

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester I of B.Tech.(Mechanical/Electronics and Telecommunication/Instrumentation) progressively implemented from academic year 2018-19 (FY)

Option I

Course Code	Name of the Course	Group	Teaching Scheme*				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
SH100AU	Induction Program		Mandatory audit course of three weeks duration as per AICTE model curriculum										AU
SH101U	Differential Calculus	BS	3	1	--	4	10	30	60	--	--	100	4
SH152U	Engineering Physics	BS	3	--	--	3	10	30	60	--	--	100	3
ME151U	Engineering Graphics and Drafting	BE	3	--	--	3	10	30	60	--	--	100	3
CE151U	Engineering Mechanics	BE	3	1		4	10	30	60	--	--	100	4
ME152U	General Workshop Practices	BE	--	--	2	2	--	--	--	50	--	50	1
SH153U	Engineering Physics Lab	BS	--	--	2	2	--	--	--	50	--	50	1
ME153U	Engineering Graphics and Drafting lab	BE	--	--	2	2	--	--	--	50	--	50	1
CE152U	Engineering Mechanics Lab	BE	--	--	2	2	--	--	--	50	--	50	1
Total			12	2	8	22	40	120	240	200	--	600	18

* Commencement of the 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 of 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

MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

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

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

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester II of B.Tech.(Mechanical/Electronics and Telecommunication/Instrumentation) progressively implemented from academic year 2018-19 (FY)

Option I

Course Code	Name of the Course	Group	Teaching Scheme*				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
SH151U	Integral Calculus	BS	3	1	--	4	10	30	60	--	--	100	4
SH102U	Engineering Chemistry	BS	3	--	--	3	10	30	60	--	--	100	3
EE101U	Elements of Electrical Engineering	BE	2	--	--	2	10	30	60	--	--	100	2
ET151U	Basic Electronics and Measurement Techniques	BE	3	--	--	3	10	30	60	--	--	100	3
CO101U	Programming for Problem Solving	BE	3	--	--	3	10	30	60	--	--	100	3
SH104U	Communication Skills	HM	1	--	--	1	5	15	30	--	--	50	1
SH105U	Communication Skills Lab	HM	--	--	2	2	--	--	--	50	--	50	1
ME101U	Mechanical Workshop Practices	BE	--	--	2	2	--	--	--	50	--	50	1
SH103U	Engineering Chemistry Lab	BS	--	--	2	2	--	--	--	50	--	50	1
EE102U	Elements of Electrical Engineering Lab	BE	--	--	2	2	--	--	--	50	--	50	1
ET152U	Basic Electronics and Measurement Techniques Lab	BE	--	--	2	2	--	--	--	50	--	50	1
CO102U	Programming for Problem Solving Lab	BE	--	--	2	2	--	--	--	50	--	50	1
SH150AU	Environmental Science	Mandatory audit course in self learning mode equivalent to study of 3 hrs/week							100	--	--	100	AU
Total			15	1	12	28	55	165	430	300		950	22

L: Lecture **T:** Tutorial

MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

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

2.MSE (TH) duration for SH104U- one hour and for all other theory courses- two hours

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester III of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19 (FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
SH226U	Engineering Mathematics	BS	3	1	--	4	10	30	60	--	--	100	4
ET201U	Network Analysis and Synthesis	PC	3	--	--	3	10	30	60	--	--	100	3
ET202U	Electronic Devices and Circuits	PC	3	--	--	3	10	30	60	--	--	100	3
ET203U	Digital Circuits and Systems Design	PC	3	--	--	3	10	30	60	--	--	100	3
ET204U	Signals and Systems	PC	3	--	--	3	10	30	60	--	--	100	3
ET205U	Electronic Materials and Components	PC	2	--	--	2	10	30	60	--	--	100	2
ET206U	Network Analysis and Synthesis Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET207U	Electronic Devices and Circuits Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET208U	Digital Circuits and Systems Design Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET209U	Signals and Systems Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET210U	Electronic Workshop	PC	--	--	2	2	--	--	--	50	--	50	1
SH200AU	Essence of Indian Traditional Knowledge	HM	--	--	--	--	NA	NA	60	--	--	60	AU
Total			17	1	10	28	60	180	420		100	910	23

