



# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

Sponsored by Lavu Educational Society, Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad.  
Kondapur (V), Ghatkesar (M), Medchal - Malkajgiri (D) - 501 301 Phone: +91 96529 10002/3



## DEPARTMENT OF BASIC SCIENCE AND HUMANITIES

VMTW/BSH/AOC/2019-20/II/03

Date: 04-02-2020

### CIRCULAR

This is to inform all the I B. Tech ECE students that, the Department is organizing an Add on course on "Design of PCB". Department advisory committee has been identified Mr.M.KARTHIKPAL, Assistant Professor in ECE Dept. for the course., He will be available 6 days to complete the course, which will take place from 10-02-2020 TO 15-02-2020. During the course you will be encouraged to interact with the speaker and the other participants through the case study discussions, hence those who are interested fill the registration form.

Copy to

The Principal, for kind information

IQAC

Notice board

I.B.Tech ECE students

Dept. file

*[Signature]*  
HOD

**Head of the Department**  
**Basic Sciences and Humanities**  
Vignans Institute of Management and Technology for Women,  
Kondapur (V), Ghatkesar (M), R R Dist-501 301.



*[Signature]*  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year: 2019-20

Date: 04-02-2020

### ADD ON COURSE SYLLABUS: Design of PCB

B.Tech I-II SEM

VENUE: BFF-8

SECTIONS: ECE-A&B

#### COURSE OBJECTIVES:

- Identifying Electronic Components Symbols & Footprints
- Constructing your Component libraries & use them effectively
- Schematic creation & interpretation
- Effective use of design rules & interfacing between schematic & PCB
- Component placement & routing techniques for various technologies

#### Module I:

Introduction to Printed circuit board: fundamental of electronic components, basic electronic circuits, Basics of printed circuit board designing: Layout planning, general rules and parameters, ground conductor considerations, thermal issues, check and inspection of artwork.

#### Module II:

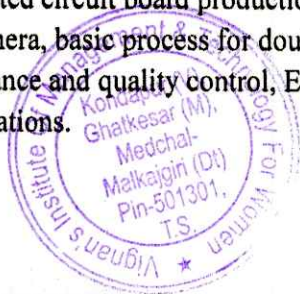
Design rules for PCB: Design rules for Digital circuit PCBs, Analog circuit PCBs, high frequency and fast pulse applications, Power electronic applications, Microwave applications, Module III Static CMOS Logic Elements

#### Module III:

Introduction to Electronic design automation(EDA) tools for PCB designing: Brief Introduction of various simulators, SPICE and PSPICE Environment, Selecting the Components Footprints as per design, Making New Footprints, Assigning Footprint to components, Net listing, PCB Layout Designing, Auto routing and manual routing. Assigning specific text (silkscreen) to design, Creating report of design, creating manufacturing data (GERBER) for design

#### Module IV

Introduction printed circuit board production techniques Photo printing, film master production, reprographic camera, basic process for double sided PCBs photo resists, Screen printing process, plating, relative performance and quality control, Etching machines, Solders alloys, fluxes, soldering techniques, Mechanical operations.



  
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**Module V**

PCB Technology Trends: Multilayer PCBs, Multiwire PCB, Flexible PCBs, Surface mount PCBs, Reflow soldering, Introduction to High-Density Interconnection (HDI) Technology.

**Text Books:**

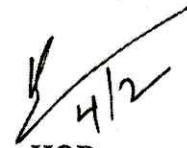
1. Printed circuit board design, fabrication assembly and testing By R. S. Khandpur, Tata McGraw Hill 2006

**Reference Books:**

1. Printed circuit Board Design and technology, Walter C. Bosshart
2. Printed Circuits Handbook, Sixth Edition, by Clyde F. Coombs, Jr, Happy T. Holden, Publisher: McGraw-Hill Education Year: 2016
3. Complete PCB Design Using OrCAD Capture and PCB Editor, Kraig Mitzner Bob Doe Alexander Akulin Anton Suponin Dirk Müller, 2nd Edition 2009.
4. Introduction to System-on-Package, Rao R Tummala & Madhavan Swaminathan, McGraw Hill, 2008.

  
**RESOURCE PERSON**

  
**COORDINATOR**

  
**HOD**

Head of the Department  
Electronics and Communication Engineering  
Vignan's Institute of Management & Technology For Women  
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Academic Year: 2019-20

Date: 04-02-2020

ADD ON COURSE NAME: Design of PCB

B.Tech I-II SEM

VENUE: BFF-8

SECTIONS: ECE-A&B

### DAY-WISE SCHEDULE

S.NO	DAY	TOPIC	TIMINGS	DURATION
1.	10-02-2020	Introduction to Printed circuit board: fundamental of electronic components, basic electronic circuits, Basics of printed circuit board designing: Layout planning, general rules and parameters, ground conductor considerations, thermal issues, check and inspection of artwork	9AM to 4 PM	6 hours
2.	11-02-2020	Design rules for PCB: Design rules for Digital circuit PCBs, Analog circuit PCBs, high frequency and fast pulse applications, Power electronic applications, Microwave applications, Module III Static CMOS Logic Elements	9AM to 4 PM	6 hours
3.	12-02-2020	Introduction to Electronic design automation (EDA) tools for PCB designing: Brief Introduction of various simulators, SPICE and PSPICE Environment, Selecting the Components Footprints as per design, Making New Footprints	9AM to 4 PM	6 hours
4.	13-02-2020	Assigning Footprint to components, Net listing, PCB Layout Designing, Auto routing and manual routing. Assigning specific text (silkscreen) to design, Creating report of design, creating manufacturing data (GERBER) for design	9AM to 4 PM	6 hours



