

## Option

**Government College of Engineering, Jalgaon**  
**Scheme for Semester I of B. Tech. Electrical Engineering with effect from academic year 2018-2019**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
<b>SHAU100</b>	<b>Induction Program</b>	<b>Mandatory audit course of three weeks as per AICTE model curriculum</b>										<b>AU</b>	
SH101U	Differential Calculus	BS	3	1	0	4	30	10	60	0	0	100	4
SH102U	Engineering Chemistry	BS	3	0	0	3	30	10	60	0	0	100	3
EE101U	Elements of Electrical Engineering	BE	2	0	0	2	30	10	60	0	0	100	2
CO101U	Programming for Problem Solving	BE	3	0	0	3	30	10	60	0	0	100	3
SH104U	Communication Skills	HM	1	0	0	1	15	5	30	0	0	50	1
SH105U	Communication Skills Lab	HM	0	0	2	2	0	0	0	50	0	50	1
ME101U	Mechanical Workshop Practices	BE	0	0	2	2	0	0	0	50	0	50	1
SH103U	Engineering Chemistry Lab	BS	0	0	2	2	0	0	0	50	0	50	1
EE102U	Elements of Electrical Engineering Lab	BE	0	0	2	2	0	0	0	50	0	50	1
CO102U	Programming for Problem Solving Lab	BE	0	0	2	2	0	0	0	50	0	50	1
Total			12	1	10	23	135	45	270	250	0	700	18

\* Commencement of first semester of UG engineering program is generally delayed by 4-5 weeks as compared with higher semesters due to admission procedure. In addition, as per AICTE directives, there is Induction Program for three weeks at the beginning of first semester. Thus, the effective teaching in first semester may be only for 8-9 weeks. Therefore, one hour per week theory/laboratory teaching should be added in the regular load shown in the curriculum structure so that the syllabus can be completed in 8-9 weeks available in first semester of UG program

L: Lecture

T: Tutorial    P: Practical

ISA: Internal Sessional Assessment

MSE: Mid Semester Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

**Note: 1. ESE(TH)duration for SH104U is two hours and that for all other theory courses is three hours.**

**2.MSE(TH) duration for SH104U is one hours and that for all other theory courses is two hours.**

3.Group indicates curriculum component as defined earlier.

**Government College of Engineering, Jalgaon**  
**Scheme for Semester II of B. Tech. Electrical Engineering with effect from academic year 2018-2019**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
SH151U	Integral Calculus	BS	3	1	0	4	30	10	60	0	0	100	4
SH152U	Engineering Physics	BS	3	0	0	3	30	10	60	0	0	100	3
ME151U	Engineering Drawing and Drafting	BE	3	0	0	3	30	10	60	0	0	100	3
ET151U	Basic Electronics and Measurement Techniques	BE	3	0	0	3	30	10	60	0	0	100	3
CE151U	Engineering Mechanics	BE	3	1	0	4	30	10	60	0	0	100	4
ME152U	General Workshop Practices	BE	0	0	2	2	0	0	0	50	0	50	1
SH153U	Engineering Physics Lab	BS	0	0	2	2	0	0	0	50	0	50	1
ME153U	Engineering Graphics and Drafting Lab	BE	0	0	2	2	0	0	0	50	0	50	1
ET152U	Basic Electronics and Measurement Techniques Lab	BE	0	0	2	2	0	0	0	50	0	50	1
CE152U	Engineering Mechanics Lab	BE	0	0	2	2	0	0	0	50	0	50	1
SHAU150U	Environmental Science	<b>Mandatory audit course in self learning mode equivalent to study of 3 hrs/week</b>							<b>100</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>AU</b>
Total			15	2	10	27	150	50	400	250	0	850	22

L: Lecture

T: Tutorial P: Practical

ISA: Internal Sessional Assessment

MSE: Mid Semester Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

**Note:1. ESE (TH) duration for ME151U is four hours and that for all other theory courses is three hours.**

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

**3. Group indicates curriculum component as defined earlier.**

**Government College of Engineering, Jalgaon**  
**Scheme for Semester III of B. Tech. Electrical Engineering with effect from academic year 2019-2020**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
SH226U	Engineering Mathematics	BS	3	1	0	4	30	10	60	0	0	100	4
EE201U	Analog Electronics	PC	3	0	0	3	30	10	60	0	0	100	3
EE202U	Electrical Circuit Analysis	BE	3	1	0	4	30	10	60	0	0	100	4
EE203U	Electrical Measurement and Instrumentation	PC	3	0	0	3	30	10	60	0	0	100	3
EE204U	Signals and Systems	PC	3	0	0	3	30	10	60	0	0	100	3
EE205U	Analog Electronics Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE 206U	Electrical Circuit Analysis Lab	BE	0	0	2	2	0	0	0	25	25	50	1
EE207U	Electrical Measurement and Instrumentation Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE208U	Signals and Systems Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE209U	Electrical and Electronics Material Lab	PC	0	0	2	2	0	0	0	50	0	50	1
SH200AU	Essence of Indian Traditional Knowledge	HM					NA	NA	60	NA	NA	60	AU

