



# Jyothi Engineering College

NAAC Accredited College with NIR Accredited Programmes\*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O. CHERUTHURUTHY, THRISSUR. PIN 679531 PH: +91 4884 259000, 274423 FAX: 04884 274777



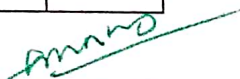
CREATING TECHNOLOGY LEADERS OF TOMORROW  
ESTD 2002

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.

## 5.1.3 Following Capacity development and skills enhancement activities are organised for improving students capability (8)

1. Soft skills, 2. Language and communication skills, 3. Life skills (Yoga, physical fitness, health and hygiene), 4. ICT/Computing Skills

Name of the capability enhancement program	Date of implementation (DD-MM-YYYY)	Number of students enrolled	Name of the agencies/consultants involved with contact details (if any)	Page No.
Soft Skills: Pre-Placement Training (Aptitude - Infosys Pattern)	19/10/2015 - 20/10/2015	123	Prometis Ltd., RoC-Bangalore, G-5, Maruthu medows 6th Cross, C V Raman Nagar Bangalore Bangalore KA 560097 IN	1
ICT/Computing Skills: Add on Course on "Programming in Python"	08/08/2015- 26/09/2015	62	CSE Department, JECC, Jyothi Hills, Panjal Road, Vettikattiri PO, Cheruthuruthy	8
Soft Skills: 2 Days Aptitude training program "ENABLE"	06/02/2017 - 07/02/2017	119	ICT Academy of Kerala, ICT Academy HQ ,L-9, Thejaswini Building,	12
ICT/Computing Skills: Add on Course on C Programming	01/10/2016 - 05/11/2016	63	Dept of CSE, JECC, Jyothi Hills, Panjal Road, Vettikattiri PO, Cheruthuruthy	13
Language and Communication Skills: Inhouse training programs	01/08/2017 - 14/12/2017	1684	Placement and Training Cell, JECC, Jyothi Hills, Panjal Road, Vettikattiri PO, Cheruthuruthy, Thrissur, Kerala 679531	16
ICT/Computing Skills: Add on Course on "Introduction to	16/09/2017 - 03/11/2017	30	Dept. of ECE, JECC, Jyothi Hills, Panjal Road, Vettikattiri PO, Cheruthuruthy Thrissur, Kerala 679531	20
Soft Skills: Global Education Seminar	09-05-2019	94	Mr. Sony Varghese, Executive Director, Easy Link Academy Thrissur.	27
ICT/Computing Skills: Add on course on CCTV Installation	18/09/2019	25	Dept. of ECE, JECC, Jyothi Hills, Panjal Road, Vettikattiri PO, Cheruthuruthy, Thrissur, Kerala 679531	28

  
 Dr. SUNNY JOSEPH KALAYATHANKAL  
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 PRINCIPAL  
 Jyothi Engineering College  
 Cheruthuruthy P.O.- 679 531



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www.jecc.ac.in | E-mail : info@jecc.ac.in


Training Name : Pre-Placement Training (Aptitude)

Conducted By : Prometis Ltd

Duration : 19<sup>th</sup> and 20<sup>th</sup> Oct 2015

Target Audience : S7 Students

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**Annexure A**

**Indicative course content**

**Quantitative Aptitude**

- Number systems 1
  - Leave the Calculators away
  - Speed Math
  - Number crunching and Approximations
  - Back to School
- Number systems 2
  - Number Systems
  - LCM,HCF
  - Factors and Factorials
  - Units Digits
  - Remainders
  - Even, odd and Prime numbers
- Percentages and Profit and Loss
- Ratio proportion and Variation
- Averages Alligations and mixtures
- Simple and Compound Interest
- Time Speed and distance
- Time and work
- Clocks Calendars and Cubes
- Permutation Combination and probability
- Data Interpretation
- Data Sufficiency
- Mathematical reasoning
- Equations
- Set Theory and Venn Diagrams

**Analytical Reasoning**

- Coding decoding
- Series completion
- Family Trees
- Puzzles
- Direction Sense
- Arrangements
- Logical Deduction
- Analogies

**Verbal Ability**

- Basic Grammar
- Reading Comprehension
- Jumbled Paragraphs
- Sentence Correction
- Fill in the blanks
- Vocabulary
- Analogies

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**Soft Skills Training**

- Group Discussion Participation
- Personal Interview Training and Resume Building
- Communication Skills
- Resume building
- E-mail etiquette/covering letters

**Annexure B**



Dear Sir

Prometis is having a bunch of young talented professionals. They are highly resourceful and keep abreast with latest Campus Recruitment Training Trends. Moreover they put it across quite effectively.

Regards,

Dr. Mathew C D  
Placement Officer  
Mob: 0 9539321777  
Department of Training & Placement  
**Toc H Institute of Science & Technology (TIST)**

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Cheruthuruthy P.O.- 679 531

From

Sobha Xavier

AP ,CSE DEPT.

