GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

2nd Year

SEMESTER - III

S. No.	Course Code	Course Title	Teaching Schedule (Hours per week)			Credits
			L	T	P	
1.	PCC-EE201-T	Electrical Circuits and Networks	3	1	0	4
2.	PCC-EE203-T	Electronic Devices and Circuits	3	0	0	3
3.	PCC-EE205-T	Electrical Machines-I	3	1	0	4
4.	PCC-EE207-T	Generation of Electric Power	3	1	0	4
5.	BSC201-T	Mathematics-III	3	0	0	3
6.	PCC-EE203-P	Electronic Devices and Circuits Laboratory	0	0	2	1
7.	PCC-EE205-P	Electrical Machines-I Laboratory	0	0	3	1.5
8.	PCC-EE209-P	Electrical Workshop	0	0	2	1
9.	MC103-T	Indian Constitution	3	0	0	0
					Total Credits	**21.5**

L-Lecture, T-Tutorial, P-Practical

Course Code	Definition/Category
BSC	Basic Science Courses
ESC	Engineering Science Courses
HSMC	Humanities and Social Sciences including Management courses
MC	Mandatory Courses
PCC	Program Core Courses
PEC	Program Elective Courses
OEC	Open Elective Courses
PROJ	Project Work
INT	Practical Training

Note: Students will be allowed to use non-programmable scientific calculator only, however sharing of calculator will not be permitted.

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Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

2nd Year

SEMESTER - IV

S. No.	Course Code	Course Title	Teaching Schedule (Hours per Week)			Credits
			L	T	P	
1.	PCC-EE202-T	Power Electronics	3	0	0	3
2.	PCC-EE204-T	Electrical Machines-II	3	1	0	4
3.	PCC-EE206-T	Power Systems-I	3	1	0	4
4.	PCC-EE208-T	Fields and Waves	3	1	0	4
5.	PCC-EE210-T	Signals and Systems	3	0	0	3
6.	PCC-EE202-P	Power Electronics Laboratory	0	0	2	1
6.	PCC-EE204-P	Electrical Machines-II Laboratory	0	0	3	1.5
7	PCC-EE206-P	Power Systems-I Laboratory	0	0	2	1
8.	MC104-T	Essence of Indian Traditional Knowledge	3	0	0	0
					Total Credits	**21.5**

Important Notes:

1. The students will have to undergo Practical Training-I of 4-6 weeks duration during summer vacations at the end of 4th semester which will be evaluated in 5th semester.

2. Students will be allowed to use non-programmable scientific calculator only, however sharing of calculator will not be permitted.

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

3rd Year

SEMESTER - V

S. No.	Course Code	Course Title	Teaching Schedule (Hours per Week)			Credits
			L	T	P	
1.	PCC-EE301-T	Advanced Power Electronics and Drives	3	0	0	3
2.	PCC-EE303-T	Control Systems-I	3	1	0	4
3.	PCC-EE305-T	Microprocessors and Microcontrollers	3	0	0	3
4.	ESC-EE307-T	Electrical Engineering Materials	3	0	0	3
5.	PCC-EE301-P	Advanced Power Electronics and Drives Laboratory	0	0	2	1
6.	PCC-EE303-P	Control Systems-I Laboratory	0	0	2	1
7.	PCC-EE305-P	Microprocessors and Microcontrollers Laboratory	0	0	2	1
8.	Open Elective Course – I		3	0	0	3
9.	HSMC302-T	Fundamentals of Management for Engineers	2	0	0	2
10.	INT-EE309-P	Practical Training-I Presentation	0	0	2	1
					Total Credits	**22**

Important Notes:

1. Open Elective Course– I to be offered by departments other than Electrical Engineering.
2. Assessment of Practical Training-I will be based on presentation/seminar, viva-voce, report and certificate for the practical training taken at the end of 4th semester.
3. Students will be allowed to use non-programmable scientific calculator only, however sharing of calculator will not be permitted.

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

3rd Year

SEMESTER - VI

S. No.	Course Code	Course Title	Teaching Schedule (Hours per Week)			Credits
			L	T	P	
1.	PCC-EE302-T	Power Systems-II	3	1	0	4
2.	PCC-EE304-T	Electrical Measurements and Instrumentation	3	1	0	4
3.	PCC-EE306-T	Control Systems-II	3	0	0	3
4.	PCC-EE302-P	Power Systems-II Laboratory	0	0	2	1
5.	PCC-EE304-P	Electrical Measurements and Instrumentation Laboratory	0	0	2	1
6.	PCC-EE306-P	Control Systems-II Laboratory	0	0	2	1
7.	Program Elective Course– I		3	0	0	3
8.	Open Elective Course– II		3	0	0	3
9.	HSMC301-T	Economics for Engineers	2	0	0	2
					Total Credits	**22**

Important Notes:

1. Open Elective Course– II to be offered by departments other than Electrical Engineering.

2. The students will have to undergo Practical Training-II of 4-6 weeks duration during summer vacations in an industry/research institute at the end of 6th semester which will be evaluated in 7th semester.

