(Formerly West Bengal University of Technology)

Syllabus for B. Tech in Electrical Engineering

(Applicable from the academic session 2018-2019)

3<sup>rd</sup> Semester

# Theory:

Sl. No.	CODE	Paper		act per er week		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 301	Electric Circuit Theory	3	1	0	4	4
2	PC-EE 302	Analog Electronics	3	0	0	3	3
3	PC-EE 303	Electromagnetic field theory	3	0	0	3	3
4	ES-ME 301	Engineering Mechanics	3	0	0	3	3
5	BS-M 301	Mathematics-III	3	0	0	3	3
6	BS-EE301	Biology for Engineers	3	0	0	3	3
7	MC-EE 301	Indian Constitution	3	0	0	3	0
		TOTAL OF SEMESTER:				22	19

Sl.	CODE	Paper	Contact periods Per week		Total Contact	Credits	
No.			L	T	P	Hrs	
1	PC-EE 391	Electric Circuit Theory Laboratory	0	0	2	2	1
2	PC-EE 392	Analog Electronics laboratory	0	0	2	2	1
3	PC-CS 391	Numerical Methods laboratory	0	0	2	2	1
		Total of Practical / Sessional				06	3
TOTA	AL OF SEMES	TER:				28	22

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4<sup>th</sup> Semester

## Theory:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 401	Electric machine-I	3	0	0	3	3
2	PC-EE 402	Digital Electronic	3	0	0	3	3
3	PC-EE 403	Electrical and Electronics Measurement	3	0	0	3	3
4	ES-EE 401	Thermal Power Engineering	3	0	0	3	3
5	HM-EE401	Values and Ethics in profession	3	0	0	3	3
6	MC- EE401	Environmental Science	3	0	0	3	0
		TOTAL OF SEMESTER:				18	15

Sl.	CODE	Paper		act per		Total	Credits
No.			P	<u>er weel</u>	<b>K</b>	Contact	
			L	T	P	Hrs	
1	PC-EE 491	Electric machine-I	0	0	2	2	1
		laboratory					
2	PC-EE 492	Digital electronics	0	0	2	2	1
		laboratory					
3	PC-EE 493	Electrical and electronic	0	0	2	2	1
		measurement laboratory					
4	ES-ME 491	Thermal power	0		2	2	1
		engineering laboratory					
		Total of Practical /				08	4
		Sessional					
TOTA	AL OF SEMES	TER:				26	19

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<u>5<sup>th</sup> Semester</u>

## Theory:

Sl.	CODE	Paper		act per		Total	Credits
No.			P	er week		Contact	
			L	T	P	Hrs	
1	PC-EE 501	Electric machine-II	3	0	0	3	3
2	PC-EE 502	Power system-I	3	0	0	3	3
3	PC-EE 503	Control system	3	0	0	3	3
4	PC-EE 504	Power electronics	3	0	0	3	3
5	PE-EE 501	<ul><li>A. High voltage</li></ul>	3	0	0	3	3
6	OE-EE 501	<ul> <li>A. Data structure &amp; algorithm</li> <li>B. Object oriented programming</li> <li>C. Computer organization &amp; architecture</li> </ul>	3	0	0	3	3
		TOTAL OF SEMESTER:				18	18

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 591	Electric Machine-II laboratory	0	0	2	2	1
2	PC-EE 592	Power system-I laboratory	0	0	2	2	1
3	PC-EE 593	Control system laboratory	0	0	2	2	1
4	PC-EE 594	Power Electronics laboratory	0	0	2	2	1
		Total of Practical / Sessional				08	4
TOT	AL OF SEMES	TER:				26	22

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## **Syllabus for B. Tech in Electrical Engineering**

(Applicable from the academic session 2018-2019)

6th Semester

## Theory:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
110.			L	T	P	Hrs	
1	PC-EE 601	Power System-II	3		0	3	3
2	PC-EE-602	Micro processor & micro controller	3	0	0	3	3
3	PE-EE 601	<ul><li>A. Digital control system</li><li>B. HVDC transmission</li><li>C. Electrical Machine Design</li></ul>	3	0	0	3	3
4	PE-EE 602	<ul><li>A. Electrical and Hybrid vehicle</li><li>B. Power quality &amp; FACTS</li><li>C. Industrial Electrical systems</li></ul>	3	0	0	3	3
5	OE-EE 601	A. Digital Signal Processing B. Communication Engineering C. VLSI & Microelectronics	3	0	0	3	3
6	HM-EE 601	Economics for Engineers	3	0	0	3	3
		TOTAL OF SEMESTER:				18	18

### **Practical / Sessional:**

Sl.	CODE	Paper		Contact periods		Total	Credits
No.			P	er week	(	Contact	
			L	T	P	Hrs	
1	PC-EE 691	Power system-II laboratory	0	0	2	2	1
2	PC-EE692	Micro processor &	0	0	2	2	1
		microcontroller laboratory					
2	PC-EE 681	Electrical & Electronic	1	0	4	5	3
		design laboratory					
		Total of Practical /				09	05
		Sessional					
TOTA	AL OF SEMES	TER:				27	23

Summer Internship of 3-week duration after 6<sup>th</sup> semester. Students will be assessed based on submission of report on internship and presentation in a seminar in 7<sup>th</sup> semester

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7<sup>th</sup> Semester

# Theory:

Sl. No.	CODE	Paper		act per er weel		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 701	Electric Drive	3	0	0	3	3
2	PE-EE 701	<ul><li>A. Control system Design</li><li>B. Electrical Energy conservation &amp; Auditing</li><li>C. Power generation economics</li></ul>	3	0	0	3	3
3	OE-EE701	<ul><li>A. Artificial intelligence</li><li>B. Internet of things</li><li>C. Computer graphics</li></ul>	3	0	0	3	3
4	OE-EE702	<ul><li>A. Embedded system</li><li>B. Digital image processing</li><li>C. Computer network</li></ul>	3		0	3	3
5	HM-EE701	Principle of Management	3	0	0	3	3
		TOTAL OF SEMESTER:				15	15

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 791	Electric Drive laboratory	0	0	2	2	1
2	PW-EE 781	Project stage-I	0	0	4	4	2
3	PW-EE782	Seminar	0	0	0	0	1
		Total of Practical /				06	04
		Sessional					
TOT	AL OF SEMES	TER:				21	19

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8<sup>th</sup> Semester

## Theory:

Sl. No.	CODE	Paper		act per er week		Total Contact	Credits
			L	T	P	Hrs	
1	PC-EE 801	Utilization of Electric Power	3	0	0	3	3
2	PE- EE 801	A. Line –commutated and active PWM rectifiers B. Power system dynamics & control C. Advanced Electric Drives D. Industrial Automation and Control	3	0	0	3	3
3	OE-EE 801	<ul> <li>A. Soft computing Techniques</li> <li>B. Biomedical Instrumentation.</li> <li>C. Introduction to Machine learning</li> <li>D. Sensors and Transducers</li> </ul>	3	0	0	3	3
		TOTAL OF SEMESTER:				09	09

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact	Credits
			L	T	P	Hrs	
1	PW-EE 881	Project stage-II	0	0	16	16	8
		Total of Practical /				16	08
		Sessional					
TOTAL OF SEMESTER:					25	17	