

GOVERNMENT POLYTECHNIC, PUNE

(An autonomous Institute of Government of Maharashtra)

Programme Structure

DIPLOMA IN ELECTRICAL ENGINEERING

Level I - Foundation Level Courses (All Compulsory)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
HU181	English	--	COMPULSORY	2	2	--	4	20	80	25	--	--	125	--
HU182	Communication Skills	--	COMPULSORY	2	2	--	4	20	80	--	25	--	125	--
SC181	Applied Mathematics - I	--	COMPULSORY	3	--	1	4	20	80	--	--	--	100	--
SC182	Applied Mathematics - II	--	COMPULSORY	3	--	1	4	20	80	--	--	--	100	--
SC183	Engineering Physics	--	COMPULSORY	3	2	--	5	20	80	--	--	50	150	--
SC184	Engineering Chemistry	--	COMPULSORY	3	2	--	5	20	80	--	--	50	150	--
Total				16	8	2	26	120	480	25	25	100	750	--

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DIPLOMA IN ELECTRICAL ENGINEERING

Level - II Core Technology Courses														
GROUP - A (All Compulsory)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
AM281	Engineering Mechanics	--	COMPULSORY	4	2	--	6	20	80	25	--	--	125	--
CM286	Computer Fundamentals	--	COMPULSORY	1	2	--	3	--	--	25	--	50	75	--
CM287	C Programming	--	COMPULSORY	2	2	--	4	--	--	--	--	50	50	--
EE281	Basic Electrical Engineering	--	COMPULSORY	3	2	1	6	20	80	--	--	50	150	--
ET281	Basic Electronics	--	COMPULSORY	4	2	--	6	20	80	25	--	50	175	--
ME284	Engineering Drawing	--	COMPULSORY	2	2	--	4	--	--	50	--	--	50	--
ME285	Fundamentals of Mechanical Engineering	--	COMPULSORY	2	2	--	4	--	--	--	50	--	50	--
WS281	Workshop Practice	--	COMPULSORY	--	4	--	4	--	--	50	--	--	50	--
Total				18	18	1	37	60	240	175	50	200	725	--

GROUP - B (Any One)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
HU281	Industrial Psychology	--	OPTIONAL	2	--	1	3	20	80	--	--	--	100	--
SC282	Engineering Mathematics	--	OPTIONAL	2	--	1	3	20	80	--	--	--	100	--
Total				2	0	1	3	20	80	0	0	0	100	--

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DIPLOMA IN ELECTRICAL ENGINEERING

Level III – Basic Technology Courses (All Compulsory)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
EE381	Mini project	--	COMPULSORY	--	2	--	2	--	--	25	25	--	50	--
EE382	Electrical Circuits and Networks	--	COMPULSORY	3	2	1	6	20	80	--	--	50	150	--
EE383	Electrical Measurements	--	COMPULSORY	3	2	--	5	20	80	--	--	50	150	--
EE384	Electrical Power Generation	--	COMPULSORY	3	2	--	5	20	80	--	50		150	--
EE385	Electrical Materials and Workshop	--	COMPULSORY	1	2	--	3	--	--	50	--	--	50	--
EE386	Computer Aided Electrical Drawing and Simulation	--	COMPULSORY	1	2	--	3	--	--	--	--	50	50	--
EE387	Electrical Machine - I	EE281	COMPULSORY	3	2	1	6	20	80	--	--	50	150	--
EE388	Electrical Machine - II	EE387	COMPULSORY	3	2	1	6	20	80	--	--	50	150	--
EE389	Control Panel Design	--	COMPULSORY	2	2	--	4	--	--	--	50	--	50	--
ET390	Digital Electronics and Microprocessor	ET281	COMPULSORY	3	2	--	5	20	80	--	--	50	150	--
Total				22	20	3	45	120	480	75	125	300	1100	--

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DIPLOMA IN ELECTRICAL ENGINEERING

Level - IV Applied Technology Courses														
GROUP - A (Any Two)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
AU481	Environmental Science@	--	COMPULSORY	--	2	--	2	--	--	50	--	--	50	--
AU482	Community Development	--	OPTIONAL	2	--	--	2	20	80	--	--	--	100	--
AU483	Renewable & Sustainable Energy	--	OPTIONAL	2	--	--	2	20	80	--	--	--	100	--
AU484	Engineering Economics	--	OPTIONAL	2	--	--	2	20	80	--	--	--	100	--
Total				2	2	0	4	20	80	50	0	0	150	--

