



2.3.2 Teachers use ICT enabled tools for effective teaching learning process

S.No	Description	Page No
1	You Tube Lecture Videos	4
2	Google Class Room	5
3	Power Point & Innovative Teaching Methodology	9
4	Lab manuals are mailed to students well in advance the experiment is performed.	17
5	ICT Enabled Class Room	19
6	E Resources	24

PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.



MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

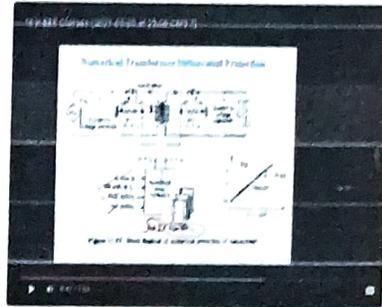


Metric 2.3.2

Teachers use ICT enabled tools for effective teaching-learning process.



Smart Class Room



Virtual White Board



Virtual Class Room



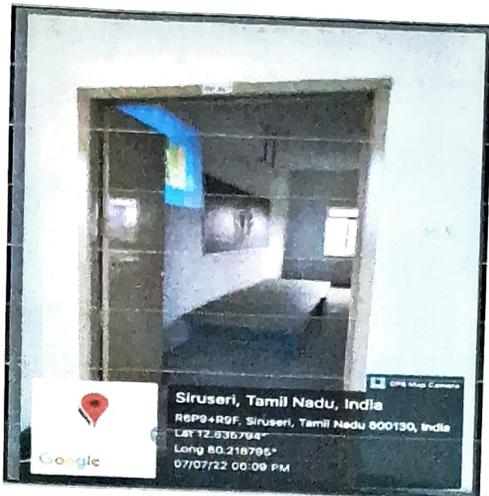
Faculty YouTube Video



MOOC Courses



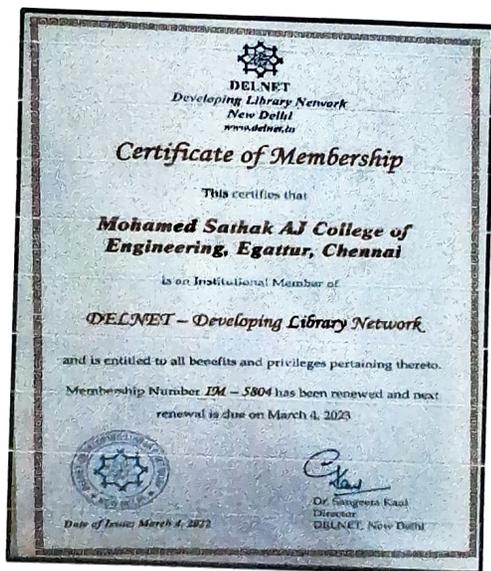
E-Learning



LCD Enabled Class Room



GCR Page



Delnet



E-Resource MSAJCE Website

**ICT Tools**

S.No	Name of the Subject	Name of the Faculty	Topic	YouTube Video Link
1	Power Electronics	Mr. C. Venkatesh	PE Part 1: Introduction to Power Electronics	https://www.youtube.com/watch?v=0Ua9Tex8q7w
2	Power Electronics	Mr. C. Venkatesh	PE Part 2: Working of SCR & Its VI Characteristics	https://www.youtube.com/watch?v=rhqqBcM7CrA&t=29s
3	Medical Electronics	Dr.M.Siva Kumar	Biomedical Electronics	https://www.youtube.com/watch?v=mr756SaOjs8
4	Embedded System	Dr.M.Siva Kumar	MCU & SBC programming for smart IoT devices_ Using Cisco Packet Tracer	https://www.youtube.com/watch?v=TgiaVUIxwd8
5	Antenna and Micro Wave Engineering	Dr.M.Siva Kumar	Antenna Design & Analysis using Matlab antenna Designer app	https://www.youtube.com/watch?v=mdg2PZjtVgo



Subject Name: OCS752 Introduction to C Programming

The screenshot shows a Google Classroom interface for a course titled "Introduction to C - 2018 batch" for "Final year EEE". The page includes a header with navigation tabs for "Stream", "Classwork", "People", and "Grades". A large blue banner at the top features the course title and a "Customize" button. Below the banner, the "Stream" section displays a list of activities posted by "IYr EEE":

- Meet: Announce something to your class (with a "Generate link" button)
- Class code: ugoootr
- Upcoming: No work due soon (with a "View all" button)
- Assignment: "IYr EEE posted a new material: EPC - C" (Nov 18, 2021)
- Assignment: "IYr EEE posted a new assignment: IA - 4 - Question paper" (Nov 9, 2021)
- Material: "IYr EEE posted a new material: unit 4 - notes" (Nov 1, 2021)
- Assignment: "IYr EEE posted a new assignment: MCO - unit 3" (Oct 13, 2021)
- Material: "IYr EEE posted a new material: Unit - 3 Notes" (Oct 11, 2021)
- Assignment: "IYr EEE posted a new assignment: IA-2 MCO" (Sep 29, 2021)
- Material: "IYr EEE posted a new material: Unit 2 - Notes" (Sep 27, 2021)
- Assignment: "IYr EEE posted a new assignment: IA -1" (Sep 18, 2021)
- Assignment: "IYr EEE posted a new assignment: IA 1 - MCO" (Sep 18, 2021)
- Material: "IYr EEE posted a new material: Study material" (Sep 17, 2021)

Introduction to C Programming - Course Documents Uploaded in Google Class Room



Subject code / Subject Name: EE8301 Electrical Machines-I

EE8301 (EM-I)
8 yr EEE

Stream Classwork People Grades

Customize

EE8301 (EM-I)
8 yr EEE

Meet :
Outdated link
Join
Not visible to students

Class code :
idn7lsv

Announce something to your class

EE8301 (EM-I) posted a new assignment: EM1 OP for late submission
Nov 8, 2021

EE8301 (EM-I) posted a new assignment: EM 1- IAT 4- OP
Nov 3, 2021

Upcoming
No work due soon
[View all](#)

