DINABANDHU ANDREWS COLLEGE

AFFLIATED TO UNIVERSITY OF CALCUTTA

Department of Electronics

UNDERGRADUATE SECTION

Model Reference: University of Calcutta, Syllabus for Electronics Advanced (CBCS)

[with effect from July 2018 (2018-19)] [with effect from July 2018 (2018-19)]

The Programme Outcomes (PO) of B.Sc. Honours Electronics Curriculum:

Programme Outcomes Nos	Program Outcome (PO)
PO-A	The objective is to establish robust groundwork in fundamental sciences and mathematics.
PO-B	To utilize contemporary methodologies, advanced apparatus, and up-to-date software applications using deep understandings.
PO-C	To manage diverse categories of modern electrical and electronic circuits.
PO-D	To identify, formulate, and analyze intricate scientific problems towards well-supported conclusions.
PO-E	To cultivate proficiency in computational problem-solving for various analytical challenges in the field of Electronics.
PO-F	To develop written and verbal communication skills while dealing with electronics-related topics
PO-G	To develop a logical and scientific mindset in youth.
PO-H	To inspire interdisciplinary students to understand modern trends in applied electronics.
PO-I	To adequately equip students for a prosperous career in industry, as well as to inspire them towards pursuing higher education and a career in research.
PO-J	To develop the ability of independent learning despite of the technological up-gradation throughout the rest of life.
PO-K	To cultivate both individual and collaborative skills as an individual or as a member of a team during laboratory sessions.
PO-L	To inspire the students to apply their concept of electronics to understand their electronic gadgets in a more efficient way.

Programme Specific Outcomes Nos	Program Specific Outcome (PSO)
PSO-1	To develop scientific ability in the students so they can understand modern science and technology related to the society.
PSO-2	To utilize knowledge in emerging areas of electronics for higher studies, research, and industries that relate to software and hardware applications.
PSO-3	To develop the skill of using modern laboratories of electronics and respective ISO certified safety measures.

PSO-4	To develop leadership and managerial abilities, and comprehend the importance of ongoing learning to become a competitive professional.

Mapping of PO & PSO for Electronics Honours Syllabus under the University of Calcutta

Serial Numbers	Program Outcome (PO)											
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H	PO-I	PO-J	PO-K	PO-L
PSO-1	✓	✓	✓	✓			✓		✓	✓	✓	✓
PSO-2	✓	✓	✓		✓			✓		✓		✓
PSO-3			✓								✓	✓
PSO-4					✓	✓	✓		✓	✓	✓	

❖ **Semester wise Programme Outcome mapping for Electronics Honours (CBCS System) under University of Calcutta**

Semester - 1												
COURSE DETAIL	Program Outcome (PO)											
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H	PO-I	PO-J	PO-K	PO-L
CC-1 (Theory & Practical) Basic Circuit Theory and Network Analysis			✓	✓		✓	✓		✓	✓	✓	✓
CC-2 (Theory & Practical) Mathematics Foundation for Electronics	✓			✓	✓		✓			✓	✓	✓

Semester - 2												
COURSE DETAIL	Program Outcome (PO)											
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H	PO-I	PO-J	PO-K	PO-L
CC-3 (Theory & Practical) Applied Physics	✓			✓			✓	✓		✓	✓	✓
CC-4 (Theory & Practical) C Programming and Data Structure		✓			✓		✓		✓	✓	✓	✓

Semester - 3												
COURSE DETAIL	Program Outcome (PO)											
	PO-A	PO-B	PO-C	PO-D	PO-E	PO-F	PO-G	PO-H	PO-I	PO-J	PO-K	PO-L
CC-5 (Theory & Practical) Semiconductor Device	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓

CC-6 (Theory & Practical) Electronic Circuits			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CC-7 (Theory & Practical) Electromagnetics	✓			✓			✓		✓	✓	✓	✓
SEC -1 Circuit Modeling using PSPICE		✓			✓		✓		✓	✓	✓	✓

Semester - 4												
COURSE DETAIL	**Program Outcome (PO)**											
	PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
CC-8 (Theory & Practical) Operational Amplifiers and Applications			✓		✓	✓	✓		✓	✓	✓	✓
CC-9 (Theory & Practical) Digital Electronics and VHDL		✓	✓			✓	✓		✓	✓	✓	✓
CC-10 (Theory & Practical) Signals and Systems		✓	✓	✓		✓	✓		✓	✓	✓	✓
SEC -2 Programming with Matlab/Scilab		✓			✓		✓		✓	✓		

Semester - 5												
COURSE DETAIL	**Program Outcome (PO)**											
	PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
CC-11 (Theory & Practical) Electronic Instrumentation			✓	✓		✓	✓	✓	✓	✓	✓	✓
CC-12 (Theory & Practical) Microprocessors and Microcontrollers		✓			✓	✓	✓		✓	✓	✓	✓
DSE-1 (Theory & Practical) Control Systems		✓	✓			✓	✓	✓	✓	✓	✓	✓
DSE-2 (Theory & Practical) Power Electronics			✓			✓	✓	✓	✓	✓	✓	✓

Semester - 6												
COURSE DETAIL	**Program Outcome (PO)**											
	PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
CC-13 (Theory & Practical) Communication Electronics			✓			✓	✓		✓	✓	✓	✓
CC-14 (Theory & Practical) Photonics			✓					✓	✓	✓	✓	✓
DSE-3 (Theory & Practical) Basic VLSI Design		✓	✓					✓	✓	✓	✓	✓
DSE-4 (Theory & Practical) Transmission Lines, Antenna and Microwave Devices		✓	✓			✓		✓	✓	✓	✓	✓

❖ **Programme Outcome mapping for Electronics Honours (1+1+1 System) under University of Calcutta**

Part – I (1st year)													
Module	**COURSE DETAIL**	**Program Outcome (PO)**											
		PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
I	Paper – I Mathematical Methods & Classical and Quantum Mechanics	✓	✓		✓	✓		✓			✓		
II	Paper – II Electromagnetism- I, Linear Circuits and Nonlinear Devices and Circuits I & Practical			✓			✓	✓	✓	✓	✓	✓	✓

Part – II (2nd year)													
Module	**COURSE DETAIL**	**Program Outcome (PO)**											
		PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
I	Paper – III Thermal, Statistical and Solid State Physics &	✓	✓	✓		✓	✓	✓			✓		✓

	Nonlinear Devices and Circuits II												
II	Paper – IV Instrumentation and Digital Electronics I & Practical		✓	✓			✓	✓	✓	✓	✓	✓	✓

Part – III (3rd year)													
Module	**COURSE DETAIL**	**Program Outcome (PO)**											
		PO -A	**PO -B**	**PO -C**	**PO -D**	**PO -E**	**PO -F**	**PO -G**	**PO -H**	**PO -I**	**PO -J**	**PO -K**	**PO -L**
I	Paper – V Electromagnetism II and Electronic Communication & Microwave Electronic Devices, Optics and Photonics	✓	✓		✓			✓			✓	✓	✓
	Paper – VI Digital Electronics II and Introduction to Computers and C programming & Introduction to the 8085 Microprocessor		✓			✓	✓	✓	✓		✓	✓	✓
II	Paper – VII (Practical) Experiments with Analog Integrated Circuits and on Communication Systems & Experiments on Digital Electronics		✓	✓			✓	✓	✓		✓	✓	✓
	Paper – VIII (Practical) Assembly Language Programming on the 8085 Microprocessor & Computer programming in C language		✓	✓	✓	✓	✓	✓			✓	✓	✓