L: Lecture **T:** Tutorial

MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours

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

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester IV of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19 (FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
ET251U	Electronic Circuits and Applications	PC	3	--	--	3	10	30	60	--	--	100	3
ET252U	Linear Integrated Circuits and Applications	PC	3	--	--	3	10	30	60	--	--	100	3
ET253U	Analog Communication	PC	3	--	--	3	10	30	60	--	--	100	3
ET254U	Computer Oriented Numerical Methods	BE	3	--	--	3	10	30	60	--	--	100	3
ET255U	Power Electronics	BE	3	--	--	3	10	30	60	--	--	100	3
SH299U	Effective Technical Communication	HM	--	--	2	2	--	--	--	25	25	50	1
ET256U	Electronic Circuits and Applications Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET257U	Linear Integrated Circuits and Applications Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET258U	Analog Communication Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET259U	Computer Oriented Numerical Methods Lab	BE	--	--	2	2	--	--	--	25	25	50	1
ET260U	Power Electronics Lab	BE	--	--	2	2	--	--	--	50	--	50	1
SH250AU	Introduction to the Constitution of India	HM	--	--	--	--	NA	NA	60	--	--	60	AU
Total			15	--	12	27	50	150	360	175	125	860	21

L: Lecture **T:** Tutorial

MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours

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

* Course ET459 Professional Internship of six weeks (one training program of minimum two weeks) to be completed during vacation between IV to VIII semester and assessed in VIII semester

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester V of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19 (FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
ET301U	Automatic Control Systems	PC	2	--	--	2	10	30	60	--	--	100	2
ET302U	Microprocessors and Microcontrollers	PC	3	--	--	3	10	30	60	--	--	100	3
ET303U	Digital Communication	PC	3	--	--	3	10	30	60	--	--	100	3
ET304U	Data Structures	BE	2	--	--	2	10	30	60	--	--	100	2
ET305U	Digital Signal Processing	PE	3	--	--	3	10	30	60	--	--	100	3
ET306U	Open Elective - I	OE	3	--	--	3	10	30	60	--	--	100	3
ET307U	Electronic Measurements and Maintenance Lab	PC	1	--	2	3	--	--	--	25	25	50	2
ET308U	Microprocessors and Microcontrollers Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET309U	Digital Communication Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET310U	Data Structures Lab	BE	--	--	2	2	--	--	--	25	25	50	1
ET311U	Digital Signal Processing Lab	PE	--	--	2	2	--	--	--	50	--	50	1
Total			17	--	10	27	60	180	360	150	100	850	22

L: Lecture **T:** Tutorial
MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory
ESE: End Semester Examination

ISA: Internal Sessional Assessment
ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours
 2. MSE (TH) duration for all theory courses- two hours

Open Elective I

- X. Electronic Instruments and Applications
- Y. Electronic Appliances

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester VI of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19(FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
SH376U	Human Resources and Engineering Economics	HM	2	--	--	2	10	30	60	--	--	100	2
ET351U	Electromagnetics and Fields	PC	3	--	--	3	10	30	60	--	--	100	3
ET352U	Computer Architectures	PC	2	--	--	2	10	30	60	--	--	100	2
ET353U	Professional Elective-I	PC	3	--	--	3	10	30	60	--	--	100	3
ET354U	Professional Elective-II	PE	2	--	--	2	10	30	60	--	--	100	2
ET355U	Open Elective - II	OE	3	--	--	3	10	30	60	--	--	100	3
SH377U	Professional Skills and Ethics	HM	1	--	2	3	--	--	--	50	--	50	2
ET356U	Professional Elective-I Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET357U	Professional Elective-II Lab	PE	--	--	2	2	--	--	--	25	25	50	1
ET358U	Object Oriented Programming Lab	BE	--	--	2	2	--	--	--	25	25	50	1
ET359U	Development Engineering Project	PS	--	--	2	2	--	--	--	50	50	100	2
Total			16	--	10	26	60	180	360	175	125	900	22

L: Lecture **T:** Tutorial
MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory
ESE: End Semester Examination

ISA: Internal Sessional Assessment
ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours
 2. MSE (TH) duration for all theory courses- two hours

