



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: *48*
Name of the Faculty: *Dr. B. Ashok Kumar*
Date/Time/Venue:

List Enclosed

Date	Time	Topics	Remarks
Day1			
Day2			

B.AK

Signature of the Faculty coordinator

06.03.17

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>48</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 session can be conducted.</i>
Hall/Lab arrangements	<i>Good</i>
Hospitality	<i>Good</i>

Signature of Head of the Department

04.03.17

**One credit course on
14EE1K0 Design of Power Supplies
Students Attendance Semester: III EEE (A)**

S.NO	REG NO	NAME OF THE STUDENT	04.03.17 FN	04.03.17 AN	05.03.17 FN	05.03.17 AN
1.	14E01	AARTHI.S.K	AarthiSK	AarthiSK	AarthiSK	AarthiSK
2.	14E03	ABHISHEK.P	P.Abhishek	P.Abhishek	P.Abhishek	P.Abhishek
3.	14E04	ABINAYA.K	K.Abinaya	K.Abinaya	K.Abinaya	K.Abinaya
4.	14E06	AMALARANI.K	K.Amaly	K.Amaly	K.Amaly	K.Amaly
5.	14E11	ARUNA DEVI.S	Aruna	Aruna	Aruna	Aruna
6.	14E12	ARUN KUMAR.R	R.Arun Kumar	R.Arun Kumar	R.Arun Kumar	R.Arun Kumar
7.	14E13	AZHAGUMEENA.K	Azhagumena	Azhagumena	Azhagumena	Azhagumena
8.	14E14	BALAJI.K.S	K.S.Balaji	K.S.Balaji	K.S.Balaji	K.S.Balaji
9.	14E15	BALAJI.S	S.Balaji	S.Balaji	S.Balaji	S.Balaji
10.	14E17	BALENDRA DAGEENDRAN	Baleendra	Baleendra	Baleendra	Baleendra
11.	14E18	BARAKATH AGEESHA.M.K	Agesha	Agesha	Agesha	Agesha
12.	14E20	CHARLES.S	S.Charles	S.Charles	S.Charles	S.Charles
13.	14E21	CHINGKHEINGANBA.L	Chingke	Chingke	Chingke	Chingke
14.	14E23	DEEPIKA.K	Deepika	Deepika	Deepika	Deepika
15.	14E25	DIVYA.R	R.Divya	R.Divya	R.Divya	R.Divya
16.	14E27	ELAKYA.A	A.Elakya	A.Elakya	A.Elakya	A.Elakya
17.	14E28	ESWARAKALYANI.C	C.Kalyani	C.Kalyani	C.Kalyani	C.Kalyani
18.	14E29	GAYATHRI.S.S	S.S.Gayathri	S.S.Gayathri	S.S.Gayathri	S.S.Gayathri
19.	14E30	GEETHANJALI.K	K.Geethanjali	K.Geethanjali	K.Geethanjali	K.Geethanjali
20.	14E31	GOKUL NATH.G.R.P	P.Gokul Nath	P.Gokul Nath	P.Gokul Nath	P.Gokul Nath
21.	14E32	GOKULA KRISHNAN.B	B.Gokul	B.Gokul	B.Gokul	B.Gokul
22.	14E34	HARI HARAN.B	B.Harish	B.Harish	B.Harish	B.Harish
23.	14E35	HARIDEVAN.G	G.Haridevan	G.Haridevan	G.Haridevan	G.Haridevan
24.	14E39	JAISHRI.J	J.Jaishri	J.Jaishri	J.Jaishri	J.Jaishri
25.	14E41	JAYALAKSHMI.G	G.Jayalaxmi	G.Jayalaxmi	G.Jayalaxmi	G.Jayalaxmi
26.	14E42	JAYASREE.N	N.Jayasree	N.Jayasree	N.Jayasree	N.Jayasree
27.	14E43	JENISH SWEETLIN BRIGHT.J	J.Sweetlin	J.Sweetlin	J.Sweetlin	J.Sweetlin
28.	14E44	JESLIN KEBA.J	J.Kesava	J.Kesava	J.Kesava	J.Kesava
29.	14E45	JEYA PRAKASH .C.K	K.Prakash	K.Prakash	K.Prakash	K.Prakash

30	14E46	JEYASHEELA.P	P.Jeyel				
31	14E50	KAMESH SUBRAMANIAN.C	Kamesh	Kamesh	Kamesh	Kamesh	Kamesh
32	14E51	KANAGASELVARAMU.M	m.k.soram	m.k.soram	m.k.soram	m.k.soram	m.k.soram
33	14E52	KANDASAMY.C	c.kelof	c.kelof	c.kelof	c.kelof	c.kelof
34	14E54	KARPAGA PRIYA.V.J	Karpaga	Karpaga	Karpaga	Karpaga	Karpaga
35	14E57	KARTHICK.K	K.Karthick	K.Karthick	K.Karthick	K.Karthick	K.Karthick
36	14E58	KAVIPRIYA.B	B.Kavipriya	B.Kavipriya	B.Kavipriya	B.Kavipriya	B.Kavipriya
37	14E59	KAVIYA.K	K.Kavya	K.Kavya	K.Kavya	K.Kavya	K.Kavya
38	14E60	KAYAL VIZHI.M	M.Kayal	M.Kayal	M.Kayal	M.Kayal	M.Kayal
39	14E62	KHAGOKPAM CHALAMBA	K.Chalamba	K.Chalamba	K.Chalamba	K.Chalamba	K.Chalamba
40	14E78	NANDHINI BALU	N.Balu	N.Balu	N.Balu	N.Balu	N.Balu
41	14E126	ANANTHARAJ.S					
42	14E128	ASWINI MAI.S.B	A.Swini	A.Swini	A.Swini	A.Swini	A.Swini
43	14E131	BALAJI.N	N.Balaji	N.Balaji	N.Balaji	N.Balaji	N.Balaji
44	14E132	GOKUL NATH.V.M					
45	14E133	HARIHARAN.AxR	A.R.Hariharan	A.R.Hariharan	A.R.Hariharan	A.R.Hariharan	A.R.Hariharan
46	14E136	KRISHNA VINEHA.S.A	S.A.Krishna	S.A.Krishna	S.A.Krishna	S.A.Krishna	S.A.Krishna
47	14E137	LAKXMANAN.V	V.Lakshmanan	V.Lakshmanan	V.Lakshmanan	V.Lakshmanan	V.Lakshmanan
48	14E143	PRITHVIRAJ.P	P.Prithviraj	P.Prithviraj	P.Prithviraj	P.Prithviraj	P.Prithviraj
49	14E148	SELVAKUMAR.A	A.Selvakumar	A.Selvakumar	A.Selvakumar	A.Selvakumar	A.Selvakumar
50	14E149	SUBHASHINI.M	M.Subhashini				
51	14E150	TAMILARASAN.K					

52 14E09 ARAVINDAN . K

53 14E26 DURGA RAJ . G.

K.Karthick K.Karthick K.Karthick K.Karthick
G.Durgaji G.Durgaji G.Durgaji

B. A. S.

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