

Weekly Schedule for Syllabus Completion

B. Tech Semester-VII Electronic science

Paper Code: EL-701 Power Electronics

No. of weeks	Weekly Schedule	Unit	Topics Completed/To be completed
1	22 nd July to 29 th July	1	Power diodes, Enhancement of reverse blocking capacity, reverse recovery Power BJT, second breakdown, saturation and quasi saturation state.
2	30 th July to 5 th August	1	Power MOSFETs, operation modes, switching characteristics, Insulated Gate Bipolar Transistors (IGBT) Basic structure, I-V Characteristics, switching characteristics, device limitations and safe operating area (SOA) etc.
3	6 th August to 12 th August	2	silicon controlled rectifier (SCR) structure, I-V characteristics, turn ON and turn OFF characteristics, ratings,
4	13 th August to 19 th August	2	Control circuits design and protection circuits. Gate turn-off thyristor (GTO), I-V characteristics, turn ON, turn OFF characteristics,
5	20 th August to 26 th August	2	limitation of power handling capability, GTO snubber consideration, Basic structure, working and V-I characteristic of Diac and Triac,
6	27 th August to 2 nd September	2	Application of a diac as a triggering device for a triac. Application of SCR: SCR as phase controlled rectifier, half wave, full wave rectifiers
7	3 rd September to 9 th September	2	Bridge rectifiers with inductive non-inductive loads; Analysis for a single phase supply, idea of three phase supply
8	10 th September to 16 th September	3	Need for commutating circuits

			and their various types, d.c. link invertors,
9	17 th September to 23 rd September	3	Parallel capacitors commutated invertors with and without reactive feedback and its analysis,
10	19th September 2016 (1st Internal Assessment)	1, 2	Unit 1 (full) and Unit 2 (first half)
11	24 th September to 30 th September	3	Series Invertors and its improved version, bridge invertors.
12	01 st October to 7 th October	4	Use of an SCR as a d.c. switch, the parallel capacitor commutated d.c. switch
13	7th October 2016 (2nd Internal Assessment)	2, 3	Unit 2 (second half) and Unit 3
13	8 th October to 14 th October	4	triggering circuits for d.c. switches,
14	15 th October to 21 st October	4	operation of d.c. chopper circuits using B-type commutating circuit,
15	21st October 2016 (3rd Internal Assessment)	4	Unit 4
16	22 nd October to 28 th October	4	cathode pulse turn-off of SCR, Morgan's chopper.

(Signature of the teacher)

Mrs. Amrita Chakraborty

(Name of the teacher)