

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE

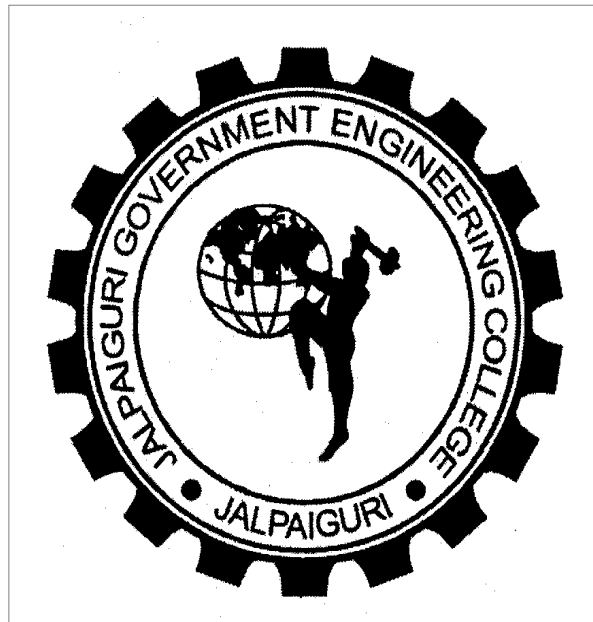
JALPAIGURI- 735 102

(AN AUTONOMOUS GOVERNMENT COLLEGE)

**COURSE STRUCTURE AND SYLLABUS
FOR**

M.TECH. IN ELECTRICAL ENGINEERING

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



www.jgec.ac.in

Phone: 03561 – 255131 (Principal), Fax: 03561 – 256143
255465 (EPABX)- 105(EE)

Code	Sub.	Contact Hrs./Week		Code	Sub.	Contact Hrs./Week	
		L -T-P-TO	Cr.			L -T-P-TO	Cr.
EMM-101	Advanced Engineering Mathematics	3-1-0-4	4	PEM-201	Power Electronics- II	3-1-0-4	4
PEM-101	Power Electronics- I	3-1-0-4	4	PEM-202	Electric Drives	3-1-0-4	4
PEM-102	Electrical Machine Analysis	3-1-0-4	4	Any three subjects to be chosen from the following pool of Electives	Elective-III	4-0-0-4	4
PEM-103	Elective-I	3-1-0-4	4		Elective-IV	4-0-0-4	4
PEM-104	Elective- II (Management)	4-0-0-4	4		Elective- V	4-0-0-4	4
PEM-191	Electrical Engineering Laboratory -I	0-0-9-9	6	PEM-291	Electrical Engineering Laboratory -II	0-0-3-3	2
				PEM-281	Seminar	0-0-6-6	4
				PEM-282	Comprehensive Viva-Voce	0-0-0-0	4
		16-4-9-29	26			18-2-9-29	30
PEM-381	Pre-submission Defense of Dissertation	0-0-0-0	6	PEM-481	Post submission defense of dissertation	0-0-0-0	4
PEM-382	Dissertation (Part-I)	0-0-18-18	12	PEM-482	Dissertation (Completion)	0-0-24-24	18
PEM-383	Classroom Teaching Practice	0-0-6-6	4				
		0-0-24-24	22			0-0-24-24	22

List of Elective Subjects

PEM-103: Elective-I:

(a) Advanced Control Systems, (b) AI & Soft Computing (c) Optimization Technique (d) Soft Computing in Electrical Engg.

PEM-104- Elective-II:

(a) Energy Management & Audit (b) Power Quality Management (c) Industrial Management

Elective-III/IV/V: (Any three subjects to be chosen from the following pool of Electives.)

PEM- 203 Generation of Non conventional Energy 4-0-0-4-4:

PEM -204 Advanced Mathematics-II 4-0-0-4-4:

PEM- 205 Intelligent Control of Drives 4-0-0-4-4:

PEM -206 Solid State Power Controller 4-0-0-4-4:

PEM -207 Digital Signal Processing 4-0-0-4-4:

PEM -208 FACT & HVDC Transmission 4-0-0-4-4:

PEM -209 Microcontroller Based System Design 4-0-0-4-4:

PEM -210 Flexible AC Transmission Systems 4-0-0-4-4:

PEM -211 Nonlinear Phenomena in Switching Circuit 4-0-0-4-4:

PEM -212 Special Electrical machines 4-0-0-4-4:

PEM -213 Embedded system 4-0-0-4-4:

PEM -214 Digital Image Processing 4-0-0-4-4:

PEM -215 Advanced Power Electronics 4-0-0-4-4:

PEM- 216 Advanced Electric Drives 4-0-0-4-4:

PEM- 217 Application of Power Electronics in Power System 4-0-0-4-4:

PEM-218 Pulse width Modulation for Power Electronic Converters 4-0-0-4-4:

PEM-219 Power Electronics and Distributed Generation 4-0-0-4-4:

PEM-220 Modeling and Simulation of Systems Using MATLAB and Simulink 4-0-0-4-4:

PEM-221 Modeling and Control of Wind Energy Generation 4-0-0-4-4:

PEM-222 Nonlinear Dynamics and Chaos 4-0-0-4-4:

PEM-223 Artificial Neural Network 4-0-0-4-4:

PEM-224 Soft Computing 4-0-0-4-4:

PEM-225 Research Methodology 4-0-0-4-4: