

# **SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY**

## **COURSE STURCTURE**

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

**SPECIALIZATION:**

**ISR**



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

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

Effective from: 2015 -2016

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### 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	1
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	
<b>Total Credits</b>					<b>25</b>
<b>Total Contact Hours</b>			<b>16-4-9</b>	<b>29</b>	

### 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 1	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

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12	ME102	Engineering Workshop	0-0-3	FC-C17	2
13	GP	General Proficiency	-----	Non Credit	
<b>Total Credits</b>					<b>25</b>
<b>Total Contact Hours</b>			<b>16-3-10</b>	<b>29</b>	

### Ability Enhancement Compulsory Course (AECC):

- HU 102 Professional Communication

### Skill Enhancement Course (SEC):

- ME 102 Engineering Workshop

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

#### 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	
<b>Total Credits</b>					<b>25</b>
<b>Contact Hours</b>			<b>17-2-9</b>	<b>28</b>	

#### 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

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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
<b>Total Credits</b>					<b>24</b>
<b>Total Contact Hours</b>			<b>16-2-9</b>	<b>28</b>	

### 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	
<b>Total Credits</b>					<b>23</b>
<b>Total Contact Hours</b>			<b>15-4-6</b>	<b>25</b>	

#### Open Elective (OE):

1. CS311 Ecommerce
2. CE311 Engineering Economics

**5-Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA****Effective from: 2014 -2015****ISR****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	
<b>Total Credits</b>					<b>23</b>
<b>Contact Hours</b>			<b>Total</b>	<b>17-2-6</b>	<b>25</b>

**Skill Enhancement Course (SEC):****1. CS312 Management Information System****SEMESTER – VII**

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	
<b>Credits</b>			<b>Total</b>		<b>23</b>

**5-Year Dual Degree B. Tech. (Computer Science & Engineering)+ M.Tech. / MBA****Effective from: 2014 -2015****ISR**

<b>Hours</b>	<b>Total Contact</b>	<b>14-3-13</b>	<b>30</b>
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<b>Electives</b>		
1.	CS405	Formal Methods
2.	CS451	Wireless Technologies
3.	EC405	Wireless Mobile Communication
4.	EC443	Telecommunication Security and Networks
5.	CS441	Software project management.

**Generic Elective (GEI)**

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

**SEMESTER VIII**

<b>Sr. No.</b>	<b>Courses Code</b>	<b>Courses</b>	<b>L-T-P</b>		<b>Credits</b>
1		Generic Elective	3-1-0	GE1	4
2	CS562	Knowledge Engineering	3-0-0	C53	3
3	CS 564	Soft Computing Techniques	3-0-0	C54	3
4	CS 572	Introduction to Embedded System	3-0-0	C55	3
		<b>Elective-1</b>	3-0-0	DSE1	3
6	CS584	Soft Computing lab	0-0-3	C56	2
7	CS592	Major Project	0-0-10	DP1	5
8	GP	General Proficiency	-----	NCC	
<b>Total Credits</b>					<b>23</b>
<b>Total Contact</b>				<b>15-1-13 =</b>	<b>29</b>
<b>Hours</b>					

<b>Electives ( 1 )</b>		
1	CS568	Machine Translation and Learning
2	CS 570	Speech Processing
3	EC477	Digital Image Processing
4	CS 566	Natural Language Processing
5	CS574	Any skill based course by NSDC*credits will be decided when the course is run.

**Generic Elective (GE2)**

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

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

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

## SEMESTER IX

Sr. No.	Courses Code	Courses	L-T-P		Credits
1	CS661	Expert System Design	3-0-0	C57	3
2	CS699	Robotics	3-0-0	C58	3
3		<b>Elective 2</b>	3-0-0	DSE2	3
4		<b>Elective 3</b>	3-0-0	DSE3	3
5	CS683	Expert System Design Lab	0-0-3	C59	2
6	CS691	Dissertation Part - I	0-0-14	DP2	7
7	GP	General Proficiency	-----	NCC	
<b>Total Credits</b>				<b>21</b>	
<b>Total Contact Hours</b>			<b>12-0-17</b>	<b>29</b>	

Electives ( 2&3 )		
1	CS663	Intelligent Information Retrieval
2	CS665	Pattern Matching
3	CS 667	Evolutionary Computation
4	CS669	Fuzzy Set Theory
5	CS671	Multimedia and Computer Graphics
6	CS673	Any skill based course by NSDC*credits will be decided when the course is run.

## SEMESTER X

Sr. No.	Courses Code	Courses			Credits
1	CS690	Dissertation Part – II		DP3	23
2	GP	General Proficiency			0
<b>Total Credits</b>				<b>23</b>	

**GRAND TOTAL CREDITS = 240**