

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-III (Option-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme						Credits
							Theory			Practical		Total	
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
CO201U	Object Oriented Programming	PC	3	...	...	3	30	10	60	...	...	100	3
CO202U	Digital Electronics and Logic Design	BE	3	...	...	3	30	10	60	...	...	100	3
CO203U	Fundamentals of Data Structure	PC	3	...	...	3	30	10	60	...	...	100	3
CO204U	Discrete Structures and Graph Theory	BS	3	...	...	3	30	10	60	...	...	100	3
CO205U	Humananities and Social Science	HM	2	...	...	2	30	10	60	...	...	100	2
CO206U	Problem Solving Using Python	PC	3	...	...	3	30	10	60	...	...	100	3
CO207U	Object Oriented Programming Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO208U	Fundamentals of Data Structure	PC	...	...	2	2	...	...	...	25	25	50	1
CO209U	Digital Electronics and Logic Design Lab	BE	...	...	2	2	...	...	...	50	...	50	1
CO210U	Problem Solving Using Python Lab	PC	...	...	2	2	...	...	...	25	25	50	1
SH299U	Effective Technical Communication	HM	...	...	2	2	...	...	...	25	25	50	1
SH200AU	Essence of Indian Traditional Knowledge	HM	Mandatory audit course in self learning mode equivalent to study of 3 hrs/week			0	...	...	60	...	...	60	AU
<b>Total</b>			<b>17</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>180</b>	<b>60</b>	<b>420</b>	<b>150</b>	<b>100</b>	<b>910</b>	<b>22</b>

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

1. Duration for all (ESE-TH) theory courses is three hours.
2. Duration for all (MSE-TH) theory courses is two hours.
3. SH200AU Essence of Indian Traditional Knowledge is mandatory, non-credit audit course.

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-IV(OPTION-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits		
							Theory			Practical			Total	
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE			
SH291U	Mathematics for Computer Engineering	BS	3	1	...	4	30	10	60	...	...	100	4	
CO251U	Operating Systems and Systems	PC	3	...	...	3	30	10	60	...	...	100	3	
CO252U	Data Communication and Networking	PC	3	...	...	3	30	10	60	...	...	100	3	
CO253U	Entrepreneurship and Business Management Information	HM	3	...	...	3	30	10	60	...	...	100	3	
CO254U	Data Structures and Files	PC	3	...	...	3	30	10	60	...	...	100	3	
CO255U	Operating Systems and Systems Programming Lab	PC	...	...	2	2	...	...	...	50	...	50	1	
CO256U	Data Communication and Networking	PC	...	...	2	2	...	...	...	25	25	50	1	
CO257U	Data Structures and Files Lab	PC	...	...	2	2	...	...	...	25	25	50	1	
CO258U	Software Lab-I	PC	1	...	2	3	...	...	...	25	25	50	2	
CO259U	Advanced Programming Lab	BE	...	...	2	2	...	...	...	25	25	50	1	
SH250AU	Introduction to the Constitution of India	HM	mode equivalent to study of 3 hrs/week				0	-	-	60	-	-	60	AU
<b>Total</b>			<b>16</b>	<b>1</b>	<b>10</b>	<b>27</b>	<b>150</b>	<b>50</b>	<b>360</b>	<b>150</b>	<b>100</b>	<b>810</b>	<b>22</b>	

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

1. Duration for all (ESE-TH) theory courses is three hours.
2. Duration for all (MSE-TH) theory courses is two hours.
3. Course SH250AU Constitution of India is mandatory, non-credit audit course.
4. Course CO409U Professional Internship of minimum 6 weeks shall be completed during vacation after IV semester and will be assessed in VII semester.

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-V (Option-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme						Credits
							Theory			Practical		Total	
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
CO301U	Computer Networks	PC	3		...	3	30	10	60	...	...	100	3
CO302U	Database Management Systems	PC	3		...	3	30	10	60	...	...	100	3
CO303U	Formal Language and Automata Theory	PC	3	...	...	3	30	10	60	...	...	100	3
CO304U	Professional Elective-I	PE	3	...	...	3	30	10	60	...	...	100	3
CO305U	Open Elective-I	OE	3	...	...	3	30	10	60	...	...	100	3
CO306U	Computer Networks Lab	PC	...	...	2	2	...	...	...	50	...	50	1
CO307U	Database Management Systems Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO308U	Professional Elective-I Lab	PE	...	...	2	2	...	...	...	25	25	50	1
CO309U	Software Lab-II	PC	1	...	2	3				25	25	50	2
CO310U	Application Programming Lab	PC	1		2	3				25	25	50	2
<b>Total</b>			<b>17</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>150</b>	<b>50</b>	<b>300</b>	<b>150</b>	<b>100</b>	<b>750</b>	<b>22</b>

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

1. Duration for all (ESE-TH) theory courses is three hours.
2. Duration for all (MSE-TH) theory courses is two hours.
3. Course CO409U Professional Internship of minimum 6 weeks shall be completed during vacation after IV semester and will be assessed in VII semester.

