Certificate Course

On

MATLAB/Simulink

13.06.2022 to 04.07.2022

Coordinator: K. Kalyan Kumar

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

Department of Electrical and Electronics Engineering

Lr. / KSRMCE / EEE / 2021-22 /

Date: 08.06.2022

To
The Principal,
K.S.R.M.College of Engineering (A), Kadapa.

//THROUGH PROPER CHANNEL//

Sub: KSRMCE – (EEE) – Permission for Conducting a Certification Course on " MATLAB/SIMULINK" for B.Tech IV Semester Students – Request for Permission – Reg.

Respected Sir,

It is being brought to your kind notice that, I K. Kalyan Kumar, Assistant Professor from Department of EEE is organizing a Certification Course on "MATLAB/SIMULINK" for B.Tech IV Semester students, from 13.06.2022 to 04.07.2022. In this regard, I request you to kindly permit for organizing the above mentioned certification course, for which kind of act I would be grateful to you sir.

The Resource persons of the workshop:
1. Mr. S .Kadhar vali, Assistant Professor in EEE, KSRMCE (A).

Thanking you Sir,

Yours Faithfully
K. Kalyan Kumar
(K.Kalyan Kumar)
(Assistant Professor/EEE)

forwarded to the principal / sir

Permitted
V. S. S. murli

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

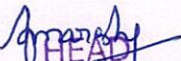## Department of Electrical and Electronics Engineering

Cr./KSRMCE/(Department of E.E.E)/2021-22/

Date: 09.06.2022

Circular

It is hereby informed that the department of Electrical and Electronics Engineering is organizing a Certification Course on "MATLAB/SIMULINK " for B.Tech IV Semester students, from 13.06.2022 to 04.07.2022. The resource person is Mr. S .Kadhar vali, Assistant Professor in EEE, KSRMCE. In this Context, I request the students to register their names with the concerned coordinator on or before 11.06.2022. The details of the Workshop are as follows:

Name of the Event	Certification Course
Name of the Course	MATLAB/SIMULINK
Date(s)	13.06.2022 to 04.07.2022
Resource persons	Mr. S .Kadhar vali, Assistant Professor in EEE, KSRMCE.
Venue	SJ – 114 (Simulation Lab)
Faculty Coordinator	Mr. K. Kalyan Kumar, Assistant Professor in EEE, KSRMCE

Head of the Department

Department of Electrical &
Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

Department of Electrical and Electronics Engineering

List of Registered Participants

Name of the Event	Certification Course
Name of the Course	MATLAB/SIMULINK
Date(s)	13.06.2022 to 04.07.2022
Timings	03:00 PM to 5:00 PM
Resource persons	Mr. S .Kadhar vali, Assistant Professor in EEE, KSRMCE
Venue	SJ – 114 (Simulation Lab)
Faculty Coordinator	Mr. K. Kalyan Kumar, Assistant Professor in EEE, KSRMCE

S.No	Roll Number	Name of the Student	Signature
1	209Y1A0201	ABBARATHI GOPI CHARAN	A. Gopicharan
2	209Y1A0202	ADIMULAM GANGADHAR	Gangadhar
3	209Y1A0203	AMBAVARAM SANJANA (W)	Sanjana
4	209Y1A0204	BANDI NEERAJA REDDY (W)	NEERAJa Reddy
5	209Y1A0205	BERI YASWANTH	B. Yaswanth
6	209Y1A0206	CHEMIKALA RAMA DEVI (W)	C. Ramadevs
7	209Y1A0208	DERANGULA VENKATA NAGA RUCHITHA (W)	Naga Ruchitha
8	209Y1A0209	DUGGIREDDY DHARANI (W)	D. Dharani
9	209Y1A0210	DUGGIREDDY TEJASWINI (W)	D. Tejaswini
10	209Y1A0211	GADDAM HARIKA (W)	G. Harika
11	209Y1A0213	GANDLA VENKATA SUNIL KUMAR	Venkata sunil
12	209Y1A0214	GOLLA SIVAKUMAR	Sivakumar