Add-On-Course In Charge

To

Principal

JECC

Respected Sir,

The add-on- course for this academic year is scheduled from 8/8/2015 to 26/9/2015. As per the instruction from the principal and management, every Saturday will be utilized for the same.

I kindly request you grant us the permission for conducting the add-on-courses.

Thanking you,

08/07/2015

Cheruthuruthy

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Yours faithfully

*Sobha*  
Sobha Xavier P

Recommended  
*of*

*amano*  
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## Add-on Courses

### Programming Python

**Expected Course Outcome:**

1. Describe the core syntax and semantics of Python programming language.
2. Discover the need for working with the strings and functions.
3. Illustrate the process of structuring the data using lists, dictionaries and tuples
4. Infer the Object-oriented Programming concepts in Python.
5. To handling with data and information processing techniques.
6. To solve problems, explore real-world software development challenges, and create practical applications


**Syllabus**

1. Installing Python; basic syntax, interactive shell, editing, saving, and running a script.
2. The concept of data types: variables, Conditions, Boolean logic, logical operators; ranges, Control statements: if-else, loops (for, while).
3. String manipulations, Lists and Tuples, Dictionaries.
4. Concept of function, Function calls.
5. File concepts-Operations.
6. Classes and OOP: classes, objects, attributes and methods, OOP continued: inheritance, polymorphism, Numerical Computations with Python.
7. Matplotlib Introduction, Introduction to pyplot, Python CSV, Creating and Viewing HTML Files with Python, Python MySQL, Web Development using FLASK framework.

**COURSE OUTCOMES VS PO MAPPING:**

SLNo	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	3	2	3	3	3	1	1	2	1	1	1	3
C02	3	2	3	3	2	2	2	1	1	2	2	3
C03	3	3	3	2	2	1	1	1	1	1	2	3
C04	3	3	3	2	2	1	2	1	1	1	2	3
C05	3	3	3	2	2	2	1	1	1	1	2	3
C06	3	3	3	2	2	2	1	1	1	1	2	3
Avg	3	2.7	3	2.3	2.2	1.5	1.3	1.2	1	1.2	1.8	3

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N.A.A.T Accredited College with 100% Accredited Programmes\*

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CREATING TECHNOLOGICAL LEADERS OF TOMORROW  
ESTD 2007

NSA, accredited B.Tech Programmes in Mechanical Engineering, Electrical & Electronics Engineering, Information Technology, Computer Science & Engineering, Civil Engineering, Chemical Engineering, Environmental Engineering, Food Engineering, Industrial Engineering, Metallurgical Engineering, Textile Engineering, and Biotechnology. Approved by AICTE (Approved) since 2014-2022

## Department of Computer Science and Engineering Add-On Course - Python Programming

### Course Outline

Hour	Topics	COs
1	Installing Python; basic syntax, interactive shell, editing, saving, and running a script.	CO1
2	The concept of data types; variables.	CO1
3	Conditions. Boolean logic, logical operators; ranges	CO1
4	Control statements: if-else, loops (for, while).	CO1
5	String manipulations.	CO2
6	Lists and Tuples.	CO3
7	Dictionaries.	CO3
8	Concept of function, Function calls.	CO2
9	File concepts-Operations.	CO4
10	Classes and OOP: classes, objects, attributes and methods.	CO5
11	OOP continued: inheritance, polymorphism	CO5
12	Numerical Computations with Python.	CO6
13	Matplotlib Introduction.	CO6
14	Introduction to pyplot.	CO6
15	Python CSV.	CO4, CO6
16	Creating and Viewing HTML Files with Python.	CO6
17	Python MySQL.	CO6
18	Web Development using FLASK framework.	CO6
19	Micro project-1	CO1, CO6
20	Micro project-2	CO1, CO6

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## Course objectives:

1. Describe the core syntax and semantics of Python programming language.
2. Discover the need for working with the strings and functions.
3. Illustrate the process of structuring the data using lists, dictionaries and tuples
4. Infer the Object-oriented Programming concepts in Python.
5. To handling with data and information processing techniques.
6. To solve problems, explore real-world software development challenges, and create practical applications.

## Course Outcomes:

COs	Statements
CO1	Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
CO2	Express proficiency in the handling of strings and functions.
CO3	Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries and Tuples.
CO4	Identify the commonly used operations involving file systems.
CO5	Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.
CO6	Express proficiency in the handling data and information processing techniques and web development

Proposed By:

Bineesh M. AP CSE Dept.  
Sobha Xavier P, AP CSE Dept.

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## Placement and Training Department

Name of the Programme:	Enable
Trainers	ICT Academy of Kerala
No. of days of training	2 days (Aptitude)
Date	6 <sup>th</sup> and 7 <sup>th</sup> Feb.2017(Monday & Tuesday)
Branches	CSE, ECE & EEE
Total no. of eligible students	127
Eligibility Criteria	7 CGPA with no active backlogs

### COURSE CONTENTS

Day-1 , Monday ,06-02-2017		
SL	Topic	Duration
1	Percentages	1 Hr
2	Ratios	1 Hr
3	Linear equations	1 Hr
4	Coding and Analogies	1 Hr
5	Time and Distance	1 Hr
6	Time and Work	1 Hr
7	Analytical Reasoning	1 Hr
Day-2 , Tuesday, 07-02-2017		
SL	Topic	Duration
8	Simple and Compound Interest	1 Hr
9	Profit and Loss	1 Hr
10	Averages	1 Hr
11	Mathematical Operations and	1 Hr
12	Fractions	1 Hr
13	Blood Relations	1 Hr
14	Direction Sense	1 Hr

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From

Sobha Xavier

AP ,CSE DEPT.