<b>Professional Elective-I</b>
A. Android Programming
B. Machine Learning
C. Software Engineering

<b>Open Elective-I</b>
A. Professional Ethics and cyber Security
B. Software Engineering

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-VI (Option-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme						Credits
							Theory			Practical		Total	
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
CO351U	Software Project Management	HM	3	...	...	3	30	10	60	...	...	100	3
CO352U	Finance Management and Informantion System	HM	2		...	2	30	10	60	...	...	100	2
CO353U	Design and Analysis of Algorithms	PC	3	...	...	3	30	10	60	...	...	100	3
CO354U	Professional Elective-II	PE	3	...	...	3	30	10	60	...	...	100	3
CO355U	Open Elective-II	OE	3	...	...	3	30	10	60	...	...	100	3
CO356U	Design and Analysis of Algorithms Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO357U	Professional Elective-II Lab	PE	...	...	2	2	...	...	...	25		25	1
CO358U	'R' Programming Lab	PC	1	...	2	3	...	...	...	25	25	50	2
CO359U	Web Programming Lab	PC	1		2	3				25	25	50	2
CO360U	Mini-project	PS	...	...	2	2	...	...	...	25	25	50	1
CO361U	Seminar	PS		...	2	2	...	...	...	25		25	1
<b>Total</b>			<b>16</b>	<b>0</b>	<b>12</b>	<b>28</b>	<b>150</b>	<b>50</b>	<b>300</b>	<b>150</b>	<b>100</b>	<b>750</b>	<b>22</b>

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

1. Duration for all (ESE-TH) theory courses is three hours.
2. Duration for all (MSE-TH) theory courses is two hours.
3. Course CO409U Professional Internship of minimum 6 weeks shall be completed during vacation after IV semester and will be assessed in VII semester.

<b>Professional Elective-II</b>
A. Professional Ethics and Cyber Security
B. Internet of Things
C. Embedded System

<b>Open Elective-II</b>
A. Internet and communication Technology
B. Human Computer Interaction

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-VII(Option-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
							Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
CO401U	Compiler Design	PC	3	...	...	3	30	10	60			100	3
CO402U	Cryptography and Network Security	PC	3	...	...	3	30	10	60			100	3
CO403U	Professional Elective-III	PE	3	...	...	3	30	10	60	...	...	100	3
CO404U	Professional Elective-IV	PE	3	...	...	3	30	10	60	...	...	100	3
CO405U	Open Elective-III	OE	3	...	...	3	30	10	60	...	...	100	3
CO406U	Compiler Design Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO407U	Cryptography and Network Security Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO408U	Professional Elective-III Lab	PE	---	...	2	2	...	...	...	25	25	50	1
CO409U	Professional Internship	PS			...	0	...	...	...	25		25	1
CO410U	Industrial Lecture	PS	1	...	...	1	...	...	...	25	...	25	1
CO411U	Project Phase I	PS	...	...	2	2	...	...	...	25	25	50	2
<b>Total</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>150</b>	<b>50</b>	<b>300</b>	<b>150</b>	<b>100</b>	<b>750</b>	<b>22</b>

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

1. Duration for all (ESE-TH) theory courses is three hours.
2. Duration for all (MSE-TH) theory courses is two hours.
3. Course CO409U Professional Internship of minimum 6 weeks shall be completed during vacation after IV semester and will be assessed in VII semester.

<b>Professional Elective-III</b>
A. Image Processing
B. Bio-Informatics
C. Software Metrics and Quality Assurance

<b>Professional Elective-IV</b>
A. Web and Internet
B. Management Information System
C. Data Analytics

<b>Open Elective-III</b>
A. Software Metrics and Quality Assurance
B. Information Storage and Management

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.**  
**Department of Computer Engineering.**  
**Scheme for B. Tech. (Computer Engineering)-2018-19, Sem-VIII(Option-I)**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme						Credits
							Theory			Practical		Total	
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
CO451U	Distributed Systems	PC	3	...		3	30	10	60			100	3
CO452U	Cloud Computing	PC	3	...	...	3	30	10	60	...	...	100	3
CO453U	Professional Elective-V	PE	3	...	...	3	30	10	60	...	...	100	3
CO454U	Professional Elective-VI	PE	3	...	...	3	30	10	60	...	...	100	3
CO455U	Distributed System Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO456U	Cloud Computing Lab	PC	...	...	2	2	...	...	...	25	25	50	1
CO457U	Professional Elective-V Lab	PE	...	...	2	2	...	...	...	25	25	50	1
CO458U	Project Phase II	PS	...	...	4	4	...	...	...	75	75	150	6
CO459U	Industrial Visit/Special Study/EDT	PS	...	...	...	0	...	...	...	50	...	50	1
<b>Total</b>			<b>12</b>	<b>0</b>	<b>10</b>	<b>22</b>	<b>120</b>	<b>40</b>	<b>240</b>	<b>200</b>	<b>150</b>	<b>750</b>	<b>22</b>

**L:Lecture**

**T:Tutorial**

**P:Practical**

**MSE:Mid Semester Examination**

**ISA:Internal Sessional Assessment**

**ESE:End Semester Exam**

**ICA:Internal Continuous Assessment**

**Note:**

**1. Duration for all (ESE-TH) theory courses is three hours.**

**2. Duration for all (MSE-TH) theory courses is two hours.**

<b>Professional Elective-V</b>
A. Fundamental of Artificial Neural Network
B. Big Data Analytics
C. Information Storage and Management

<b>Professional Elective-VI</b>
A. Ad-Hoc Sensor Networks
B. Advanced Deep Learning
C. Data Warehousing and Data Mining