EE8301 (EM-I) posted a new material: Unit 4- Part 4-Course Material
Nov 2, 2021

EE8301 (EM-I) posted a new material: Unit 4- Part 3-Course Material
Nov 2, 2021

EE8301 (EM-I) posted a new material: Unit 4- Part 2-Course Material
Nov 2, 2021

EE8301 (EM-I) posted a new material: Unit 4- Part 1-Course Material
Nov 2, 2021

EE8301 (EM-I) posted a new material: Unit 3- Part 2-Course Material
Oct 26, 2021

EE8301 (EM-I) posted a new material: Unit 3- Part 1-Course Material
Oct 26, 2021 (Edited Oct 26, 2021)



 5006 Mohamed Raith M Sep 28, 2021 Mohamed Raith	 311820105006 lat2 EM1.pdf PDF	⋮
		▶
 5302 Mohamed Fazil Sep 28, 2021 Em1	 Adobe Scan Sep 28, 2021 (...) PDF	⋮
		▶
 Ilyr EEE posted a new assignment: IAT 2 OP- EM I Sep 28, 2021		⋮
 Ilyr EEE posted a new material: Unit 2- Part 5- course material Sep 28, 2021		⋮
 Ilyr EEE posted a new assignment: EM-I IAT1 OP Sep 14, 2021		⋮
 Ilyr EEE posted a new material: Unit 11 (Problem) Sep 8, 2021		⋮
 Ilyr EEE posted a new material: Unit 11 (Theory) Sep 8, 2021		⋮
 Ilyr EEE posted a new material: Electric machines- Nagrath & Kothari Aug 27, 2021		⋮
 Ilyr EEE posted a new material: Principle of Electric Machines and Power Electronics Aug 27, 2021		⋮

Electrical Machines-I- Course Documents Uploaded in Google Class Room



Subject Name: EE8501 Power System Analysis

The screenshot shows a Google Classroom page for the course 'PSA' (Power System Analysis). The page features a green header banner with the text 'PSA' and '3RD YEAR EEE'. Below the banner, there is a list of activities and assignments. The activities include:

- Stream
- Classroom
- People
- Grades

The main content area displays a list of assignments and materials:

- Assignment: 'PSA MODEL EXAM' (Sep 22, 2022)
- Assignment: 'PSA ICA - PART B & PART C' (Sep 21, 2022)
- Assignment: 'PSA ICA' (Sep 21, 2022)
- Assignment: 'PSA ICA - PART B & PART C' (Sep 21, 2022)
- Assignment: 'PSA ICA 2 - PART B & PART C' (Sep 12, 2022)
- Assignment: 'PSA ICA 3 - PART B & PART C' (Sep 12, 2022)
- Assignment: 'PSA ICA' (Sep 12, 2022)
- Assignment: 'PSA ICA' (Sep 12, 2022)
- Material: 'PSA UNIT 1 MATERIAL' (Sep 7, 2022)
- Assignment: 'PSA ICA 2 - PART B & PART C' (Sep 3, 2022)
- Assignment: 'PSA ICA 2 - PART B & PART C' (Sep 3, 2022)
- Assignment: 'PSA ICA 2' (Sep 3, 2022)
- Material: 'PSA UNIT 2 NOTES WITH PPT' (Sep 1, 2022)

At the bottom of the page, there is a text box containing the text: **Power System Analysis- Course Documents Uploaded in Google Class Room**



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

YEAR: III

S.No	Name of the Subject	Name of the faculty	ICT tool used	Link
1	Digital Signal Processing	Mrs.Hemasumitha	Google Class Room	https://classroom.google.com/c/MTUyNzEzODE5OQ
		Mr.N.Suresh	Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/EE8591-ICT.pdf
2	Object Oriented Programming	Mrs.Asrin	Google Class Room	https://classroom.google.com/c/MzkxMTU4MTU1Mjk2
		Mrs.Sumana	Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/CS8392-ICT.pdf
3	Microprocessors and Microcontrollers	Mrs.R.SugunaDevi	Google Class Room	https://classroom.google.com/c/Mzk4MzgWMTU1M
			Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/EE8551-ICT.pdf
4	Basics of Bio Medical Instrumentation	Mrs.D.Hemasumitha	Google Class Room	https://classroom.google.com/c/Mzk1NDMzNj12Mz
		Mr.S.V.Vinodh	Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/OMD551-ICT.pdf
5	Power Electronics	Mr.C.Venkatesh	Google Class Room	https://classroom.google.com/c/Mzk0NTMzNz12Nz1
			YouTube	https://www.youtube.com/watch?v=rhqqBcM7CrA
		Dr.A.Kamalaselvan	Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/EE8552-ICT.pdf
6	Power System Analysis	Mrs.H.Brindha	Powerpoint	http://www.msajce-edu.in/academics/eee/ICTTools/EE8501-ICT.pdf

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (O.M.R.)
Sipcot - IT Highway Egattur,
Chennai - 603103.

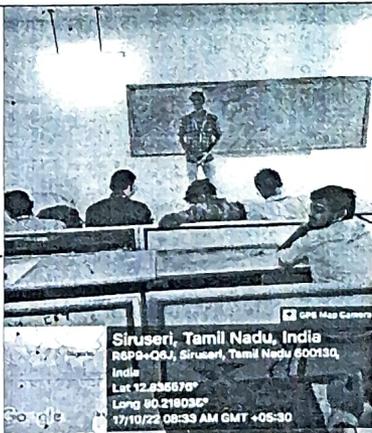
Sample of Innovative Teaching methods



Role Play for the course Total Quality Management



Seminar presentation for the course High voltage engineering



Mohamed Sathak A. J. Col

PRINCIPAL
Mohamed Sathak A. J. Col
No. 34, Rajiv Gandhi Salai (IT Park),
Siruseri, Tamil Nadu - 603103.

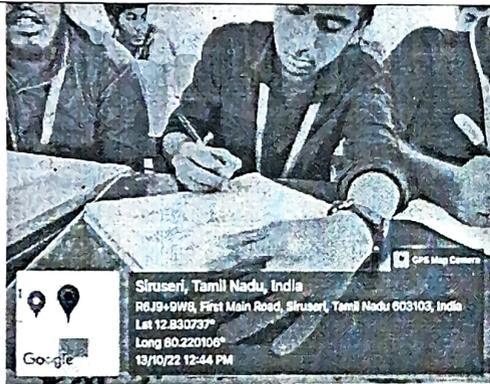
Flipped class for the course Electronic Devices and Circuits

Chennai - 603103.