Add-On-Course In Charge

To

Principal

JECC

Respected Sir,

The add-on- course for this academic year is scheduled from 1/10/2016 to 5/11/2016. As per the instruction from the principal and management, every Saturday will be utilized for the same.

I kindly request you grant us the permission for conducting the add-on-courses.

Thanking you,

02/09/2016

Cheruthuruthy

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Yours faithfully

Sobha Xavier P

Recommended  
*of*

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16-17

## Add-on Courses

### C Programming

**Expected Course Outcome:**

1. Know the basics of C programming language.
2. To get the knowledge about functions and recursion.
3. The student will be able to handle arrays.
4. The student will be familiarised with structure and union.

**Syllabus**

Structure of C program – Operators and expressions – Procedure and order of evaluation – Input and Output functions. while, do -while and for statements, if, if-else, switch, break, continue, goto, and labels. Programming examples.

Functions and Program structures: Functions – declaring, defining, and accessing functions – parameter passing methods – Recursion . Library functions. Header files – C pre-processor. Example programs.

Arrays: Defining and processing arrays – passing arrays to functions – two dimensional and multidimensional arrays – application of arrays. Example programs.

Structures – declaration, definition and initialization of structures, unions, Pointers: Concepts, declaration, initialization of pointer variables simple examples.

**COURSE OUTCOMES VS PO MAPPING:**

SLNo	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	3	2	3	3	3	1	1	2	1	1	1	3
C02	3	2	3	3	2	2	2	1	1	2	2	3
C03	3	3	3	2	2	1	1	1	1	1	2	3
C04	3	3	3	2	2	1	2	1	1	1	2	3
Avg	3	2.5	3	2.5	2.3	1.3	1.5	1.3	1	1.3	1.8	3

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DEPARTMENT OF CSE- ADD-ON COURSE SCHEDULE

ADD-ON COURSE	DATE & DAY	HOURS ALLOTTED	VENUE
C programming	01/10/2016(SATURDAY)	1 to 7th Hour	Data structure lab
	15/10/2016(SATURDAY)	1 to 7th Hour	
	22/10/2016(SATURDAY)	1 to 7th Hour	
	29/10/2016(SATURDAY)	1 to 7th Hour	
	05/11/2016(SATURDAY)	1 to 7th Hour	

Staff In-Charge  
Ms.Sobha Navier P

Total Hours

35

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## In-house Training programs for placements preparations and communication/soft skillsdevelopment

### SEMESTER 1

APTITUDE

SOFT SKILLS

NIL

\*PAT Orientation (1 session per Sem.)

Language Lab (Per KTU Curriculum)

Business English Certificate from Cambridge- Preliminary/Vantage) Classes by Dr. Usha Menon, English Trainer

### SEMESTER 2

APTITUDE

SOFT SKILLS

NIL

\*Internship Orientation (1 session per Sem.)

Language Lab (As Per KTU Curriculum)

Business English Certificate from Cambridge- Preliminary/Vantage) Classes by Dr. Usha Menon, English Trainer

### SEMESTER 3

APTITUDE

SOFT SKILLS

NIL

\*Startup Orientation (1 session per Sem.)

Life Skills-Optional (As Per KTU Curriculum)

Business English Certificate from Cambridge- (Vantage/Advanced) for the interested students.

### SEMESTER 4

APTITUDE

SOFT SKILLS

NIL

1Hr per class/batch per week is allotted and incorporated into the regular time table. The

classes will be handled by ion house soft skill trainer Prof. davis Padical and Placement officer Mr. Bibin Joy

### SEMESTER 5

APTITUDE

SOFT SKILLS

NIL

1Hr per class/batch per week is allotted and incorporated into the regular time table. The

classes will be handled by ion house soft skill trainer Prof. davis Padical and Placement officer Mr. Bibin Joy

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*[Signature]*  
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## In-house Training programs for placements preparations and communication/soft skills development

### SEMESTER 6

APTITUDE	SOFT SKILLS
<p>1Hr. per class/batch per alternate week is allocated in the regular time table . The students will be taken to the Computer lab and given a practise in aptitude tests using the inhouse software <b>Praktiz</b> .</p>	<p>1Hr per class/batch per alternate week is allotted and incorporated into the regular time table. The classes will be handled by in house soft skill trainer Prof. davis Padical</p>