Professional Elective - I

- A. Telematics
- B. Modern Control Theory
- C. Consumer Electronics

Professional Elective - II

- A. Information Theory and Coding Techniques
- B. Bio-informatics
- C. Embedded Systems

Open Elective - II

- X. Microprocessor Techniques
- Y. Fundamentals of Telecommunication

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester VII of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19 (FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
SH426U	Accounts and Finance for Entrepreneurs	HM	3	--	--	3	10	30	60	--	--	100	3
ET401U	Computer Communication	PC	3	--	--	3	10	30	60	--	--	100	3
ET402U	Professional Elective-III	PE	3	--	--	3	10	30	60	--	--	100	3
ET403U	Professional Elective-IV	PE	3	--	--	3	10	30	60	--	--	100	3
ET404U	Open Elective - III	OE	3	--	--	3	10	30	60	--	--	100	3
ET405U	Computer Communication Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET406U	Professional Elective-III Lab	PE	--	--	2	2	--	--	--	25	25	50	1
ET407U	Seminar	PS	--	--	1	1	--	--	--	25	25	50	1
ET408U	Project Phase I	PS	--	--	3	3	--	--	--	75	75	150	3
ET409U	Industrial Lectures	PS	1	--	--	1	--	--	--	50	--	--	1
Total			16	--	8	24	50	150	300	200	150	800	22

L: Lecture **T:** Tutorial
MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory
ESE: End Semester Examination

ISA: Internal Sessional Assessment
ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours
2. MSE (TH) duration for all theory courses- two hours

Professional Elective - III

- A. Mobile Communication
- B. Mixed Signal Design
- C. Speech and Audio Processing
- D. Very Large Scale Integration Design

Professional Elective - IV

- A. Internet of Things
- B. Satellite Communication
- C. Adaptive Signal Processing
- D. Introduction to Micro Electro-Mechanical Systems
- E. Online Course

Open Elective - III

- X. Analog and Digital Integrated Circuits
- Y. Wireless Communication Technologies

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

Scheme for Semester VIII of B. Tech. (Electronics and Telecommunication) progressively implemented from academic year 2018-19(FY)

Course Code	Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credit	
			Hrs/Week				Theory			Practical			Total
			L	T	P	Total	ISA	MSE	ESE	ICA	ESE		
ET451U	Microwave Communication	PC	3	--	--	3	10	30	60	--	--	100	3
ET452U	Audio Video Engineering	PC	3	--	--	3	10	30	60	--	--	100	3
ET453U	Professional Elective-V	PE	3	--	--	3	10	30	60	--	--	100	3
ET454U	Professional Elective-VI	PE	3	--	--	3	10	30	60	--	--	100	3
ET455U	Microwave Communication Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET456U	Audio Video Engineering Lab	PC	--	--	2	2	--	--	--	25	25	50	1
ET457U	Professional Elective-V Lab	PE	--	--	2	2	--	--	--	25	25	50	1
ET458U	Project Phase II	PS	--	--	4	4	--	--	--	100	100	200	3
ET459U	Professional Internship *	PS	--	-	--	--	--	--	--	75	--	75	2
ET460U	Special Study/ Entrepreneurship Development Program	PS	--	--	--	--	--	--	--	25	--	25	2
			12	-	10	22	40	120	240	275	175	850	22

L: Lecture **T:** Tutorial

MSE: Mid Semester Examination

P: Practical **Lab:** Laboratory

ESE: End Semester Examination

ISA: Internal Sessional Assessment

ICA: Internal Continuous Assessment

Note: 1. ESE (TH) duration for all theory courses- three hours

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

* Course ET459 Professional Internship of six weeks (one training program of minimum two weeks) to be completed during vacation between IV to VIII semester and assessed in VIII semester

Professional Elective - V

- A. Wireless Sensor Networks
- B. Artificial Intelligence and Neural Networks
- C. Bio-medical Electronics
- D. Fiber Optic Communication

Professional Elective - VI

- A. Wavelet Transform
- B. Analog and Digital Complementary Metal Oxide Semiconductor Design
- C. Online Course
- D. Programmable Logic Control and Supervisory Control and Data Acquisition

