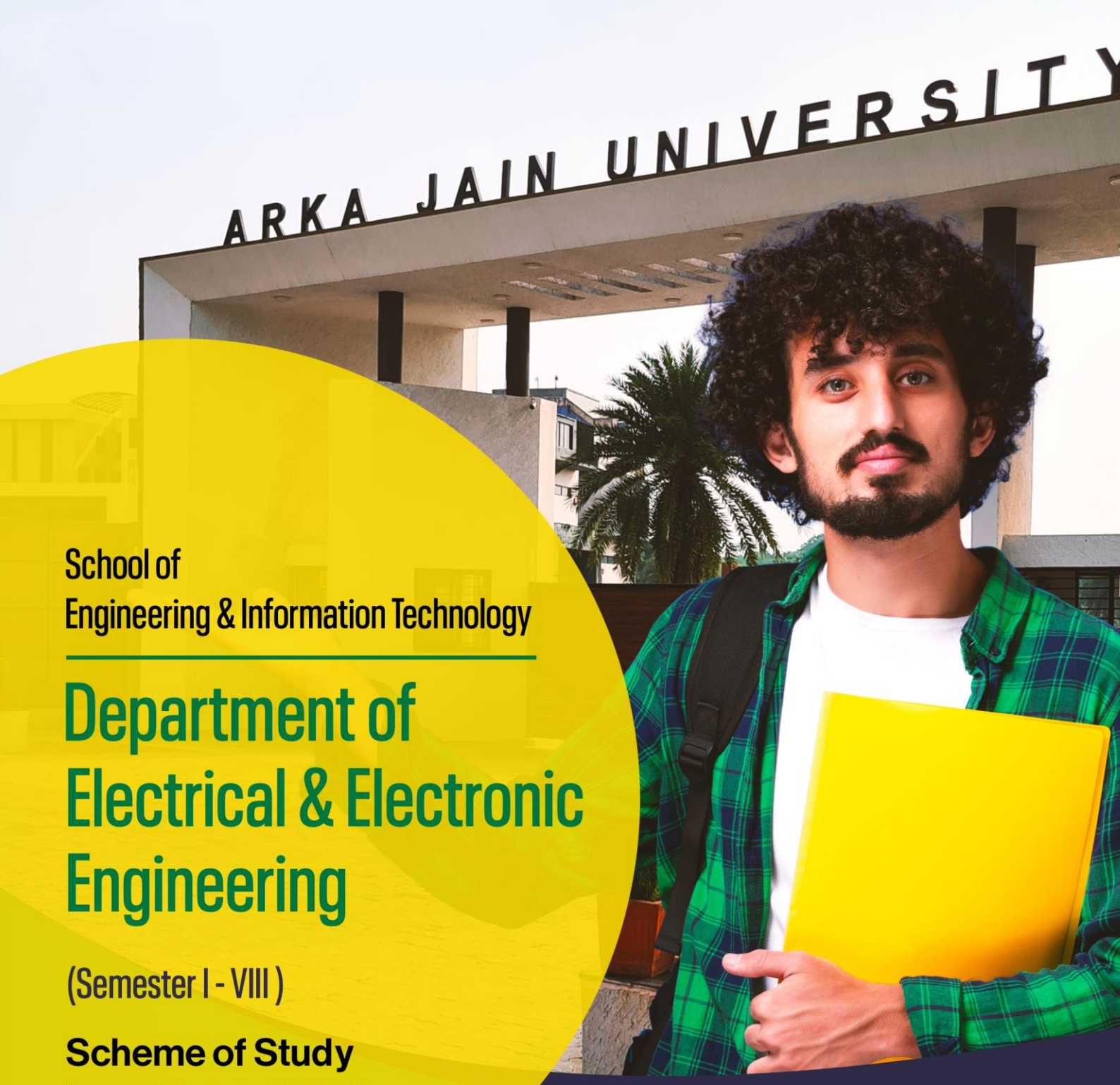


School of
Engineering & Information Technology

Department of Electrical & Electronic Engineering

(Semester I - VIII)

Scheme of Study
(w.e.f Batch 2020)

JGi

ARKA JAIN University
Jharkhand (Jamshedpur)

SEMESTER –I

Name of the Subject	Group	L-T-P	Credit
Engineering Mathematics–I	A & B	03-01-2000	4
Engineering Chemistry	A	3-0-0	3
Programming for Problem Solving	B	3-0-0	3
Basic Electrical Engineering	A	03-01-2000	4
Engineering physics	B	03-01-2000	4
Engineering Mechanics	A	3-0-0	3
English for Communication	B	3-0-0	3
Constitution of India	B	0-0-0	0
Engineering Chemistry Lab	A	0-0-1	1
Engineering Physics Lab	B	0-0-1	1
Basic Electrical Engineering Lab	A	0-0-1	1
Programming for Problem Solving Lab	B	0-0-2	2
Engineering Mechanics Lab	A	0-0-1	1
Engineering Graphics & Design	A	0-0-2	2
Workshop Practices	B	0-0-2	2
TOTAL	A or B	12-02-2005	19