### SEMESTER 7

APTITUDE	SOFT SKILLS
<p>2Hrs. per class/batch per alternate week is allocated in the regular time table . The students will be taken to the Computer lab and given practise in aptitude tests using the inhouse software <b>Praktiz</b> .</p>	<p>2Hrs. per class/batch per alternate week is allotted and incorporated into the regular time table. The classes will be handled by in house soft skill trainer Prof. davis Padical</p>

### SEMESTER 8 (As per requirement /time availability)

APTITUDE	SOFT SKILLS
<p>Practise aptitude tests using in house <b>Praktiz</b> software or <a href="http://www.indiabix.com">www.indiabix.com</a></p>	<p>Mock GDs, Interviews Skills Cont...</p>

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*Sunny*

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## COURSE PLAN- SOFT SKILL/COMMUNICATION SKILLS DEVELOPMENT TRAINING (IN-HOUSE) FOR S4,S5,S6,S7

COURSE CODE	COURSE NAME	BATCHES	TRAINER'S NAME
	COMMUNICATIVE ENGLISH	S4, S5, S6, S7	DAVIS PADICAL

### COURSE OBJECTIVES

- To develop communication competence in prospective engineers
- To enable the students to convey thoughts and ideas with clarity and focus
- To develop report writing skills
- To enable them to speak without feeling nervous or apprehension
- To equip them to face personal interviews and group discussion
- To develop phone etiquettes and to acquaint them with video conferencing
- To prepare them on problem solving skills
- To make them understand the synergy of team dynamics and effectiveness
- To create an awareness of Engineering ethics and Human values
- To instill Moral and Social values, Loyalty and also to learn to appreciate the rights of others
- To learn leadership qualities and practice them

### Syllabus:

Need for communication both verbal and non-verbal, Interview skills, Group discussion, Technical and Literary writing, How to write an effective CV, Barriers to communication, Creative thinking, Group dynamics, Leadership skills and Team work.

### Reference books:

- Barun K. Mitra (2011), "Personality Development & Soft skills", First Edition; Oxford Publishers
- Kalyana (2015) "Soft Skill for Managers", First Edition; Wiley Publishing Ltd.
- Larry James (2016) "The First Book of Life Skills"; First Edition; Embassy books
- Shalini Verma (2014); "Development of Life Skills and Professional Practice"; First Edition; Sultan Chand (G/L) & Company
- John C. Maxwell (2014); "The 5 Levels of Leadership", Centre Street, A division of Hachette Book Group Inc.

### Course Structure

Module	Course Plan	Semester	Hours
I	<ul style="list-style-type: none"> <li>• Use of language in communication</li> <li>• Need for effective communication</li> <li>• How to pronounce the right way</li> <li>• Getting rid of MTI (mother tongue influence)</li> <li>• Developing Listening skills</li> <li>• Nonverbal communication – Body language, Gestures</li> <li>• Essential vocabulary building including spellings</li> </ul>	4	6  8

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College



## COURSE PLAN- SOFT SKILL/COMMUNICATION SKILLS DEVELOPMENT TRAINING (IN-HOUSE) FOR S4,S5,S6,S7

II	<ul style="list-style-type: none"> <li>Barriers to communication</li> <li>Use of pleasantries</li> <li>Using of metaphors, similes, phrases, proverbs and anecdotes</li> <li>Intonation and voice modulation</li> <li>Kinesics, Proxemics and Chronemics</li> <li>Getting the homophones right</li> <li>Oral presentation and public speaking through extempore</li> <li>Lecture / discussion with maximum trainee participation</li> <li>An exercise in impromptu speaking to an audience</li> </ul>	5	6  8
III	<ul style="list-style-type: none"> <li>Phone etiquettes including video calls</li> <li>Creating the first &amp; lasting impression: Interview mannerisms, what to bring, what to wear, posture, researching the organization, comparing skills to job requirements, how to frame responses, how to be ready with anecdotes.</li> <li>How to handle personality related questions</li> <li>Netiquettes and writing e-mails</li> <li>Video conferencing practice</li> <li>Letter writing (Technical and Literary writing, Cover letters, Official and Informal letters)</li> <li>Critical Thinking &amp; Problem solving- Creativity, Lateral and analytical thinking.</li> </ul>	6	6  12
IV	<ul style="list-style-type: none"> <li>Self-introduction (Tell me about yourself) &amp; Improvise to the maximum before drives</li> <li>Group Discussion</li> <li>How to write a Resume and CV.</li> </ul>	7	6  12
<b>Teaching approaches</b>			
	Power point presentation, Lecturing & Handouts, Group Discussion, Activities by students, brainstorming, Impromptu Oral presentation, Role plays & case studies, Phone interviews and Video conferencing.		

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Sunny

Dr. SUNNY JOSEPH KALAYATHANKAL  
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PRINCIPAL  
Engineering College  
P.O - 679 531



From

Soumya C

AP ,MR Dept.

Add-On-Course in Charge

To

Principal

JECC

Sub : Request to get sanction to conduct add-on course

Respected Sir,

The add-on- course in MATLAB Programming for Beginners for this academic year is scheduled from 16<sup>th</sup> Feb 2019 to 23<sup>rd</sup> March 2019. The Resource person for the course is Ms. Nyni K A .As per the instruction from the principal and management, every Saturday will be utilized for the same.

