

**VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM**  
**(AUTONOMOUS)**

Ref.No. VIT/AS/ACD/ /2021

Date:20-11-2021

**ACADEMIC CALENDAR FOR I B.TECH -I & II SEMESTER**

The Academic Calendar for I B.Tech -I & II Semester for the Academic Year 2021-22.

<b>I B.Tech I Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
<b>Commencement of Class Work</b>	<b>22-11-2021</b>		
Induction Classes	22-11-2021	27-11-2021	1W
I Unit of Instructions	29-11-2021	15-01-2022	7W
I Mid Examinations	17-01-2022	22-01-2022	1W
II Unit of Instructions	24-01-2022	12-03-2022	7W
II Mid Examination	14-03-2022	19-03-2022	1W
Preparation & Practical Examinations	21-03-2022	26-03-2022	1W
<b>End Examinations</b>	<b>28-03-2022</b>	<b>09-04-2022</b>	<b>2W</b>
<b>Commencement of Class Work</b>	<b>11-04-2022</b>		
<b>I B.Tech II Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
I Unit of Instructions	11-04-2022	28-05-2022	7W
I Mid Examinations	30-05-2022	04-06-2022	1W
II Unit of Instructions	06-06-2022	23-07-2022	7W
II Mid Examination	25-07-2022	30-07-2022	1W
Preparation & Practical Examinations	01-08-2022	06-08-2022	1W
<b>End Examinations</b>	<b>08-08-2022</b>	<b>20-08-2022</b>	<b>2W</b>
<b>Commencement of II B.Tech I Semester Class work</b>	<b>22-08-2022</b>		
<i>Note: Calendar is prepared with 8hrs/day 7 weeks per instruction period</i>			

  
**DEAN EVALUATION**  
Dean Evaluation

Vishnu Institute of Technology (Autonomous)  
Vishnupur, BHIMAVARAM-534 202,

To : All Notice Boards

: All HODs with a request to follow the above schedules and also inform to all the staff

Copy to : Director (Admin), SVES for favour of information

” : Principal Office, VIT

” : Controller of Examinations, VIT

” : I B.Tech In Charge, VIT

” : Warden, Canteen I/C & Security officer-SVES

  
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Vishnupur, Bhimavaram-534202

**VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM**  
**(AUTONOMOUS)**

Ref.No. VIT/AS/ACD/ /2021

Date:22-02-2022

**REVISED ACADEMIC CALENDAR FOR I B.TECH -I & II SEMESTER**

The Revised Academic Calendar for I B.Tech -I & II Semester for the Academic Year 2021-22.

<b>I B.Tech I Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
<b>Commencement of Class Work</b>	<b>22-11-2021</b>		
Induction Classes	22-11-2021	27-11-2021	1W
I Unit of Instructions	29-11-2021	22-01-2022	8W
II Unit of Instructions	24-01-2022	26-02-2022	5W
I Mid Examinations	28-02-2022	05-03-2022	1W
II Unit of Instructions Continue	07-03-2022	26-03-2022	3W
II Mid Examination	28-03-2022	02-04-2022	1W
Preparation & Practical Examinations	04-04-2022	09-04-2022	1W
<b>End Examinations</b>	<b>11-04-2022</b>	<b>23-04-2022</b>	<b>2W</b>
<b>Commencement of I B.Tech II Semester Class Work</b>	<b>25-04-2022</b>		
<b>I B.Tech II Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
I Unit of Instructions	25-04-2022	11-06-2022	7W
I Mid Examinations	13-06-2022	18-06-2022	1W
II Unit of Instructions	20-06-2022	06-08-2022	7W
II Mid Examination	08-08-2022	13-08-2022	1W
Preparation & Practical Examinations	15-08-2022	20-08-2022	1W
<b>End Examinations</b>	<b>22-08-2022</b>	<b>03-09-2022</b>	<b>2W</b>
<b>Commencement of II B.Tech I Semester Class work</b>	<b>05-09-2022</b>		

  
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# VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM

(AUTONOMOUS)

Ref.No. VIT/AS/ACD/ /2021

Date:23-10-2021

## ACADEMIC CALENDAR FOR II B.TECH -I & II SEMESTER

The Academic Calendar for II B.Tech -I & II Semester for the Academic Year 2021-22.