Total	15	2	10	27	150	50	360	100	100	810	22
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L: Lecture

T: Tutorial P: Practical

ISA: Internal Sessional Assessment

MSE: Mid Semester Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

**Note:1. Professional Internship of 6 weeks shall be completed during vacation period after IV<sup>th</sup> semester and it will be assessed in VIII<sup>th</sup> semester. Minimum two weeks at a time can be completed.**

**2. SH200AU - It is a self study subject.**

**Government College of Engineering, Jalgaon**

**Scheme for Semester IV of B. Tech. Electrical Engineering with effect from academic year 2019-2020**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
SH286U	Life Skills	HM	2	0	0	2	30	10	60	0	0	100	2
EE251U	Electromagnetic Fields	BE	3	0	0	3	30	10	60	0	0	100	3
EE252U	DC Machines and Transformers	PC	3	0	0	3	30	10	60	0	0	100	3
EE253U	Digital Electronics and Microprocessor	PC	3	1	0	4	30	10	60	0	0	100	4
EE254U	Power System I	PC	3	0	0	3	30	10	60	0	0	100	3
EE255U	DC Machines and Transformers Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE256U	Digital Electronics and Microprocessor Lab	PC	0	0	2	2	0	0	0	25	25	50	1

EE257U	Power System I Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE258U	Circuit Simulation Lab	PC	0	0	2	2	0	0	0	50	0	50	1
EE259U	Mini Project	PS	0	0	2	2	0	0	0	25	25	50	2
SH299U	Effective Technical Communication	HM	0	0	2	2	0	0	0	25	25	50	1
<b>SH250AU</b>	<b>Introduction to The Constitution of India</b>	<b>HM</b>					<b>NA</b>	<b>NA</b>	<b>60</b>	<b>NA</b>	<b>NA</b>	<b>60</b>	<b>AU</b>
Total			14	1	12	27	150	50	360	175	125	860	22

L: Lecture

MSE: Mid Semester Examination

T: Tutorial P: Practical

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

### Government College of Engineering, Jalgaon

#### Scheme for Semester V of B. Tech. Electrical Engineering with effect from academic year 2020-2021

#### Option I

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
EE301U	AC Machines	PC	3	0	0	3	30	10	60	0	0	100	3
EE302U	Microcontroller and Its Applications	PC	3	0	0	3	30	10	60	0	0	100	3
EE303U	Power System II	PC	3	1	0	4	30	10	60	0	0	100	4
EE304U	Professional Elective I	PE	3	0	0	3	30	10	60	0	0	100	3

EE305U	Open Elective I	OE	3	0	0	3	30	10	60	0	0	100	3
EE306U	AC Machines Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE307U	Microcontroller and Its Applications Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE308U	Power System II Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE309U	Professional Elective I Lab	PE	0	0	2	2	0	0	0	50	0	50	1
EE310U	Numerical Methods and Computer Programmimg Lab	PC	1	0	2	3	0	0	0	25	25	50	2
Total			16	1	10	27	150	50	300	150	100	750	22

L: Lecture

MSE: Mid Semester Examination

T: Tutorial P: Practical

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

List of Professional Elective I:

EE304U A Wind and Solar Power Technologies

EE304U B Digital Signal Processing

EE304U C Power Quality

List of Open Elective I:

EE305U A Renewable Energy Technologies

EE305U B Wind and Solar Power Systems

**Government College of Engineering, Jalgaon**

**Scheme for Semester VI of B. Tech. Electrical Engineering with effect from academic year 2020-2021**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme Hrs/Week				Evaluation Scheme					Credits
							Theory			Practical	Total	
			L	T	P	Total	MSE	ISA	ESE	ICA		