I kindly request you grant us the permission for conducting the add-on-courses.

Thanking you,

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11/02/2019

Cheruthuruthy

Yours faithfully

*Soumya*  
Soumya C

*Am*  
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Approved.  
Prof. Ratan. P



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## DEPARTMENT OF MR- ADD-ON COURSE SCHEDULE

ADD-ON COURSE	DATE & DAY	HOURS ALLOTTED	VENUE
MATLAB Programming for Beginners	16/02/2019(SATURDAY)	1 to 6th Hour	SS Lab/Project Lab
	23/02/2019(SATURDAY)	1 to 6th Hour	
	02/03/2019(SATURDAY)	1 to 6th Hour	
	16/03/2019(SATURDAY)	1 to 6th Hour	
	23/03/2019(SATURDAY)	1 to 6th Hour	

*Soumya C*  
 Staff In-Charge  
 Ms. Soumya C

Total Hours 30

*[Signature]*  
 HOD/MR

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*[Signature]*  
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## MATLAB Programming for Beginners

Eligible for: S4&MR/ECE/EEE

### ADD ON COURSE

The course will give the fundamental knowledge and practical abilities in MATLAB required to effectively utilize this tool in technical numerical computations and visualisation in other courses. MATLAB is a very popular language for technical computing used by students, engineers, and scientists in universities, research institutes, and industries all over the world. The software is popular because it is powerful and easy to use, and it has a great number of tools, built in functions and simulation windows which can be used for many applications in many fields.

#### Course Objective

1. To impart the knowledge to the students with MATLAB software.
2. To provide a working introduction to the MATLAB technical computing environment.
3. To introduce students the use of a high-level programming language, MATLAB.

#### Course Outcome

On successful completion of the course, the students should be able to

1. Understand the fundamental computer programming concepts such as variables, control structures, functions, data types and how to handle them in MATLAB.
2. Understand the main features of the MATLAB program development environment to enable their usage in the higher learning.
3. They shall learn a great number of MATLAB commands and how to use them in programming and in many applications in Mathematics.
4. They shall be able to write a MATLAB script and create a useful functions to be used later in another mathematical subject.

#### Skills Required

- C Programming, Basics of Engineering Mathematics

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Jyothi Engineering College is established in 1983 and is recognized by the Government of Kerala. It is also approved by AICTE and affiliated to APJ Abdul Kalam Technological University. The college offers B.Tech. programs in Computer Science & Engineering, Bio-Informatics & Computational Engineering, Electrical & Electronics Engineering and Mechanical Engineering. It is also approved by the Government of Kerala for the academic years 2018 to 2022.

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## STARTING WITH MATLAB

(7 Hours)

Starting MATLAB, MATLAB windows - working in the command window - arithmetic operations with scalars - display formats - Elementary math built-in functions- Defining scalar variables - Useful commands for managing variables - Script files - Examples of MATLAB applications.

## CREATING ARRAYS

(4 Hours)

Creating a one-dimensional array (vector) -Creating a two-dimensional array (matrix) - Notes about variables in MATLAB - The transpose operator - Array addressing - Using a colon : in addressing arrays - Adding elements to existing variables - Deleting elements - Built-in functions for handling arrays -Strings and strings as variables-Problems

## MATHEMATICAL OPERATIONS WITH ARRAYS

(3 Hours)

Addition and Subtraction -Array multiplication -Array division -Element-by-element operations-Using arrays in MATLAB built-in math functions -Built-in functions for analyzing arrays-Generation of random numbers -Examples of MATLAB applications -Problems

## TWO-DIMENSIONAL PLOTS

(4 Hours)

The plot command -The fplot command -Plotting multiple graphs in the same plot - Formatting a plot -Plots with error bars -Plots with special graphics -Histograms -Polar plots -Plotting multiple plots on the same page -Multiple figure windows -Examples of MATLAB applications -Problems.

## USER-DEFINED FUNCTIONS AND FUNCTION FILES

(2 Hours)

Creating a function file -Structure of a function file- Saving a function file- Using a user-defined function- Examples of MATLAB applications- Problems.

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## PROGRAMMING IN MATLAB

(3 Hours)



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Relational and logical operators - Conditional statements - The switch-case statement - Loops -Nested loops and nested conditional statements -The break and continue commands - Examples of MATLAB applications-Problems.

## POLYNOMIALS, CURVE FITTING, AND INTERPOLATION (2 Hours)

Polynomials- Curve fitting - Interpolation – Problems.

## SYMBOLIC MATH (4 Hours)

Solving algebraic equations – Differentiation – Integration - Solving an ordinary differential equation-Problems.

