

Department of Computer Science and Engineering
Integrated Computer Engineering (ICE) Stream

Module Code	Module Name	Category	Lectures	Lab/Assignm	Credits		Norm		Evaluation %		
			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE	
Semester 1											
MA1013	Mathematics	C	3.0	1/1	3.0				20	80	
CS1032	Programming Fundamentals	C	2.0	3/1	3.0				20	80	
ME1032	Mechanics	C	2.0	3/4	2.0				20	80	
MT1022	Properties of Materials	C	2.0	3/4	2.0				20	80	
CE1022	Fluid Mechanics	C	2.0	3/4	2.0				20	80	
EE1012	Electrical Engineering	C	2.0	3/4	2.0				20	80	
EL1012	Language Skill Enhancement I	C	-	3/1	1.0		15.0		20	80	
MN1012	Engineering in Context	C	1.0	-		1.0		1.0	30	70	
Total for Semester 1								15.0	1.0		
Semester 2											
CS2012	Principles of Object Oriented Programming	E	2.0	3/1	3.0		3.0		40	60	
CS2222	Principles of Embedded Systems Programming	E	2.0	3/1	3.0				40	60	
CS2022	Data Structures and Algorithms	C	2.0	3/2	2.5				40	60	
CS2052	Computer Architecture	C	2.0	3/1	3.0				40	60	
EN1012	Electronic Devices and Circuits	C	2.0	-	2.0		16.5		40	60	
MA1032	Numerical Methods for Computer Science	C	3.0	-	3.0				30	70	
EE2093	Theory of Electricity	C	2.0	-	2.0				30	70	
ME1802	Introduction to Manufacturing Engineering	C	2.0	3/2	2.5				30	70	
CS2952	Communication Skills	C	0.5	3/1	1.5				80	20	
CS1962	Engineering Skill Development	C	0.5	3/1		1.5		1.5	100	-	
Total for Semester 2								19.5	1.5		
Semester 3											
CS2062	Object Oriented Software Development	E	2.0	3/1	3.0		3.0		40	60	
CS2242	Embedded Software Development	E	2.0	3/1	3.0				40	60	
CS2032	Principles of Computer Communication	C	2.0	3/1	3.0				40	60	
CS2042	Operating Systems	C	2.0	3/2	2.5				40	60	
EN2022	Digital Electronics	C	2.0	3/2	2.5				30	70	

Curriculum of B.Sc. Engineering Honours Degree Programme
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					GPA	NGPA	GPA	NGPA	CA	WE	
CE1822 ✓	Aspects of Civil Engineering	C	2.0	-	2.0		16	1.0	30	70	
ME1822 ✓	Basic Engineering Thermodynamics	C	1.5	3/2	2.0				30	70	
CS2150 ✓	Graph Theory for Computing	C	2.0	-	2.0				30	70	
MA2073 ✓	Calculus for System Modelling	C	2.0	-	2.0				30	70	
CS2202 ✓	Programming Challenge I	E	-	3/1		1.0			100	-	
CS2972 ✓	Automation Challenge I	E	-	3/1		1.0			100	-	
CS2963 ✓	Presentation Skills	C	-	3/1		1.0		1.0	100	-	
Total for Semester 3								19.0	2.0		
Semester 4											
CS3252	Industrial Computer Engineering	C	2.0	3/1	3.0		15.5	16	40	60	
CS3262	Embedded Networks	C	2.0	3/1	3.0				40	60	
CS3272	Embedded Database Systems	C	2.0	3/1	3.0				40	60	
MA2033	Linear Algebra	C	2.0	-	2.0				30	70	
MA2063	Differential Equations and Applications	C	2.0	-	2.0				30	70	
EN2062	Signals & Systems	C	2.0	3/2	2.5				30	70	
DE2xxx	Humanities Elective I	E			2.0		2.0				
CS2982	Automation Challenge II	C	-	3/1		1.0			100	-	
CS3953	Technical Writing	C	0.5	3/1		1.5		2.5	100	-	
Total for Semester 4								17.5	2.5		

CS3953	Technical Writing	C	0.5	3/1		1.5		2.5	100	-	
Total for Semester 4								17.5	2.5		

