(An Autonomous Institute of Government of Maharashtra)

"Globally Accepted Engineers with Human Skills"



Curriculum for Final Year B. Tech. Computer 2017-18

GOVERNMENT COLLEGE OF ENGINEERING, Jalgaon.

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM I

Course]	Feaching Scheme	e Hrs/week				Eval	uation S	cheme			
Code	Name of the Course	Group						The	eory		Prac	tical	Total	Credits
Code			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	
SH101	Engineering Mathematics-I	Α	3	1		4	10	15	15	60			100	4
SH102	Applied Physics	A	4			4	10	15	15	60			100	4
CO101	Computer Fundamentals and 'C' Programming	В	3			3	10	15	15	60			100	3
CE101	Engineering Mechanics	В	3	1		4	10	15	15	60			100	4
ET101	Basic Electronics Engineering	В	2			2	4	8	8	30			50	2
ME101	Workshop Practice-I	В			2	2					50		50	1
SH103	Applied Physics Lab	А			2	2					50		50	1
CO102	Computer Fundamentals and 'C' Programming Lab	В			4	4					50		50	2
CE101	Engineering Mechanics Lab	В			2	2					50		50	1
ET102	Basic Electronics Engineering Lab	В			2	2					50		50	1
	Total		15	2	12	29	44	68	68	270	250	0	700	23
				SEM II										
			Teaching Scheme Hrs /week				-							
Course]		e Hrs/week					uation S				
Course Code	Name of the Course	Group		Feaching Scheme		I			eory		Prac		Total	Credits
Code		Group	TH		e Hrs/week	Total	ISA	ISE1	eory ISE2	ESE		tical ESE	Total	Credits
Code SH151	Engineering Mathematics-II	A	TH	Feaching Scheme		4	10	ISE1 15	eory ISE2 15	ESE 60	Prac		100	4
Code SH151 SH152	Engineering Mathematics-II Applied Chemistry	A	TH 3 4	Feaching Scheme	PR	4 4	10 10	ISE1 15 15	eory ISE2 15 15	ESE 60 60	Prac ICA	ESE	100 100	4 4
Code SH151 SH152 ME151	Engineering Mathematics-II Applied Chemistry Engineering Graphics	A A B	TH	Teaching Scheme	_ PR	4 4 3	10 10 10	ISE1 15 15 15	eory 1SE2 15 15 15	ESE 60 60 60	Prac ICA 	ESE 	100 100 100	4 4 3
Code SH151 SH152 ME151 EE151	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering	A A B B B	TH 3 4 3 2	Teaching Scheme TUT 1 	PR	4 4 3 2	10 10 10 4	ISE1 15 15 15 8	eory ISE2 15 15 15 8	ESE 60 60 60 30	Prac ICA 	ESE 	100 100 100 50	4 4 3 2
Code SH151 SH152 ME151 EE151 SH153	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies	A A B B A	TH	Teaching Scheme TUT 1 	PR	4 4 3 2 3	10 10 10	ISE1 15 15 15	eory 1SE2 15 15 15	ESE 60 60 60	Prac ICA 	ESE 	100 100 100 50 100	4 4 3
Code SH151 SH152 ME151 EE151 SH153 ME152	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II	A A B B B	TH 3 4 3 2	Teaching Scheme TUT 1	PR	4 4 3 2 3 2	10 10 10 4	ISE1 15 15 15 8	eory ISE2 15 15 15 8	ESE 60 60 60 30	Prac ICA 50	ESE 	100 100 100 50 100 50	4 4 3 2
Code SH151 SH152 ME151 EE151 SH153 ME152 SH154	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II Applied Chemistry Lab	A A B B A	TH 3 4 2 3	Teaching Scheme TUT 1	PR	4 4 3 2 3 2 2 2	10 10 10 4 10	ISE1 15 15 15 8 15	eory 1SE2 15 15 15 8 15	ESE 60 60 60 30 60	Prac ICA 50 50	ESE 	100 100 50 100 50 50 50	4 4 3 2 3 1 1
Code SH151 SH152 ME151 EE151 SH153 ME152 SH154 ME153	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II Applied Chemistry Lab Engineering Graphics Lab	A A B B A B A B A B B B	TH 3 4 3 2 3 3	Tut 1	PR	4 4 3 2 3 2 2 4	10 10 10 4 10	ISE1 15 15 15 8 15 	ISE2 15 15 15 15 8 15 	ESE 60 60 60 30 60 	Prac ICA 50 50 50	ESE 	100 100 50 100 50 50 50 50	4 4 3 2
Code SH151 SH152 ME151 EE151	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II Applied Chemistry Lab	A A B B A B A A	TH 3 4 3 2 3	Tut 1	PR	4 4 3 2 3 2 2 2	10 10 10 4 10	ISE1 15 15 15 8 15 	eory ISE2 15 15 15 8 15 	ESE 60 60 60 30 60 	Prac ICA 50 50 50 50 50	ESE 	100 100 50 100 50 50 50 50 50 50	4 4 3 2 3 1 1
Code SH151 SH152 ME151 EE151 SH153 ME152 SH154 ME153 EE152	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II Applied Chemistry Lab Engineering Graphics Lab Basic Electrical Engineering Lab General Proficiency I	A A B B A B A B A B B B	TH 3 2 3 1	Tut 1	PR	$ \begin{array}{c} 4 \\ - 4 \\ - 3 \\ - 2 \\ - 3 \\ - 2 \\ - 4 \\ - 2 \\ - 3 \\ \end{array} $	10 10 10 4 10 	ISE1 15 15 15 8 15 	eory 1SE2 15 15 15 8 15 	ESE 60 60 30 60 	Prac ICA 50 50 50 50 50 50	ESE 	100 100 100 50 100 50 50 50 50 50 50 50 50 50 50 50 50	$ \begin{array}{r} 4 \\ 4 \\ 3 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 1 \\ 2 \\ \end{array} $
Code SH151 SH152 ME151 EE151 SH153 ME152 SH154 ME153	Engineering Mathematics-II Applied Chemistry Engineering Graphics Basic Electrical Engineering Enviornmental Studies Workshop Practice-II Applied Chemistry Lab Engineering Graphics Lab Basic Electrical Engineering Lab	A A B B A A B A B B B B B	TH 3 2 3	Tut 1	PR	4 4 3 2 3 2 2 2 4 2 2	10 10 10 4 10 	ISE1 15 15 15 8 15 	eory ISE2 15 15 15 8 15 	ESE 60 60 30 60 	Prac ICA 50 50 50 50 50	ESE 	100 100 50 100 50 50 50 50 50 50	4 4 3 2 3 1 1 2 1