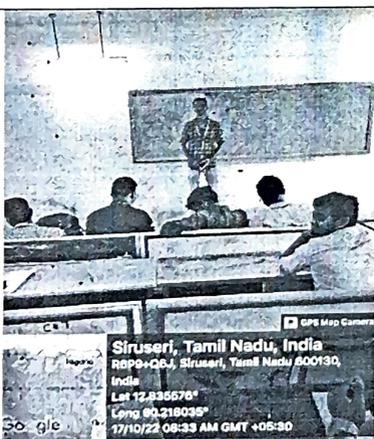
Sample of Innovative Teaching methods



Mind map for the course Microprocessor and Microcontrollers



Flipped class for the course Basics of biomedical Instrumentation



Handwritten signature

PRINCIPAL

Flipped class for the course Digital Logic Circuits

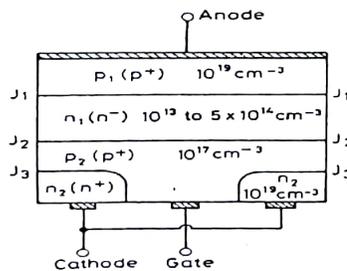
No 34, Rajiv Gandhi Salai,
Sipat - IT Highway Egattur,
Chennai - 603103.

EE8552 Power Electronics

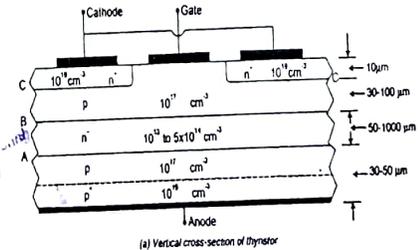
THYRISTORS SILICON CONTROLLED RECTIFIER (SCR)

- Three terminal, four layers (P-N-P-N)
- Can handle high currents and high voltages, with better switching speed and improved breakdown voltage .
- Name 'Thyristor', is derived by a combination of the capital letters from THYRatron and transISTOR.
- Has characteristics similar to a thyatron tube
But from the construction view point belongs to transistor (pnp or npn device) family.

BASIC STRUCTURE OF SCR



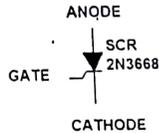
BASIC STRUCTURE OF SCR CONTD...



M. Sathish
 Mohamed Sathish A. J. College of Engineering
 No 34, Rajiv Gandhi Salai (OMR)
 Sipcot - IT Highway, Egattur,
 Chennai - 603 103.

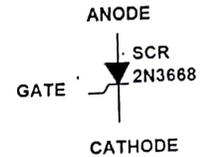
SCR / Thyristor

- Circuit Symbol and Terminal Identification



SCR / Thyristor

- Anode and Cathode terminals as conventional pn junction diode
- Gate terminal for a controlling input signal

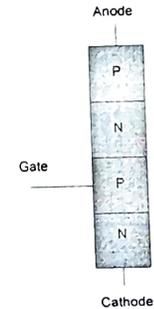


SCR/ Thyristor

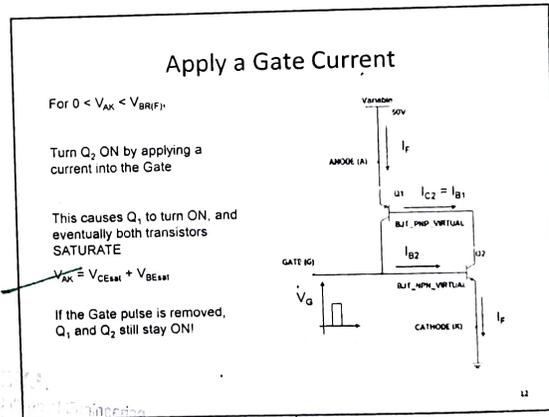
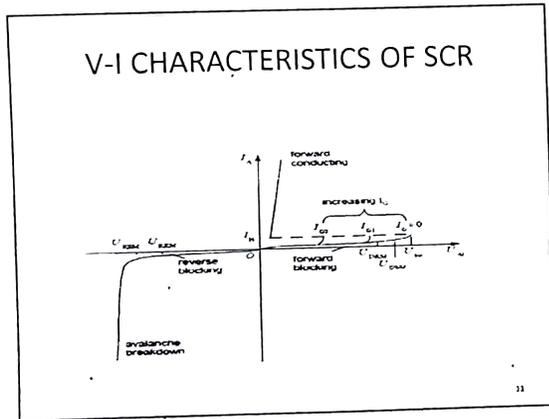
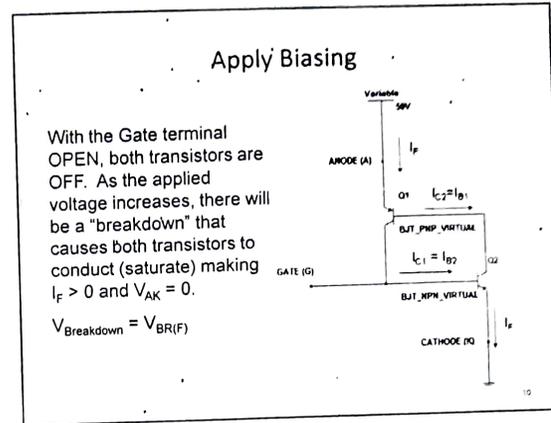
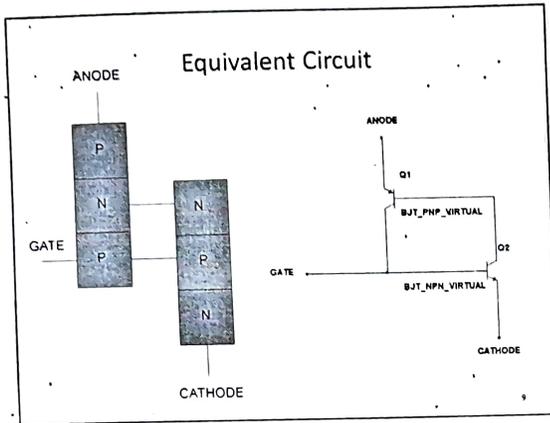
- An SCR (Thyristor) is a "controlled" rectifier (diode)
- Control the conduction under forward bias by applying a current into the Gate terminal
- Under reverse bias, looks like conventional pn junction diode

