

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus for B. Tech Electrical and Computer Engineering
(Applicable from the academic session 2025-2026)

Curriculum Structure

Semester-I							
SN	Code	Course Name	L	T	P	Hr	Credit
1	BS-PH101	Physics-I (Gr-A)	3	1	0	4	4
2	BS-M101	Mathematics –IA*	3	1	0	4	4
3	ES-EE101	Basic Electrical Engineering	3	1	0	4	4
4	MC-ECS101	Environmental Science	3	0	0	3	0
5	MC-ECS102	NSS/NCC or Sports and Yoga [No syllabus]	0	0	2	2	0
6	BS-PH191	Physics-I Laboratory (Gr-A)	0	0	3	3	1.5
7	ES-EE191	Basic Electrical Engineering Laboratory	0	0	2	2	1
8	ES-ME192	Workshop /Manufacturing Practices(Gr-A)	1	0	3	4	3
		Total of First Semester Credits	13	3	10	26	17.5
Semester-II							
9	BS-CH201	Chemistry-I (Gr-A)	3	1	0	3	4
10	BS-M201	Mathematics –IIA [#]	3	1	0	4	4
11	ES-CS201	Programming for Problem Solving	3	0	0	3	3
12	HM-HU201	English	2	0	0	2	2
13	MC-ECS201	Constitution of India	2	0	0	2	0
14	BS-CH291	Chemistry Laboratory (Gr-A)	0	0	3	3	1.5
15	ES-CS291	Programming for Problem Solving	0	0	4	4	2
16	ES-ME291	Engineering Graphics & Design (Gr-A)	1	0	4	5	3
17	HM-HU291	Language Laboratory	0	0	2	2	1
		Total of Second Semester Credits	14	2	13	28	20.5
Semester-III							
18	PC-ECS 301	Electric Circuit Theory	3	1	0	4	3
19	PC-ECS 302	Data Structure & Algorithm	3	0	0	3	3
20	ES-ECS 301	Analog & Digital Electronics	3	0	0	3	3
21	BS-ECS 301	Mathematics-III	3	1	0	4	3
22	BS 301	Biology for Engineers	3	0	0	3	3
23	HM 301	Economics for Engineers	3	0	0	3	3
24	PC-ECS 391	Electric Circuit Theory Laboratory	0	0	2	2	1
25	PC-ECS 392	Data Structure & Algorithm Lab	0	0	2	2	1
26	PC-ECS 393	IT Workshop (MATLAB & Python)	1	0	2	3	1
27	ES-ECS 391	Analog & Digital Electronics Laboratory	0	0	2	2	1
		Total of Third Semester Credits	19	2	8	29	22

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus for B. Tech Electrical and Computer Engineering
(Applicable from the academic session 2025-2026)

