

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

COURSE STURCTURE

5 YEARS DUAL DEGREE B.TECH. (CSE) + M. TECH. / MBA

**SPECIALIZATION:
SOFTWARE ENGINEERING**



**GAUTAMBUDDHAUNIVERSITY
GAUTAM BUDH NAGAR, GREATER NOIDA
2015-2016**

5 Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA

Effective from: 2015 -2016

Software Engineering

SEMESTER I

Sr. No.	Courses Code	Courses	L-T-P	Credits	
1	CY101	Engineering Chemistry	3-1-0	FC-C1	4
2	MA101	Engineering Mathematics – I	3-1-0	FC-C2	4
3	ES 101	Environmental studies	2-1-0	AECC1	3
4	CS101	Computer Programming – I	2-0-0	FC-C3	2
5	EC101	Basic Electronics	2-1-0	FC-C4	3
6	HU101	English Proficiency	2-0-0	AECC2	2
7	SS101	Human Values & Buddhist Ethics	2-0-0	AECC3	2
8	CY103	Engineering. Chemistry Lab	0-0-2	FC-C5	1
9	CS 181	Computer Programming Lab1	0-0-2	FC-C6	3
10	CE103	Engineering Graphics	0-0-3	FC-C7	2
11	EC181	Basic Electronics Lab	0-0-2	FC-C8	1
12	GP	General Proficiency	-----	Non Credit	
Total Credits				25	
Total Contact Hours			16-4-9	29	

Ability Enhancement Compulsory Course (AECC):

1. HU101 English Proficiency
2. ES 101 Ecology and Environment
3. SS101 Human Values & Buddhist Ethics

SEMESTER II

Sr. No.	Courses Code	Courses	L-T-P	Credits	
1	PH102	Engineering Physics	3-1-0	FC- C9	4
2	MA102	Engineering Mathematics – II	3-1-0	FC-C10	4
3	ME 101	Engineering Mechanics	2-1-0	FC-C11	3
4	CS102	Computer Programming – II	2-0-0	FC-C12	2
5	EE102	Electrical Technology	2-1-0	FC-C13	3
6	HU102	Professional Communication	2-0-0	AECC4	2
7	--	Open Elective I	2-0-0	OE 1	2
9	PH104	Engineering Physics Lab	0-0-2	FC-C14	1
10	CS182	Computer Programming Lab - II	0-0-2	FC-C15	1
11	EE104	Electrical Technology Lab	0-0-2	FC-C16	1
12	ME102	Engineering Workshop	0-0-3	FC-C17	2
13	GP	General Proficiency	-----	Non Credit	
Total Credits				25	
Total Contact Hours			16-4-9	29	

Ability Enhancement Compulsory Course (AECC):

1. HU 102 Professional Communication

Skill Enhancement Course (SEC):

1. ME 102 Engineering Workshop

Open Elective I (OE) : Courses offered from other school

5 Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA

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Software Engineering

SEMESTER – III

Sr. No.	Courses Code	Courses	L-T-P		Credits
1	MA201	Engineering Mathematics III	3-1-0	FC-C18	4
2	EC201	Digital Electronics	3-0-0	FC-C19	3
3	CS201	Internet Technology	3-0-0	C20	3
4	CS203	Operating Systems	3-0-0	C21	3
5	CS205	Data Structure & Algorithms	2-1-0	C22	3
6	CS207	System Analysis and Design	3-0-0	C23	3
7	EC281	Digital Electronics Lab	0-0-3	FC-C24	2
8	CS281	Internet Technology Lab	0-0-3	C25	2
9	CS283	Data Structure and Algorithms Lab	0-0-3	C26	2
10	GP	General Proficiency	-----	Non Credit	
Total Credits					25
Contact Hours			17-2-9	28	

SEMESTER – IV

Sr. No.	Courses Code	Quantitative Techniques	L-T-P		Credits
1	MA202	Numerical and Statistical Analysis	3-1-0	C27	4
2	EC210	Principles of Communication	2-1-0	C28	3
3	CS202	Software Engineering	3-0-0	C29	3
4	CS204	Discrete Structure	3-0-0	FC-C30	3
5	CS206	Data Base Management System	3-0-0	C31	3
6	CS208	Principles of Programming Language	2-0-0	C32	2
7	EC282	Analog Communication Lab	0-0-3	C33	2
8	CS282	Software Engineering Lab	0-0-3	C34	2
9	CS284	Database Management System Lab	0-0-3	C35	2
10	GP	General Proficiency	-----	Non Credit	0
Total Credits					24
Total Contact Hours			16-2-9	28	

5 Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA**Effective from: 2015 -2016****Software Engineering****SEMESTER – V**

Sr. No.	Courses Code	Courses	L-T-P	Credits	
1	CS301	Theory of Automata	3-1-0	C36	4
2	CS303	Web Development	3-1-0	C37	4
3	CS305	Computer Graphics	2-1-0	C38	3
4	CS307	Analysis and Design of Algorithms	2-1-0	C39	3
5	CS309	Computer Organization & Architecture	3-0-0	C40	3
6		Open Elective	2-0-0	OE2	2
7	CS381	Web Development Lab	0-0-3	C41	2
8	CS383	Computer Graphics Lab	0-0-3	C42	2
9	GP	General Proficiency	-----	Non Credit	
Total Credits					23
Total Contact Hours			15-4-6	25	