SEMESTER –II

Name of the Subject	Group	L-T-P	Credit
Engineering Mathematics–II	A & B	03-01-2000	4
Engineering Chemistry	B	3-0-0	3
Programming for Problem Solving	A	3-0-0	3
Basic Electrical Engineering	B	03-01-2000	4
Engineering physics	A	03-01-2000	4
Engineering Mechanics	B	3-0-0	3
English for Communication	A	3-0-0	3
Constitution of India	A	0-0-0	0
Engineering Chemistry Lab	B	0-0-1	1
Engineering Physics Lab	A	0-0-1	1
Basic Electrical Engineering Lab	B	0-0-1	1
Programming for Problem Solving Lab	A	0-0-2	2
Engineering Mechanics Lab	B	0-0-1	1
Engineering Graphics& Design	B	0-0-2	2
Workshop Practices	A	0-0-2	2
TOTAL	A or B	12-02-2005	19

SEMESTER –I (Group-A)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering Chemistry	BSC	3	3	100	70	20	5	5
Engineering Mathematics–I	BSC	4	4	100	70	20	5	5
Basic Electrical Engineering	ESC	4	4	100	70	20	5	5
Engineering Mechanics	ESC	3	3	100	70	20	5	5
Engineering Chemistry Lab	BSC	1	2	50	35	5	5	5
Basic Electrical Engineering Lab	ESC	1	2	50	35	5	5	5
Engineering Mechanics Lab	ESC	1	2	50	35	5	5	5
Engineering Graphics& Design	ESC	2	4	50	35	5	5	5
TOTAL		**19**	**24**	**600**	**420**	**100**	**40**	**40**

SEMESTER I (Group-B)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Engineering physics	BSC	4	4	100	70	20	5	5
Engineering Mathematics –I	BSC	4	4	100	70	20	5	5
Programming for Problem Solving	ESC	3	3	100	70	20	5	5
English for Communication	HSMC	3	3	100	70	20	5	5
Constitution of India	MC	0	2	50	35	10	2.5	2.5
Engineering physics Lab	BSC	1	2	50	35	5	5	5
Programming for Problem Solving Lab	ESC	2	4	50	35	5	5	5
Workshop Practices	ESC	2	4	50	35	5	5	5
TOTAL		**19**	**26**	**600**	**420**	**105**	**37.5**	**37.5**

SEMESTER II (Group-A)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Engineering physics	BSC	4	4	100	70	20	5	5
Engineering Mathematics –II	BSC	4	4	100	70	20	5	5
Programming for Problem Solving	ESC	3	3	100	70	20	5	5
English for Communication	HSMC	3	3	100	70	20	5	5
Constitution of India	MC	0	2	50	35	10	2.5	2.5
Engineering physics Lab	BSC	1	2	50	35	5	5	5
Programming for Problem Solving Lab	ESC	2	4	50	35	5	5	5
Workshop Practices	ESC	2	4	50	35	5	5	5
TOTAL		**19**	**26**	**600**	**420**	**105**	**37.5**	**37.5**

SEMESTER –II (Group-B)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Engineering Chemistry	BSC	3	3	100	70	20	5	5
Engineering Mathematics–II	BSC	4	4	100	70	20	5	5
Basic Electrical Engineering	ESC	4	4	100	70	20	5	5
Engineering Mechanics	ESC	3	3	100	70	20	5	5
Engineering Chemistry Lab	BSC	1	2	50	35	5	5	5
Basic Electrical Engineering Lab	ESC	1	2	50	35	5	5	5
Engineering Mechanics Lab	ESC	1	2	50	35	5	5	5
Engineering Graphics& Design	ESC	2	4	50	35	5	5	5
TOTAL		**19**	**24**	**600**	**420**	**100**	**40**	**40**

SEMESTER-III

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Electrical Circuit Analysis	PCC	3	3	100	70	20	5	5
Electromagnetic Fields	PCC	4	4	100	70	20	5	5
Analog Electronic	PCC	3	3	100	70	20	5	5
Engineering Mathematics – III	BSC	4	4	100	70	20	5	5
Electrical Machines-I	PCC	4	4	100	70	20	5	5
Environmental Sciences	MC	0	2	50	35	10	2.5	2.5
Electrical Circuit Analysis Lab	PCC	1	2	50	35	5	5	5
Electrical Machines-I Lab	PCC	1	2	50	35	5	5	5
Analog Electronics Lab	PCC	1	2	50	35	5	5	5
TOTAL		**21**	**26**	**700**	**490**	**125**	**42.5**	**42.5**

