

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE

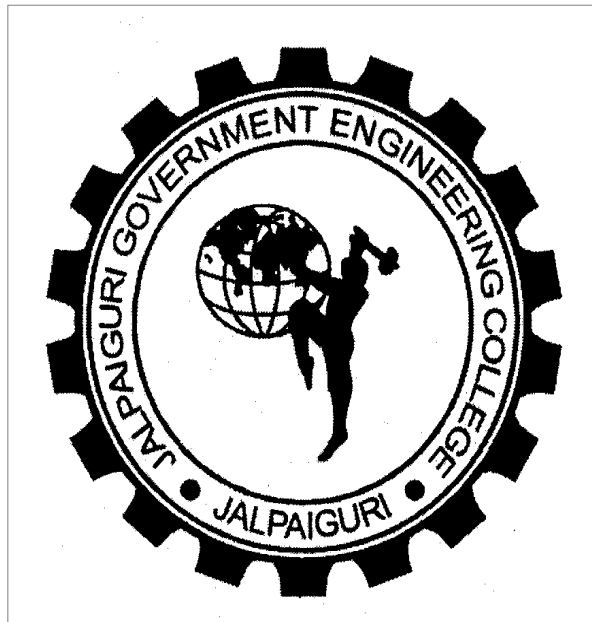
JALPAIGURI- 735 102

(AN AUTONOMOUS GOVERNMENT COLLEGE)

**COURSE STRUCTURE AND SYLLABUS
FOR**

B.TECH. IN ELECTRONICS& COMMUNICATION ENGINEERING

(Implemented from the Academic Year 2013-14 -for the new batch only)