Open Elective (OE):

1. CS311 Ecommerce
2. CE311 Engineering Economics

SEMESTER – VI

Sr. No.	Courses Code	Courses	L-T-P	Credits	
1	CS302	Distributed Operating System	3-1-0	C43	4
2	CS304	Concepts of Artificial Intelligence	3-0-0	C44	3
3	CS306	Advanced Computer Architecture	3-0-0	C45	3
4	CS308	Computer Networks	3-1-0	C46	4
5	EC304	Microprocessor and Interfacing	3-0-0	C47	3
6	CS 312	Management Information System	2-0-0	SEC2	2
7	EC384	Microprocessor and Interfacing Lab	0-0-3	C48	2
8	CS382	Computer Networks Lab	0-0-3	C49	2
9	GP	General Proficiency	-----	Non Credit	
Total Credits					23
Contact Hours			Total	17-2-6	25

Skill Enhancement Course (SEC):

1. CS312 Management Information System

SEMESTER – VII

5-Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA

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Software Engineering

Sr. No.	Courses Code	Courses	L-T-P		Credits
1.		Generic Elective	3-1-0	GE 1	4
2	CS401	Compiler Design	3-0-0	C50	3
3	CS403	Object-Oriented Analysis	3-0-0	C51	3
4		Elective 1	3-0-0	DSE1	3
5		Elective 2	3-0-0	DSE2	3
6	CS481	Compiler Design Lab	0-0-3	C52	2
7	CS491	Seminar	0-0-2	DP1	1
8	CS493	Minor Project	0-0-8	DP2	4
9	GP	General Proficiency	-----	Non Credit	
Total Credits					23
Total Contact Hours			14-3-13		30

Electives		
1.	CS405	Formal Methods
2.	CS451	Wireless Technologies
3.	EC405	Wireless Mobile Communication
4.	EC443	Telecommunication Security and Networks
5.	CS441	Software project management.
Any skill based course		

Generic Elective (GEI)

1. MA406 Operation Research Techniques
2. MA507 Optimization Techniques
3. MA417 Number Theory

SEMESTER VIII

Sr. No.	Courses Code	Courses	L-T-P		Credits
1		Generic Elective	3-1-0	GE2	4
2	CS532	Advanced Software Engineering	3-0-0	C53	3
3	CS534	Open Source Software Systems	3-0-0	C54	3
4	CS536	Object-Oriented Software Engineering	3-0-0	C55	3
5		Elective-3	3-0-0	DSE3	3
6	CS586	Object-Oriented Software Engineering Lab	0-0-3	C56	2
7	CS592	Major Project	0-0-10	DP3	5
8	GP	General Proficiency	-----	Non Credit	
Total Credits					23
Total Contact Hours			15-1-13		29

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Software Engineering

Elective 3		
1	CS542	Software Architecture and Design
3	CS546	Software Re-Engineering
4	CS548	Software Reusability
5	CS550	Web-Based Software Engineering
6	CS552	Any skill based course by NSDC*credits will be decided when the course is run.

Generic Elective (GE2)

1. MA 402 Modeling and Simulation
2. MA416 Probability and Stochastic Process

Summer Semester (After 8 th Semester)					
Sr. No.	Courses Code	Courses	L-T-P		Credits
1	CS490	Summer Project / Industrial Training		DP4	5
Total Credits				05	
Total Contact Hours				4-6 week	

SEMESTER IX

Sr. No.	Courses Code	Courses	L-T-P		Credits
1	CS631	Software Testing	3-0-0	C57	3
2	CS633	Component-Based Software Engineering	3-0-0	C58	3
3		Electives 4	3-0-0	DSE 4	3
4	CS655	Industrial Practices in Software Engineering	2-0-0	DSE5	2
5	CS683	Industrial Practices in Software Engineering Lab	0-0-6	DSE6	3
6	CS691	Dissertation Part - I	0-0-14	DP5	7
7	GP	General Proficiency	-----	Non Credit	
Total Credits				21	
Total Contact Hours			12-0-17	29	

Electives (4&5)		
1	CS641	Aspect-Oriented Software Engineering
2	CS643	Software Reliability
3	CS645	Software Quality Assurance
4	CS647	Software Maintenance
5	CS649	Software Performance
6	CS 651	Software Measurement and Estimation
7	CS685	Any skill based course by NSDC*credits will be decided when the course is run.
8	CS681	Software testing lab

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Software Engineering

SEMESTER X

Sr. No.	Courses Code	Courses	L-T-P		Credits
1	CS690	Dissertation Part – II	-----	DP6	23
2	GP	General Proficiency	-----	Non Credit	
Total Credits					23

GRAND TOTAL CREDITS = 240

Open Elective I (OE) Courses offered from other school

1. SS102 History of Science & Technology
2. BSC 201 Introduction to Buddhist Meditation: Theories & Practises
3. BSCU305 Buddhist Art & Architect

List of Electives

1. CS... Fundamentals of IT BBa 2nd sem
2. CS... IT for Managers mba 1st sem
3. CS209 Basic Computer Skills
4. CS285 Computer Skills Lab.