II B.Tech I Semester (2020 Admitted Batch)			
Description	From	To	Duration (Weeks)
Commencement of Class Work	25-10-2021		
I Unit of Instructions	25-10-2021	11-12-2021	7W
I Mid Examinations	13-12-2021	18-12-2021	1W
II Unit of Instructions	20-12-2021	05-02-2022	7W
II Mid Examination	07-02-2022	12-02-2022	1W
Preparation & Practical Examinations	14-02-2022	19-02-2022	1W
End Examinations	21-02-2022	05-03-2022	2W
Commencement of Class Work	07-03-2022		
II B.Tech II Semester (2020 Admitted Batch)			
Description	From	To	Duration (Weeks)
I Unit of Instructions	07-03-2022	23-04-2022	7W
I Mid Examinations	25-04-2022	30-04-2022	1W
II Unit of Instructions	02-05-2022	18-06-2022	7W
II Mid Examination	20-06-2022	25-06-2022	1W
Preparation & Practical Examinations	27-06-2022	02-07-2022	1W
End Examinations	04-07-2022	16-07-2022	2W
Commencement of III B.Tech I Semester Class work	18-07-2022		

Note: Calendar is prepared with 8hrs/day 7 weeks per instruction period

  
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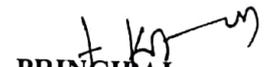
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Vishnupur, Bhimavaram-534202

# VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM

(AUTONOMOUS)

Ref.No. VIT/AS/ACD/ /2022

Date:21-03-2022

## REVISED ACADEMIC CALENDAR FOR II B.TECH -I & II SEMESTER

The Revised Academic Calendar for II B.Tech -I & II Semester for the Academic Year 2021-22.

II B.Tech I Semester (2020 Admitted Batch)			
Description	From	To	Duration (Weeks)
Commencement of Class Work	25-10-2021		
I Unit of Instructions	25-10-2021	18-12-2021	8W
I Mid Examinations	20-12-2021	25-12-2021	1W
II Unit of Instructions	27-12-2021	19-02-2022	8W
II Mid Examination	21-02-2022	26-02-2022	1W
Preparation & Practical Examinations	28-02-2022	05-03-2022	1W
End Examinations	07-03-2022	19-03-2022	2W
Commencement of Class Work	21-03-2022		
II B.Tech II Semester (2020 Admitted Batch)			
Description	From	To	Duration (Weeks)
I Unit of Instructions	21-03-2022	07-05-2022	7W
I Mid Examinations	09-05-2022	14-05-2022	1W
II Unit of Instructions	16-05-2022	02-07-2022	7W
II Mid Examination	04-07-2022	09-07-2022	1W
Preparation & Practical Examinations	11-07-2022	16-07-2022	1W
End Examinations	18-07-2022	30-07-2022	2W
Commencement of III B.Tech I Semester Class work	01-08-2022		

*Note:Calendar is prepared with 8hrs/day 7 weeks per instruction period*

  
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**VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM****(AUTONOMOUS)**

Ref.No. VIT/AS/ACD/ /2021

Date:30-09-2021

**ACADEMIC CALENDAR FOR III B.TECH -I & II SEMESTER**

The Academic Calendar for III B.Tech -I &amp; II Semester for the Academic Year 2021-22.

<b>III B.Tech I Semester (2019 Admitted Batch)</b>			
<b>Description</b>	<b>From</b>	<b>To</b>	<b>Duration (Weeks)</b>
<b>Commencement of Class Work</b>	<b>01-10-2021</b>		
I Unit of Instructions	01-10-2021	20-11-2021	7W
I Mid Examinations	22-11-2021	27-11-2021	1W
II Unit of Instructions	29-11-2021	15-01-2022	7W
II Mid Examination	17-01-2021	22-01-2022	1W
Preparation & Practical Examinations	24-01-2022	29-01-2022	1W
<b>End Examinations</b>	<b>31-01-2022</b>	<b>12-02-2022</b>	<b>2W</b>
<b>Commencement of Class Work</b>	<b>14-02-2022</b>		
<b>III B.Tech II Semester (2019 Admitted Batch)</b>			
<b>Description</b>	<b>From</b>	<b>To</b>	<b>Duration (Weeks)</b>
I Unit of Instructions	14-02-2022	02-04-2022	7W
I Mid Examinations	04-04-2022	09-04-2022	1W
II Unit of Instructions	11-04-2022	28-05-2022	7W
II Mid Examination	30-05-2022	04-06-2022	1W
Preparation & Practical Examinations	06-06-2022	11-06-2022	1W
<b>End Examinations</b>	<b>13-06-2022</b>	<b>25-06-2022</b>	<b>2W</b>
<b>Commencement of Next year Class work</b>	<b>27-06-2022</b>		
<i>Note: Calendar is prepared with 8hrs/day 7 weeks per instruction period</i>			

  
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Vishnupur, Bhimavaram-534202

# VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM

(AUTONOMOUS)

Ref.No. VIT/AS/ACD/ /2022

Date:26-02-2022

## REVISED ACADEMIC CALENDAR FOR III B.TECH -I & II SEMESTER

The Revised Academic Calendar for III B.Tech -I & II Semester for the Academic Year 2021-22.