S.No	Roll Number	Name of the Student	Signature
13	209Y1A0217	KARNATAKAM LIKHITHA (W)	
14	209Y1A0218	KATIKA MOHAMMED KAIF ALI	
15	209Y1A0219	KORAMUTLA MOHAN KRISHNA	
16	209Y1A0221	KUMMARI HEMANTH KUMAR	
17	209Y1A0222	LADDAGIRI NARASIMHA SAI PAVAN	
18	209Y1A0223	MADIREDDY GOWRI (W)	
19	209Y1A0225	MALLELA CHANDRA BHARATH KUMAR REDDY	
20	209Y1A0226	MALLEM CHARAN KUMAR	
21	209Y1A0227	MUDDA MAHA LAKSHMI (W)	
22	209Y1A0229	NAREDDY SASI REKHA (W)	
23	209Y1A0241	SHAIK ALISHA SAMEERA (W)	
24	209Y1A0247	SINGARAPU SHASHIKALA (W)	
25	219Y5A0204	MAYAKUNTLA SRINIDHI (w)	
26	219Y5A0205	MUDDALA LAKSHMI DEVI (W)	

Coordinator

Head of the Department

HEAD
Department of Electrical &
Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

Department of Electrical and Electronics Engineering

Certification Course on " MATLAB/SIMULINK"

Modules

Timing: 03:00 PM to 5:00 PM

Module-1

Elementary features: Introduction to Simulink –Creating new Simulink file – Commonly used blocks – Continues & Discrete signals – Logic & Bit operations – Math operations – Ports & Subsystems – Sinks – Sources – User defined functions.

Module-2

SIM Power Systems: Fundamental Blocks: Electrical sources – Elements – Interface elements – Machines – Power Electronics – Control & Measurement- FACTS – Renewable Sources.

Module-3

Electrical Engineering Applications – Modeling& Simulation of simple Electrical Block diagrams: Power electronics, Electrical Machines, Power & Control Systems.

Coordinator

Head of the Department

HEAD
Department of Electrical &
Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

Course Schedule:

S.no	Date	Topic	No. of Hours
		Module-1	
1	13/06/2022	Elementary features: Introduction to Simulink	2
2	14/06/2022	Creating new Simulink file	2
3	15/06/2022	Commonly used blocks	2
4	16/06/2022	Continues & Discrete signals	2
5	17/06/2022	Logic & Bit operations Math operations	2
6	20/06/2022	Ports & Subsystems	2
7	21/06/2022	Sinks – Sources – User defined functions.	2
		Module-2	
8	22/06/2022	SIM Power Systems: Fundamental Blocks: Electrical sources	2
9	23/06/2022	Elements – Interface elements	2
10	24/06/2022	Machines – Power Electronics	2
11	27/06/2022	Control & Measurement	2
12	28/06/2022	FACTS – Renewable Sources	2
		Module-3	
13	29/06/2022	Electrical Engineering Applications	2
14	30/06/2022	Modeling& Simulation of simple Electrical Block diagrams: Power electronics	2
15	02/07/2022	Electrical Machines	2
16	04/07/2022	Power & Control Systems	2
		Total	32

Resource Person

Mr. S .Kadhar vali, Assistant Professor in EEE, KSRMCE

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

Department of Electrical and Electronics Engineering
Attendance Sheet

S.No.	Roll Number	13/6	14/6	15/6	16/6	17/6	20/6	21/6	22/6	23/6	24/6	27/6	28/6	29/6	30/6	02/7	04/7
1	209Y1A0201	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
2	209Y1A0202	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
3	209Y1A0203	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
4	209Y1A0204	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
5	209Y1A0205	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
6	209Y1A0206	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P
7	209Y1A0208	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
8	209Y1A0209	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
9	209Y1A0210	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P
10	209Y1A0211	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
11	209Y1A0213	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	209Y1A0214	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
13	209Y1A0217	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	209Y1A0218	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	209Y1A0219	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
16	209Y1A0221	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

/ksrmce.ac.in   Follow Us: /ksrmceofficial

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

S.No.	Roll Number	13/6	14/6	15/6	16/6	17/6	20/6	21/6	22/6	23/6	24/6	27/6	28/6	29/6	30/6	02/7	04/7
17	209Y1A0222	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
18	209Y1A0223	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
19	209Y1A0225	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
20	209Y1A0226	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	209Y1A0227	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	209Y1A0229	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
23	209Y1A0241	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
24	209Y1A0247	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
25	219Y5A0204	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
26	219Y5A0205	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P

Coordinator

Head of the Department
HEAD
Department of Electrical &
Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

/ksrmce.ac.in   Follow Us: /ksrmceofficial

KSNR
lives on..