Semester 5										
CS3282	Industrial Computer Engineering Project	C		6/1	2.0				100	-
CS3052	Computer Security	C	2.0	-	2.0				40	60
CS3242	Micro-controllers and Applications	C	2.0	3/1	3.0				60	40
CS3062	Theory of Computing	C	2.0	-	2.0				40	60
MN3042	Business Economics & Financial Accounting	C	3.0	-	3.0				30	70
CS3612	Intelligent Systems	C	2.0	3/1	3.0				40	60
CS3332	Industrial Instrumentation & Control	C	2.0	3/1	3.0				40	60
MA3013	Applied Statistics	C	2.0	-	2.0				40	60

Module Code	Module Name	Category	Lectures		Credits		Score		Evaluation %	
			Lect/week	Labs/weeks	GPA	NOGA	GPA	NOGA	CL	WT
<i>Industrial Training</i>										
CS3992	Industrial Training	C	-	-	6.0		6.0		100	-
<i>Total for Industrial Training</i>							0.0	6.0		
<i>Semester 6</i>										
CS4012 ✓	Professional Practice	C	2.0	-	2.0		3.0		30	70
CS3962 ✓	Research and Report Writing	C	0.5	3/2	1.0			80	20	
CS3412 ✓	Advanced Networking	E	2.0	3/1	3.0			40	60	
CS3712 ✓	Image Processing	E	2.0	3/1	3.0			40	60	
CS4232 ✓	Formal Methods in Software Engineering	E	2.0	3/1	3.0			40	60	
CS4242 ✓	Human Computer Interaction	E	2.0	3/1	3.0			40	60	
CS4532 ✓	Concurrent Programming	E	2.0	3/1	3.0			40	60	
CS4742 ✓	Bioinformatics	E	2.0	3/1	3.0	3.0		40	60	
DE2xxx ✓	Humanities Elective II	E			2.0		2.0			
<i>Semester 6</i>							8.0	0.0		
<i>Semester 7</i>										
CS4202	Research and Development Project	C			5.0		13.0	17	100	-
CS4362	Hardware Description Languages	C	2.0	3/1	3.0				40	60
CS4372	Machine Vision	C	2.0	3/1	3.0				40	60
MN4062	Organizational Behavior and Management	C	2.0	-	2.0				30	70
CS4322	Digital System Design	E	2.0	3/1	3.0				40	60
CS4222	Software Process and Management	E	2.0	3/1	3.0				50	50
CS4232	Formal Methods in Software Engineering	E	2.0	3/1	3.0				50	50
CS4242	Human Computer Interaction	E	2.0	3/1	3.0				40	60
CS4252	Advanced Operating Systems	E	2.0	3/1	3.0				50	50
CS4262	Distributed Systems	E	2.0	3/1	3.0				50	50
CS4272	Quality Engineering	E	2.0	3/1	3.0				50	50
CS4332	Computer Aided Digital Design	E	2.0	3/1	3.0				40	60
CS4342	Advanced Computer Architecture	E	2.0	3/1	3.0				40	60

Effective for 2015 Intake onwards

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Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation(%)		
					GPA	NGPA	GPA	NGPA	CA	WE	
CS4432	Network and System Administration	E	2.0	3/1	3.0				40	60	
CS4442	Current Trends in Networking	E	2.0	3/1	3.0				50	50	
CS4452	Information Security & Cryptography	E	2.0	3/1	3.0				50	50	
CS4462	Computer & Network Security	E	2.0	3/1	3.0				50	50	
CS4472	Mobile Computing	E	2.0	3/1	3.0				50	50	
CS4482	High Performance Networking	E	2.0	3/1	3.0				40	60	
CS4492	Wireless and Broadband Networking	E	2.0	3/1	3.0				40	60	
CS4522	Advanced Algorithms	E	2.0	3/1	3.0				40	60	
CS4532	Concurrent Programming	E	2.0	3/1	3.0				40	60	
CS4542	Compiler Design	E	2.0	3/1	3.0				40	60	
CS4552	Scientific Computing	E	2.0	3/1	3.0				40	60	
CS4622	Machine Learning	E	2.0	3/1	3.0				50	50	
CS4632	Database Internals	E	2.0	3/1	3.0				40	60	
CS4642	Data Mining & Information Retrieval	E	2.0	3/1	3.0				40	60	
CS4722	Computer Vision	E	2.0	3/1	3.0				40	60	
CS4742	Bioinformatics	E	2.0	3/1	3.0				40	60	
CS4732	Computer Graphics	E	2.0	3/1	3.0			6.0	40	60	
CS4752	Advanced Numerical Analysis	E	2.0	3/1	3.0				30	70	
MA4053	Numerical Analysis for Scientific Computing	E	3.0	-	3.0				30	70	
Total for Semester 7						22.0	0.0	19.0	0.0		

