



THIAGARAJAR COLLEGE OF ENGINEERING - MADURAI 625 015
TCE-III

S.No	One credit course need analysis sheet	
1.	Name of the Course	Design of power supplies
2.	Name of the Industry	CDAC, Thiruvananthapuram
3.	Name of the SIG associated with	
4.	Motivation for offering the course	
4.1	Feedback (If yes, Details of the feedback as per the annexure I)	
	From Recruiter	Y/N ✓
	From Employer	Y/N ✓
	From Alumni	Y/N ✓
	From Academic Council members	Y/N ✓
	From Board of Studies members	Y/N ✓
	From Senior students	Y/N ✓
	From current students	Y/N ✓
	From Performance Assessment Committee	Y/N ✓
	From Department Advisory committee	Y/N ✓
4.2	Faculty participation in Seminar/FDP (If yes, details)	
	At higher learning institutes	
	At Industry	
5.	Outcomes expected	
	Technology transfer	
	Student Internship	
	Placement	
	Organizing FDP/seminar at TCE	
	Collaborative research/consultancy projects	
	Faculty as Trainee/Trainer in the Industry	
	Joint publications	
	Setting up of Lab/Infrastructure	



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TCE-III

Course Schedule

Name of the Course: *Design of power supplies*
 Name of the Industry: *CDAC, Thiruvananthapuram*
 Name of the Expert: *Mr. E. Chandrasekar*
 Number of Students enrolled: *72*
 Name of the Faculty: *Dr. B. Ashok Kumar*
 Date/Time/Venue:

List Enclosed

Date	Time	Topics	Remarks
Day1			
Day2			

B.A.K.
 Signature of the Faculty coordinator

One credit course
 14EE1K0-Design of Power Supplies

Schedule

Date	9.30 AM -11.00 AM	11.15 AM-1.15 PM	2.00 PM - 3.30 PM	3.45 PM-4.45 PM
04.03.17	Introduction of Available Sources & demanding loads: Sources - AC mains, Lab supplies, Batteries, Solar Cells - Loads - Requirements of load, battery as load,	Selection of Topology : Step-Up / Step-Down, Multiple outputs, Continuous & discontinuous modes of operation, Isolated converters, Various configurations of Converters,	Selection of Components: Selection of Resistors, Chokes, Capacitors, Diodes, MoSFETs & IGBTs, Connectors Guide to Instrumentation: Basics of measurements using DMM, Oscilloscope, Electronic loads, etc Design of Magnetics Fundamentals & ideal conditions, design of High frequency chokes & transformers, Selection of wire gauge, sealing of magnetics	Design of Feedback circuits Basic control requirements, Current & voltage mode control fundamentals & system stability conditions Design of Control and Monitoring circuits Practical Control circuitry & Monitoring circuitry requirements
05.03.17	Evaluations and Thermal management Performance evaluations of SMPS & thermal loss calculations and cooling options & packaging of converter EMI control requirements Overview of EMC, differentiating signal and noise, Layout concepts Low & High frequency filtering requirements, Optimal filter design	Worst case analysis Introduction to datasheet reading, operation tuned to datasheet, typical worst case analysis Simulation of particular application in PSIM Simulation of simple BUCK, BOOST & BUCK BOOST, Typical discrete power factor corrector circuit	Standards governing the power supplies IEC standards for Electrical & Environmental testing, certification standards, Ingress protection standards Recent trend in Power supplies Recent advancements in components, Recent advancements in topologies,	Digital control of power supplies, Power Integration & its Low power applications Demonstration of Various SMPS & Its components- Practical design of a cell phone charger- a practical approach


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Course Instructor Feedback for One/Two credit course

TCE-III

Name of the Course: *Design of power supplies*
 Name of the Industry: *CDAC, Thiruvananthapuram*
 Name of the Expert: *Mr. E. Chandrasekar*
 Date/Time/Venue:

	Comments
Student attendance	<i>72</i>
Level of the students in understanding the concepts	<i>Good</i>
Any suggestions regarding new content to be included as Prerequisites/Special electives	<i>Practical sessions can be conducted</i>
Hall/Lab arrangements	<i>Good</i>
Hospitality	<i>Good</i>

Signature of Head of the Department

E1H- Design of Power supplies

VII semester EEE (A&B)

26.09.2015 & 27.09.2015

VI semester A section :