ISA :Internal Sessional Assessment

ISE: In Semester Examination

ESE: End Semester Examination

ICA : Internal Contineous Accessment

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM III

	1			SEMIII										
Course			Teaching Scheme Hrs /week						Eva	luation	Scheme			
Code	Name of the Course	Group					Th	neory] Pra	ctical	Total	Credits	
Coue			ТН	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	TULAI	
CO201	Discrete Structure and Graph Theory	D	3			3	10	15	15	60			100	3
ET221	Digital Electronics and Logic Design	В	3			3	10	15	15	60			100	3
CO202	Fundamentals of Data Structures Programming	D	3	1		4	10	15	15	60			100	4
CO203	Computer Organization	D	3			3	10	15	15	60			100	3
CO204	Object Oriented Technology	D	3			3	10	15	15	60			100	3
CO254	Application Development Lab	В	1		2	3					25	25	50	2
ET222	Digital Electronics and Logic Design Lab	В			2	2					50		50	1
CO205	Fundamentals of Data Structures Programming Lab	D			4	4					50	50	100	2
CO206	Software Lab-I	D			2	2					25	25	50	1
CO207	Object Oriented Technology Lab	D			2	2					25	25	50	1
	Tota l		16	1	12	29	50	75	75	300	175	125	800	23
				SEM IV										
Course]]	Feaching Schem	e Hrs/week					luation	Scheme			
Code	Name of the Course	Group						, Th	neory		l Pra	ctical	Total	Credits
			ТН	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
SH253	Numerical Methods and Probability Theory	А	3	1		4	10	15	15	60			100	4
CO251	Data Structures and Files	D	3			3	10	15	15	60			100	3
CO252	Computer Graphics	D	3			3	10	15	15	60			100	3
CO253	Data Communications	D	3			3	10	15	15	60			100	3
SH254	Humanities and Social Science	С	3			3	10	15	15	60			100	3
SH204	General Proficiency-II	С	1		2	3					25	25	50	2
				1	1			-			-		-	

