CBCS SYLLABUS

FOR

THREE YEARS UNDER-GRADUATE COURSE

IN

ELECTRONIC SCIENCE (HONOURS)

(*w.e.f. 2017*)

BANKURA UNIVERSITY

BANKURA

WEST BENGAL

PIN 722155

(Proposed)

STRUCTURE IN ELECTRONIC SCIENCE (HONOURS)

SEMESTER –I

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/ELC/ 101/C-1	Basic Circuit Theory and Network Analysis (T1) Basic Circuit Theory and Network Analysis Lab (P1)	4 2	10	25 15	50			
SH/ELC / 102/C-2	Mathematics Foundation for Electronics (T2) Mathematics Foundation for Electronics Lab (P2)	4 2	10	25 15	50			
SH/ELC / 103/GE-1	**Any one of the following** a) Electronic Circuits and PCB Designing (GE-T1) Electronic Circuits and PCB Designing Lab (GE-P1) b) Digital System Design(GE-T2) Digital System Design Lab (GE-P2) c) Communication Systems (GE-T3) Communication Systems Lab (GE-P3) d) Instrumentation (GE-T4) d) Instrumentation Lab (GE-P4)	4 2	10	25 15	50			
ACSHP/104/ AECC-1	Environmental Studies	4	10	40	50			
Total in Semester – I		**22**	**40**	**160**	**200**			

SEMESTER –II

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/ELC / 201/C-3	Semiconductor Devices(T3) Semiconductor Devices Lab (P3)	4 2	10	25 15	50			
SH/ELC / 201/C-4	Applied Physics (T4) Applied Physics Lab (P4)	4 2	10	25 15	50			
SH/ELC / 203/GE-2	**Any one of the following** a) Electronic Circuits and	4		25				

	PCB Designing (GE-T1) Electronic Circuits and PCB Designing Lab (GE-P1)	2	10	15	50			
	b) Digital System Design(GE-T2) Digital System Design Lab (GE-P2)							
	c) Communication Systems (GE-T3) Communication Systems Lab (GE-P3)							
	d) Instrumentation (GE-T4) d) Instrumentation Lab (GE-P4)							
ACSHP/204/ AECC-2	English/Hind/MIL	2	10	40	50			
Total in Semester – II		**20**	**40**	**160**	**200**			

SEMESTER –III

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/ELC / 301/C-5	Electronic Circuits (T5) Electronic Circuits Lab (P5)	4 2	10	25 15	50			
SH/ELC / 301/C-6	Digital Electronics and Verilog (T6) Digital Electronics and Verilog Lab (P6)	4 2	10	25 15	50			
SH/ELC / 301/C-7	C Programming and Data Structures (T7) C Programming and Data Structures Lab (P7)	4 2	10	25 15	50			
SH/ELC / 304/GE-3	**Any one of the following**	4		25				
	a) Electronic Circuits and PCB Designing (GE-T1) Electronic Circuits and PCB Designing Lab (GE-P1)	2	10	15	50			
	b) Digital System Design(GE-T2) Digital System Design Lab (GE-P2)							
	c) Communication Systems (GE-T3) Communication Systems Lab (GE-P3)							
	d) Instrumentation (GE-T4) d) Instrumentation Lab (GE-P4)							
SH/ELC /	**Any one of the following**							

305/SEC-1	a) Programming with MATLAB b) Design and Fabrication of Printed Circuit Boards	2	10	40	50			
Total in Semester - III		**26**	**50**	**200**	**250**			

SEMESTER –IV

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/ELC /401/C-8	Operational Amplifiers and Applications (T8) Operational Amplifiers and Applications Lab (P8)	4 2	10	25 15	50			
SH/ELC /401/C-9	Signals and Systems (T9) Signals and Systems Lab (P9)	4 2	10	25 15	50			
SH/ELC /401/C-10	Electronic Instrumentation (T10) Electronic Instrumentation Lab (P10)	4 2	10	25 15	50			
SH/ELC /404/GE-4	**Any one of the following** a) Electronic Circuits and PCB Designing (GE-T1) Electronic Circuits and PCB Designing Lab (GE-P1) b) Digital System Design(GE-T2) Digital System Design Lab (GE-P2) c) Communication Systems (GE-T3) Communication Systems Lab (GE-P3) d) Instrumentation (GE-T4) d) Instrumentation Lab (GE-P4)	4 2	10	25 15	50			
SH/ELC / 405/SEC-2	**Any one of the following** a) Programming with MATLAB b) Design and Fabrication of Printed Circuit Boards	2	10	40	50			
Total in Semester - IV		**26**	**50**	**200**	**250**			

SEMESTER – V

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total			
SH/ELC / 501/C-11	Microprocessors and Microcontrollers (T11) Microprocessors and Microcontrollers Lab (P11)	4 2	10	25 15	50			
SH/ELC / 501/C-12	Electromagnetics (T12) Electromagnetics Lab (P12)	4 2	10	25 15	50			
SH/ELC / 503/DSE-1	Any **one of the following**	4	10	25 15	50			
	a) Power Electronics (DSE1-T1) Power Electronics Lab (DSE1-P1)	2						
	b) Modern Communication Systems (DSE2-T2) Modern Communication Systems Lab (DSE2-P2)							
	c) Numerical Techniques (DSE3-T3) Numerical Techniques Lab (DSE3-P3)							
SH/ELC / 504/DSE-2	Any **one of the following**	4	10	25 15	50			
	a) Transmission Lines, Antenna and Wave Propagation (DSE4-T4) Transmission Lines, Antenna and Wave Propagation lab (DSE4-P4)	2						
	b) Control Systems (DSE5-T5) Control Systems Lab (DSE5-P5)							
	c) Digital Signal Processing (DSE6-T6) Digital Signal Processing Lab (DSE6-P6)							

Total in Semester – V	**24**	**40**	**160**	**200**			

SEMESTER – VI

Course Code	Course Title	Credit	Marks			No. of Hours		
			I.A.	ESE	Total	Lec.	Tu.	Pr.
SH/ELC / 601/C-13	Communication Electronics (T13) Communication Electronics Lab (T13)	4 2	10	25 15	50			
SH/ELC / 601/C-14	Photonics (T14) Photonics Lab (P14)	4 2	10	25 15	50			
SH/ELC/ 603/DSE-3	Any **one of the following** a) Power Electronics (DSE1-T1) Power Electronics Lab (DSE1-P1) b) Modern Communication Systems (DSE2-T2) Modern Communication Systems Lab (DSE2-P2) c) Numerical Techniques (DSE3-T3) Numerical Techniques Lab (DSE3-P3)	4 2	10	25 15	50			
SH/ELC/ 603/DSE-4	Any **one of the following** a) Transmission Lines, Antenna and Wave Propagation (DSE4-T4) Transmission Lines, Antenna and Wave Propagation lab (DSE4-P4) b) Control Systems (DSE5-T5) Control Systems Lab (DSE5-P5) c) Digital Signal Processing (DSE6-T6) Digital Signal Processing Lab (DSE6-P6)	4 2	10	25 15	50			
Total in Semester – VI		**24**	**40**	**160**	**200**			

SC = Subject Code, C= Core Course, AECC= Ability Enhancement Compulsory Course, SEC= Skill Enhancement Course, GE= Generic Elective, DSE= Discipline Specific Elective IA= Internal Assessment, ESE= End-Semester Examination, Lec.=Lecture, Tu.= Tutorial, and Prc.=Practical