SH386U	Industrial Organisation and Management	HM	2	0	0	2	30	10	60	0	0	100	2
EE351U	Control Systems	PC	3	0	0	3	30	10	60	0	0	100	3
EE352U	Power Electronics	PC	3	0	0	3	30	10	60	0	0	100	3
EE353U	Switchgear and Protection	PC	3	0	0	3	30	10	60	0	0	100	3
EE354U	Professional Elective II	PE	3	0	0	3	30	10	60	0	0	100	3
EE355U	Open Elective II	OE	3	0	0	3	30	10	60	0	0	100	3
SH387U	Industrial Organisation and Management Lab	HM	0	0	2	2	0	0	0	25	0	25	1
EE356U	Control Systems Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE357U	Power Electronics Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE358U	Switchgear and Protection Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE359U	Professional Elective II Lab	PE	0	0	2	2	0	0	0	25	0	25	1
Total			17	0	10	27	180	60	360	125	75	800	22

L: Lecture  
MSE: Mid Semester Examination

T: Tutorial    P: Practical    ISA: Internal Sessional Assessment  
ESE: End Semester Examination    ICA: Internal Continuous Assessment

List of Professional Elective II:

EE354U A Power System Stability

EE354U B Industrial Automation

EE354U C Energy Conservation and Auditing

List of Open Elective II:

EE355U A Energy Audit and Conservation

EE355U B Electrical Engineering Materials

**Government College of Engineering, Jalgaon**  
**Scheme for Semester VII of B. Tech. Electrical Engineering with effect from academic year 2021-2022**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme Hrs/Week				Evaluation Scheme					Credits	
			L	T	P	Total	Theory			Practical			Total
							MSE	ISA	ESE	ICA	ESE		
EE401U	Electric Drives	PC	3	0	0	3	30	10	60	0	0	100	3
EE402U	Power System Operation and Control	PC	3	0	0	3	30	10	60	0	0	100	3
EE403U	Professional Elective III	PE	3	0	0	3	30	10	60	0	0	100	3
EE404U	Professional Elective IV	PE	3	0	0	3	30	10	60	0	0	100	3
EE405U	Open Elective III	OE	3	0	0	3	30	10	60	0	0	100	3
EE406U	Electrical Drives Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE407U	Professional Elective III Lab	PE	0	0	2	2	0	0	0	25	25	50	1
EE408U	Seminar	PS	0	0	2	2	0	0	0	50	0	50	2
EE409U	Project I	PS	0	0	2	2	0	0	0	25	25	50	2
EE410U	Industrial Lecture	PS	1	0	0	1	0	0	0	50	0	50	1
Total			16	0	8	24	150	50	300	175	75	750	22

L: Lecture

MSE: Mid Semester Examination

T: Tutorial    P: Practical

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

List of Professional Elective III:

EE403U A Power System Design

EE403U B Electrical Machine Design

EE403U C Optimization Techniques

List of Professional Elective IV:

EE404U A Smart Grid Technology

EE404U B Industrial Safety

EE404U C Industrial Electrical Systems

List of Open Elective III:

EE405U A Electrification of Buildings

EE405U B Industrial Automation



**Government College of Engineering, Jalgaon**  
**Scheme for Semester VIII of B. Tech. Electrical Engineering with effect from academic year 2021-2022**

**Option I**

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	MSE	ISA	ESE	ICA	ESE		
SH486U	Enterprenuership Development	HM	2	0	0	2	30	10	60	0	0	100	2
EE451U	Utilization of Electrical Energy	PC	3	0	0	3	30	10	60	0	0	100	3
EE452U	Professional Elective V	PE	3	0	0	3	30	10	60	0	0	100	3
EE453U	Professional Elective VI	PE	3	0	0	3	30	10	60	0	0	100	3
SH487U	Enterprenuership Development Lab	HM	0	0	2	2	0	0	0	50	0	50	1
EE454U	Utilization of Electrical Energy Lab	PC	0	0	2	2	0	0	0	25	25	50	1
EE455U	Professional Elective V Lab	PE	0	0	2	2	0	0	0	25	25	50	1
EE456U	Electrical Testing and Maintenance Lab	PC	1	0	2	3	0	0	0	25	25	50	2
EE457U	Project II	PS	0	0	4	4	0	0	0	50	50	100	4
EE458U	Professional Internship	PS	0	0	0	0	0	0	0	50	0	50	2
Total			12	0	12	24	120	40	240	225	125	750	22

L: Lecture

MSE: Mid Semester Examination

T: Tutorial P: Practical

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

List of Professional Electives V:

List of Professional Elective VI:

EE452U A Computer Aided Power System Analysis

EE452U B Illumination Engineering

EE452U C High Voltage Engineering

EE453U A HVDC And FACTS

EE453U B Special Machines

EE453U C Electrical and Hybrid Vehicle









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