Department of Computer Science and Engineering

Computer Science and Engineering (CSE) Stream

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation	
					GPA	NGPA	GPA	NGPA	CA	W
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				40	60
MA1032	Numerical Methods for Computer Science	C	3.0	-	3.0				30	70
EE2093	Theory of Electricity	C	2.0	-	2.0		16.5		30	70
CS2952	Communication Skills	C	0.5	3/1	1.5				80	20
ME1802	Introduction to Manufacturing Engineering	C	2.0	3/2	2.5				30	70
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

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CE1822	Aspects of Civil Engineering	C	2.0	-	2.0				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		16		30	70
CS2202	Programming Challenge I	E	-	3/1		1.0		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										
CS3022	Software Engineering	C	2.0	3/1	3.0				40	60
CS3032	Computer Networks	C	2.0	3/1	3.0				40	60
CS3042	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		15.5		30	70
DE2xxx	Humanities Elective I	E			2.0		2.0			
CS2212	Programming 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		
Semester 5										
CS3202	Software Engineering Project	C		6/1	2.0				100	-
CS3052	Computer Security	C	2.0	-	2.0				40	60
CS3062	Theory of Computing	C	2.0	-	2.0				30	70
CS3242	Micro-controllers and Applications	C	2.0	3/1	3.0				60	40
MN3042	Business Economics & Financial Accounting	C	3.0	-	3.0				30	70
MA3013	Applied Statistics	C	2.0	-	2.0		14.0		30	70
CS3212	Software Architecture and Design	E	2.0	3/1	3.0				40	60
CS3412	Advanced Networking	E	2.0	3/1	3.0				40	60

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits GPA	Credits NGPA	Norm GPA	Norm NGPA	Evaluation CA	Evaluation [illegible]
CS3512	Programming Languages	E	2.0	3/1	3.0				40	6
CS3612	Intelligent Systems	E	2.0	3/1	3.0				40	60
CS3712	Image Processing	E	2.0	3/1	3.0		6.0		40	60
				Total for Semester 5			20.0	0.0		
Industrial Training										
CS3992	Industrial Training	C	-	-		6.0		6.0	100	-
				Total for Industrial Training			0.0	6.0		
Semester 6										
CS4012	Professional Practice	C	2.0	-	2.0				30	70
CS3962	Research and Report Writing	C	0.5	3/2	1.0		3.0		80	20
CS3312	Embedded System Design	E	2.0	3/1	3.0				30	70
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
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			
				Total for Semester 6			8.0	0.0		
Semester 7										
CS4202	Research and Development Project	C			5.0				100	-
MN4062	Organizational Behaviour and Management	C	2.0	-	2.0		7.0		30	70
CS4322	Digital System Design	E	2.0	3/1	3.0				40	60
CS4352	Robotics and Automation	E	2.0	3/1	3.0				50	50
CS4362	Hardware Description Languages	E	2.0	3/1	3.0				40	60
CS4372	Machine Vision	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

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation	
					GPA	NGPA	GPA	NGPA	CA	WE
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
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
CS4752	Advanced Numerical Analysis	E	2.0	3/1	3.0				30	70
CS4732	Computer Graphics	E	2.0	3/1	3.0		12.0	0.0	40	60
				Total for Semester 7			19.0	0.0		
Semester 8										
CS4202	Research and Development Project	C			5.0				100	-
MN4122	Human Resource Management & Industrial relations	C	2.0	-	2.0		7.0		30	70
CS4222	Software Process and Management	E	2.0	3/1	3.0				50	50

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation %	
					GPA	NGPA	GPA	NGPA	CA	WE
CS4362	Hardware Description Languages	E	2.0	3/1	3.0				40	60
CS4372	Machine Vision	E	2.0	3/1	3.0				40	60
CS4352	Robotics and Automation	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
CS4272	Quality Engineering	E	2.0	3/1	3.0				50	50
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				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
CS4732	Computer Graphics	E	2.0	3/1	3.0				40	60
CS4742	Bioinformatics	E	2.0	3/1	3.0				40	60
CS4262	Distributed Systems	E	2.0	3/1	3.0		9.0		50	50

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	W
MA4013	Linear Models and Multivariate Statistics	E	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
CS4752	Advanced Numerical Analysis	E	2.0	3/1	3.0		3.0	0.0	30	70
				Total for Semester 8			19.0	0.0		
	Total for the Programme						**137.0**	**13.0**		

Modules Offered to Other Fields of Specialization

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignm hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	W
Semester 2										
CS2812	Visual Programming	-	1.0	3/1	2.0				60	40
CS2842	Computer Systems	-	2.0	-	2.0				40	60
CS2850	Visual Programming & Applications	-	1.0	3/1		2.0			100	-
Semester 3										
CS2812	Visual Programming	-	1.0	3/1	2.0				60	40
CS2882	Object Oriented Programming using C++	-	2.0	3/1	3.0				30	70
Semester 4										
CS2832	Modular Software Development	-	1.0	6/1	3.0				50	50