

MICROPROCESSORS AND MICROCONTROLLERS



**ELECTRICAL
ENGINEERING**



PROF. SANTANU CHATTOPADHYAY

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TYPE OF COURSE	: Rerun Core UG	COURSE DURATION	: 12 weeks (28 Jan'19 - 19 Apr'19)
PRE-REQUISITES	: Digital Design, Digital Logic	EXAM DATE	: 27 Apr 2019
INDUSTRY SUPPORT	: Companies involved in development of microprocessor and microcontroller based products		
INTENDED AUDIENCE	: CSE, ECE, EE		

COURSE OUTLINE :

Microprocessors are used extensively in the design of any computing facility. It contains units to carry out arithmetic and logic calculations, fast storage in terms of registers and associated control logic to get instructions from memory and execute them. A number of devices can be interfaced with them to develop a complete system application.

ABOUT INSTRUCTOR :

Prof. Santanu Chattopadhyay, currently a Professor in the Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, received his PhD from Indian Institute of Technology (IIT) Kharagpur in 1996. His research interests include Embedded Systems, System-on-Chip (SoC) and Network-on-Chip (NoC) Design and Test, Power- and Thermal-aware Testing of VLSI Circuits and Systems. He has published more than 150 papers in reputed international journals and conferences. He has published several text and reference books in the related areas. He is a senior member of IEEE and an editorial board member of IET Circuits Devices and Systems.

COURSE PLAN

Week 1	: Introduction: General processor architecture, Microprocessors, Microcontrollers
Week 2	: 8085 – Part I
Week 3	: 8085 – Part II
Week 4	: 8085 – Part III
Week 5	: 8085 – Part IV
Week 6	: 8051 – Part I
Week 7	: 8051 – Part II
Week 8	: PIC, AVR
Week 9	: ARM – Part I
Week 10	: ARM – Part II
Week 11	: Interfacing examples – Part I
Week 12	: Interfacing examples – Part II