SCR / Thyristor

- 4-layer (pnpn) device
- Anode, Cathode as for a conventional pn junction diode
- Cathode Gate brought out for controlling input



M. S. H.
PRINCIPAL
Mohamed Gaffar A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egmore,
Chennai - 600030.

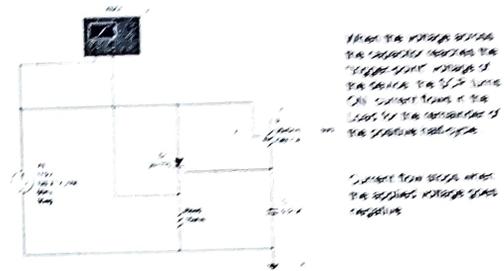


Handwritten scribble

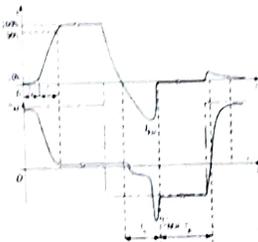
How do you turn it OFF?

- Cause the forward current to fall below the value of the "holding" current, I_H
- Reverse bias the device

SCR Application – Power Control



SWITCHING CHARACTERISTICS OF SCR



Turn-on transient

- Delay time t_d
- Rise time t_r
- Turn-on time t_{on}

Turn-off transient

- Reverse recovery time t_{rr}
- Forward recovery time t_{fr}
- Turn-off time t_o

SCR OPERATING MODES

FORWARD BLOCKING MODE: Anode is positive w.r.t. cathode, but the anode voltage is less than the break over voltage (V_{BO}). Only leakage current flows, so thyristor is not conducting.

FORWARD CONDUCTING MODE: When anode voltage becomes greater than V_{BO} , thyristor switches from forward blocking to forward conduction state, a large forward current flows.

If the $I_G > I_{G1}$, thyristor can be turned ON even when anode voltage is less than V_{BO} .

- The current must be more than the latching current (I_L).
- If the current reduced less than the holding current (I_H), thyristor switches back to forward blocking state.

REVERSE BLOCKING MODE: When cathode is more positive than anode, small reverse leakage current flows. However if cathode voltage is increased to reverse breakdown voltage, avalanche breakdown occurs and large current flows.

Handwritten signature

Thyristor- Operation Principle

- Thyristor has three p-n junctions (J1, J2, J3 from the anode).
- When anode is at a positive potential (VAK) w.r.t cathode with no voltage applied at the gate, junctions J1 & J3 are forward biased, while junction J2 is reverse biased.
 - As J2 is reverse biased, no conduction takes place, so thyristor is in forward blocking state (OFF state).
 - Now if VAK (forward voltage) is increased w.r.t cathode, forward leakage current will flow through the device.
 - When this forward voltage reaches a value of breakdown voltage (VBO) of the thyristor, forward leakage current will reach saturation and reverse biased junction (J2) will have avalanche breakdown and thyristor starts conducting (ON state), known as forward conducting state.
- If Cathode is made more positive w.r.t anode, junction J1 & J3 will be reverse biased and junction J2 will be forward biased.
- A small reverse leakage current flows, this state is known as reverse blocking state.
- As cathode is made more and more positive, stage is reached when both junctions A & C will be breakdown, this voltage is referred as reverse breakdown voltage (OFF state), and device is in reverse blocking state.



TRIGGERING METHODS

- THYRISTOR TURNING ON IS ALSO KNOWN AS TRIGGERING.
- WITH ANODE POSITIVE WITH RESPECT TO CATHODE, A THYRISTOR CAN BE TURNED ON BY ANY ONE OF THE FOLLOWING TECHNIQUES:
 - FORWARD VOLTAGE TRIGGERING
 - GATE TRIGGERING
 - dv/dt TRIGGERING
 - TEMPERATURE TRIGGERING
 - LIGHT TRIGGERING

Forward Voltage Triggering

- When breakover voltage (VBO) across a thyristor is exceeded than the rated maximum voltage of the device, thyristor turns ON.
- At the breakover voltage the value of the thyristor anode current is called the latching current (IL).
- Breakover voltage triggering is not normally used as a triggering method, and most circuit designs attempt to avoid its occurrence.
- When a thyristor is triggered by exceeding VBO, the fall time of the forward voltage is quite low (about 1/20th of the time taken when the thyristor is gate-triggered).
- However, a thyristor switches faster with VBO turn-ON than with gate turn-ON, so permitted di/dt for breakover voltage turn-on is lower.

dv/dt triggering

- With forward voltage across anode & cathode of a thyristor, two outer junctions (A & C) are forward biased but the inner junction (J2) is reverse biased.
- The reverse biased junction J2 behaves like a capacitor because of the space-charge present there.
- As p-n junction has capacitance, so larger the junction area the larger the capacitance.
- If a voltage ramp is applied across the anode-to-cathode, a current will flow in the device to charge the device capacitance according to the relation:

$$I_c = C \frac{dv}{dt}$$

- If the charging current becomes large enough, density of moving current carriers in the device induces switch-on. This method of triggering is not desirable because high charging current (Ic) may damage the thyristor.

Mohamed Bahgat, 10/2018

MOHAMED SATHAK A.J COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University)
34, Old Mahabalipuram Road, Egattur, Chennai – 603 103.

ISO 9001: 2015 Certified Institution

Sponsored By: MOHAMMED SATHAK TRUST, Chennai – 600 034.



ACADEMIC YEAR:

EE8511- CONTROL AND INSTRUMENTATION LABORATORY

Name :

Register Number :

Department : Electrical and Electronics Engineering

Year / Semester : III Year / V Semester

(ANNA UNIVERSITY: CHENNAI - 600 025)



MOHAMED SATHAK A J COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi and Affiliated to Anna University)
34, Old Mahabalipuram Road, Egattur, Chennai – 603 103.