GROUP - B (Any One)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
MA481	Construction Management	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA482	Industrial Organisation and Management	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA483	Entrepreneurship Development	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA484	Materials Management	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA485	Supervisory Management	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA486	Total Quality Management	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
MA487	Management Information System	--	OPTIONAL	3	--	--	3	20	80	--	--	--	100	--
Total				3	0	0	3	20	80	0	0	0	100	--

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DIPLOMA IN ELECTRICAL ENGINEERING

GROUP - C (All Compulsory)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
EE481	Project and Seminar (In-house / Industry)	90 Credits	COMPULSORY	--	8	--	8	50	--	50	50	--	150	150
EE482	Transmission and Distribution of Electrical Power	--	COMPULSORY	3	2	--	5	20	80	--	25	--	125	125
EE483	Instrumentation and Control	--	COMPULSORY	4	2	--	6	20	80	--	--	25	125	125
EE484	Testing and Maintenance of Electrical Equipment	EE387	COMPULSORY	4	2	--	6	20	80	--	--	50	150	150
EE485	Switchgear and Protection	--	COMPULSORY	3	2	--	5	20	80	--	25	--	125	125
EE486	Electrical Estimation and Costing	--	COMPULSORY	3	2	--	5	20	80	--	50	--	150	150
EE487	Utilisation of Electrical Energy	--	COMPULSORY	3	2	--	5	20	80	--	25	--	125	125
EE488	Energy Audit and Conservation	EE383	COMPULSORY	3	--	1	4	20	80	--	--	--	100	100
Total				23	20	1	44	190	560	50	175	75	1050	1050

GROUP - D (All Compulsory - Non Credit Courses)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
NC481	Development of Soft Skills - I	--	COMPULSORY	--	2	--	--	--	--	25	--	--	25*	--
NC482	Development of Soft Skills - II	--	COMPULSORY	--	2	--	--	--	--	25	--	--	25*	--
Total				0	4	0	--	0	0	50	0	0	50*	--

Note:- * Grades will be awarded for GROUP - D (Non Credit Courses)

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Programme Structure

DIPLOMA IN ELECTRICAL ENGINEERING

Level V – Diversified Courses (Any Three)														
COURSE CODE	COURSE TITLE	PREREQUISITE	COMPULSORY / OPTIONAL	TEACHING SCHEME				EXAMINATION SCHEME					CLASS DECLARATION	
				L	P	T	C	PA	TH	TW	OR	PR		TOTAL
EE581	Industrial Automation	EE483	OPTIONAL	3	2	1	6	20	80	--	--	50	150	150
EE582	Power Electronics and Drives	EE388	OPTIONAL	3	2	1	6	20	80	--	--	50	150	150
EE583	Electrical Machine Design	EE388	OPTIONAL	3	2	1	6	20	80	--	50	--	150	150
EE584	Micrcontroller and Applications	ET390	OPTIONAL	3	2	1	6	20	80	--	--	50	150	150
EE585	Illumination Engineering	EE487	OPTIONAL	3	2	1	6	20	80	--	50	--	150	150
EE586	Electrical Building Maintenance System	EE383	OPTIONAL	3	2	1	6	20	80	--	50	--	150	150
EE587	Modern Electric Traction	EE487	OPTIONAL	3	2	1	6	20	80	--	50	--	150	150
Total				9	6	3	18	60	240	0	50	100	450	450

	TEACHING SCHEME				EXAMINATION SCHEME					Class Declaration	
	L	P	T	C	PA	TH	TW	OR	PR		Total
Grand Total	95	74	11	180	610	2240	375	425	775	4425	1500

Abbreviations: L - Lecture, P - Practical, C - Credits, PA - Progressive Assessment, PR - Practical, TW - Term Work, OR - Oral, @ - Compulsory

Each Lecture / Practical period is of one clock hour

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Summary of Programme Structure

DIPLOMA IN ELECTRICAL ENGINEERING

Total Credits		180
Total No. Courses		39
No.of Courses with Theory Examination		28
No.of Courses with Practical Examination		33
No.of Courses without Theory Examination		11
Total Marks		4425
Marks for Class Declaration		1500
Theory Paper Marks for Class Declaration		1000
Theory : Practical Ratio		53:47
Class Declaration Courses		11
Non Credit Courses		2

Level	Credits
I	26
II - A	37
II - B	3
III	45
IV - A	4
IV - B	3
IV - C	44
IV - D	--
V	18
Total	180

(Shri S. V. Chaudhari)
CDC In-charge

(Shri C. Y. Totewar)
Chairman, PBOS