

**Government College of Engineering, Jalgaon**  
**Scheme for Semester I of B. Tech. Electrical Engineering with effect from academic year 2018-19**

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		
SHAU100U	Induction Program		Mandatory audit course of three weeks as per AICTE model curriculum										AU
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

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 2018-19**

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		
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
<b>SHAU150U</b>	<b>Environmental Science</b>						<b>NA</b>	<b>NA</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>AU</b>
Total			15	2	10	27	150	50	400	250	0	810	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 curriculam 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**

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
<b>SH200AU</b>	<b>Essence of Indian Traditional Knowledge</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			15	2	10	27	150	50	360	100	100	810	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. 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**

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**

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 Programming Lab	PC	1	0	2	3	0	0	0	25	25	50	2
<b>EE405U</b>	<b>Open Elective III</b>	<b>OE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>30</b>	<b>10</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>3</b>
Total			19	1	10	30	180	60	360	150	100	850	25

L: Lecture

MSE: Mid Semester Examination

T: Tutorial

ESE: End Semester Examination

P: Practical

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

List of Open Elective III:

EE405U A Electrification of Buildings

EE405U B Industrial Automation

**Government College of Engineering, Jalgaon**  
**Scheme for Semester VI of B. Tech. Electrical Engineering with effect from academic year 2020-21**

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		
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
<b>SH486U</b>	<b>Enterprenuership Development</b>	<b>HM</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>30</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>100</b>	<b>2</b>
<b>SH487U</b>	<b>Enterprenuership Development Lab</b>	<b>HM</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>50</b>	<b>1</b>
Total			19	0	12	31	210	70	360	175	135	950	25

L: Lecture

MSE: Mid Semester Examination

List of Professional Elective II:

EE354U A Power System Stability

EE354U B Industrial Automation

EE354U C Energy Conservation and Auditing

T: Tutorial P: Practical

ESE: End Semester Examination

List of Open Elective II:

EE355U A Energy Audit and Conservation

EE355U B Electrical Engineering Materials

ISA: Internal Sessional Assessment

ICA: Internal Contineous Assessment

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

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
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
EE410U	Industrial Lecture	PS	1	0	0	1	0	0	0	50	0	50	1
<b>EE451U</b>	<b>Utilization of Electrical Energy</b>	<b>PC</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>30</b>	<b>10</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>3</b>
<b>EE452U</b>	<b>Professional Elective V</b>	<b>PE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>30</b>	<b>10</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>3</b>
<b>EE454U</b>	<b>Utilization of Electrical Energy Lab</b>	<b>PC</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>1</b>
<b>EE455U</b>	<b>Professional Elective V Lab</b>	<b>PE</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>1</b>
<b>EE456U</b>	<b>Electrical Testing and Maintenance Lab</b>	<b>PC</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>2</b>
Total			20	0	10	30	180	60	360	175	125	900	25

L: Lecture

T: Tutorial P: Practical

ISA: Internal Sessional Assessment

MSE: Mid Semester Examination

ESE: End Semester Examination

ICA: Internal Continuous Assessment

List of Professional Electives III:

EE403U A Power System Design

EE403U B Electrical Machine Design

EE403U C Optimization Techniques

List of Professional Electives IV:

EE404U A Smart Grid Technology

EE404U B Industrial Safety

EE404U C Industrial Electrical Systems

List of Professional Electives V:

EE452U A Computer Aided Power System Analysis

EE452U B Illumination Engineering

EE452U C High Voltage Engineering

**Government College of Engineering, Jalgaon**

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

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		
EE408U	Seminar	PS	0	0	0	0	0	0	0	50	0	100	2
EE457U	Project	PS	0	0	0	0	0	0	0	75	75	150	6
EE453U	Self Learning (MOOCS/NPTEL/SWAYAM , etc or Professional Elective - VI	PE	3	0	0	3	30	10	60	0	0	100	3
EE454U	Professional Internship	PS	0	0	0	0	0	0	0	50	0	50	2
Total			3	0	0	3	30	10	60	175	75	400	13

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 VI:

EE453U A HVDC and FACTS

EE453U B Special Machines

EE453U C Electrical and Hybrid Vehicle