### Reference:

- [1] Gilat, Amos, 2008, “MATLAB Introduction With Applications”, 3rd Ed., JOHN WILEY & SONS, INC. , USA .
- [2] Hunt, Brian R. & others, 2001, “A Guide to MATLAB for Beginners and Experienced Users”, Cambridge University Press, USA.
- [3] McMahan, David, 2007, ”MATLAB Demystified”, The McGraw-Hill Companies, USA.
- [4] Davis, Timothy A. & Sigmon, Kermit, 2007, “MATLAB Primer”, 7th Ed., Chapman & Hall/CRC, USA.

### COURSE PLAN (30 HOURS MANDATORY)

Sl. No.	Topics to be covered	Hour
1	Starting MATLAB, MATLAB Windows.	1
2	Working in the Command Window.	2
3	Arithmetic Operations With Scalars, Display Formats.	3
4	Elementary Math Built-In Functions, Problems.	5
5	Defining Scalar Variables, Useful Commands for Managing Variables.	6
6	Script Files, Examples of MATLAB Applications.	7

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7	Creating a One-Dimensional Array (Vector), Creating a Two-Dimensional Array (Matrix), Notes About Variables in MATLAB.	8
8	The Transpose Operator, Array Addressing, Using A Colon : In Addressing Arrays.	9
9	Adding Elements to Existing Variables, Deleting Elements, Built-In Functions For Handling Arrays.	10
10	Strings and Strings as Variables, Problems	11
11	Addition and Subtraction, Array Multiplication, Array Division.	12
12	Element-by-Element Operations, Using Arrays in MATLAB Built-in Math Functions, Built-In Functions for Analyzing Arrays, Generation of Random Numbers.	13
13	Examples of MATLAB Applications & Problems.	14
14	The pplot Command, The fplot Command, Plotting Multiple Graphs In The Same Plot.	15
15	Formatting a Plot.	16
16	Plots With Error Bars, Plots With Special Graphics, Histograms, Polar Plots, Plotting Multiple Plots on The Same Page, Multiple Figure Windows.	17
17	Examples of MATLAB Applications & Problems.	18
18	Creating a Function File, Structure of a Function File, Saving a Function File, Using a User-Defined Function.	19
19	Examples of MATLAB Applications & Problems.	20
20	Relational and Logical Operators, Conditional Statements, The Switch-Case Statement.	21
21	Loops : Nested Loops and Nested Conditional Statements, The Break And Continue Commands.	22
22	Examples of MATLAB Applications, Problems.	23
23	Polynomials	24
24	Curve Fitting , Interpolation, Problems	25
25	Solving Algebraic Equations	26
26	Integration	27

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27	Differentiation	28
28	Solving an Ordinary Differential Equation	29
29	Exam	30

### COURSE OUTCOMES VS PO MAPPING:

SLNo	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	3	2	1		2				2			1
C02	3	3	3	2	2		1		2			1
C03	2	3	3	3	2				2			1
C04	2	3	3	3	2				2			1
Avg	2.5	2.75	2.5	2	2		1		2			1

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----- Forwarded message -----

From: P&T, Jyothi Engg College <pat@jecc.ac.in>

Date: Wed, May 8, 2019 at 2:26 PM

Subject: Program Confirmed on Thursday, 09-05-2019 || Seminar at JECC on higher studies and placement opportunities abroad

Dear Students,

Greetings From PAT Office!!!

**Global Education Seminar** organised by PAT office for creating awareness among the present final year students regarding **higher studies** and **placement** opportunities abroad, will be conducted tomorrow, **9th May 2019(Thursday)** from **11.00 AM to 12.30 PM** at the **Decennial hall**.

All the interested students from the **final year(2019 passing out) B.Tech & M.Tech batches** are welcome to attend the seminar, even if you haven't registered for participating.

You may not be planning for overseas education or job at present. But the inputs you get from this seminar, can be very useful to you in the future. So please make use of the opportunity.

Please make sure that you are present at the venue sharp by 11.00 AM itself. Late entries will not be permitted since it will spoil the very purpose of the program.

Please do not hesitate to contact the PAT Office, if you have any queries or need further information.

Warm Regards,

**Bibin Joy**

Placement & Training Officer, Jyothi Engineering College, Thrissur, Kerala

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bibinjoy@jecc.ac.in | pat@jecc.ac.in



be silly  
be honest  
be kind

----- Forwarded message -----

From: P&T, Jyothi Engg College <pat@jecc.ac.in>

Date: Sat, May 4, 2019 at 3:06 PM

Subject: Seminar at JECC on higher studies and placement opportunities abroad ||for 2019 passing out students

Dear Students,

Greetings From PAT Office!!!

We are getting a lot of queries from the current final year students regarding **higher studies** and **placement** opportunities abroad.

There is no doubt that choosing an overseas education for your higher studies is one of the most rewarding decisions you will ever make in your life.

A study abroad experience will benefit you in ways beyond your imagination and expectations. It will offer you an opportunity to discover a unique diversified culture, make lifelong friendships and connections, and

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*Admaly*

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Principal  
Jyothi Engineering College  
Kuthuruthy P.O.-679 531



receive an education that goes a long way in your holistic development.