ISO 9001: 2015 Certified Institution

Sponsored By: MOHAMMED SATHAK TRUST, Chennai – 600 034.

Register Number

BONAFIDE CERTIFICATE

It is Certify that this is a Bonafide record of work done by Mr. / Ms. . . .
..... of **III YEAR/VI SEMESTER B.E**
/ B.Tech **ELECTRICAL AND ELECTRONICS ENGINEERING** in the
EE8511- CONTROL AND INSTRUMENTATION
LABORATORY during the academic year 2022-2023.

Staff In-Charge

Head of the Department

Submitted for the Anna University B.E / B.Tech Practical
Examination held on

Internal Examiner

External Examiner



Infrastructure Details

Department of Civil Engineering

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	SF 320- Lecturer Hall	II Year	702	LCD Projector, Wi-Fi
2	Class Room	SF 321- Lecturer Hall	III Year	702	LCD Projector, Wi-Fi
3	Class Room	SF 322- Lecturer Hall	IV Year	1053	LCD Projector, Wi-Fi
4	Drawing Hall - I	SF 323- Lecturer Hall	-	1053	-

Department of Computer Science Engineering

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	TF 406- Lecturer Hall	II Year	1053	LCD Projector, Wi-Fi
2	Class Room	TF 407- Lecturer Hall	III Year	1053	LCD Projector, Wi-Fi
3	Class Room	TF 408- Lecturer Hall	IV Year	1053	LCD Projector, Wi-Fi

Department Of Electrical and Electronics Engineering

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	SF 311- Lecturer Hall	II Year	702	LCD Projector, Wi-Fi
2	Class Room	SF 312- Lecturer Hall	III Year	702	LCD Projector, Wi-Fi
3	Class Room	SF 319- Lecturer Hall	IV Year	702	LCD Projector, Wi-Fi

PRINCIPAL

MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
No. 34, Rajiv Gandhi Road, (OMR) SIPCOT - IT Park
Siruseri, Chennai 603 103

**Department of Electronics and Communications Engineering**

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	FF 217- Lecturer Hall	II Year	702	LCD Projector, Wi-Fi
2	Class Room	FF 218- Lecturer Hall	III Year	702	LCD Projector, Wi-Fi
3	Class Room	FF 219- Lecturer Hall	IV Year	702	LCD Projector, Wi-Fi

Department of Information Technology

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	TF 413- Lecturer Hall	II Year	1053	LCD Projector, Wi-Fi
2	Class Room	TF 414- Lecturer Hall	III Year	1053	LCD Projector, Wi-Fi
3	Class Room	TF 415- Lecturer Hall	IV Year	1053	LCD Projector, Wi-Fi

Department of Mechanical Engineering

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)	Facilities Available
1	Class Room	SF 327-Lecturer Hall	II Year	702	LCD Projector, Wi-Fi
2	Class Room	SF 328-Lecturer Hall	III Year	702	LCD Projector, Wi-Fi
3	Class Room	SF 329-Lecturer Hall	IV Year	702	LCD Projector, Wi-Fi


PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
No. 34, Rajiv Gandhi Road, (OMR) SIPCOT - IT Park,
Siruseri, Chennai - 603 103.



Department of Science and Humanities

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)
1	Class Room	SF 301-Lecturer Hall	I Year	702
2	Class Room	SF 302-Lecturer Hall	I Year	702
3	Class Room	SF 303-Lecturer Hall	I Year	702
4	Class Room	SF 307-Lecturer Hall	I Year	1053
5	Class Room	SF 308-Lecturer Hall	I Year	702
6	Class Room	SF 309-Lecturer Hall	I Year	702

Others

Sl. No.	Description	Name in Board	Usage	Size (Sq.Ft)
1	Class Room	FF 203 -Lecturer Hall	PG	351
2	Drawing Hall - I	SF 323-Lecturer Hall	-	1053
3	Drawing Hall - I	TF 19- Lecturer Hall		1053
4	Tutorial Hall	TF 421- Lecturer Hall	-	1053
5	Tutorial Hall	TF 422- Lecturer Hall I	-	702
6	Tutorial Hall	TF 423-Lecturer Hall	PG	702

