

<b>GOVERNMENT COLLEGE OF ENGINEERING, JALGAON</b>													
<b>Department of Computer Engineering</b>													
<b>Scheme for Semester I B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)</b>													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme					Credit	
			L	T	P	Total	Theory			Practical			Total
							MSE	ISA	ESE	ICA	ESE		
SH100AN	Induction Program [Includes Universal Human Values (UHV - I module)]	Mandatory Audit Course as per AICTE	...	...	...	...	...	...	...	50	...	50	AU
SH101N	Engineering Mathematics I	BSC	3	1	...	4	30	10	60	...	...	100	4
SH152N	Engineering Physics	BSC	3	...	...	3	30	10	60	...	...	100	3
EE101N	Basic Electrical Engineering	ESC	3	...	...	3	30	10	60	...	...	100	3
CO101N	Fundamentals of Computer Science and Engineering	ESC	3	...	...	3	30	10	60	...	...	100	3
ME101N	Mechanical Workshop Practices	VSEC (Skill)	...	...	4	4	...	...	...	50	...	50	2
SH153N	Engineering Physics Lab	BSC	...	...	2	2	...	...	...	50	...	50	1
EE102N	Basic Electrical Engineering Lab	ESC	...	...	2	2	...	...	...	50	...	50	1
CO102N	Fundamentals of Computer Science and Engineering Lab	ESC	...	...	2	2	...	...	...	50	...	50	1
LL101N	Liberal Learning Course (NSS and Sports)	LLC	...	...	4	4	...	...	..	50	...	50	2
IK103N	Essence of Indian Traditional Knowledge	HSSM (IKS)	2	...	...	2	30	10	60	...	...	100	2
<b>Total</b>			<b>13</b>	<b>1</b>	<b>16</b>	<b>30</b>	<b>120</b>	<b>40</b>	<b>240</b>	<b>350</b>	<b>...</b>	<b>750</b>	<b>22</b>
<b>L : Lecture</b>		<b>T: Tutorial</b>	<b>P: Practical</b>				<b>MSE: Mid Semester Examination</b>						
<b>ISA :Internal Sessional Assessment</b>		<b>ESE: End Semester Examination</b>				<b>ICA : Internal Contineous Accessment</b>							

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON													
Department of Computer Engineering													
Scheme for Semester II B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme					Credit	
			L	T	P	Total	Theory			Practical			Total
							MSE	ISA	ESE	ICA	ESE		
SH151N	Engineering Mathematics II	BSC	3	1	...	4	30	10	60	...	...	100	4
SH102N	Engineering Chemistry	BSC	3	...	...	3	30	10	60	...	...	100	3
ME151N	Engineering Graphics	ESC	3	...	...	3	30	10	60	...	...	100	3
CO151N	Programming for Problem Solving	PCC	3	...	...	3	30	10	60	...	...	100	3
ME152N	Engineering Exploration Workshop	VSEC (Skill)	...	...	4	4	...	...	...	50	...	50	2
CO152N	Programming for Problem Solving Lab	PCC	...	...	2	2	...	...	...	50	...	50	1
SH100N	Ability Enhancement Course (English)	AEC (HSSM)	1	...	2	3	...	...	..	50	...	50	2
SH103N	Engineering Chemistry Lab	BSC	...	...	2	2	...	...	...	50	...	50	1
ME153N	Engineering Graphics lab	ESC	...	...	2	2	...	...	...	50	...	50	1
LL102N	Liberal Learning Course (Yoga and Nutrition)	LLC	...	...	4	4	...	...	..	50	...	50	2
<b>Total</b>			<b>14</b>	<b>1</b>	<b>14</b>	<b>29</b>	<b>150</b>	<b>50</b>	<b>300</b>	<b>250</b>	<b>...</b>	<b>750</b>	<b>22</b>
<b>L : Lecture</b>		<b>T: Tutorial</b>		<b>P: Practical</b>			<b>MSE: Mid Semester Examination</b>						
<b>ISA :Internal Sessional Assessment</b>		<b>ESE: End Semester Examination</b>			<b>ICA : Internal Contineous Accessment</b>								
Exit Option for UG Certificate: 8 credits in work based Vocational Courses or Internship/apprenticeship offered during summer Vacation (As per exit policy approved by Board of Studies (Computer Engineering) in its meeting held on 06 July, 2023.)													