K.S.R.M. COLLEGE OF ENGINEERING
(UGC - Autonomous)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

KSNR
lives on..

Departmentof EEE

Certification Course

on

MATLAB/SIMULINK

Date(s)	Venue
13/06/2022 to 04/07/2022	SJ – 114 (Simulation Lab)

Coordinators
Mr. K. Kalyan Kumar
Assistant Professor,
Department of EEE.

Resource Persons
Mr. S. Khadar Vali
Assistant Professor,
Department of EEE.

Dr. Karanam Amaresh (HoD)   Dr. V.S.S. Murthy (Principal)   Dr. Kandala Chandra Obul Reddy (MD, KGI)   Smt. K.Rajeswari (Correspondent,Secretary,Treasurer)   Sri K. Madan Mohan Reddy (Vice – Chairman)   Sri K. Raja Mohan Reddy (Chairman)

ksrmceofficial
www.ksrmce.ac.in
8143731980, 8575697569

/ksrmce.ac.in   Follow Us: /ksrmceofficial

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

Department of Electrical and Electronics Engineering
Activity Report

Name of the Event	Certification Course
Name of the Course	MATLAB/SIMULINK
Date(s)	13.06.2022 to 04.07.2022
Target Audience	B.Tech IV Semester Students
Number of Students Participated	26
Resource Person	Mr. S .Kadhar vali, Asst. Prof. in EEE
Organizer/Supporting Team	Mr. K. Kalyan Kumar, Asst. Prof. in EEE
Report	This Course on MATLAB/SIMULINK is an academia knowledge sharing initiative taken by the department of EEE,K.S.R.M.C.E. It was a 32 hours course from 13/06/2022 to 04/07/2022. The primary objective of this programme is to update/enhance the skills of engineering students in advanced domains of electrical engineering keeping pace with the IT industry. The training methodology includes: ● Module wise case studies. ● MATLAB based laboratory assignment. ● Classroom Lectures. Each module prepared for delivery, aimed for practical aspect of that theory and some of which related to the research . The content covered have been listed below: ● Construct simple models using SIMULINK. ● Construct the required functions to perform the operations in main problems..
Photos	

K.Kalyankumar
Coordinator

HEAD
Department of Electrical &
Head of the Department Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

⊕ /ksrmce.ac.in   Follow Us: f ◎ ⊌ /ksrmceofficial

K. S. R. M. COLLEGE OF ENGINEERING

(UGC-Autonomous)

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

Kadapa, Andhra Pradesh,Indai-516003

KSNR
lives on..

Department of Electrical & Electronics Engineering

Certificate

This is to certify that Mr/Miss. **AMBAVARAM SANJANA** has successfully Completed the certification course on "MATLAB/SIMULINK" organized by the Department of Electrical & Electronics Engineering, KSRM College of Engineering(Autonomous), Kadapa from 13.06.2022 to 04.07.2022.

Co-ordinatorSignature

HoD Signature

Principal Signature

⊕ /ksrmce.ac.in   Follow Us: 🇫 🔘 🐦 /ksrmceofficial
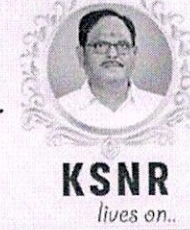
K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

K. S. R. M. COLLEGE OF ENGINEERING
(UGC-Autonomous)
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
Kadapa, Andhra Pradesh,Indai-516003

KSNR
lives on..

Department of Electrical & Electronics Engineering

Certificate

This is to certify that Mr/Miss. **MALLEM CHARAN KUMAR** has successfully Completed the certification course on **"MATLAB/SIMULINK"** organized by the Department of Electrical & Electronics Engineering, KSRM College of Engineering(Autonomous), Kadapa from 13.06.2022 to 04.07.2022.

Co-ordinatorSignature

HoD Signature

Principal Signature

/ksrmce.ac.in   Follow Us: 🅕 📷 🐦 /ksrmceofficial

K.S.R.M. COLLEGE OF ENGINEERING
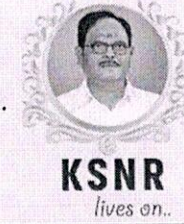## (UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

K. S. R. M. COLLEGE OF ENGINEERING
(UGC-Autonomous)
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
Kadapa, Andhra Pradesh,Indai-516003

KSNR
lives on..

