WEST BENGAL STATE COUNCIL OF TECHNICAL & VOCATIONAL EDUCATION AND SKILL DEVELOPMENT

(A Statutory Body under Government of West Bengal Act XXVI of 2013)
Department of Technical Education, Training & Skill Development, Government of West Bengal
Karigari Bhawan, 4th & 5th Floor, Plot No. B/7, Action Area-III, Newtown, Rajarhat, Kolkata–700160

WBSCTVESD Curriculum for Diploma Courses in Engineering and Technology

Semester - I

Sl. No.	Category of Course	Course Title	Hours per week			Total contact hrs/ week	Credits	Marks
			L	T	P			
	Theory Subjects							
1.	Basic Science	Mathematics-I	2	1	0	3	3	100
2.	Basic Science	Applied Physics-I	2	1	0	3	3	100
3.	Basic Science	Applied Chemistry	2	1	0	3	3	100
4.	Humanities & Social Science	Communication Skills in English	2	0	0	2	2	100
	Practical Subjects							
5.	Engineering Science	Engineering Graphics	0	0	3	3	1.5	100
6.	Engineering Science	Engineering Workshop Practice	0	0	3	3	1.5	100
7.	Basic Science	Applied Physics-I Lab	0	0	2	2	1	100
8.	Basic Science	Applied Chemistry Lab	0	0	2	2	1	100
9.	Humanities & Social Science	Sports and Yoga	0	0	2	2	1	100
10.	Humanities & Social Science	Communication Skills in English Lab	0	0	2	2	1	100
	Total		8	3	14	25	**18**	**1000**

Semester - II

Sl. No.	Category of Course	Course Title	Hours per week			Total contact hrs/ week	Credits	Marks
			L	T	P			
	Theory Subjects							
1.	Basic Science	Mathematics-II	3	1	0	4	4	100
2.	Basic Science	Applied Physics-II	2	1	0	3	3	100
3.	Engineering Science	Introduction to IT Systems	2	0	0	2	2	100
4.	Engineering Science	Fundamentals of Electrical & Electronics Engineering	2	1	0	3	3	100
5.	Engineering Science	Engineering Mechanics	2	1	0	3	3	100
	Practical Subjects							
6.	Basic Science	Applied Physics-II Lab	0	0	2	2	1	100
7.	Engineering Science	Introduction to IT Systems Lab	0	0	4	4	2	100
8.	Engineering Science	Fundamentals of Electrical & Electronics Engineering Lab	0	0	2	2	1	100
9.	Engineering Science	Engineering Mechanics Lab	0	0	2	2	1	100
	AUDIT COURSES-Mandatory non-credit courses							
10.	Audit	Indian Constitution	2	0	0	2	0	100
	Total		13	4	10	27	**20**	**1000**

Curriculum structure for 3rd, 4th, 5th and 6th semester students of

Diploma in Electrical Engineering (Industrial Control)

3rd Semester

Sl.No.	Category of course	Code No	Course Title	Credits	Marks	Total Contact Hours per Week	
						L	P
1	Program Core Course		Introduction to Electric Generation Systems	3	100	3	0
2	Program Core Course		Introduction to Electric Generation Systems Laboratory	1	100	0	2
3	Program Core Course		Electrical Circuits	3	100	3	0
4	Program Core Course		Electrical Circuits Laboratory	1	100	0	2
5	Program Core Course		Electrical and Electronic Measurement	3	100	3	0
6	Program Core Course		Electrical and Electronic Measurement Laboratory	1	100	0	2
7	Program Core Course		DC Machines and Transformers	3	100	3	0
8	Program Core Course		DC Machines and Transformers Laboratory	1	100	0	2
9	Program Core Course		Analog and Digital electronics	3	100	3	0
10	Program Core Course		Analog and Digital electronics Laboratory	1	100	0	2
11	Internship		Internship-I	1	100	0	
TOTAL				**21**	**1100**	**15**	**10**
Total contact hrs/ week =25							