The PAT office is organising a '**Global Education Seminar**' for the interested students from the final year B.Tech and M.Tech students . The program will be a 1 and half hour session . The tentative dates are 9th or 10th (Thursday or Friday) May 2019 from 10.00 AM to 11.30 AM.

Vastly experienced resource persons in this field, will be handling the session and interaction.

**The following topics will be covered**

- 1) Guidelines for Interviews & Placements in India & Abroad.
- 2) Scholarship Options In European Countries.
- 3) Short Term Programs in Abroad with 100% placement assurance.

**Resource team**

The resource persons are Management Consultants with Experience from MNCs and currently working with a lot of Engg. Colleges .They can guide you with the application procedures for **Germany and Italy scholarship Options**,

Eligible students(marks %) can do their masters program absolutely free of cost in World Ranking Universities.

They also assist students for 1 year programs with sure shot placement in countries like Newzealand, Ireland, Canada, France, Australia, UK and many more.

**Registration**

The exact Date and time of the program will be announced once the registrations are completed. those who are 100 percent sure about their participation can register by clicking on the link below on or before **Monday, 6th May 2019 - 5.00 PM**

Registration Link - <https://forms.gle/egiLYJRUC1X26cbn7>

Please do not hesitate to contact the PAT Office, if you have any queries or need further information.

Warm Regards,

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be kind

**Bibin Joy**  
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3942K

*Amal*  
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From

Roshni Rajan K

AP,ECE Dept.

ADD-ON COURSE COORDINATOR

To

The Principal

JECC

*Amr*  
Dr. SUNNY JOSEPH KALAYATHANKAL  
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Sir,

Sub: Request for conducting meeting for add-on courses.

We would like to conduct a meeting on 18/09/2019 with the add-on course registered students and the concerned course coordinators to discuss about the course execution. I kindly request you to grant us permission for the same.

ADD-ON COURSE	STAFF-IN-CHARGE	HOUR & VENUE
WATER QUALITY MANAGMENT OF DOMESTIC SOURCES	Mr. M G CYRIAC Dr.AGNES ANTO C	6 <sup>th</sup> Hour ENVIRONMENTAL ALB
INTRODUCTION TO VHDL	Mr.AKHILBALAKRISHNAN Mr.KAPIL DAS	4 <sup>th</sup> Hour EEE SEMINAR HALL
COMPUTER AIDED DESIGN	Mr.CHRISTY V V Mr.NIKHIL N S	3 <sup>rd</sup> Hour CAM LAB
IMAGE PROCESSING	Mr. FEPSLIN ATHISH MON	4 <sup>th</sup> Hour CSE LIBRARY
CCTV INSTALLATION	Ms.SHINY M I Mr.BINOJ V J	3 <sup>rd</sup> Hour ECE SEMINAR HALL
EMBEDDED SYSTEMS DESIGN WITH 8051	Mr.JINESH K J	3 <sup>rd</sup> Hour VLSI LAB
WORKSHOP ON 3-D DESIGN & 3-D PRINTING (FABLAB)		6 <sup>th</sup> Hour FABLAB

*Amr*  
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ROSHNI RAJAN K

Thanking you,

*Forwarded to principal*  
*Roshni*

ADD-ON COURSE COORDINATOR

*Approved*



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## DEPARTMENT OF ECE-ADD ON COURSE

### CCTV Installation

Closed-circuit television (CCTV), also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. In industrial plants, CCTV equipment may be used to observe parts of a process from a central control room, for example when the environment is not suitable for humans. Through this Add on course students will be able to know different types of CCTV system, how to decide which system to use for a specific application, and about its transmission, connections, DVR and networking.

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#### Key Objectives of the Course:

1. To understanding the customer's requirements
2. To installing the camera and CCTV hardware equipment
3. To configure the system for surveillance function
4. Coordinate the work with colleagues and coworkers

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#### Course outcomes:

CO1: Students Will be able to Interact with customer and supervisor and understand customers requirements

CO2: Students Will be able to Procuring CCTV hardware and test before installation

CO3: Students Will be able to Connecting cables and Setting up the camera using tools, Setting CCTV camera and DVR with the system

#### SYLLABUS

#### Module I: CCTV Introduction (12 hours)

To understand the import ants of surveillance,

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To study different types of CCTV cameras, monitors and installation tools in brief

To familiar with different lighting conditions

To study about power supplies and different types needed for CCTV

To familiar with Different display system

To understand the site condition

Suggest solution based on the site condition and requirement

Deciding the CCTV system to be installed

To understand about the ambient light setting

## Module II: CCTV CAMERA AND LENS (12 hours)

To acquire knowledge about different types of cameras and the latest technologies,

To study about cameras in depth,

To study about sophisticated equipments related with CCTV

Understand different Lenses

Understand the importance of focusing

To procure CCTV hardware

To test hardware before installation

To understand the focusing concept and calibration of camera

Deciding the CCTV system to be installed

## Module III: Transmission and Connections (6 hours)

To study different types of cable, switches and other technologies to fulfill the system for Transmission