Department of Electrical & Electronics Engineering

Certificate

This is to certify that Mr/Miss. **KATIKA MOHAMMED KAIF ALI** has successfully Completed the certification course on "MATLAB/SIMULINK" organized by the Department of Electrical & Electronics Engineering, KSRM College of Engineering(Autonomous), Kadapa from 13.06.2022 to 04.07.2022.

Co-ordinatorSignature   HoD Signature   Principal Signature

/ksrmce.ac.in   Follow Us: ☐ ☐ ☐ /ksrmceofficial

K.S.R.M. COLLEGE OF ENGINEERING
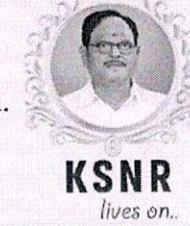**(UGC-AUTONOMOUS)**
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

K. S. R. M. COLLEGE OF ENGINEERING

(UGC-Autonomous)

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

Kadapa, Andhra Pradesh,Indai-516003

KSNR
lives on..

Department of Electrical & Electronics Engineering

Certificate

This is to certify that Mr/Miss. **CHEMIKALA RAMA DEVI** has successfully Completed the certification course on "MATLAB/SIMULINK" organized by the Department of Electrical & Electronics Engineering, KSRM College of Engineering(Autonomous), Kadapa from 13.06.2022 to 04.07.2022.

Co-ordinatorSignature   **HoD Signature**   **Principal Signature**

K.S.R.M. COLLEGE OF ENGINEERING
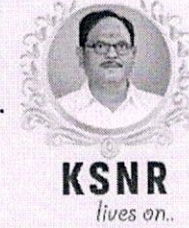**(UGC-AUTONOMOUS)**
Kadapa, Andhra Pradesh, India – 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

KSNR
lives on..

K. S. R. M. COLLEGE OF ENGINEERING
(UGC-Autonomous)
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
Kadapa, Andhra Pradesh,Indai-516003

KSNR
lives on..

Department of Electrical & Electronics Engineering

Certificate

This is to certify that Mr/Miss. <u>BERI YASWANTH</u>   has successfully Completed the certification course on "MATLAB/SIMULINK" organized by the Department of Electrical & Electronics Engineering, KSRM College of Engineering(Autonomous), Kadapa from 13.06.2022 to 04.07.2022.

Co-ordinatorSignature   **HoD Signature**   **Principal Signature**

⊕ /ksrmce.ac.in   Follow Us: ▊ ▣ ✈ /ksrmceofficial

Feedback on Certification Course on " MATLAB /Simulink"

1. Roll Number *

   _____

2. Name of the Student *

   _____

3. Is the course content met your expectation *

   Mark only one oval.

   ◯ Yes

   ◯ No

4. Is the lecture sequence well planned *

   Mark only one oval.

   ◯ Yes

   ◯ No

5. The contents of the course is explained *
   with examples

   Mark only one oval.

   ◯ Agree

   ◯ Strongly Agree

   ◯ disagree

6. Is the level of course high *

   Mark only one oval.

   ◯ Agree

   ◯ Disagree

7. Is the course exposed you to the new knowledge and practices

   Mark only one oval.

   ◯ Agree

   ◯ Strongly Agree

   ◯ disagree

8. Is the lecturer clear and easy to understand *

   Mark only one oval.

   1 ◯

   2 ◯

   3 ◯

   4 ◯

   5 ◯

9. Rate the value of course in increasing your skills *

Mark only one oval.

1 ◯

2 ◯

3 ◯

4 ◯

5 ◯

10. Any issues *

_____

Google Forms

K.S.R.M. COLLEGE OF ENGINEERING

(AUTONOMOUS)

Department of Electrical & Electronics Engineering

Feedback of students on Certification Course on " MATLAB /Simulink"