III B.Tech I Semester (2019 Admitted Batch)			
Description	From	To	Duration (Weeks)
Commencement of Class Work	01-10-2021		
I Unit of Instructions	01-10-2021	27-11-2021	8W
I Mid Examinations	29-11-2021	04-12-2021	1W
II Unit of Instructions	06-12-2021	29-01-2022	8W
II Mid Examination	31-01-2021	05-02-2022	1W
Preparation & Practical Examinations	07-02-2022	12-02-2022	1W
End Examinations	14-02-2022	26-02-2022	2W
Commencement of Class Work	28-02-2022		
III B.Tech II Semester (2019 Admitted Batch)			
Description	From	To	Duration (Weeks)
I Unit of Instructions	28-02-2022	02-04-2022	8W
I Mid Examinations	25-04-2022	30-04-2022	1W
II Unit of Instructions	01-05-2022	25-06-2022	8W
II Mid Examination	27-06-2022	02-07-2022	1W
Preparation & Practical Examinations	04-07-2022	09-07-2022	1W
End Examinations	11-07-2022	23-07-2022	2W
Commencement of Next year Class work	25-07-2022		

  
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Website: www.jntuk.edu.in  
Email: dap@jntuk.edu.in



Phone: 0884-2300991

**Directorate of Academic Planning**  
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA  
KAKINADA-533003, Andhra Pradesh, INDIA  
(Established by AP Government Act No. 30 of 2008)

Lr. No. DAP/RAC/ II,III & IV Year /B. Tech/B. Pharmacy/2021

Date 08.10.2021

**Dr. R. Srinivasa Rao,**  
**Director, Academic Planning**  
**JNTUK, Kakinada**

To  
All the Principals of Affiliated Colleges,  
JNTUK, Kakinada.

**Revised Academic Calendar for II, III, IV Year - B. Tech/B. Pharmacy for the AY 2021-22**  
(As per G.O. Rt. No. 242, Higher Education (U.E) Dept., dated 13.09.2021)

I SEMESTER			
Description	From	To	Weeks
<b>Commencement of Class Work</b>	<b>01.10.2021</b>		
I Unit of Instruction	01.10.2021	20.11.2021	7W
I Mid Examinations	22.11.2021	27.11.2021	1W
II Unit of Instructions	29.11.2021	15.01.2022	7W
II Mid Examinations	17.01.2022	22.01.2022	1W
Preparation & Practicals	24.01.2022	29.01.2022	1W
End Examinations	31.01.2022	12.02.2022	2W
Commencement of II Semester Class Work	<b>14.02.2022</b>		
II SEMESTER			
I Unit of Instructions	<b>14.02.2022</b>	02.04.2022	7W
I Mid Examinations	04.04.2022	09.04.2022	1W
II Unit of Instructions	11.04.2022	28.05.2022	7W
II Mid Examinations	30.05.2022	04.06.2022	1W
Preparation & Practicals	06.06.2022	11.06.2022	1W
End Examinations	13.06.2022	25.06.2022	2W
Commencement of next Year Class Work			
<i>Note: Calendar is prepared with 8 hrs/day hence 7 weeks per instruction period</i>			

*R. Srinivasa Rao*  
**Director Academic Planning**  
**Director**  
**Academic Planning**  
**JNTUK Kakinada**

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK  
Copy to Rector, Registrar, JNTUK  
Copy to Director Academic Audit, JNTUK  
Copy to Director of Evaluation, JNTUK

**VISHNU INSTITUTE OF TECHNOLOGY::BHIMAVARAM**  
**(AUTONOMOUS)**

Ref.No. VIT/AS/ACD/ /2022

Date: 10-01-2022

**ACADEMIC CALENDAR FOR M.TECH -I & II SEMESTER**

The Academic Calendar for M.TECH -I & II Semester for the Academic Year 2021-22.

<b>M.TECH I Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
<b>Commencement of Class Work</b>	<b>17-01-2022</b>		
I Unit of Instructions	17-01-2022	05-03-2022	7W
I Mid Examinations	07-03-2022	12-03-2022	1W
II Unit of Instructions	14-03-2022	30-04-2022	7W
II Mid Examination	02-05-2022	07-05-2022	1W
Preparation & Practical Examinations	09-05-2022	14-05-2022	1W
<b>End Examinations</b>	<b>16-05-2022</b>	<b>28-05-2022</b>	<b>2W</b>
<b>Commencement of II Semester Class Work</b>	<b>30-05-2022</b>		
<b>M.TECH II Semester (2021 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
I Unit of Instructions	30-05-2022	16-07-2022	7W
I Mid Examinations	18-07-2022	23-07-2022	1W
II Unit of Instructions	25-07-2022	10-09-2022	7W
II Mid Examination	12-09-2022	17-09-2022	1W
Preparation & Practical Examinations	19-09-2022	24-09-2022	1W
<b>End Examinations</b>	<b>26-09-2022</b>	<b>08-10-2022</b>	<b>2W</b>
<b>Commencement of M.TECH III Semester Class work</b>	<b>10-10-2022</b>		

