CURRICULUM

FIRST SEMESTER

Course Code	Type	Course	L-T-P	Credit
19MA604	FC	Software Based Numerical Computation Methods	2-0-2	3
19PR611	SC	Power System Planning, Operation and Control	3-0-2	4
19PR612	SC	Sustainable and Renewable Energy Technology	2-0-2	3
19PR601	FC	Power Electronic Converters for Smartgrids and Electric Vehicles	2-0-2	3
19PR613	SC	Smartgrid	3-0-0	3
19PR614	SC	Electric Vehicle Technology	2-0-2	3
19PR602	FC	Digital Signal Controllers	3-0-2	4
19HU601	HU	Amrita Values Program*		P/F
19HU602	HU	Career Competency I*		P/F
		Credits		**23**

***** Non-credit course

SECOND SEMESTER

Course Code	Type	Course	L-T-P	Credit
19PR615	SC	Restructured Power System Optimisation	2-0-2	3
19PR603	FC	Power Quality and FACTS	2-0-2	3
19PR616	SC	Intelligence& Communication in Smartgrid	2-0-2	3
19PR617	SC	Vehicular Networks and communications	2-0-2	3
	E	Elective 1	3-0-0	3
	E	Elective 2	3-0-0	3
19PR618	SC	Application Development lab	1-0-2	2
19HU603	HU	Career Competency II	0-0-2	1
19RM600	SC	Research Methodology	2-0-0	2
		Credits		**23**

THIRD SEMESTER

Course code	Type	Course	Credit
19PR798	P	Dissertation	10

FOURTH SEMESTER

Course code	Type	Course	Credit
19PR799	P	Dissertation	10
		Credits	10

Total Credits: 66

LIST OF COURSES

Foundation Core (FC)

Course Code	Course	L – T – P	Credits
19PR601	Power Electronic Converters for Smartgrids and Electric Vehicles	2-0-2	3
19PR602	Digital Signal Controllers	3-0-2	4
19PR603	Power Quality and FACTS	2-0-2	3
19MA604	Software Based Numerical Computation Methods	2-0-2	3

Subject Core (SC)

Course Code	Course	L – T – P	Credits
19PR611	Power System Planning, Operation and Control	3-0-2	4
19PR612	Sustainable and Renewable Energy Technology	2-0-2	3
19PR613	Smartgrid	3-0-0	3
19PR614	Electric Vehicle Technology	2-0-2	3
19PR615	Restructured Power System Optimisation	2-0-2	3
19PR616	Intelligence & Communication in Smartgrid	2-0-2	3
19PR617	Vehicular Networks and communications	2-0-2	3
19PR618	Application Development lab	1-0-2	2
19RM600	Research Methodology	2-0-0	2

ELECTIVES -I

(Subjects include areas from Power System, Sustainable and Renewable Energy, Computational and Communication Technology, Power Electronics ,Control and Smartgrid**)**

Course Code	Course	L – T – P	Credits
19PR701	Energy Storage Technology	3-0-0	3
19PR702	ICT enabled Power System Protection	3-0-0	3
19PR703	Advanced Digital Signal Controllers and Applications	3-0-0	3
19PR704	Machine learning and Multi Agent Systems for Power Engineering	3-0-0	3
19PR705	Mathematical Modelling of Energy Systems	3-0-0	3
19PR706	Cyber Physical Systems	3-0-0	3
19PR707	Energy Conservation and Management	3-0-0	3
19PR708	Solar Energy Utilisation	3-0-0	3
19PR709	Wind Energy Conversion Systems	3-0-0	3
19PR710	Power Plant Instrumentation	3-0-0	3
19PR711	Computational Intelligence for Power Applications	3-0-0	3
19PR712	Bio- Energy Conversion	3-0-0	3

ELECTIVES -II

(Subjects include areas from Automotive applications and Electric Vehicles)

Course Code	Course	L – T – P	Credits
19PR721	Advanced Power Electronics for Automotive Applications	3-0-0	3
19PR722	System Engineering and Integration	3-0-0	3
19PR723	Electric Drives And Control	3-0-0	3
19PR724	Control System Design	3-0-0	3
19PR725	E-mobility Business and policies	3-0-0	3
19PR726	Automotive Electronics	3-0-0	3
19PR727	Automotive Control System	3-0-0	3
19PR728	Vehicle Dynamics and Control	3-0-0	3

*****Any of the elective subjects offered in any semester in any department may also be permitted with the concurrence of the department.

Project Work

Course Code	Course	L – T – P	Credits
19PR798	Dissertation I		10
19PR799	Dissertation II		10