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5.	14-02-2020	Introduction printed circuit board production techniques Photo printing, film master production, reprographic camera, basic process for double sided PCBs photo resists, Screen printing process, plating, relative performance and quality control, Etching machines, Solders alloys, fluxes, soldering techniques, Mechanical operations, fluxes, soldering techniques, Mechanical operations	9AM to 4 PM	6 hours
6.	15-02-2020	PCB Technology Trends: Multilayer PCBs. Multiwire PCB, Flexible PCBs, Surface mount PCBs, Reflow soldering, Introduction to High-Density Interconnection (HDI) Technology. Feedback Taken & Test Conducted	9AM to 4 PM	6 hours
Total 36 hours				

  
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Academic Year: 2019-20

Date: 04-02-2020

ADD ON COURSE NAME: Design of PCB

B.Tech I-II SEM

STUDENT REGISTRATION LIST

SECTION: ECE-A

S.NO	ROLL NUMBER	NAME OF THE STUDENT	SIGNATURE
1	19UP1A0401	ARKALA SNEHA REDDY	Sneha
2	19UP1A0402	BANDI RASAGNA	Rasagna
3	19UP1A0403	BASWA VIGNATHA	vignatha
4	19UP1A0404	BELLI PAVANI	Pallani
5	19UP1A0405	B V SHIVA KEERTHIKA	Keerthika
6	19UP1A0406	SAI LAKSHMI SRAVYA	Sravya
7	19UP1A0407	GAJULA ABHIGNA	abhigna
8	19UP1A0408	GADDAM LIKHITHA	Likhitha
9	19UP1A0409	GIRUGUBOTHALA SAI DEEPTHI	G. Deepthi
10	19UP1A0410	GOLLA PRIYANKA	G. Priyanka
11	19UP1A0411	GOURISHETTI SWETHA	Swetha
12	19UP1A0412	KOPPELA NISHITHA	Nishitha
13	19UP1A0413	KALAVA CHARITHA	Charitha
14	19UP1A0414	KALVA MAHATHEE REDDY	Mahathee
15	19UP1A0415	KANDE LAHARI	Lahari
16	19UP1A0416	KANDULA MEGHANA	Meghana
17	19UP1A0417	KONAKANCHI TEJASWINI	K. Tejaswini
18	19UP1A0418	KUNCHETTI PRAVALIKA	K. Pravalika
19	19UP1A0419	LINGAMPALLY ABHINAYA	L. abhinaya
20	19UP1A0420	MANNE SRAVANI	Sravani
21	19UP1A0421	NAKKA LAVANYA	N. Lavanya
22	19UP1A0422	NEELAM MOHANA PRIYA	Mpriya
23	19UP1A0423	PUSHADAPU LAVANYA	Lavanya
24	19UP1A0424	PALLE PAVANI	Pavani
25	19UP1A0425	PARIMI PRASANNA LAXMI	Laxmi
26	19UP1A0426	P SINDHU	Sindhu
27	19UP1A0427	RAJPUTH MAHESHWARI SINGH	Mareshigh
28	19UP1A0428	ROWTHU PALLAVI	Pallavi
29	19UP1A0429	SYED TABASSUM	Tabassum
30	19UP1A0430	SAKSHI JAYASREE BHAVANI	Bhavani
31	19UP1A0431	SANGOJU SATHWIK	Sathwika
32	19UP1A0432	SEETHAMMAGARI ANITHA	Anitha
33	19UP1A0433	SIVVA AKSHAYA	Akshaya

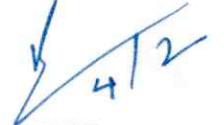


  
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34	19UP1A0434	LAKSHMI YESASWINI	Vashif
35	19UP1A0435	SUGGUNA LIKHITA	Likhita
36	19UP1A0436	TANKALA HARIKA	Harika.
37	19UP1A0437	THOOMU SREYA REDDY	Sreya
38	19UP1A0438	UPPULA SHUVALEELA	Auf.
39	19UP1A0439	VANAM ASHVITHA REDDY	Ashvitha
40	19UP1A0440	VANKUDOTH SANGITHA	Sangitha
41	19UP1A0441	V LAXMI VASUNDHARA	Vasu
42	19UP1A0442	GAYATHRI MANASA	-

  
COORDINATOR

  
HOD

Head of the Department  
Electronics and Communication Engineering  
Vignan's Institute of Management & Technology For Women  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year: 2019-20