  
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Vishnupur, Bhimavaram-534202

**VISHNU INSTITUTE OF TECHNOLOGY::BHIMAVARAM**  
(AUTONOMOUS)

Date: 16-10-2021

Ref.No. VIT/AS/ACD/ /2021

**ACADEMIC CALENDAR FOR II M.TECH -I & II SEMESTER**

The Academic Calendar for II M.TECH -I & II Semester for the Academic Year 2021-22.

<b>II M.TECH I Semester (2020 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
Commencement of Class Work & Commencement of Project Work Phase-1	18-10-2021		
I Unit of Instructions	18-10-2021	04-12-2021	7W
I Mid Examinations	06-12-2021	11-12-2021	1W
Unit of Instructions	13-12-2021	29-01-2022	7W
II Mid Examination	31-01-2022	05-02-2022	1W
Preparation & Practical Examinations	07-02-2022	12-02-2022	1W
End Examinations	14-02-2022	26-02-2022	2W
Commencement of II Semester Class Work	28-02-2022		
<b>II M.TECH II Semester (2020 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
Project Work Phase-II	28-02-2022	04-06-2022	14W
Theses Submission Duration	06-06-2022	02-07-2022	4W
<i>Note: Calendar is prepared with 8hrs/day hence 7 weeks per instruction period</i>			

  
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**(AUTONOMOUS)**

Ref.No. VIT/AS/ACD/ /2021

Date: 16-10-2021

**ACADEMIC CALENDAR FOR MBA -III & IV SEMESTER**

The Academic Calendar for MBA –III & IV Semester for the Academic Year 2021-22.

<b>MBA III Semester (2020 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
<b>Commencement of Class Work</b>	<b>18-10-2021</b>		
I Unit of Instructions	18-10-2021	04-12-2021	7W
I Mid Examinations	06-12-2021	11-12-2021	1W
II Unit of Instructions	13-12-2021	29-01-2022	7W
II Mid Examination	31-01-2022	05-02-2022	1W
Preparation & Practical Examinations	07-02-2022	12-02-2022	1W
<b>End Examinations</b>	<b>14-02-2022</b>	<b>26-02-2022</b>	<b>2W</b>
<b>Commencement of II Semester Class Work</b>	<b>07-03-2022</b>		
<b>MBA IV Semester (2020 Admitted Batch)</b>			
Description	From	To	Duration (Weeks)
I Unit of Instructions	07-03-2022	23-04-2022	7W
I Mid Examinations	25-04-2022	30-04-2022	1W
II Unit of Instructions	02-05-2022	18-06-2022	7W
II Mid Examination	20-06-2022	25-06-2022	1W
Preparation & Practical Examinations	27-06-2022	02-07-2022	1W
<b>End Examinations</b>	<b>04-07-2022</b>	<b>16-07-2022</b>	<b>2W</b>
<b>Project Viva</b>	<b>18-07-2022</b>	<b>30-07-2022</b>	<b>2W</b>

*Note: Calendar is prepared with 8hrs/day hence 7 weeks per instruction period*

  
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**VISHNU INSTITUTE OF TECHNOLOGY: BHIMAVARAM**  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**LESSON PLAN**