Semester 8

CS4202 Research and Development Project

Semester 8

CS4202	Research and Development Project	C			5.0				100	-
CS4352	Robotics and Automation	C	2.0	3/1	3.0				50	50
MN4122	Human Resource Management & Industrial relations	C	2.0	-	2.0			10.0	30	70
CS4222	Software Process and Management	E	2.0	3/1	3.0				50	50
CS4232	Formal Methods in Software Engineering	E	2.0	3/1	3.0				50	50
CS4242	Human Computer Interaction	E	2.0	3/1	3.0				40	60

CS4222 Software Process and Management

Department of Computer Science and Engineering
 Integrated Computer Engineering (I.C.E.) Semesters

Module Code	Module Name	Category	Lectures		Lab Assignm		Credits		Norm		Evaluation %	
			hrs/week	hrs/weeks	hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
		E	2.0	3/1	3.0						50	50
CS4252	Advanced Operating Systems	E	2.0	3/1	3.0						50	50
CS4272	Quality Engineering	E	2.0	3/1	3.0						40	60
CS4322	Digital System Design	E	2.0	3/1	3.0						40	60
CS4332	Computer Aided Digital Design	E	2.0	3/1	3.0						40	60
CS4342	Advanced Computer Architecture	E	2.0	3/1	3.0						40	60
CS4432	Network and System Administration	E	2.0	3/1	3.0						50	50
CS4442	Current Trends in Networking	E	2.0	3/1	3.0						50	50
CS4452	Information Security & Cryptography	E	2.0	3/1	3.0						50	50
CS4462	Computer & Network Security	E	2.0	3/1	3.0						50	50
CS4472	Mobile Computing	E	2.0	3/1	3.0						40	60
CS4482	High Performance Networking	E	2.0	3/1	3.0						40	60
CS4492	Wireless and Broadband Networking	E	2.0	3/1	3.0						40	60
CS4522	Advanced Algorithms	E	2.0	3/1	3.0						40	60
CS4532	Concurrent Programming	E	2.0	3/1	3.0						40	60
CS4542	Compiler Design	E	2.0	3/1	3.0						40	60
CS4552	Scientific Computing	E	2.0	3/1	3.0						50	50
CS4622	Machine Learning	E	2.0	3/1	3.0						40	60
CS4632	Database Internals	E	2.0	3/1	3.0						40	60
CS4642	Data Mining & Information Retrieval	E	2.0	3/1	3.0						40	60
CS4722	Computer Vision	E	2.0	3/1	3.0						40	60
CS4732	Computer Graphics	E	2.0	3/1	3.0						40	60
CS4742	Bioinformatics	E	2.0	3/1	3.0			6.0			50	50
CS4262	Distributed Systems	E	3.0	-	3.0						30	70
MA4013	Linear Models and Multivariate Statistics	E	2.0	3/1	3.0						30	70
CS4752	Advanced Numerical Analysis	E	3.0	-	3.0			3.0			30	70
MA4023	Operational Research	E	3.0	-	3.0						30	70
MA4033	Time Series & Stochastic Process	E	3.0	-	3.0						30	70
MA4053	Numerical Analysis for Scientific Computing	E	3.0	-	3.0						30	70

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Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation(%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Total for Semester 8					21.0	0.0	19.0	0.0		
Total for the Programme					137.0	13.0	137.0	13.0		