Semester-IV							
28	PC-ECS 401	Electric Machines	3	0	0	3	3
29	PC-ECS 402	Control Systems	3	0	0	3	3
30	PC-ECS 403	Electricals & Electronics Instrumentations	3	0	0	3	3
31	PC-ECS 404	Artificial Intelligence	3	0	0	3	3
32	PC-ECS 405	Object Oriented Programming	3	0	0	3	3
33	PC-ECS 406	Computer Organisation & Architecture	3	0	0	3	3
34	PC-ECS 491	Electric Machines Laboratory	0	0	2	2	1
35	PC-ECS 492	Control Systems Laboratory	0	0	2	2	1
36	PC-ECS 494	Artificial Intelligence Laboratory	0	0	2	2	1
37	PC-ECS 495	Object Oriented Programming Laboratory	0	0	2	2	1
		Total of Fourth Semester Credits	18	0	8	26	22
Semester-V							
38	PC-ECS 501	Operating Systems	3	0	0	3	3
39	PC-ECS 502	Power System	3	0	0	3	3
40	PC-ECS 503	Microcontroller & it's Application	3	0	0	3	3
50	PE- ECS 501	A. Digital Signal Processing B. Digital Control System C. Electrical and Hybrid Transportation	3	0	0	3	3
42	OE-ECS 501	A. Statistics and Foundations of Data Science B. VLSI & Microelectronics C. Mechatronics	3	0	0	3	3
43	OE-ECS 502	A. Universal Human Values B. Soft Skill & Interpersonal Communication C. Organizational Behavior	3	0	0	3	3
44	PC-ECS 591	Operating System Laboratory	0	0	2	2	1
45	PC-ECS 592	Power System Laboratory	0	0	2	2	1
46	PC-ECS 593	Microcontroller & it's Application Laboratory	0	0	2	2	1
47	OE-ECS 591	A. Data Science Laboratory B. VLSI & Microelectronics C. Mechatronics	0	0	2	2	1
		Total of Fifth Semester Credits	18	0	8	26	22
Semester-VI							
48	PC-ECS 601	Power Electronics and Drives	3	0	0	3	3
49	PC-ECS 602	Database Management Systems	3	0	0	3	3
41	PE-ECS 601	A. Machine Learning & Deep Learning B. Soft Computing Techniques C. Power System Analysis	3	0	0	3	3

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus for B. Tech Electrical and Computer Engineering
(Applicable from the academic session 2025-2026)

51	PE- ECS 602	A. Design and Analysis of Algorithm B. Computer Network C. Software Engineering	3	0	0	3	3
52	OE-ECS 601	A. Embedded System B. Robotics C. Sensors & Actuators	3	0	0	3	3
53	HU 601	Values and Ethics in profession	3	0	0	3	3
54	PC-ECS 691	Power Electronics and Drives Laboratory	0	0	2	2	1
55	PC-ECS 692	Database Management Systems Laboratory	0	0	2	2	1
56	PC-ECS 693	Computer-Aided Electrical [Machine] Design Laboratory	0	0	2	2	1
		Total of Sixth Semester Credits	18	0	6	24	21
6th > industrial training / internship > 4 weeks [evaluation will be done end of seven sem, Credit carried over to PW-ECS 782]							
Semester-VII							
57	PC-ECS 701	Internet of Things	3	0	0	3	3
58	PC-ECS 702	Signals & Systems	3	0	0	3	3
59	PE-ECS 701	A. Industrial Automation and Control B. Smart Electric Grid and Energy Management C. Renewable and Nonconventional Energy Systems	3	0	0	3	3
60	OE-ECS 701	A. Project Management & Entrepreneurship B. Data Analytics C. Product Life Cycle Management	3	0	0	3	3
61	OE-ECS 702	A. E-Commerce B. Energy Storage System C. Cyber Security	3	0	0	3	3
62	HM 701	Principles of Management	3	0	0	3	3
63	PC-ECS791	Internet of Things	0	0	2	2	1
64	PW-ECS 781	Project Stage-I	0	0	4	4	2
65	PW-ECS 782	Industrial training / Internship* [Credit carried over from 6th Sem]	0	0	0	0	1
66	PW-ECS 783	Seminar	0	0	2	2	1
		Total of Seventh Semester Credits	18	0	8	26	23
Semester-VIII							
67	PE- ECS801	A. Biomedical Instrumentation B. Utilization of Electric Power C. Cloud Computing	3	0	0	3	3
68	PE- ECS802	A. Cryptography and Network Security B. Web and Internet Technology C. Speech and Natural Language Processing	3	0	0	3	3

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus for B. Tech Electrical and Computer Engineering
(Applicable from the academic session 2025-2026)

69	OE-ECS-801	A. Mobile Computing B. Cyber Law and Ethics C. Blockchain Technologies	3	0	0	3	3
70	PW-ECS 881	Project Stage-II	0	0	16	16	8
		Total of Eighth Semester Credits	9	0	16	25	17
		Total Credit Points: 165					