**Faculty Name: I.V.V.VIJETHA**  
**Designation: Asst. Prof**  
**Regulation: R20**  
**Subject: Electrical Machines-I**

**Subject Code: 20EE3T03**  
**Branch: EEE**  
**Year/Sem: II-I**  
**Section: EEE**

S. No	No. of Hours	Date	Topic	Reference Book-Page No.	COs
<b>UNIT-I Electromechanical Energy Conversion and Introduction to DC Generator</b>					
1	2	25.10.21 26.10.21	Principles of electromechanical energy conversion	T1-161	<b>CO1</b>
2	2	27.10.21	Singly excited and multi excited system	T1- 164&192	
3	1	28.10.21 29.10.21	Calculation of force and torque using the concept of co-energy.	R6-95&105	
4	2	30.10.21 01.11.21	Construction and principle of operation of DC machine	R6-162	
5	4	02.11.21 03.11.21 05.11.21 06.11.21	EMF equation for generator, Classification of DC machines based on excitation	R6-193,227	
6	1	08.11.21	OCC of DC shunt generator.	R6-236	
7	2	09.11.21 10.11.21	Internal and External characteristics of DC shunt generator.	R6-239	
8	1	11.11.21	Tutorial	T1-161	
<b>No. of Hours Required: 15</b>					
<b>Unit-II: DC Motors</b>					
9	2	12.11.21 13.11.21	Principle of operation –Types	R6-306	<b>CO2</b>
10	2	15.11.21 16.11.21	Torque equation and back-emf of dc motors	R6-310	
11	2	17.11.21 18.11.21	Characteristics of separately-excited, shunt motors	T1-429	
12	1	19.11.21	Characteristics of series and compound motors	T1-431	
13	2	20.11.21 22.11.21	Necessity of starter – Starting by 3 point and 4 point starters	R6-374	
14	3	23.11.21 24.11.21 25.11.21	Speed control by armature voltage and field control	R6-345	
15	2	26.11.21 27.11.21	Losses and efficiency of D.C. Machines	T1-490	
16	1	29.11.21	Applications of dc motors.	T1-521	
17	1	30.11.21	Tutorial		
<b>No. of Hours Required: 16</b>					
<b>UNIT-III: Testing of D.C. Machines &amp; Single Phase Transformers</b>					
<b>Testing of D.C. Machines</b>					
18	2	01.12.21 02.12.21	Testing of DC machines - brake test	R6-421	
19	3	03.12.21 04.12.21 06.12.21	Swinburne's method – principle of regenerative or Hopkinson's method	R6-422	

20	3	07.12.21 08.12.21 09.12.21	Retardation test -- separation of losses.	R6-432	<b>CO3</b>	
21	2	10.12.21 11.12.21	Problems	R6-448		
22	1	20.12.21	Tutorial			
<b>Single-phase Transformers</b>						
23	3	21.12.21 22.12.21 23.12.21	Types and constructional details - principle of operation - emf equation	T1-2 & R6-part-iii-3		
24	3	24.12.21 27.12.21 28.12.21	Operation on no load and on load	T1-10		
25	2	29.12.21 30.12.21	Lagging, leading and unity power factors loads	R6-part-iii-17		
26	3	31.12.21 03.01.22 04.01.22	Phasor diagrams of transformers – equivalent circuit	R6-part-iii-17		
27	1	05.01.22	Tutorial			
<b>No. of Hours Required: 23</b>						
<b>UNIT – IV: Testing of Single-phase Transformers</b>						
28	2	06.01.22 07.01.22	Tests on single phase transformers – open circuit and short circuit tests	T1-66	<b>CO4</b>	
29	2	08.01.22 10.01.22	Regulation – losses and efficiency	T1-40 & 49		
30	2	11.01.22 12.01.22	Sumpner’s test – separation of losses	R6-part-iii-40		
31	1	20.01.22	Problems	R6-part-iii-41		
32	2	21.01.22 22.01.22	Parallel operation with equal voltage ratios	T1-84		
33	1	24.01.22	Problems	T1-91		
34	1	25.01.22	All day efficiency.	R6-part-iii-60		
35	1	27.01.22	Auto transformer (Qualitative treatment only).	T1-70 & R6-part-iii-42		
36	1	28.01.22	Problems	R6-part-iii-43		
37	1	29.01.22	Tutorial			
<b>No. of Hours Required: 14</b>						
<b>UNIT – V: 3-Phase Transformers</b>						
38	1	31.01.22	Poly phase connections - Y/Y, Y/ $\Delta$ , $\Delta$ /Y, $\Delta$ / $\Delta$ and open $\Delta$	R6-part-iii-94	<b>CO5</b>	
39	1	01.02.22	Third harmonics in phase voltages	R6-part-iii-114		
40	1	02.02.22	Three winding transformers: determination of $Z_p$ , $Z_s$ and $Z_t$	R6-part-iii-118		
41	1	03.02.22	Off load and On load tap changers	R6-part-iii-153		
42	1	04.02.22	Scott connection.	R6-part-iii-109		
43	1	05.02.22	Tutorial	R6-part-iii-94		
<b>No. of Hours Required: 6</b>						
<b>Total No. of Hours Required: 74</b>						

**Text Books:**

- T1. Electric Machines by P.S. Bhimbhra, Khanna Publishers, 2<sup>nd</sup> Edition, 2017.  
T2. Electric Machinery by A.E. Fitzgerald, Charles Kingsley, Stephen D. Umans, McGraw Hill Education, 6<sup>th</sup> Edition, 24<sup>th</sup> Reprint 2012.  
T3. The Performance and Design of Alternating Current Machines by M. G. Say, CBS Publishers, 3<sup>rd</sup> Edition, 2002.