SEMESTER-IV

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Electrical Machines-II	PCC	4	4	100	70	20	5	5
Digital Electronics	PCC	3	3	100	70	20	5	5
Power Electronics	PCC	4	4	100	70	20	5	5
Signals and Systems	PCC	3	3	100	70	20	5	5
Biology for Engineers	BSC	3	3	100	70	20	5	5
Essence of Indian Knowledge Tradition	MC	0	2	50	35	10	2.5	2.5
Electrical Machines II Lab	PCC	1	2	50	35	5	5	5
Digital Electronics Lab	PCC	1	2	50	35	5	5	5
Power Electronics Lab	PCC	1	2	50	35	5	5	5
TOTAL		**20**	**25**	**700**	**490**	**125**	**42.5**	**42.5**

SEMESTER V

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Power Systems–I	PCC	3	3	100	70	20	5	5
Control Systems	PCC	3	3	100	70	20	5	5
Microprocessors	PCC	3	3	100	70	20	5	5
Program Elective – I		3	3	100	70	20	5	5
Electrical Energy Conservation and Auditing								
Electrical Machine Design	PEC							
Industrial Electrical Systems								
Open elective-I		3	3	100	70	20	5	5
Electronic Devices	OEC							
Strength of Materials								
Data Structures and Algorithms								
Professional practice law & ethics	HSMC	3	3	100	70	20	5	5
Power Systems I Lab	PCC	1	2	50	35	5	5	5
Control Systems Lab	PCC	1	2	50	35	5	5	5
Microprocessors Lab	PCC	1	2	50	35	5	5	5
Summer Internship-1(3-4 Weeks)	PROJ	2	0	50	35	15	0	0
TOTAL		**23**	**24**	**800**	**560**	**150**	**45**	**45**

SEMESTER VI

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Power Systems – II	PCC	3	3	100	70	20	5	5
Measurements and Instrumentation	PCC	3	3	100	70	20	5	5
Program Elective – II		3	3	100		20	5	5
					70			
Digital Signal Processing	PEC							
Control Systems Design								
Program Elective – III		3	3	100		20	5	5
Line Commutated and Active Rectifiers					70			
High Voltage Engineering	PEC							
Electromagnetic Waves								
Open Elective –II		3	3	100	70	20	5	5
Wavelet Transforms								
Internet of Things								
Thermal and Fluid Engineering	OEC							
IPR	HSMC	3	3	100	70	20	5	5
Power Systems II Lab	PCC	1	2	50	35	5	5	5
Measurements and		1	2	50	35	5	5	5
Instrumentation Lab	PCC							
TOTAL		**20**	**22**	**700**	**490**	**130**	**40**	**40**

SEMESTER VII

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Professional Elective -IV								
Power System Protection	PEC	3	3					
Electrical and Hybrid Vehicles				100	70	20	5	5
Computational Electromagnetic								
Professional Elective - V								
Power System Dynamics andControl	PEC	3	3	100	70	20	5	5
Power Quality and FACTS								
Electrical Drives								
Open Elective - III								
Analog and Digital Communication	OEC	3	3	100	70	20	5	5
Embedded Systems								
Fluid Machinery								
Open Elective - IV								
Power Plant Engineering	OEC	3	3	100	70	20	5	5
Image Processing								
Automobile Engineering								
Project Management	HSMC	3	3	100	70	20	5	5
Summer Internship-II(4-6 Weeks)	PROJ	3	0	100	70	30	0	0
Minor Project(Project to be carried over to next semester)	PROJ	3	6	100	70	30	0	0
TOTAL		**21**	**21**	**600**	**490**	**160**	**25**	**25**

SEMESTER VIII

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA	Attendance
Professional Elective - VI	PEC	3	3	100	70	20	5	5
HVDC Transmission Systems								
Wind and Solar Energy Systems								
Advanced Electric Drives								
Open Elective- V	OEC	3	3	100	70	20	5	5
VLSI circuits								
Modern Manufacturing Processes								
Computer Networks								
Open Elective - VI	OEC	3	3	100	70	20	5	5
Electrical Materials								
Big Data Analysis								
Major Project	PROJ	8	16	200	140	60	0	0
Extra-Curricular/ Co-Curricular Activity	PROJ	0	0	100	70	30	0	0
TOTAL		**17**	**25**	**600**	**420**	**150**	**15**	**15**