



DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by A.I.C.T.E., New Delhi & Affiliated to JNTUK, Kakinada)

A NAAC Accredited Institute

An ISO 9001:2008; ISO 14001:2004 & OHSAS 18001:2007 Certified Institution
NH-5, Anakapalle – 531002, Visakhapatnam, A.P.

Mobile: +91 9963981111, Website: www.diet.edu.in, E-mail: info@diet.edu.in

CIRCULAR

Anakapalle

Dt: 18-11-2020

Department of Electronics & Communication Engineering is hereby informed that, in view of the feedback received from III B.Tech. students of ECE branch regarding skill enhancement and to improve the expertise of students in MatLab, HOD is advised to depute a faculty from ECE to design and develop a suitable course structure in line with advanced topics of Signal processing using MatLab for working on real time applications III B.Tech. students of ECE branch with over 30 working hours. Please ensure that this Add-on course helps them to understand the basic data operations in MatLab & to develop basic projects on MatLab, in the signal processing domain. Make arrangements to deliver the course from next week onwards.

PRINCIPAL

Dadi Institute of Engineering & Technology, Anakapalle

Dadi Institute of Engineering & Technology



Approved by AICTE & Permanently Affiliated to JNTUK
NAAC Accredited Institute & Inclusion under Section 2(f) & 12(B) of the UGC Act
NH-16, Anakapalle, Visakhapatnam, Andhra Pradesh
9963694444, 9963981111, www.diet.edu.in, info@diet.edu.in

Department of Electronics and Communication Engineering

Presents

A four Week Training Program

on

**"MatLab for Signal
Processing"**

(23-11-2020 to 19-12-2020)

Course Instructor

Mr M Kishore Kumar

Assistant Professor, Department of ECE

Venue:

Computer Lab 8, 3rd Floor, DIET



About the Institute

Dadi Institute of Engineering & Technology is a top ranked Engineering and Management College affiliated to Jawaharlal Nehru Technological University, Kakinada. The Institute is NAAC Accredited, ISO Certified and also associated with many professional bodies in the field of Engineering, Technology and Management. It strives to promote the highest standards among the students and enable them to Build a New World. Dadi Institute of Engineering & Technology is distinctive among institutions of higher learning. Founded in 2006 by Sri Dadi Veerabhadra Rao, an academician and former Minister as the first multicultural and co-educational college in Anakapalle which admits only academically promising students.

About ECE Department

The Department of ECE was established in the year 2006. It offers B.Tech. Program with an initial intake of 120. It also offers M.Tech. Program in Systems and Signal Processing. The department has good infrastructural facilities with full fledged laboratories equipped with adequate hardware and software. The faculty members are actively involved in research and are publishing papers in reputed national and international journals/conferences.

About the course

Students will be able to learn the MatLab and its Basic Tool box, Signal Processing Toolbox, which are useful to operate on the real-time Signaling projects. These Two of the basic Toolboxes that mathematically describe the performance of Systems.



Electronics and Communications Engineering

MatLab for Signal Processing

Course Instructor:

Malla Kishore Kumar
Assistant Professor, ECE Department
Dadi Institute of Engineering & Technology

Duration:

4 Weeks: (23/11/2020 to 19/12/2020)

Overview & Need for the Course:

Students are instructed to learn the basics of MatLab in this course. However they need to learn some advanced topics for working on real time applications. The course covers content required to develop basic projects on MatLab, in signal processing domain.

Course Objectives: To

- Understand the basic data operations in MatLab
- Provide knowledge on built in commands.
- Develop the skill required to handle large amounts of data.
- make the student handling real time sensor data.

Course Outcomes:

By the end of the course, the student will be able to

- Handle matrix operations.
- Generate and manipulate data as per the requirement.
- Develop real time projects using MatLab.

Requirements:

- Basic Knowledge on C-Programming.
- A Computer with an Internet Connection.