Note: Students securing CGPA 7.0 and above upto semester-II can opt for Double minor by registering additional courses [Semester-III onwards] and earning these additional 18 credits . Students need to submit written application through respective HoD to Academic and Examination Cell. This double minor track should be different than multidisciplinary minor track opted by students from semester-III as per Multi Disciplinary Minor (MDM) courses. For example: If Computer Engineering student opted for Civil Engineering track for MDM, then he/she should register for additional credits other than Mechanical and Civil Engineering courses for double minor. Students opting for double minor can not opt for either Honors or Honors with research degree.													

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON													
Department of Computer Engineering													
Scheme for Semester III B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme						Credit
			L	T	P	Total	Theory			Practical		Total	
							MSE	ISA	ESE	ICA	ESE		
CO201N	Discrete Structure and Graph Theory	PCC	3	...	...	3	30	10	60	...	...	100	3
CO202N	Digital Electronics and Logic Design	PCC	2	...	...	2	30	10	60	...	...	100	2
CO203N	Data Structures	PCC	3	...	...	3	30	10	60	...	...	100	3
CO204N	Open Elective -I	OE (MDC)	3	1	...	4	30	10	60	...	...	100	4
XXMYYYN	Multi Disciplinary Minor-I	MDM-I (MDC)	2	...	...	2	30	10	60	...	...	100	2
CO206N	Digital Electronics and Logic Design Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
CO207N	Data Structures Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
SH201N	Project and Finance Management	EEMC	2	...	...	2	30	10	60	...	...	100	2
SH203N	Environmental Science	VEC (HSSM )	2	...	...	2	30	20	...	...	...	50	2
CO250N	Community Engineering Project / Field Project	CEP (ELC)	...	...	2	2	...	...	...	30	20	50	2
<b>Total</b>			<b>17</b>	<b>1</b>	<b>6</b>	<b>24</b>	<b>210</b>	<b>80</b>	<b>360</b>	<b>140</b>	<b>60</b>	<b>800</b>	<b>22</b>
<b>L : Lecture</b>		<b>T: Tutorial</b>		<b>P: Practical</b>				<b>MSE: Mid Semester Examination</b>					
<b>ISA :Internal Sessional Assessment</b>		<b>ESE: End Semester Examination</b>				<b>ICA : Internal Contineous Accessment</b>							
<b>List of Open Elective -I</b>													
CO204NX Software Engineering													
CO204NY Internet and Communication Technology													

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON													
Department of Computer Engineering													
Scheme for Semester IV B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme						Credit
			L	T	P	Total	Theory			Practical		Total	
							MSE	ISA	ESE	ICA	ESE		
CO251N	Data Communication and Networking	PCC	3	...	...	3	30	10	60	...	...	100	3
CO252N	Operating System and System Programming	PCC	3	...	...	3	30	10	60	...	...	100	3
CO253N	Database Management System	PCC	3	...	...	3	30	10	60	...	...	100	3
CO254N	Open Elective-II	OE (MDC)	2	...	...	2	30	10	60	...	...	100	2
XXMYYYN	Multi Disciplinary Minor-II	MDM-II (MDC)	2	...	...	2	30	10	60	...	...	100	2
CO256N	Operating System and System Programming Lab	VSEC	...	...	2	2	...	...	...	30	20	50	1
CO257N	Database Management System Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
CO258N	Software Lab-I	VSEC	...	...	2	2	...	...	...	30	20	50	1
SH202N	Entrepreneurship Development	EEMC (Mgmt)	2	...	...	2	30	10	60	...	...	100	2
SH204N	Universal Human Values-II	VEC (HSSM)	2	...	...	2	30	70	...	...	...	100	2
SH205N	मराठी लेखनकौशल्य (Writing Skills)*	AEC (HSSM)	2	...	...	2	30	20	...	...	...	50	2
<b>Total</b>			<b>19</b>	<b>0</b>	<b>6</b>	<b>25</b>	<b>240</b>	<b>100</b>	<b>360</b>	<b>90</b>	<b>60</b>	<b>850</b>	<b>22</b>
* Students are permitted to earn credits of this course for any other Modern Indian Language (other than English) through MOOC courses, as per credit transfer policy of the instit													
<b>L : Lecture</b>		<b>T: Tutorial</b>		<b>P: Practical</b>				<b>MSE: Mid Semester Examination</b>					
<b>ISA :Internal Sessional Assessment</b>				<b>ESE: End Semester Examination</b>				<b>ICA : Internal Contineous Accessment</b>					
<b>List of Open Elective -II</b>													
CO254NX Software Metrics and Quality Assurance													
CO254NY Operating System and System Programming													
Exit Option for UG Diploma: 8 credits in Skill based Vocational Courses/Internship/apprentiship/MiniProject offered during summer vacation after Second Year (As per exit policy approved by Board of Studies (Computer Engineering) in its meeting held on 06 July, 2023).													