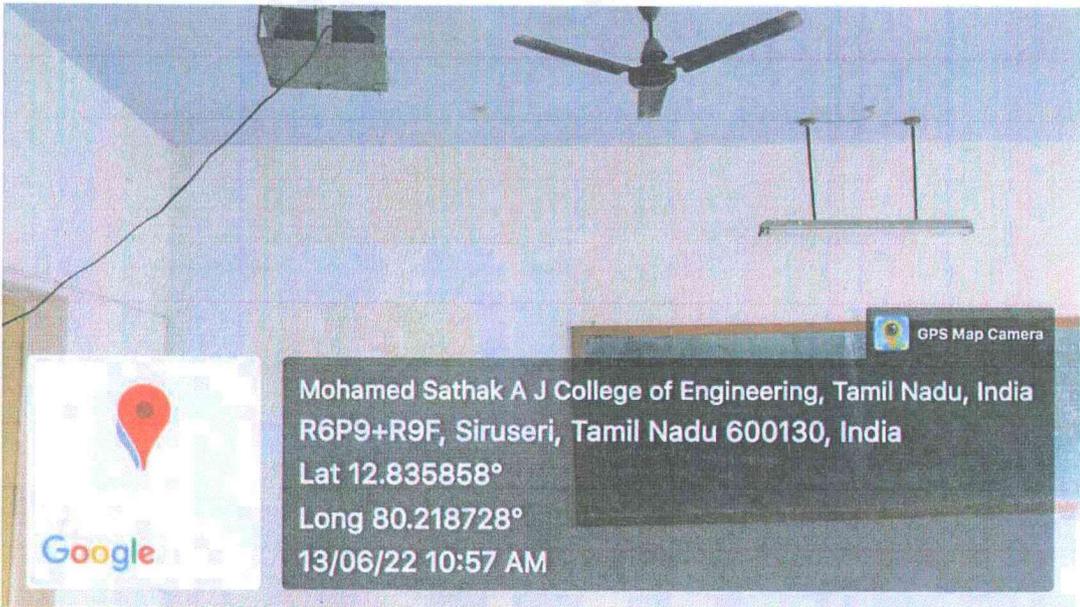
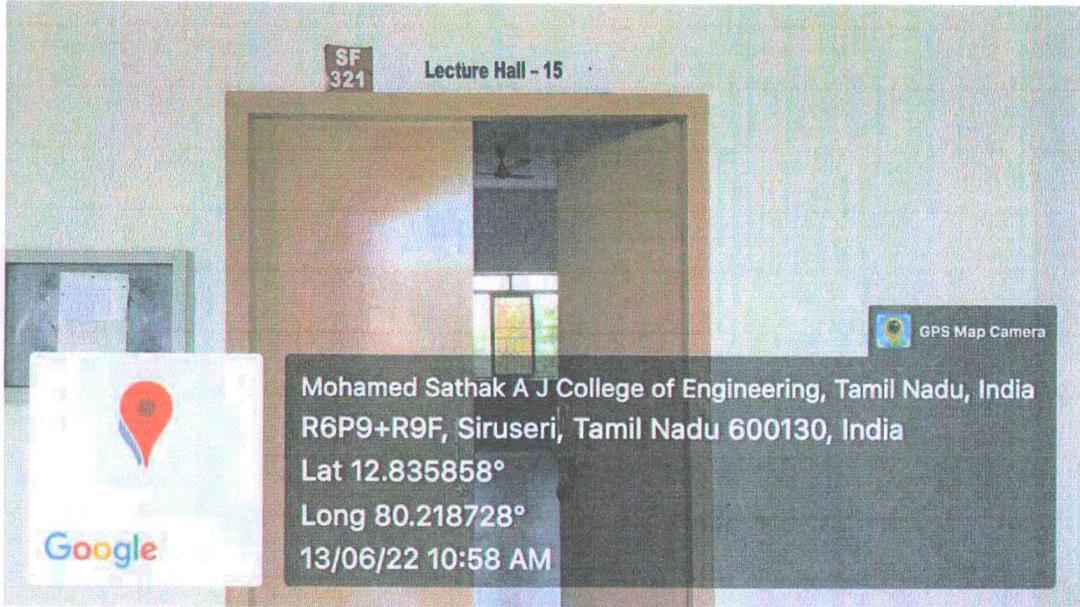

PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
No. 34, Rajiv Gandhi Road, (OMR) SIPCOT - II Park,
Sriperumbudur, Chennai - 603 103.



MOHAMED SATHAK A J COLLEGE OF ENGINEERING

Sponsored by Mohamed Sathak Trust
(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
Siruseri IT Park, Egattur, Chennai 603 103

CIVIL CLASS ROOM SF321



Mohamed Sathak
PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Mohamed Sathak
PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
No. 34, Rajiv Gandhi Road, (OMR) SIPCOT - IT Park,
Siruseri, Chennai - 603 103.



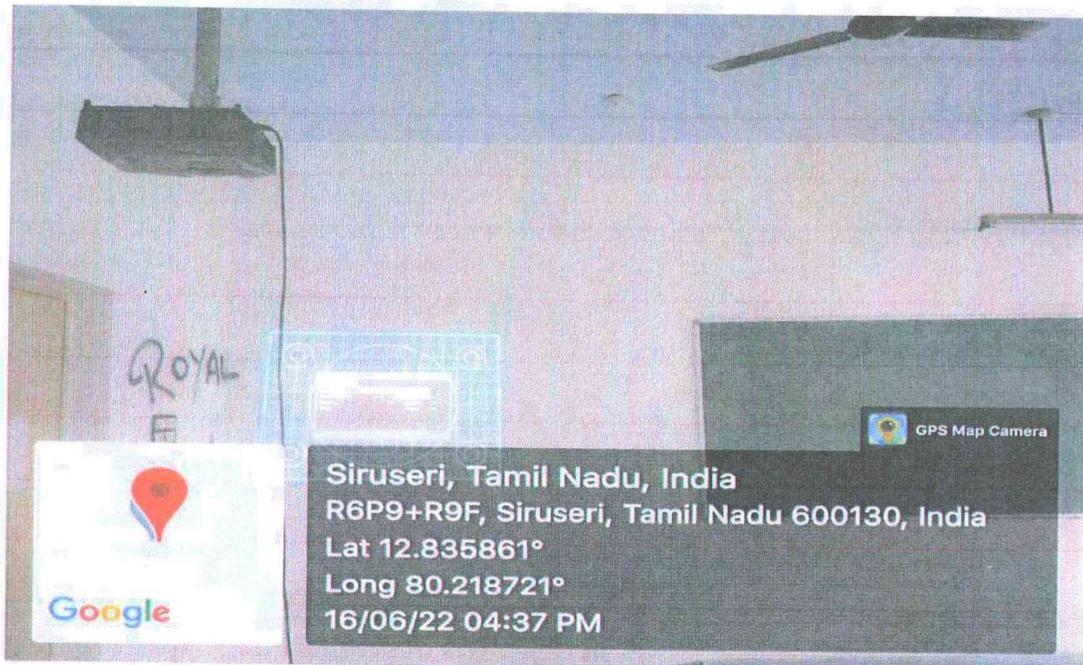
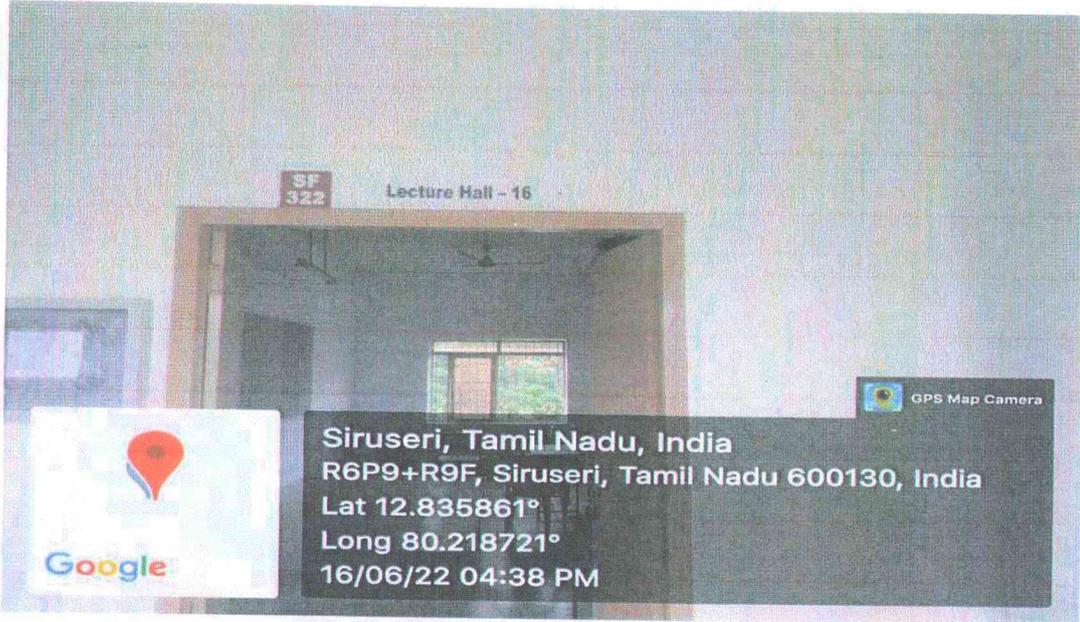
MOHAMED SATHAK A J COLLEGE OF ENGINEERING