Date: 04-02-2020

ADD ON COURSE NAME: Design of PCB

B.Tech I-II SEM

STUDENT REGISTRATION LIST

SECTION: ECE-B

S.NO	ROLL NUMBER	NAME OF THE STUDENT	SIGNATURE
1	19UP1A0443	ANNU PRAGATHI	Pragathi
2	19UP1A0444	ANUMUJU KAVYA	Kavya
3	19UP1A0445	BACHANENI SHANMUKHI	shanmukhi
4	19UP1A0446	BANALA SNITHIKA	Snithika
5	19UP1A0447	SIVA NAGA SAI SARANYA	saranya
6	19UP1A0448	BOGALA ANUSHA	Anu
7	19UP1A0449	BOKKA HARSHITHA	B.Harshitha
8	19UP1A0450	BOKKA VARSHITHA	
9	19UP1A0451	BOLLEPALLY JASHANVI	B. Jashanvi
10	19UP1A0452	CHIMATA MADHAVI	Madhavi
11	19UP1A0453	DASI VENKATA SAHITHAYA	Sahithaya
12	19UP1A0454	DUGYALA VAISHNAVI	D. vaishnavi
13	19UP1A0455	G.SHIRISHA	G. shirisha
14	19UP1A0456	GABALE NISHITHA	G. Nishitha
15	19UP1A0457	HARSHA VARDHINI	H. Vardhini
16	19UP1A0458	GUMAMALA SNEHA REDDY	G. Sneha
17	19UP1A0459	HALDODDI DIVYA	H. Divya
18	19UP1A0460	JANJIRALA ANUSHA	J. Anusha
19	19UP1A0461	KARKURI SOWMYA	Sowmya
20	19UP1A0462	KALYANAM MOUNIKA	Mounika
21	19UP1A0463	KOMMINENI JASMITHA	Jasmita
22	19UP1A0464	KONDERU SRAVYA	Sravya
23	19UP1A0465	PRASANNA LAXMI REDDY	Laxmi
24	19UP1A0466	GADDAM LIKHITHA	Likhitha
25	19UP1A0467	LIMBURE SANTHOSHI	Santhoshi
26	19UP1A0468	YOGITHA REDDY	Yogitha
27	19UP1A0469	MARVALA DEEPIKA	Deepika
28	19UP1A0470	MEDA BHUVANESWARI	Bhuvanewari
29	19UP1A0471	PADAKULA UMA	Uma
30	19UP1A0472	RAMIDI DEEKSHITHA	Deekshi
31	19UP1A0473	RAVULA HIRANMAI	Hiranmai
32	19UP1A0474	SHANIGALA CHANDANA	chandana
33	19UP1A0475	SIRI CHANDANA REDDY	chandana



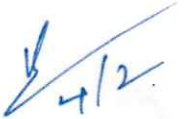
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34	19UP1A0476	SUROJU SRIVAISHNAVI	Vaishnavi
35	19UP1A0477	TELUKUNTLA SREYA REDDY	Sya
36	19UP1A0478	THAMATAM AKSHITHA	Akshitha
37	19UP1A0479	TURPU SHRAVANI	Shravani
38	19UP1A0480	VANGETI BANNY	Banny
39	19UP1A0481	VENNAMANENI ANOUSHIKA	Ano
40	19UP1A0482	YEDULLA NAGALAXMI	Nagalaxmi

  
COORDINATOR

  
HOD

Head of the Department  
Electronics and Communication Engineering  
Vignan's Institute of Management & Technology For Women  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year: 2019-20

Date: 10-02-2020

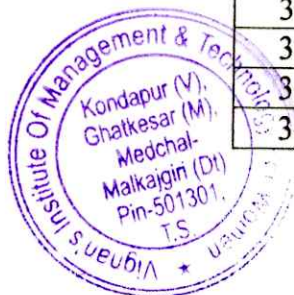
ADD ON COURSE NAME: Design of PCB

B.Tech I-II SEM

STUDENT REGISTRATION LIST

SECTION: ECE-A

S.NO	ROLL NUMBER	NAME OF THE STUDENT
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33	19UP1A0433	SIVVA AKSHAYA
34	19UP1A0434	LAKSHMI YESASWINI




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8	19UP1A0451	BOLLEPALLY JASHANVI
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13	19UP1A0456	GABALE NISHITHA
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30	19UP1A0473	RAVULA HIRANMAI
31	19UP1A0474	SHANIGALA CHANDANA
32	19UP1A0475	SIRI CHANDANA REDDY
33	19UP1A0476	SUROJU SRIVAISHNAVI
34	19UP1A0477	TELUKUNTLA SREYA REDDY



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35	19UP1A0478	THAMATAM AKSHITHA
36	19UP1A0479	TURPU SHRAVANI
37	19UP1A0480	VANGETI BANNY
38	19UP1A0481	VENNAMANENI ANOUSHIKA
39	19UP1A0482	YEDULLA NAGALAXMI

  
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