Course Contents:

1. Course overview
2. Command
3. MatLab desktop and editor
4. Vector and matrix
5. Indexing into and modifying arrays
6. Array calculations
7. Calling function
8. Obtaining help
9. Plotting data
10. Logical arrays
11. Introducing Signal Processing Tool Box
12. Introducing Image Processing Tool Box
13. Programming
14. Final project
15. Conclusion

Classroom:

The screenshot displays the MATLAB R2014a environment. The top menu bar includes HOME, PLOTS, APPS, EDITOR, PUBLISH, and VIEW. The toolbar contains icons for file operations (New, Open, Save, Find Files, Compare, Print), editing (Insert, Comment, Indent), navigation (Go To, Find), and execution (Run, Run and Advance, Run Section, Advance, Run and Time). The current folder is 'H:\Instal Softwares\MatLab\bin', and the editor window shows a script named 'mytask_2.m' with the following code:

```
1 - clear;
2 - clear all;
3 - close all;
4 - img = imread('boston_night.JPG');
5 - % Enter your code below
6 - img1=rgb2gray(img);
7 - imshow(img1);
8 - img2=double(img1);
9 - img3=img2.*1.5;
10 - figure
11 - imshow(img3);
12 - img4=imrotate(img3,-1);
13 - figure=
14 - imshow(img4);
15 - img5=cast(img4,'uint8');
16 - %imgadjusted=img(1:3456,1:5184);
```

The workspace table below shows the variables created during execution:

| Name | Value | Min | Max |
|------|-------------------|----------|----------|
| img | 3456x5184x3 uint8 | <Too ... | <Too ... |
| img1 | 3456x5184 uint8 | <Too ... | <Too ... |
| img2 | 3456x5184 double | <Too ... | <Too ... |
| img3 | 3456x5184 double | <Too ... | <Too ... |
| img4 | 3549x5245 double | <Too ... | <Too ... |
| img5 | 3549x5245 uint8 | <Too ... | <Too ... |

The Command Window shows the execution output, including warnings about image size and the current prompt 'fz >>':

```
In mytask_2 at 7
Warning: Image is too big to fit on screen: displaying at 13%
> In imshow/private/initSize at 71
In imshow at 282
In mytask_2 at 11
Warning: Image is too big to fit on screen: displaying at 13%
> In imshow/private/initSize at 71
In imshow at 282
In mytask_2 at 14
fz >>
```




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COURSE COMPLETION CERTIFICATE

This Certificate is given to

KAILLA ANITHA




For the successful completion of 4-week course on MatLab for Signal

Processing from 23/11/2020 to 19/12/2020)



Mr. M Kishore Kumar

Course Instructor



Dr. Ch Narasimham

Principal



Mr. Dadi Ratnakar

Chairman





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This Certificate is given to

PANNDURU VASU




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Mr. M Kishore Kumar

Course Instructor



Dr. Ch Narasimham

Principal



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COURSE COMPLETION CERTIFICATE

This Certificate is given to

S SANDHYA



For the successful completion of 4-week course on MatLab for Signal

Processing from 23/11/2020 to 19/12/2020)

Mr. M Kishore Kumar

Course Instructor

Dr. Ch Narasimham

Principal

Mr. Dadi Ratnakar

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This Certificate is given to

RAKOTI SAILAJA



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Course Instructor

Dr. Ch Narasimham

Principal

Mr. Dadi Ratnakar

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This Certificate is given to

PARUPALLI RAJESH



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Processing from 23/11/2020 to 19/12/2020)

Mr. M Kishore Kumar

Course Instructor

Dr. Ch Narasimham

Principal

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STUDENT FEEDBACK FORM

Dear candidate,

Your feedback is critical for the Institute to ensure that we are meeting your educational needs. We would appreciate if you could take a few minutes to share your opinions with us so that we can serve you better.

Title of the Activity: Matlab for signal processing

Date Duration: 4w (26/11/20 - 21/12/20) Instructor Coordinator: M. Kishore Kumar

- | | | | | | |
|---|---|---|---|---|---|
| 1. The content was as described in Publicity Material | 1 | 2 | 3 | 4 | 5 |
| 2. The program was helpful in practical understanding | 1 | 2 | 3 | 4 | 5 |
| 3. I will recommend this course/workshop program to relevant conservators across our campus | 1 | 2 | 3 | 4 | 5 |
| 4. The program was well placed within allotted time | 1 | 2 | 3 | 4 | 5 |
| 5. The instructor was an effective communicator | 1 | 2 | 3 | 4 | 5 |

Feedback Suggestions

Has to improve the way of explanation & convincing of topic.

Please return this form to the Course Instructor/ Organizer/ Coordinator at the end of the workshop/add-on course/ Training Program



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| 5. The instructor was an effective communicator | 1 | 2 | 3 | 4 | 5 |

Feedback Suggestions

learned many advanced topics in the matlab

Please return this form to the Course Instructor/ Organizer/ Coordinator at the end of the workshop/add-on course/ Training Program