Note: Students having CGPA more than 8.0, can register for additional 18 credits departmental honours courses from semester-V to earn the credits which will lead to honours degree in that major program with MDM													

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON													
Department of Computer Engineering													
Scheme for Semester V B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme						Credit
			L	T	P	Total	Theory			Practical		Total	
							MSE	ISA	ESE	ICA	ESE		
CO301N	Object Oriented Programming using Java	PCC	4	...	...	4	30	10	60	...	...	100	4
CO302N	Computer Networks	PCC	3	...	...	3	30	10	60	...	...	100	3
CO303N	Formal Language and Automata Theory	PCC	3	1	...	4	30	10	60	...	...	100	3
CO304N	Program Elective- I	PEC	3	...	...	3	30	10	60	...	...	100	3
CO305N	Open Elective-III	OE (MDC)	2	...	...	2	30	10	60	...	...	100	2
XXMYYYYN	Multi Disciplinary Minor-III	MDM-III (MDC)	4	...	...	4	30	10	60	...	...	100	4
CO307N	Computer Network Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
CO308N	Software Lab-II	PCC	...	...	2	2	...	...	...	30	20	50	1
CO310N	Program Elective- I Lab	PEC	...	...	2	2	...	...	...	30	20	50	1
<b>Total</b>			<b>19</b>	<b>1</b>	<b>6</b>	<b>26</b>	<b>180</b>	<b>60</b>	<b>360</b>	<b>90</b>	<b>60</b>	<b>750</b>	<b>22</b>
CO311N	Hon-I	DHC-I	3	...	...	3	30	10	60	...	...	100	3
CO312N	Hon-I Lab	DHC-II	...	...	2	2	...	...	...	30	20	50	1
	<b>List of Open Elective -III</b>		<b>List of Program Elective-I</b>										
	CO305NX Professional Ethics and Cyber Security		A. Data Mining and Data Warehousing										
	CO305NY Human Computer Interaction		B. Internet of Things										
<b>L : Lecture</b>		<b>T: Tutorial</b>	<b>P: Practical</b>					<b>MSE: Mid Semester Examination</b>					
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GOVERNMENT COLLEGE OF ENGINEERING, JALGAON													
Department of Computer Engineering													
Scheme for Semester VI B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme					Credit	
			L	T	P	Total	Theory			Practical			Total
							MSE	ISA	ESE	ICA	ESE		
CO351N	Design and Analysis of Algorithm	PCC	3	...	...	3	30	10	60	...	...	100	3
CO352N	Software Engineering	PCC	2	...	...	2	30	10	60	...	...	100	2
CO353N	Compiler Construction	PCC	2	...	...	2	30	10	60	...	...	100	2
XXMYYYN	Multi Disciplinary Minor-IV	MDM-IV (MDC)	2	...	...	2	30	10	60	...	...	100	2
CO355N	Program Elective- II	PEC	3	...	...	3	30	10	60	...	...	100	3
CO356N	Program Elective- III	PEC	3	...	...	3	30	10	60	...	...	100	3
CO357N	Design and Analysis of Algorithm Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
CO358N	Compiler Construction Lab	PCC	...	...	2	2	...	...	...	30	20	50	1
CO359N	Software Lab-III	PCC	...	...	2	2	...	...	...	30	20	50	1
CO360N	Program Elective- II Lab	PEC	...	...	2	2	...	...	...	30	20	50	1
CO361N	Program Elective- III Lab	PEC	...	...	2	2	...	...	...	30	20	50	1