Sponsored by Mohamed Sathak Trust

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Siruseri IT Park, Egattur, Chennai 603 103

CIVIL CLASS ROOM SF322



[Signature]
PRINCIPAL
MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING
Siruseri IT Park, Egattur, Chennai 603 103

E-Resources

Department of Civil Engineering

[Home](#) [About Us](#) [Admission](#) [Academics](#) [Research](#) [Placement](#) [Life at MSAJCE](#) [Alumni](#) [Technology Centre](#) [Incubation & Startup](#)

- Overview
- DBE
- Programme
- Faculty
- Department Facilities
- Academics 
- Placement
- News and Events
- Student Activities
- Members of Alumni Association

ACADEMICS

ANNA UNIVERSITY REGULATION, SYLLABUS

[BE - 2013 Syllabus](#) 

[BE - 2017 Syllabus](#) 

[BE - 2017 Regulation](#) 

[BE - 2021 Syllabus & Regulation](#) 

COURSE MATERIALS

S.No.	Subject Code	Subject Name	Lesson Plan	Question Bank	Lecture Notes	ICT Tool
1	MA6353	Transforms and Partial Differential Equations	VIEW	VIEW	VIEW	VIEW
2	CE8301	Strength of Materials I	VIEW	VIEW	VIEW	VIEW
3	CE8302	Fluid Mechanics	VIEW	VIEW	VIEW	VIEW
4	CE8351	Surveying	VIEW	VIEW	VIEW	VIEW
5	CE8391	Construction Materials	VIEW	VIEW	VIEW	VIEW

Lesson Plan

MSAACE | Mohamed Sathak A. x MSAACE | Mohamed Sathak A. x of 12,552 msd

msaace.edu.in/academic/syllabus/2017/2017_2018

LP 068502.xlsx 1 / 4 100%

 MOHAMED SATHAK A J COLLEGE OF ENGINEERING, Chennai 603103		Form No. TLP-05
		Rev. Date 01-02-2011
LESSON PLAN - THEORY		Rev. No. 0

Department of Civil Engineering

Name of the Subject	FLUID MECHANICS	Name of the handling Faculty	Ap. M. B. Chinnarasimhan
Subject Code	CE3301	Year / Sem	II / II
Acad. Year	2021 - 2022	Batch	SC20 - 2021

Course Objective

To understand the basic properties of the fluids, fluid kinematics and fluid dynamics.
To analyze and appreciate the complexities involved in solving the fluid flow problems.

Course Outcome

Explain the concepts of static, kinematics and dynamic equilibrium of fluids.
Solve the problems related to equations of fluid motion.
Calculate the dimensional parameters of the fluids.
Analyze the types of flow and losses of flow in pipes.
Solve the boundary layer problems.

Lesson Plan

Sl. No.	Topic	T. R. *		Mode of Teaching (BB / PP / NP/EE / MOE / etc.)	Bloom Level (L)	C.O.	P.O.
		Theory	Practical				
UNIT I - FLUID PROPERTIES AND FLUID STATICS							
1	Fluid - definition, distinction between solid and fluid	T3	1	BB	L2	CO1	PO1-PO4
2	Units and dimensions	T3	1	BB	L1	CO1	PO1-PO4
3	Properties of fluids - density, specific weight, specific volume	T3	1	BB	L1	CO1	PO1-PO4
4	Specific gravity, viscosity, compressibility	T3	1	BB	L1	CO1	PO1-PO4
5	Vapour pressure, capillary and surface tension	T3	1	BB	L1	CO1	PO1-PO4
6	Fluid statics concept of fluid static pressure	T3	1	NP/EE	L2	CO1	PO1-PO4

Department of ECE

MSAACE | Mohamed Sathak A. x MSAACE | Mohamed Sathak A. x

msaace.edu.in/ceeculp

About Us - Admission - Academics - Research - Placement - Life at MSAACE - Alumni - Technology Centre - Incubation & Startup

ACADEMICS

ANNA UNIVERSITY REGULATION, SYLLABUS

- BE - 2015 Syllabus
- BE - 2017 Syllabus
- BE - 2017 Regulation
- BE - 2017 Open Electives
- BE - 2021 Regulation

COURSE MATERIALS

S.No.	Subject Code	Subject Name	Lesson Plan	Question Bank	Lecture Notes	ICT Tools
1	EC3201	Cellular Systems	VIEW	VIEW	VIEW	VIEW
2	EC3351	Digital Systems Design	VIEW	VIEW	VIEW	VIEW
3	EC3191	Electronic Devices and Circuit	VIEW	VIEW	VIEW	VIEW
4	EC3354	Signals and Systems	VIEW	VIEW	VIEW	VIEW