3. Students will be allowed to use non-programmable scientific calculator only, however sharing of calculator will not be permitted.

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

4th Year

SEMESTER – VII

S. No.	Course Code	Course Title	Teaching Schedule (Hours per Week)			Credits
			L	T	P	
1.	PCC-EE401-T	Power System Operation and Control	3	1	0	4
2.	Program Elective Course – II		3	0	0	3
3.	Program Elective Course – III		3	0	0	3
4.	Open Elective Course – III		3	0	0	3
5.	PROJ-EE419-P	Minor Project	0	0	8	4
6.	INT-EE421-P	Practical Training-II Presentation	0	0	2	1
					Total Credits	**18**

Important Notes:

1. Open Elective Course– II to be offered by departments other than Electrical Engineering.
2. The Minor Project should be initiated by the student in the beginning of 7th semester and will be evaluated at the end of the semester on the basis of its implementation, presentation delivered, viva-voce and report.
3. The viva-voce for Minor Project by external examiner and Chairperson of the Department (Internal Examiner) at the end of the semester.
4. Assessment of Practical Training-II will be based on presentation/seminar delivered, viva-voce, report and certificate for the practical training taken at the end of 6th semester.
5. Students will be allowed to use the scientific calculator only, however sharing of calculator will not be permitted.

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

4th Year

SEMESTER - VIII

S. No.	Course Code	Course Title	Teaching Schedule (Hours per Week)			Credits
			L	T	P	
1.	PCC-EE402-T	Computer Methods in Power Systems	3	1	0	4
2.	Program Elective Course – IV		3	0	0	3
3.	Program Elective Course – V		3	0	0	3
4.	PCC-EE402-P	Computer Methods in Power Systems Laboratory	0	0	2	1
5.	PROJ-EE420-P	Major Project	0	0	12	6
6.	MC-EE422-P	General Proficiency	0	0	0	0
					Total Credits	**17**

Important Notes:

1. The project should be initiated by the student in continuation of the 7th semester and will be evaluated at the end of the 8thsemester on the basis of its implementation (software/hardware), presentation delivered, viva-voce and report.
2. A viva-voce of the students for Major Project will be taken by external examiner and Chairperson of the Department (Internal Examiner) at the end of the semester.
3. General Proficiency is a non-credit Mandatory Course and the student has to get pass marks in order to qualify for the award of degree.
4. Students will be allowed to use non-programmable scientific calculator only, however sharing of calculator will not be permitted.

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Scheme of B. Tech – Electrical Engineering, w.e.f. Session 2018-19

Lists of Program Electives

PEC-I:

1. PEC-EE308-T Renewable Energy Resources
2. PEC-EE310-T Network Synthesis and Filters
3. PEC-EE312-T Digital Signal Processing
4. PEC-EE314-T Modeling and Simulation
5. Any one MOOCS/SWAYAM/Equivalent course not studied earlier

PEC-II:

1. PEC-EE403-T Electrical Machine Design
2. PEC-EE405-T Advance Power Electronics
3. PEC-EE407-T Reliability Engineering
4. PEC-EE409-T Utilization of Electrical Energy
5. Any one MOOCS/SWAYAM/Equivalent course not studied earlier

PEC-III:

1. PEC-EE411-T Energy Management and Auditing
2. PEC-EE413-T Soft Computing
3. PEC-EE415-T SCADA System and Applications
4. PEC-EE417-T Internet of Things (IOT)
5. Any one MOOCS/SWAYAM/Equivalent course not studied earlier

PEC-IV:

1. PEC-EE404-T Flexible AC Transmission Systems (FACTS)
2. PEC-EE406-T Distributed Generation
3. PEC-EE408-T Power Quality
4. PEC-EE410-T Smart Grid Technologies
5. Any one MOOCS/SWAYAM/Equivalent course not studied earlier

PEC-V:

1. PEC-EE412-T EHV AC and DC Transmission
2. PEC-EE414-T Restructured Power System
3. PEC-EE416-T High Voltage Engineering
4. PEC-EE418-T Optimization Theory
5. Any one MOOCS/SWAYAM/Equivalent course not studied earlier

Note: The MOOCS/SWAYAM/Equivalent course proposed/shortlisted by the students will be reviewed and finalized by the departmental committee consisting of chairperson, class coordinator/in-charge and subject teacher concerned(To be appointed by Chairperson). The committee will ensure that the course content of this course should not overlap more than ten percent with subjects already covered in the scheme and syllabus.