4th Semester

Sl. No	Category of course	Code No	Course Title	Credits	Marks	Contact Hours per Week	
						L	P
1	Program Core Course		Power Electronics Converters and Application	3	100	3	0
2	Program Core Course		Power Electronics Converters and Application Laboratory	1	100	0	2
3	Program Core Course		Electric Power Transmission and Distribution	3	100	3	0
4	Program Core Course		Electric Power Transmission and Distribution Laboratory	1	100	0	2
5	Program Core Course		Induction, Synchronous and Special Electrical Machines	3	100	3	0
6	Program Core Course		Induction, Synchronous and Special Electrical Machines Laboratory	1	100	0	2
7	Program Core Course		Industrial Instrumentation & Control System	3	100	3	0
8	Program Core Course		Industrial Instrumentation & Control System Laboratory	1	100	0	2
9	Program Elective course I		**Any one of the following subjects to be chosen** 1. Switchgear and protection 2. Building Electrification	3	100	3	0
10	Program Elective course I Lab		**Any one of the following subjects to be chosen** 1. Switchgear and Protection Laboratory 2. Building Electrification Laboratory	1	100	0	2
11	Minor Project			1	100	0	2
TOTAL				**21**	**1100**	**15**	**12**
Total contact hrs/ week =27							

5th Semester

Sl. No	Category of course	Code No	Course Title	Credits	Marks	Total Contact Hours per Week	
						L	P
1	Program Core Course		Microcontroller and its Applications	3	100	3	0
2	Program Core Course		Microcontroller and its Applications Laboratory	1	100	0	2
3	Program Core Course		Industrial Automation and Embedded Systems	3	100	3	0
4	Program Core Course		Industrial Automation and Embedded Systems Laboratory	1	100	0	2
5	Program Elective course II		**Any one of the following subjects to be chosen** 1. Electric Vehicles 2. Industrial Drives 3. Electrical Testing & Commissioning	3	100	3	0
6	Program Elective course II lab		**Any one of the following laboratories to be chosen** 1. Electric Vehicles Laboratory 2. Industrial Drives Laboratory 3.Electrical Testing & Commissioning Laboratory	1	100	0	2
7	Program Elective course III		**Any one of the following subjects to be chosen** 1. Non-Conventional Energy Sources 2. Utilization of Electrical Power 3. Communication Technologies	3	100	3	0
8	Program Elective course III Lab		**Any one of the following laboratories to be chosen** 1. Non-Conventional Energy Sources Laboratory 2. Utilization of Electrical Power Laboratory 3. Communication Technologies Laboratory	1	100	0	2
9	Internship		Internship II	1	100	0	
10	Major Project			2	100	0	4
TOTAL				**19**	**1000**	**12**	**12**
Total contact hrs/ week = 24							

6th Semester

Sl. No	Category of course	Code No	Course Title	Credits	Marks	Total Contact Hours per Week	
						L	P
1	Program Core Course		Energy conservation and Audit	3	100	3	0
2	Program Core Course		Energy conservation and Audit Laboratory	1	100	0	2
3	Program Elective course IV		**Any one of the following subjects to be chosen** 1. Object Oriented Programming and Networking 2. Solar Power Technologies 3. Industrial Measurement and Condition Monitoring	3	100	3	0
4	Program Elective course IV Lab		**Any one of the following subjects to be chosen** 1. Object Oriented Programming and Networking Laboratory 2. Solar Power Technologies Laboratory 3. Industrial Measurement and Condition Monitoring Laboratory	1	100	0	2
5	Humanities and Social Science		Entrepreneurship and Start-ups	3	100	3	0
6	Open Elective course-I (compulsory)		Engineering Economics and Project Management	3	100	3	0
7	Open Elective course- II		**Any one of the following subjects to be chosen.** [i] Mechatronics [ii] Disaster Management [iii] Internet of Things [iv] Environmental Science and Engineering [v] Industrial Management [vi] Sustainable Development [vii] Industrial Safety	3	100	3	0
8	Major Project			2	100	0	4
9	Seminar			2	100	0	4
TOTAL				**21**	**900**	**15**	**12**
Total contact hrs/ week =27							

Members of **Electrical Engineering (Industrial Control)** syllabus subcommittee:

1. **Dr. Sagarika Pal**, Associate Professor, Electrical Engineering, **NITTTR** Kolkata as **Expert**
2. **Mr. Tanumay Das**, Manager (Power Station),Project & Planning Dept.,**WBPDCL** as **Expert**
3. **Mr. Debasish Shaw**, Assistant Engineer (Electrical),**PWD**, Govt. of WB as **Expert**
4. **Mr. Biplab Nayak**, Lecturer in Electrical Engineering, Present posting at **Kolaghat Government Polytechnic**, Kolaghat as **Member**
5. **Mr. SoumenSaha**, Principal-in-Charge, **Kolaghat Government Polytechnic** as **Member**.
6. **Mr. Soumitra Kundu**, Lecturer in Electrical Engineering, Present posting at **Kolaghat Government Polytechnic**, Kolaghat as **Convener**