C Programming K. Umesh

Question Bank

MSAJCE - November Semter A. x MSAJCE - November Semter A. x START20.pdf

msajce.edu.in/academic/QuestionBank/2241220.pdf

ECM402-QB.pdf 1 / 19 100%

ECM402 ELECTRONIC CIRCUITS – II – QUESTIONS BANK

UNIT: FEEDBACK AMPLIFIERS

PART A

1. The voltage gain without negative feedback is 40 dB. What is the new voltage gain if 3% negative feedback is introduced? (APRIL/MAY 2016/NOV /DEC 2017)

Given: $20 \log A_v = 40 \text{ dB}$, $A_v = 10000$, $\beta = 0.03$
 We know that, $A_{vf} = A_v / (1 + A_v \beta)$
 $= 10000 / (1 + (10000 * 0.03)) = 31.22$

2. Why gain bandwidth product remains constant with the introduction of negative feedback? (NOV/DEC 15; (MAY/JUN 16)

Since the bandwidth with negative feedback increases by factor $(1 + A\beta)$ and gain decreases by same factor, the gain bandwidth product of an amplifier does not altered, when negative feedback is introduced.

3. List the effects of negative feedback on the noise and bandwidth of an amplifier. (MAY 2016)

The effects of noise decreases and bandwidth increases of an negative feedback amplifier.

4. A voltage series feedback amplifier has a voltage gain with feedback as 83.33 and feedback ratio as 0.01. Calculate the voltage gain of the amplifier without feedback. (MAY 2016) (NOV 06)

Given: $A_{vf} = 83.33$, $\beta = 0.01$
 We know that, $A_{vf} = A_v / (1 + A_v \beta)$
 $A_v = 83.33 / (1 - (83.33 * 0.01)) = 499.33$

5. List the properties of negative feedback amplifier. (APRIL/MAY 2016)

Department of Mechanical Engineering

MSAJCE - November Semter A. x MSAJCE - November Semter A. x MSAJCE - November Semter A. x ECM402-QB.pdf

msajce.edu.in/mech.php

About Us - Admission - Academics - Research - Placement - Life at MSAJCE - Alumni - Technology Centre - Incubation & Startup

Overview

Office

Programme

Faculty

Department Facilities

Academics

Placement

News and Events

Student Activities

Members of Alumni Association

ACADEMICS

ANNA UNIVERSITY REGULATION, SYLLABUS

BE - 2017 Syllabus

BE - 2017 Regulation

BE - 2017 Open Electives

COURSE MATERIALS

S.No.	Subject Code	Subject Name	Lesson Plan	Question Bank	Lecture Notes	ICT Tools
1	ME101	Engineering Graphics	VIEW	VIEW	VIEW	VIEW
2	ME102	Engineering Mathematics	VIEW	VIEW	VIEW	VIEW
3	ME103	Transforms and Partial Differential Equations	VIEW	VIEW	VIEW	VIEW
4	ME104	Engineering Thermodynamics	VIEW	VIEW	VIEW	VIEW
5	CE105	Fluid Mechanics and Machinery	VIEW	VIEW	VIEW	VIEW
6	ME106	Engineering Materials and	VIEW	VIEW	VIEW	VIEW

PPT

MOHAMED SATHAK A J COLLEGE OF
ENGINEERING

FLUID MECHANICS INTRODUCTION AND BASIC CONCEPTS

by
Dr.G.RAMESH

Objectives

- Understand the basic concepts of Fluid Mechanics.
- Recognize the various types of fluid flow problems encountered in practice.
- Model engineering problems and solve them in a systematic manner.
- Have a working knowledge of accuracy, precision, and significant digits, and recognize the importance of dimensional homogeneity in engineering calculations.

Simplified Notes

Navigation: Home, About Us, Admission, Academics, Research, Placement, Life at MSACE, Alumni, Technology Centre, Incubation & Startup

REGISTRATION

COURSE MATERIALS

S.No.	Subject Code	Subject Name	Lesson Plan	Question Bank	Lecture Notes	ICT Tools
1	EE101	Control Systems	VIEW	VIEW	VIEW	VIEW
2	EE102	Digital System Design	VIEW	VIEW	VIEW	VIEW
3	EE103	Electronic Devices and Circuit	VIEW	VIEW	VIEW	VIEW
4	EE104	Microprocessors	VIEW	VIEW	VIEW	VIEW
5	EE105	Computer Programming & Data Structures	VIEW	VIEW	VIEW	VIEW

The transfer function of the system is derived by applying Laplace transform to the input and output signals. The output is called as transfer function.

The circuit is a first order system. The transfer function is given by:

$$G(s) = \frac{Y(s)}{X(s)} = \frac{1}{s + a}$$

Block Diagram:

The transfer function is derived by applying Laplace transform to the input and output signals. The output is called as transfer function.

Handwritten Notes

REGISTRATION

LECTURE NOTES

EE102-DIGITAL SYSTEM DESIGN

II YEAR - II SEMESTER - R2019

UNIT-I-BASIC CONCEPTS

INTRODUCTION

In this course, we will study the basic concepts of digital systems. The students of system based on the use of these are called as digital systems.

The operation of a digital system is either engineering problem we studied in EE101.

For the formal definition of digital systems we will apply the definition given by IEEE in 1964.

Introduction of digital systems

The position of a digital system is given in the following diagram.

Navigation: Home, About Us, Admission, Academics, Research, Placement, Life at MSACE, Alumni, Technology Centre, Incubation & Startup

COURSE MATERIALS

S.No.	Subject Code	Subject Name	Lesson Plan	Question Bank	Lecture Notes	ICT Tools
1	EE101	Control Systems	VIEW	VIEW	VIEW	VIEW
2	EE102	Digital System Design	VIEW	VIEW	VIEW	VIEW
3	EE103	Electronic Devices and Circuits	VIEW	VIEW	VIEW	VIEW
4	EE104	Microprocessors	VIEW	VIEW	VIEW	VIEW
5	EE105	Computer Programming & Data Structures	VIEW	VIEW	VIEW	VIEW
6	EE106	Engineering Mathematics and Probability	VIEW	VIEW	VIEW	VIEW