**Reference Books:**

- R1. Theory & Performance of Electrical Machines by J.B. Gupta, S.K. Kataria & Sons, Reprint 2013 Edition.  
R2. Electrical Machines by S.K. Bhattacharya, McGraw Hill Education, 4<sup>th</sup> Edition 2017  
R3. Electric Machines by I.J. Nagrath & D.P. Kothari, McGraw Hill Education, 5<sup>th</sup> Edition 2017.

**OUTCOMES:****COURSE OUTCOMES:**

After completion of this course the students are

- Able to explain the principles of electromechanical energy conversion and operation of DC generators.
- Able to analyze the operating characteristics and performance of DC motors.
- Able to describe the methods of testing methods of DC motors and principle of transformers.
- Able to analyze the performance and methods of testing of single phase transformers.
- Able to understand the three phase transformers and analyze the three phase to two phase conversion.



**Vishnu Institute of Technology: Autonomous**  
**Department of Computer Science and Engineering**

**Course Title: Computer Networks**  
**Faculty : Mr.S.M.Hussain**

**Academic Year: 2021-22**  
**Year/Sem : III/II(R19)**

**LESSON PLAN**

S No.	Date	No of Classes	Topic	Page No	REMARKS
<b>UNIT -1: Introduction</b>					
1	28/02/22	1	Introduction	3	T1
2	02/03/22 03/03/22	2	Network Topologies	-	W1,
3	04/03/22	1	WAN, LAN, MAN	17	W2, T1
4	05/03/22 07/03/22	2	Reference models- The OSI Reference Model	41	T1
5	08/03/22	1	the TCP/IP Reference Model,	45	T1
6	09/03/22 10/03/22	2	A Comparison of the OSI and TCP/IP Reference Models	49	T1
<b>Total no. Of classes :</b>		09			
<b>UNIT – II: Physical Layer</b>					
7	11/03/22	1	Physical Layer	90	T1
8	12/03/22 14/03/22	2	Guided Transmission Media	95	T1
9	15/03/22 16/03/22	2	Digital Modulation and Multiplexing	125	T1
10	17/03/22	1	Frequency Division Multiplexing	132	T1
11	19/03/22	1	Time Division Multiplexing, Code Division Multiplexing	135	T1
12	21/03/22 22/03/22	2	Wave Length Division Multiplexing.	-	W1
<b>Total no. of classes</b>		09			
<b>UNIT – III: The Data Link Layer</b>					
13	23/03/22	1	The Data Link Layer	193	T1
			Services Provided to the Network Layer	194	
14	24/03/22	1	Framing	197	T1
15	25/03/22	1	Error Control,	200	T1
			Flow Control	201	

			Error Detection and Correction(Introduction)	202	
16	26/03/22 28/03/22	2	Error-Correcting Codes	204	T1
			Error Detecting Codes	209	
17	29/03/22	1	Elementary Data Link Protocols	215	T1
			A Utopian Simplex Protocol	220	
18	30/03/22 31/03/22	2	A Simplex Stop and Wait Protocol for an Error free channel	221	T1
			A Simplex Stop and Wait Protocol for a Noisy Channel	222	
19	04/04/22 06/04/22	2	Sliding Window Protocols	226	T1
			A One Bit Sliding Window Protocol	229	
20	07/04/22 08/04/22	2	A Protocol Using Go-Back-N	232	T1
			A Protocol Using Selective Repeat	239	
<b>Total no. of classes</b>		12			
Revision Classes, Tests , Tutorials, Seminars (09/04/22 to 23/04/22)					
<b>I-MID Examinations (25-04-2022 to 30-04-2022)</b>					
<b>UNIT – IV: The Medium Access Control Sublayer</b>					
21	04/05/22 06/05/22	2	The Medium Access Control Sublayer, The Channel Allocation Problem-Static Channel Allocation	258	T1
22	07/05/22	1	Assumptions for Dynamic Channel Allocation	260	T1
23	09/05/22 10/05/22	2	Multiple Access Protocols	261	T1
			Aloha	262	
			Carrier Sense Multiple Access Protocols	266	
24	11/05/22 12/05/22	2	Collision-Free Protocols	269	T1
			Limited Contention Protocols	274	
25	13/05/22	1	Wireless LAN Protocols	277	T1
26	14/05/22	1	Ethernet	280	T1
			Classic Ethernet Physical Layer	281	
			Classic Ethernet MAC Sublayer Protocol	282	
27	16/05/22	1	Ethernet Performance	280	T1
			Fast Ethernet	290	