S.No	Roll Number	Name of the Student	Is the course content met your expectation	Is the lecture sequence well planned	The contents of the course is explained with examples	Is the level of course high	Is the course exposed you to the new knowledge and practices	Is the lecturer clear and easy to unde	Rate the value of course in increasing	Any issues
1	209Y1A0201	ABBARATHI GOPI	Yes	Yes	agree	Agree	Strongly agre	3	5	no
2	209Y1A0202	ADIMULAM GANGADHAR	Yes	Yes	agree	Agree	Strongly agre	4	5	nithing
3	209Y1A0203	AMBAVARAM SANJANA	Yes	Yes	Strongly agre	Agree	Strongly agre	4	5	Good
4	209Y1A0204	BANDI NEERAJA REDDY	Yes	Yes	Strongly agre	Agree	Strongly agre	4	4	Good
5	209Y1A0205	BERI YASWANTH	Yes	Yes	Strongly agre	Agree	Strongly agre	4	3	Good
6	209Y1A0206	CHEMIKALA RAMA DEVI	Yes	Yes	agree	Agree	Strongly agre	4	4	Good
7	209Y1A0208	DERANGULA VENKATA NAGA RUCHITHA	Yes	Yes	agree	Agree	Strongly agre	5	4	Good
8	209Y1A0209	DUGGIREDDY DHARANI	Yes	Yes	Strongly agre	Agree	Strongly agre	5	4	Good
9	209Y1A0210	DUGGIREDDY TEJASWINI	Yes	Yes	agree	Agree	Strongly agre	5	5	Good
10	209Y1A0211	GADDAM HARIKA	Yes	Yes	agree	Agree	Strongly agre	5	5	Nothing
11	209Y1A0213	GANDLA VENKATA SUNIL KUMAR	Yes	Yes	agree	Agree	Strongly agre	5	5	no
12	209Y1A0214	GOLLA SIVAKUMAR	Yes	Yes	agree	Agree	Strongly agre	3	4	no
13	209Y1A0217	KARNATAKAM LIKHITHA	Yes	Yes	Strongly agre	Agree	Strongly agre	3	4	no
14	209Y1A0218	KATIKA MOHAMMED	Yes	Yes	Strongly agre	Agree	Strongly agree		5	no
15	209Y1A0219	KORAMUTLA MOHAN	Yes	Yes	Strongly agre	Agree	Strongly agre	5	4	nothing

K.S.R.M. COLLEGE OF ENGINEERING
(AUTONOMOUS)
Department of Electrical & Electronics Engineering
Feedback of students on Certification Course on " MATLAB /Simulink"

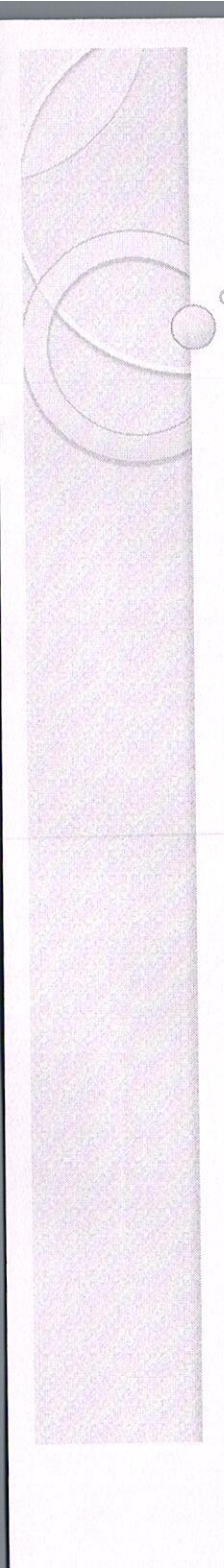| S.No	Roll Number	Name of the Student	Is the course content met your expectation	Is the lecture sequence well planned	The contents of the course is explained with examples	Is the level of course high	Is the course exposed you to the new knowledge and practices	Is the lecturer clear and easy to unde	Rate the value of course in increasing	Any issues
16	209Y1A0221	KUMMARI HEMANTH	Yes	Yes	agree	Agree	Strongly agre	5	5	Nothing
17	209Y1A0222	LADDAGIRI NARASIMHA	Yes	Yes	agree	Agree	Strongly agre	5	4	no
18	209Y1A0223	MADIREDDY GOWRI (W)	Yes	Yes	agree	Agree	Strongly agre	5	4	Nothing
19	209Y1A0225	MALLELA CHANDRA	Yes	Yes	agree	Agree	Strongly agre	5	4	Good
20	209Y1A0226	MALLEM CHARAN	Yes	Yes	agree	Agree	Strongly agre	5	5	Good
21	209Y1A0227	MUDDA MAHA LAKSHMI	Yes	Yes	agree	Agree	Strongly agre	5	5	Good
22	209Y1A0229	NAREDDY SASI REKHA	Yes	Yes	Strongly agre	Agree	Strongly agre	5	5	Good
23	209Y1A0241	SHAIK ALISHA SAMEERA	Yes	Yes	Strongly agre	Agree	Strongly agre	5	5	Good
24	209Y1A0247	SINGARAPU SHASHIKALA	Yes	Yes	Strongly agre	Agree	Strongly agre	5	5	Good
25	219Y5A0204	MAYAKUNTLA SRINIDHI	Yes	Yes	agree	Agree	Strongly agre	4	4	Good
26	219Y5A0205	MUDDALA LAKSHMI DEVI	Yes	Yes	agree	Agree	Strongly agre	4	5	Good