TH : Theory Lecture,

CO255

CO257

CO258

TUT:Tutorial,

Tota

PR:Practical

16

D

D

D

D

ISA :Internal Sessional Assessment

CO256 Computer Graphics Lab

Software Lab-II

Data Structures and Files Lab

Data Communications Lab

ISE: In Semester Examination

ESE: End Semester Examination

4

2

2

2

12

4

2

2

2

29

ICA : Internal Contineous Accessment

75

50

75

300

50

25

25

25

150

50

25

25

25

150

100

50

50

50

800

2

1

1

1

23

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM V

Course			Т	eaching Scheme	Hrs /week				Evalu	ation S	cheme			
Code	Name of the Course	Group						Tł	leory		Prac	tical	Total	Credits
Coue			ТН	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	
CO301	Theory of Computer Science	D	3			3	10	15	15	60			100	3
CO302	Software Engineering	D	3			3	10	15	15	60			100	3
CO303	System Programming	D	3			3	10	15	15	60			100	3
CO304	Computer Network Technology	D	3			3	10	15	15	60			100	3
CO305	Microprocessor and MicroController Interfacing	D	3			3	10	15	15	60			100	3
CO306	Web Programming Lab	В	1		2	3					25	25	50	2
CO307	Software Engineering Lab	D			2	2					25	25	50	1
CO308	System Programming Lab	D			2	2					50		50	1
CO309	Computer Network Technology Lab	D			2	2					25	25	50	1
CO310	Microprocessor and MicroController Interfacing Lab	D			2	2					25	25	50	1
CO311	Self Study-I	D											50**	2
	Total		16		10	26	50	75	75	300	150	100	800	23
TH :Theor	I:Theory Lecture, TUT:Tutorial, PR:Practical													

ISA :Internal Sessional Assessment

TUT: Tutorial, **ISE: In Semester Examination**

ICA : Internal Contineous Accessment

• ** Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of Five Subjects- CO301,CO302,CO303,CO304,CO305.One faculty member should be appointed as course coordinator for the course 'self study' to compile the marks of all tests and enter in to MIS.

ESE: End Semester Examination

• The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that corse, assess answer papers of test examination and submit the marks to course coordinator.

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM VI

Course			Т	eaching Scheme	Hrs /week				Eval	uation S	Scheme			
Code	Name of the Course	Group						Th	eory	_	Prac	tical	Total	Credits
Coue			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	
00151	Database Management	n					10	1.5	1.5	(0)			100	
CO351	System	D	3			3	10	15	15	60			100	3
CO352	Operating System	D	3			3	10	15	15	60			100	3
CO353	Design and Analysis of Algorithms	D	3			3	10	15	15	60			100	3
CO354	Artificial Intelligence and Expert System	D	3			3	10	15	15	60			100	3
CO355	Finance and Management Information System	С	3			3	10	15	15	60			100	3
CO356	Database Management System Lab	D			2	2					25	25	50	1
CO357	Operating System Lab	D			2	2					50		50	1
CO358	Design and Analysis of Algorithms Lab	D			2	2					25	25	50	1
CO359	Advanced Programming Lab	В			2	2					25	25	50	1
CO360	Miniproject	D			2	2					25	25	50	2
CO361	Self Study-II	D											50**	2
CO362	Industrial Lectures	D	1			1								
	Total		16		10	26	50	75	75	300	150	100	800	23

TH :Theory Lecture,

ISA :Internal Sessional Assessment

TUT:Tutorial,

ISE: In Semester Examination

PR:Practical

ICA : Internal Contineous Accessment

* Evaluation of the course CO362 Industrial lectures shall be done in VIIIth semister along with the subject CO460 Industrial lectures

• ** Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of Five Subjects- CO351,CO352,CO353,CO354,CO355.One faculty member should be appointed as course coordinator for the course 'self study' to compile the marks of all tests and enter in to MIS.