			Gigabit Ethernet	293	
			10-Gigabit Ethernet	296	
			Retrospective on Ethernet	298	
28	17/05/22 18/05/22 19/05/22	3	Wireless Lans	299	T1
<b>Total no. of classes:</b>		13			
<b>UNIT – V: Design Issues-The Network Layer Design Issues</b>					
29	20/05/22	1	Design Issues - The Network Layer Design Issues	355	T1
30	21/05/22	1	Store and Forward Packet Switching	356	T1
			Implementation of Connectionless Service	358	
31	23/05/22	1	Implementation of Connection Oriented Service	359	T1
32	24/05/22	1	Comparison of Virtual Circuit and Datagram Networks	361	T1
33	25/05/22	1	Routing Algorithms	362	T1
			The Optimality principle	364	
34	26/05/22 27/05/22	2	Shortest path Algorithm	366	T1
			Congestion Control Algorithms	392	
35	28/05/22	1	Approaches to Congestion Control	394	T1
			Traffic Aware Routing	395	
36	30/05/22	1	Admission Control	397	T1
			Traffic Throttling	398	
			Load Shedding	401	
<b>Total no. of classes</b>		09			
<b>UNIT – VI: Transport Layer</b>					
37	31/05/22	1	Transport Layer	495	T1
38	01/06/22	1	The Internet Transport Protocols: TCP	552	T1
39	02/06/22	1	UDP	541	T1

40	03/06/22	1	Application Layer	611	T1
41	04/06/22 06/06/22	2	The Domain Name System: The DNS Name Space	612	T1
42	07/06/22 08/06/22	2	Resource Records, Name Servers	616	T1
43	09/06/22	1	Electronic Mail:	623	T1
			Architecture and Services	624	
44	10/06/22	1	The User Agent	626	T1
			Message Formats	630	
45	11/06/22 13/06/22	2	Message Transfer	637	T1
			Final Delivery	643	
<b>Total no. of classes</b>		12			
Revision Classes, Tests , Tutorials, Seminars (14/06/22 to 25/06/22)					
<b>II-MID Examinations (27-06-22 to 02-07-22)</b>					
<b>Preparations &amp; Practical's (04-07-22 to 09-07-22)</b>					
<b>End Examinations (11.07.2022 to 23.07.2022)</b>					

#### TEXT BOOKS:

1. Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010
2. Computer Networks: A Top Down Approach, Behrouz A. Forouzan, Firouz Mosharraf, McGraw Hill Education

#### REFERENCE BOOKS:

1. Larry L. Peterson and Bruce S. Davie, "Computer Networks - A Systems Approach" (5th ed), Morgan Kaufmann/ Elsevier, 2011

#### Web Links:

1. <https://nptel.ac.in/courses/106105081/>
2. <https://nptel.ac.in/courses/106/105/106105080/>

  
Signature of the Faculty

  
Signature of the HOD  
Head of the Department  
Computer Science Engineering  
Vishnu Institute of Technology  
Visnupur, BHIMAVARAM-534 202



# VISHNU INSTITUTE OF TECHNOLOGY

VISHNUPUR: BHIMAVARAM

## LESSON PLAN

**VISHNU**  
UNIVERSAL LEARNING

### DESIGN & DRAWING OF REINFORCED CONCRETE STRUCTURES

<b>Name of the Faculty :</b> B.MARY DEVIKA	<b>Academic Year :</b> 2021-2022
<b>Designation :</b> Assistant Professor	<b>Branch :</b> Civil
<b>Department :</b> Civil	<b>Year &amp; Sem :</b> III Year, I sem
<b>Subject :</b> Design and Drawing of Reinforced concrete Structures	

**Catalog Description:**

*The course aims to familiarize students with different types of design philosophies and required IS codes. Equip students with concepts of design of flexural members. Understand design concepts of shear bond and torsion. Familiarize students with different types of compression members and design. understand different type of footings and their design*

REGULATION : R19

S.NO	DATE	Name of the Topic	No. of Classes	Text / Ref / Other Books with Page Numbers
<b>UNIT-I:: INTRODUCTION AND LIMIT STATE</b>				
1	01-10-2021	<b>Introduction:</b> Working stress method Design codes and handbooks	2	
2	04-10-2021	Loading standards – Dead, live, wind and earthquake load	1	TB-1
3	06-10-2021	Elastic theory, design constants, modular ratio, neutral axis depth and moment of resistance	1	TB26
4	07-10-2021	Balanced, under-reinforced and over-reinforced sections	2	TB-38
5	08-10-2021	Working stress method of design of singly and doubly reinforced beams.	2	TB-100
6	09-10-2021	<b>Limit State Design:</b> Concepts of limit state design	1	
7	11-10-2021	Basic statistical principles – Characteristic loads	1	TB-78
8	13-10-2021	Partial load and Safety factors – representative stress-strain curves for cold worked deformed bars and mild steel bars	1	TB-88
9	20-10-2021	Characteristic strength. Assumptions in limit state design – stress Block parameters	1	TB-87
10	21-10-2021	Limiting moment of Resistance Introduction Materials	2	TB-88
11	22-10-2021	Constituents of concrete, recommendation of IS 456 – 2000, grades of concrete, elastic theory	2	
12	23-10-2021	Design constants; singly reinforced beam.	1	TB-134
<b>Total No. of classes</b>			<b>17</b>	
<b>UNIT – II: DESIGN FOR FLEXURE</b>				