Coordinater

HOD

HEAD
Department of Electrical &
Electronics Engineering
K.S.R.M. College of Engineering
Kadapa -516003.

MATLAB and Simulink

Prepared by:S. Khadhar vali

Outline

- Section I (Jan 30th, 2016)
  - Background
  - Basic Syntax and Commands
  - Linear Algebra
  - Loops

- Section II (Feb 6st, 2016)
  - Graphing & Plots
  - Scripts and Functions

- Section III (Feb 20th, 2016)
  - Linear & System of Equations Solving
  - ODE Solving

- Section IV (Mar 5th, 2016)
  - Simulink

MATLAB and Simulink
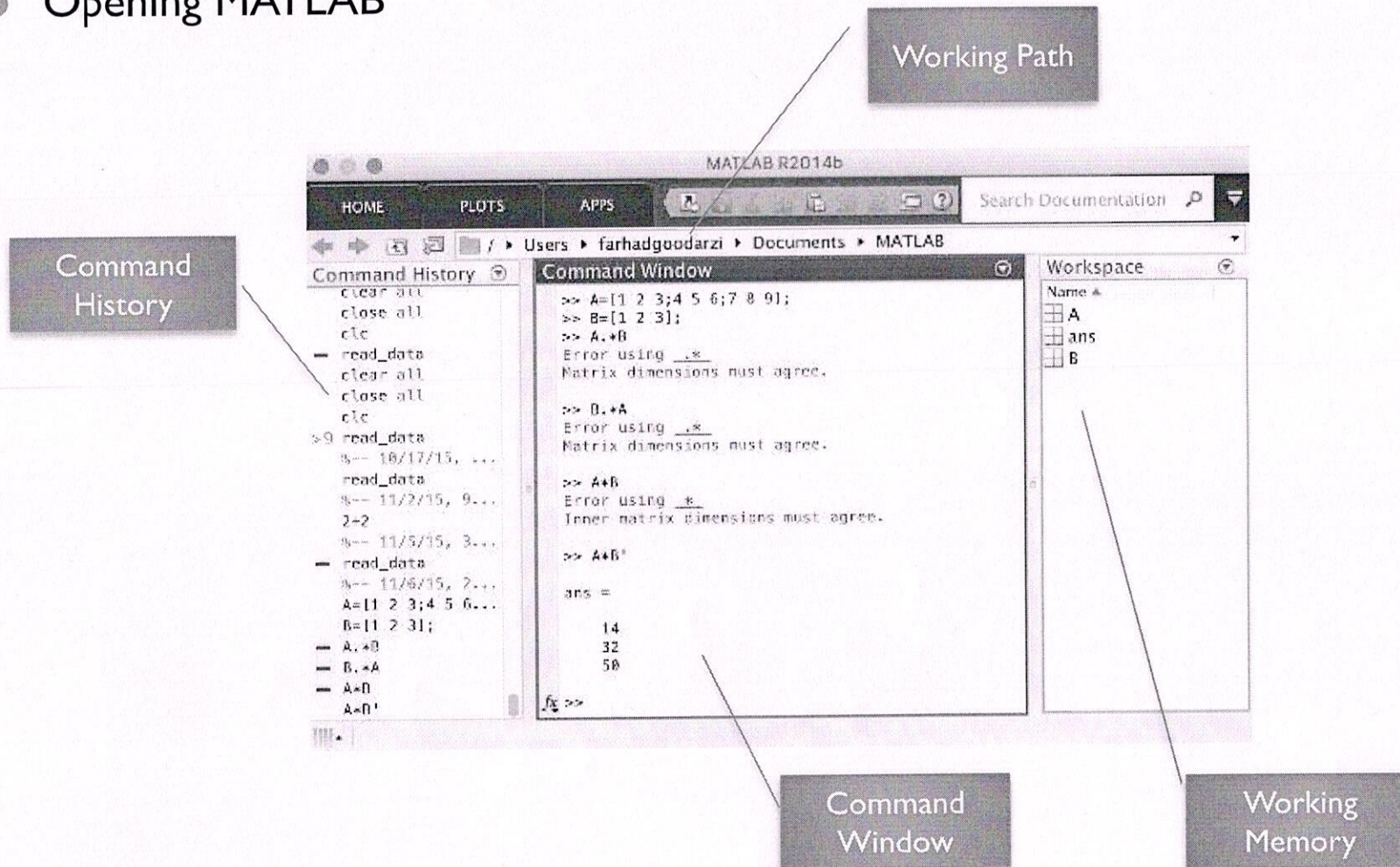
Prepared by:S. Khadhar vali

