E	2	3/2	2.5		
IS 4420	Decision Management	E	2	3/2	2.5		
IS 4920	Individual Research Project	E	-	-	6		
IS 4450	Knowledge Management	E	2	3/2	2.5		
IS 4010	Appreciation of Literary Works (Non GPA)	E	1	3	2		
IS 4510	e-Education	E	2	3/2	2.5		
IS 4610	Financial Engineering	E	2	3/2	2.5		
IS 4710	Behavioural Science II	E	2	3/2	2.5	20	*
	Total Elective (GPA)						30.5
	Total GPA Credits						135.5
	Total Compulsory Non GPA Credits						11
	Required Elective Non GPA Credits						4

* To be based on a minimum total GPA of 135.5 credits
1 - Minimum required
2 - Maximum allowed
Note: At least 2 elective subjects must be taken at Level 03