www.jgec.ac.in

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Code	Sub.	Contact Hrs./Week		Code	Sub.	Contact Hrs./Week	
		L -T-P-TO	Cr.			L -T-P-TO	Cr.
HU-102	Economics for Engineers	3-0-0-3	3	HU-201	English Language & Technical Communication	2-0-0-2	2
EE-101	Basic Electrical Engineering	3-1-0-4	4	PH-201	Physics – I	3-1-0-4	4
CH-101	Chemistry-I	3-1-0-4	4	CS-201	Principles of Computer Programming	3-1-0-4	4
M-101	Mathematics-I	3-1-0-4	4	M-201	Mathematics-II	3-1-0-4	4
EC-101	Basic Electronics Engineering	3-1-0-4	4	ME-201	Engineering Mechanics	3-1-0-4	4
EE-191	Basic Electrical Engg. Lab.	0-0-3-3	2	PH-291	Physics-I Lab.	0-0-3-3	2
CH-191	Chemistry-I Lab.	0-0-3-3	2	CS-291	Principles of Computer Programming Lab.	0-0-3-3	2
EC-191	Basic Electronics Engineering Lab.	0-0-3-3	2	ME-291	Engineering Drawing & Graphics	0-0-3-3	2
ME-192	Workshop Practice	0-0-3-3	2	HU-281	English Language & Technical Communication Lab	0-0-3-3	2
				XC-281	Extra Curricular Activities(NSS/ NCC/NSO ETC)	0-0-2-2	1
		15-4-12-31	27			14-4-14-32	27
M(CS)301	Numerical Methods	2-0-0-2	2	HU401	Values and Ethics in Profession	3-0-0-3	3
M302	Mathematics-III	3-1-0-4	4	PH401	Physics-II	3-1-0-4	4
EC301	Circuit Theory & Networks	3-1-0-4	4	EC 401	Digital Electronics	3-0-0-3	3
EC302	Signal & Systems	3-0-0-3	3	EC 402	Analog Communication	3-1-0-4	4
CH301	Basic Environmental Engineering & Elementary Biology	3-0-0-3	3	EC 403	Solid state devices	3-0-0-3	3
EC303	Analog Electronics	3-1-0-4	4	EC 404	EM Theory & Transmission Line	3-0-0-3	3
M(CS)391	Numerical Methods Lab	0-0-3-3	2	HU481	Technical Report Writing & Language Lab Practice	0-0-3-3	2
EC391	Circuit Theory & Network Lab	0-0-3-3	2	PH491	Physics-II Lab	0-0-3-3	2
EC392	Signal & Systems Lab	0-0-3-3	2	EC491	Digital Electronics Lab	0-0-3-3	2
EC393	Analog Electronics Lab	0-0-3-3	2	EC492	Analog Communication Lab	0-0-3-3	2
		17-3-12-32	28			18-2-12-32	28
EC-501	Digital Communication	3-1-0-4	4	HU-601	Principles of Management	2-0-0-2	2
EC-502	Microprocessors & Microcontrollers	3-1-0-4	4	EC601	Digital Signal Processing	3-1-0-4	4
EC-503	Antenna & Propagation	3-0-0-3	3	EC602	VLSI circuit & Systems	3-0-0-3	3
EC-504	Control Systems	3-0-0-3	3	EC603	Material Science	3-0-0-3	3
EC-505	Free Elective-I	3-0-0-3	3	EC604	Professional Elective-II	3-0-0-3	3
EC-506	Professional Elective-I	3-0-0-3	3	EC605	Free Elective-II	3-0-0-3	3
EC-591	Digital Communication Lab	0-0-3-3	2	EC691	Digital Signal Processing Lab	0-0-3-3	2
EC-592	Microprocessors & Microcontrollers Lab	0-0-3-3	2	EC692	VLSI Circuit & System Lab	0-0-3-3	2
EC-593	Antenna Lab	0-0-3-3	2	EC694	Free Elective - II- Lab.	0-0-3-3	2
EC-594	Control Systems Lab	0-0-3-3	2	EC693	Electronic Circuit Design Lab		
		18-2-12-32	28			17-1-12-30	26
EC701	Wireless Communication	3-1-0-4	4	HU 801	Financial Management and Accounts	3-0-0-3	3
EC702	Microwave Engineering & Radar	3-1-0-4	4	EC801	Professional Elective-V	4-0-0-4	4
EC703	Professional Elective-III	3-1-0-4	4	EC802	Free Elective-IV	4-0-0-4	4
EC704	Professional Elective-IV	3-0-0-3	3	EC881	Seminar	0-0-3-3	2
EC705	Free Elective-III	3-0-0-3	3	EC882	Project II	0-0-9-9	6
EC793	Professional Elective-III- Lab	0-0-3-3	2	EC893	Grand Viva Voce	0-0-0-0	5
EC792	Microwave Lab	0-0-3-3	2				
EC781	Industrial Training Evaluation	0-0-3-3	2				
EC782	Project I	0-0-3-3	2				
EC 783	Group Discussion	0-0-3-3	2				
		15-3-15-33	28			11-0-12-23	24

EC-505: Free Elective-1: A. Data Structure & C B. Power Electronics

EC-506: Professional Elective- 1: A. Telecommunication switching systems B. Computer Architecture

EC-604: Professional Elective-II: A. Information theory & coding B. Computer Communication & Networking

EC-605: Free Elective-II: A. Object Oriented Programming B. Electronic measurement & Instrumentation

EC-694: Free Elective- II: A. Object Oriented Programming Lab. B. Electronic measurement & Instrumentation Lab.

EC-703: Professional Elective-III: A. Fiber Optic Communication B. FPGA & Reconfigurable Computing

EC-704: Professional Elective-IV: A. Embedded Systems B. Modern Control Engineering

EC-705: Free Elective-III: A. Artificial Intelligence B. Data Base Management System

EC-793: Professional Elective-III: A. Fiber Optic Communication Lab. B. FPGA & Reconfigurable Computing Lab.

EC-801: Professional Elective- V: A. Nanotechnology B. Upper Atmospheric Propagation C. Remote Sensing D. Radar & Navigation

EC-802: 1 Free Elective- IV: A. Digital Image Processing B. Mobile Computing C. Software Engineering D. Internet Technology E. Advanced Engineering Mathematics