ESE: End Semester Examination

• The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that corse, assess answer papers of test examination and submit the marks to course coordinator.

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM VII (new)

			Т	eaching Scheme	Hrs /week				Eval	uation S	cheme			
Course	Name of the Course	Group						Th	eory		Prac	ctical		Credits
Code	Tvaine of the Course	Group	ТН	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	Creatis
CO401	Compiler Construction	D	3			3	10	15	15	60			100	3
CO402	Object Oriented Modeling and Design	D	3			3	10	15	15	60			100	3
CO403	Enterprise Resource Planning	С	2			2	4	8	8	30			50	2
CO404	Elective I	Е	3			3	10	15	15	60			100	3
CO405	Inter-disciplinary Elective	Е	3			3	10	15	15	60			100	3
CO406	Compiler Construction Lab	D			2	2					25	25	50	1
CO407	Object Oriented Modeling and Design Lab	D			2	2					25	25	50	1
CO408	Elective I Lab	Е			2	2					25	25	50	1
CO409	Project Phase-I	D			4	4					50	50	100	2
CO410	Seminar	D			2	2					25	25	50	2
CO411	Self Study-III	D											50**	2
Total			14		12	26	44	68	68	270	150	150	800	23

TH :Theory Lecture,

ISA :Internal Sessional Assessment

TUT:Tutorial,

PR:Practical

ESE: End Semester Examination ICA : Internal Contineous Accessment

	Interdisciplinary Elective		Elective I
A	Software Engineering	Α	Cryptography and Network Security
В	DataBase Management System	В	Software Metrics and Quality Assurance
C	Web Technology	С	Mobile Computing
E	Multimedia Techniques	D	Bio-Informatics
E	Computer Ethics and cyber security		

ISE: In Semester Examination

• ** Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of Five Subjects- CO401,CO402,CO403,CO404,CO405.One faculty member should be appointed as course coordinator for the course 'self study' to compile the marks of all tests and enter in to MIS.

• The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that corse, assess answer papers of test examination and submit the marks to course coordinator.

Department of Computer Engineering.

Scheme for B. Tech. (Computer Engineering)

SEM VIII (new)

			Т	eaching Scheme	Hrs /week				Eval	uation S	cheme			
Course	Name of the Course	Group						Th	eory	-	Practical			Credits
Code		Group	ТН	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	Cicuits
CO451	Distributed Operating System	D	3			3	10	15	15	60			100	3
CO452	Data WareHousing and Data Mining	D	3			3	10	15	15	60			100	3
CO453	Elective II	Е	3			3	10	15	15	60			100	3
CO454	Elective III	Е	3			3	10	15	15	60			100	3
CO455	Distributed Operating System Lab	D			2	2					25	25	50	1
CO456	Data WareHousing and Data Mining Lab	D			2	2					25	25	50	1
CO457	Elective II Lab	Е			2	2					25	25	50	1
CO458	Project Phase II	D			6	6					50	100	150	4
CO459	Industrial Visit/Industrial Training\Special Study	D									25		25	1
CO460	Industrial Lectures	D	1			1					25		25	1
CO461	Self Study-IV	D											50**	2
Total			13		12	25	40	60	60	240	175	175	800	23

ESE: End Semester Examination

TH : Theory Lecture,

ISA :Internal Sessional Assessment

TUT:Tutorial,

ISE: In Semester Examination

PR:Practical

ICA : Internal Contineous Accessment

	Elective II		Elective III
А	Web Services and SOA	А	Advanced Computer Architecture
В	Embeded System	В	Linear Algebra
С	Advanced Database Management System	C	Fuzzy Logic and Neural Network
D	Advanced Computer Network	D	Professional Ethics and Cyber Security

• ** Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of Four Subjects- CO451,CO452,CO453,CO454.One faculty member should be appointed as course coordinator for the course 'self study' to compile the marks of all tests and enter in to MIS.

• The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that corse, assess answer papers of test examination and submit the marks to course coordinator.

• In the course Industrial Lectures, at least twelve lectures from industrial expert should be arranged and contineously assessed (Six lectures in VIth and VIIIth semester each).