Outline

- Section I (Jan 30th, 2016)
  - Background
  - Basic Syntax and Commands
  - Linear Algebra
  - Loops

- Section II (Feb 6st, 2016)
  - Graphing & Plots
  - Scripts and Functions

- Section III (Feb 20th, 2016)
  - Linear & System of Equations Solving
  - ODE Solving

- Section IV (Mar 5th, 2016)
  - Simulink

Section 1

- Background
- Basic Syntax and Commands
- Linear Algebra
- Loops

Background

- MATLAB = Matrix Laboratory (developed by The MathWorks).
- Opening MATLAB

Variables

- Have not to be previously declared
- Variable names can contain up to 63 characters
- Variable names must start with a letter followed by letters, digits, and underscores(Valid: x1 = 5, Invalid: 1x = 5)
- Variable names are case sensitive (a1 does NOT equal A1)

Operators

- EX: Using command window
  - >> x = 5; % this is used as a comment
  - >> y = 3;
  - >> z = x + y
    - z = 8
- Semicolon (;) : Suppresses output
- Percentage (%) : Commenting. Only good for that line

MATLAB Special Variables

ans	Default variable name for results
pi	Value of pi number (3.14)
eps	Smallest incremental number
inf	Infinity
NaN	Not a number e.g. 0/0
realmin	The smallest usable positive real number
realmax	The largest usable positive real number
i,j	Imaginary unit

MATLAB Assignment & Operators

Assignment	=	a = b (assign b to a)
Addition	+	a + b
Subtraction	-	a - b
Multiplication	*	or:* a*b or a.*b
Division	/	or ./ a/b or a./b
Power	^	.^ a^b or a.^b

MATLAB Matrices

- MATLAB treats all variables as matrices. For our purposes a matrix can be thought of as an array, in fact, that is how it is stored.

- Vectors are special forms of matrices and contain only one row OR one column.

- Scalars are matrices with only one row AND one column

MATLAB Matrices

○ A matrix with only one row is called a row vector. A row vector can be created in MATLAB as follows (note the commas):

```
» rowvec = [12 , 14 , 63]
  rowvec =
     12 14 63
```

◉ A matrix with only one column is called a column vector. A column vector can be created in MATLAB as follows (note the semicolons):

```
» colvec = [13 ; 45; -2]
  colvec =
     13
     45
     -2
```

MATLAB Matrices

- A matrix can be created in MATLAB as follows (note the commas AND semicolons):

» matrix = [1 , 2 , 3 ; 4 , 5 ,6 ; 7 , 8 , 9]

matrix =

    1 2 3

    4 5 6

    7 8 9

Index

- MATLAB index starts with 1, NOT 0!

- Vector Index:
  - a = [22 17 7 4 42]

    - a(1) = 22
    - a(3) = 7

- Matrix Index:
  - a = [7 12 42; 5 1 23; 4 9 10];

    - a(1, 3) = 42
    - a(3, 2) = 9

$$a = \begin{bmatrix} 7 & 12 & 42 \\ 5 & 1 & 23 \\ 4 & 9 & 10 \end{bmatrix}$$