S.No	REG NO	NAME OF THE STUDENT	Signature
1	12E01	AISHWARYA A.	
2	12E05	APARNA M.	
3	12E06	ARAVIND P.V.	
4	12E07	ARAVIND S.	
5	12E09	ARCHANA R.	
6	12E11	ARUNRAJ T.	
7	12E12	AYESHA SUBIYA S.	
8	12E14	BALA MURALI V.	
9	12E15	BALA MURUGAN K.	
10	12E16	BHARATHI P.	
11	12E18	BHUVANESWARI M.	
12	12E21	CHANDHIYA M.	
13	12E22	DHANALAKSHMI T.	
14	12E23	ELAKIYA E.	
15	12E27	GOMATHI M.	
16	12E28	GOWTHAMAN P.S.	
17	12E30	GURURAM C.	
18	12E32	HARISH SRINIVAS R.	
19	12E33	HARISH V.	
20	12E34	INDIVER SAIKHOMCHA	
21	12E35	JAYA SURYA S.A.	
22	12E43	KARTHICK K.	
23	12E45	MADHUMITHA E.K.	
24	12E46	THANGAL M.D.	
25	12E50	MANIKANDAN A.	
26	12E52	MANIMARAN M.	
27	12E53	MANOJ M.	
28	12E55	MEENATCHI M.	
29	12E57	MUTHU KUMAR B.	
30	12E58	MUTHUBRINDHA M.	
31	12E59	MUTHU KUMAR S.	
32	12E60	MUTHU VENKATESH K.	
33	12E63	GYANENDRO NG.	
34	13LE14	MUTHULAKSHMI P.	
35	13LE15	MUTHUSELVI M.	
36	13LE17	PANDIYA RAJAN C.	

E1H- Design of Power supplies

VII semester EEE (A&B)

26.09.2015 & 27.09.2015

VI semestser B section

S.No	REG NO	NAME OF THE STUDENT	Signature
1	12E81	RAJKUMAR R.	Rajkumar R.
2	12E82	RAMASHREE SUGUMAR	Ramashree Sugumar
3	12E83	RAMKKUMAR S.	Ramkkumar S.
4	12E84	RUBINI R.	Rubini R.
5	12E87	SANJULA K.	Sanjula K.
6	12E88	SARATH KUMAR K.	Sarath Kumar K.
7	12E89	SARAVANAN K.	Saravanan K.
8	12E93	SHRI SAHANA.J	Shri Sahana J.
9	12E94	SHRILAA S.	Shrilaa S.
10	12E95	SHYAM SUNDER R.	Shyam Sunder R.
11	12E96	SHYAM S.	Shyam S.
12	12E98	SIDHARTH M.	Sidharth M.
13	12E99	SINDHU A.	Sindhu A.
14	12E100	SIVA S.	Siva S.
15	12E101	SIVAGAMI K.	Sivagami K.
16	12E102	DONALD SINGH S.	Donald Singh S.
17	12E107	SRIVIDHYALAKSHMI S.	Srividhyalakshmi S.
18	12E108	SUBRIYA T.	Subriya T.
19	12E111	SUNESHWARIA LAKSHMI P.	Suneshwaria Lakshmi P.
20	12E112	SUNIL VIGNESH V.J.	Sunil Vignesh V.J.
21	12E114	SURJITH KANNAN M.	Surjith Kannan M.
22	12E115	TAGE NOBIN	Tage Nobin
23	12E117	UMA MAHESHWARI S.	Uma Maheshwari S.
24	12E118	USHA DEVI K.	Usha Devi K.
25	12E119	VARSHINI R.	Varshini R.
26	12E122	VIGNESH M.	Vignesh M.
27	12E123	VIJAY MEYAPAN V.	Vijay Meyapan V.
28	12E125	VINITHA P.	Vinitha P.
29	12E126	VINODHINI G.	Vinodhini G.
30	12E128	YANGLEI.A.S	Yanglei A.S
31	13LE03	ARUN KUMAR S.	Arun Kumar S.
32	13LE10	KARTHICK KANNAN V.	Karthick Kannan V.
33	13LE13	MAYILSAMY K.	Mayilsamy K.
34	13LE16	NAVEEN KUMAR M.	Naveen Kumar M.
35	13LE20	SAKTHIVEL V.	Sakthivel V.
36	13LE26	SUBBUKUTTY S.	Subbukutty S.

BOS