CO362N	Mini Project	VSEC (Skill)	...	...	4	4	...	...	...	30	20	50	2
<b>Total</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>29</b>	<b>180</b>	<b>60</b>	<b>360</b>	<b>180</b>	<b>120</b>	<b>900</b>	<b>22</b>
CO363N	Hon-III	DHC-III	3	...	...	3	30	10	60	...	...	100	3
<b>List of Program Elective-II</b>			<b>List of Program Elective-III</b>										
A. Cloud Computing			A. Artificial Intelligence and Machine Learning										
B. Professional Ethics and Cyber Security			B. Software Metrics and Quality Assurance										
<b>L : Lecture</b>		<b>T: Tutorial</b>	<b>P: Practical</b>				<b>MSE: Mid Semester Examination</b>						
<b>ISA :Internal Sessional Assessment</b>		<b>ESE: End Semester Examination</b>				<b>ICA : Internal Contineous Accessment</b>							
<b>Exit Option for B.Voc.: 8 credits in Skill based Vocational Courses/Internship/apprentiship/MiniProject offered during summer vacation after Third Year (</b>													

<b>GOVERNMENT COLLEGE OF ENGINEERING, JALGAON</b>													
<b>Department of Computer Engineering</b>													
<b>Scheme for Semester VII B. Tech. (Computer Engineering) with effect from academic year 2023-24 (As per NEP 2020)</b>													
Course Code	Name of the Course	Component as per NEP	Teaching Scheme				Evaluation Scheme					Credit	
			L	T	P	Total	Theory			Practical			Total
							MSE	ISA	ESE	ICA	ESE		
CO401N	Soft Computing (NPTEL Course)	PCC	As per NPTEL Teaching Scheme				examination scheme and institute policy for					100	4
CO402N	NPTEL Course (Program Elective-IV)	PEC	As per NPTEL Teaching Scheme				examination scheme and institute policy for					100	2
XXMYYYYN	Multi Disciplinary Minor-V	MDM-V (MDC)	As per NPTEL Teaching Scheme				examination scheme and institute policy for					100	2
CO410N	Professional Internship	ELC	...	...	24	24	...	...	...	100	...	100	12
<b>Total</b>			...	...	<b>24</b>	<b>24</b>	...	...	...	<b>100</b>	...	<b>400</b>	<b>20</b>
CO411N	Hon-IV (12 Weeks NPTEL Course)	DHC-IV	As per NPTEL Teaching Scheme				examination scheme and institute policy for					100	4
CO412N	Hon-V (12 Weeks NPTEL Course)	DHC-V	3	...	...	3	30	10	60	...	...	100	3
<b>A Program Internship of one semester is to be completed by the students. One semester means 12 weeks minimum (Engagement hours of student for internship should be 18-20 hours)</b>													
<b>List of Program Elective-IV</b>													
A. Image Processing													
B. Industry 4.0													
<b>L : Lecture</b>		<b>T: Tutorial</b>		<b>P: Practical</b>				<b>MSE: Mid Semester Examination</b>					
<b>ISA :Internal Sessional Assessment</b>				<b>ESE: End Semester Examination</b>				<b>ICA : Internal Contineous Accessment</b>					
Note: Mentor faculty/Course Teacher shall be allotted for each online course for smooth evaluation and completion of the course. Mentor faculty/course Teacher need to enrol the course alongwith students													