Understand the concept of splitter, multiplexer and switcher

Understand the wiring schemes

To correct the different problem related to CCTV

Understand the cable laying methods

Understand the connection establishment

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## Module IV: DVR and Networking (5 hours)

- To familiar with CCTV recording equipment.
- To understand the networking information schemes
- Understand networking equipments
- Study about IP camera
- To connect CCTV camera and DVR with the system
- Setting up CCTV system
- To check the functioning of CCTV system
- To understand about different DVR related issues

### COURSE OUTCOMES VS PO MAPPING:

Sl.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	3	3	1	1	2	2	2	1	2
CO2	3	2	2	2	2	2	-	2	2	2	2	3
CO3	3	3	2	3	2	1	2	1	1	1	-	2
Avg	2.6	2.4	2.6	2.6	2.2	1.6	1.67	1.8	2	1.8	1.5	2.4

*Joseph*

*Sunny*

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## JYOTHI ADD-ON COURSES

Jyothi Engineering College is offering the following add-on course for our students:

1. WATER QUALITY MANAGEMENT OF DOMESTIC SOURCES
2. INTRODUCTION TO VHDL
3. COMPUTER AIDED DESIGN
4. INTRODUCTION TO IMAGE PROCESSING USING MATLAB
5. CCTV INSTALLATION
6. EMBEDDED SYSTEMS DESIGN WITH 8051
7. WORKSHOP ON 3-D DESIGN & 3-D PRINTING (FABLAB)

The maximum seats available for each add-on course is 20. Students can log on to the link [courses.jyothiengg.com](http://courses.jyothiengg.com) for registration and the course details. Registration will be on first come-first serve basis.

### JYOTHI ADD-ON COURSES

			
<p><b>WATER QUALITY MANAGEMENT OF DOMESTIC SOURCES</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE, 2<sup>nd</sup>                      Department: All Departments  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. M.G. Chinnai, CSE Department                      Ms. Anitha, CSE Department</p>	<p><b>INTRODUCTION TO VHDL</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE                      Department: SCE, EEE  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. Ajay Babalokeshan, EEE                      Dr. Srinivas, EEE Department                      Mr. Kunal Das, EEE Department</p>	<p><b>COMPUTER AIDED DESIGN</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE, 1<sup>st</sup>                      Department: ESE  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. Chandu V.V, IIS Department                      Mr. Nishu S.S, IIS Department</p>	<p><b>INTRODUCTION TO IMAGE PROCESSING USING MATLAB</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE                      Department: SCE, CSE  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. Tejaswini, MCA, CSE Department</p>
			
<p><b>CCTV INSTALLATION</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE                      Department: SCE, EEE, IAS  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. Manoj, ECE Department                      Mr. Sridhar, ECE Department</p>	<p><b>EMBEDDED SYSTEMS DESIGN WITH 8051</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE                      Department: SCE, EEE, IAS, CSE  <b>FEE DETAILS</b>                      Payment: Rs 200                      Refund: Rs 200  <b>CONTACT</b>                      Mr. Sridhar, ECE Department</p>	<p><b>WORKSHOP ON 3-D DESIGN &amp; 3-D PRINTING (FABLAB)</b>  <b>ELIGIBILITY</b>                      Semester: SS, SE                      Department: All  <b>FEE DETAILS</b>                      Payment: Rs 1000                      Refund: Nil  <b>CONTACT</b>                      Mr. Shreyas, IIS Department</p>	

*Sunny*  
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*Sridhar*



# Jyothi Engineering College

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University  
 Jyothi Engineering College, Cheruthuruthy P.O., Cheruvu, Kottayam District, Kerala  
 www.jyothi.ac.in

## DEPARTMENT OF ECE- ADD-ON COURSE SCHEDULE

ADD-ON COURSE	DATE & DAY	HOURS ALLOTTED	VENUE
CCTV INSTALLATION	23/09/2019(MONDAY)	6th Hour	MP & MC LAB
	24/09/2019(TUESDAY)	4th Hour	
	26/09/2019(THURSDAY)	7th Hour	
	27/09/2019(FRIDAY)	7th Hour	
	30/09/2019(MONDAY)	5th Hour	
	01/10/2019(TUESDAY)	2nd Hour	
	03/10/2019(THURSDAY)	4th Hour	
	04/10/2019(FRIDAY)	6th Hour	
	05/10/2019(SATURDAY)	1 to 7 Hours	
	10/10/2019(THURSDAY)	7th Hour	
	11/10/2019(FRIDAY)	7th Hour	
	19/10/2019(SATURDAY)	1 to 7 Hours	
	26/10/2019(SATURDAY)	1 to 7 Hours	

Total Hours

31

Staff In-Charge

*[Signature]*  
 Shiny M.I



*[Signature]*  
 HOD, ECE

Dr. Jose P. Therattil  
 M.Tech, M.Phil, (NIT)  
 Professor & HOD, ECE Department  
 Jyothi Engineering College  
 Cheruthuruthy P.O., Kottayam District, Kerala

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