13	25-10-2021	Limit state analysis and design of singly reinforced sections	1	TB-178
14	27-10-2021	effective depth- Moment of Resistance- Doubly reinforced and flanged (T and L) beam sections	1	TB-181
15	28-10-2021	Minimum depth for a given capacity	2	TB-197
16	29-10-2021	Limiting Percentage of Steel	2	TB-203
17	30-10-2021	Minimum Tension Reinforcement-Maximum Flexural Steel- Design of Flanged Sections (T&L)	1	
18	01-11-2021	Effective width of flange-Behaviour- Analysis and Design.	1	TB-169
19	03-11-2021	Problem solving	1	
20	08-11-2021	Problem solving	1	TB-181
21	10-11-2021	Problem solving	1	
22	11-11-2021	Problem solving	2	
23	12-11-2021	Problem solving	2	
<b>Total No. of classes</b>			<b>15</b>	
<b>UNIT – III DESIGN FOR SHEAR, TORSION</b>				
24	15-11-2021	Deflection, cracking and code provision	1	TB-203
25	17-11-2021	Limit state analysis and design of section for shear and torsion	1	TB-225
26	18-11-2021	Concept of bond	2	TB-232
27	19-11-2021	I.S. code provisions. Design examples in simply supported	2	TB-242
28	20-11-2021	Continuous beams	1	TB-259
29	22-11-2021	Detailing and Anchorage and Development length	1	TB-262
30	24-11-2021	Cracking and code provision	1	TB-288
31	25-11-2021	I.S. code provisions. Design examples in simply supported	2	TB-267
32	26-11-2021	Cracking and code provision	2	TB-278
33	27-11-2021	Cracking and code provision	1	TB-278
<b>Total No. Of Classes</b>			<b>14</b>	
<b>UNIT – IV SLABS</b>				
34	08-12-2021	Classification of slabs -design of one - way slabs	1	
35	09-12-2021	Two - way slabs	2	TB-565
36	10-12-2021	Continuous slabs	2	TB-582
37	11-12-2021	Using IS Coefficients (conventional)	1	TB-586
38	13-12-2021	Design of waist-slab staircase	1	
39	15-12-2021	Design of one way slab problems	1	
40	16-12-2021	Design of two way slab problems	1	
<b>Total No. Of Classes</b>			<b>09</b>	
<b>UNIT –V DESIGN OF COMPRESSION MEMBERS</b>				
41	16-12-2021	Effective length of a column,	1	TB-295,299
42	17-12-2021	Design of short and long columns	2	
43	18-12-2021	Under axial load	1	TB-185
44	20-12-2021	Uni-axial bending and bi-axial bending	1	TB-356
45	22-12-2021	Braced and un-braced columns –	1	TB-234
46	23-12-2021	Design of Compression members –I S Code provisions	2	TB-236
47	24-12-2021	Design of short and long columns	2	

48	27-12-2021	Design of short and long columns	1	
<b>Total No. Of Classes</b>			<b>11</b>	
<b>UNIT – VI FOOTINGS</b>				
49	29-12-2021	Different types of footings	1	TB-422
50	30-12-2021	Design of isolated and combined footings	2	
51	31-12-2021	Rectangular and circular footings subjected to axial loads	2	
52	03-01-2022	Rectangular and circular footings subjected to axial loads	1	TB-189
53	05-01-2022	rectangular and circular footings subjected to axial loads	1	TB-315
54	06-01-2022	Uni-axial bending moments.	2	TB-267
55	07-01-2022	Bending moments.	2	
56	08-01-2022	Bi-axial bending moments.	1	
57	10-01-2022	Rectangular and circular footings subjected to axial loads	1	
58	12-01-2022	Rectangular and circular footings subjected to axial loads	1	
59	13-01-2022	Rectangular and circular footings subjected to axial loads	2	
60	19-01-2022	Rectangular and circular footings subjected to axial loads	1	
61	20-01-2022	Rectangular and circular footings subjected to axial loads	1	
<b>Total No. Of Classes</b>			<b>18</b>	

**Text Books:**

- Text Book : Design Concrete structures, Unnikrishnan Pillai.  
Text Book 1 : Design Concrete structures, Devadas Menon.  
Text Book 2 : Design of reinforced Concrete structures , N.Subramaniyan

**IS CODES**

1. IS-456-2000 ( Permitted to examination hall)
2. IS-875
3. SP-16