

## Value Added Courses-I

**Year: 2019-20**

### **Title: Technology and Innovation for Social Transformation**

**Total No. of Students: 17**

**Course code: M17EHSC301**

<b>Course-1: Understanding Rural Community</b>	<b>Duration: 6 weeks (1-6-2019 to 1-12-2019)</b>
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#### **Course Objectives:**

- **Service-Learning:** Provide significant service to the community while learning; gain an understanding of the role that engineering can play in society and the broader issues related to the needs addressed.
- **Multidisciplinary Design:** Learn how to be better designers, gain design knowledge and skills; learn how to apply disciplinary knowledge to real and possibly ill-defined problems; learn how to identify and acquire new knowledge; learn to collaborate with people from other disciplines.
- **Professional Preparation:** Develop the broad set of skills needed to be successful in the changing global workplace & world.

#### **Course Content:**

- Introduction.
- Understanding development.
- Understanding partnerships / Spirit of working together.
- Cogenerating problem areas
- Desirability Validation
- User Need Analysis
- Conceptual Design

#### **Faculty Profile:**

##### **Faculty pool**

Sl No	Faculties
1	Dr. Sanjay Kotabagi
2	Dr. Gopal Joshi
3	Ms. Vani Yalamali
4	Ms. Geeta S Maralappanavar
5	Mr. Shashidhar Neelakkanthmath
6	Ms. Poornima Byahatti
7	Ms. Uma Malawad

### Resource person

SI No	Resource person
1	Dr. R Balasubramanyam
2	Mr Hemant M N
3	Dr. Prakash Bhat
4	Captain C S Anand
5	Mr. Sudarshan P
6	Prof. Chidananda Reddy S Patil
7	Mr Sham Kashyap
8	Mr Salimath
9	Mr Praveen Kumar Sayyaparaju
10	Mr Someshaker

### List of Students Enrolled

Sl.No	Student Name	USN	Branch
1.	ArpitaHuggi	01FE17BAR008	ARE
2.	ManjunathKini	01FE17BAR025	ARE
3.	Carolyn Gundimi	01FE17BAR061	ARE
4.	Daksha Hedge	01FE17BCS065	CSE
5.	Kumar gaurav	01FE17BCS098	CSE
6.	Riddhi Mehta	01FE17BCS157	CSE
7.	Deepti A	01FE17BEC049	ECE
8.	James Mathew	01FE17BEC071	ECE
9.	Komal R	01FE17BEC081	ECE
10.	Laxmi M	01FE17BEC085	ECE
11.	Pallavi Bhat	01FE17BEC112	ECE
12.	Vikas Kulkarni	01FE17BEC244	ECE
13.	Nagabashan W	01FE17BME103	MEE
14.	Sarvesh G M	01FE17BME170	MEE
15.	Shamanth Shetty	01FE17BME173	MEE
16.	Sharad N Patil	01FE17BME175	MEE
17.	Trishul Jain	01FE17BME205	MEE



## Certificates:



**KLE** Technological  
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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Arpita Huggi**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* **01.06.2019** *to* **01.12.2019** .....

A handwritten signature in blue ink, appearing to read 'Geeta S.M.'.

Course Instructor

A handwritten signature in blue ink, appearing to read 'Shalaby'.

Head of Department

A handwritten signature in blue ink, appearing to read 'R.H.'.

Controller of Examinations



**KLE** Technological  
University

Creating Value  
Leveraging Knowledge

## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Carolyn Gundimi**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* ..... **01.06.2019** ..... *to* ..... **01.12.2019** .....

A handwritten signature in blue ink, appearing to read 'Gunda S.M.'.

Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Daksha Hedge**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* ..... **01.06.2019** ..... *to* ..... **01.12.2019** .....

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Course Instructor

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Deepti A**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

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Head of Department

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Controller of Examinations



**KLE** Technological  
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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**James Mathew**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

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Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Komal R**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Kumar gaurav**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* **01.06.2019** *to* **01.12.2019** .....

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Head of Department

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Laxmi M**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

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Course Instructor

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Head of Department

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Manjunath Kini**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* ..... **01.06.2019** ..... *to* ..... **01.12.2019** .....

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Course Instructor

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Head of Department

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Nagabashan W**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Pallavi Bhat**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* **01.06.2019** *to* **01.12.2019** .....

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# Certificate

*This is to certify that*

**Riddhi Mehta**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Sarvesh G M**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* ..... **01.06.2019** ..... *to* ..... **01.12.2019** .....

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Course Instructor

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Head of Department

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Controller of Examinations





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University

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Shamanth Shetty**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

*from* **01.06.2019** *to* **01.12.2019** .....

A handwritten signature in blue ink, appearing to read 'Geta S.M.'.

Course Instructor

A handwritten signature in blue ink, appearing to read 'Shettabag'.

Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Sharad N Patil**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* **01.06.2019** *to* **01.12.2019** .....

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Course Instructor

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Head of Department

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Trishul Jain**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Understanding Rural Community (phase-I)**  
.....

*from* **01.06.2019** *to* **01.12.2019** .....

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Head of Department

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Vikas Kulkarni**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*

**Understanding Rural Community (phase-I)**

*from* **01.06.2019** *to* **01.12.2019** .....

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Course Instructor

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Head of Department

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Controller of Examinations

## Value Added Courses-II

**Year: 2019-20**

**Title: Technology and Innovation for Social Transformation**

**Total No. of Students: 17**

**Course code: M17EHSW301**

<b>Course 2: Product/Design Development</b>	<b>Duration:16 weeks(1-1-2020 to 1-5-2020)</b>
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### Course Objectives:

- **Service-Learning:** Provide significant service to the community while learning; gain an understanding of the role that engineering can play in society and the broader issues related to the needs addressed.
- **Multidisciplinary Design:** Learn how to be better designers, gain design knowledge and skills; learn how to apply disciplinary knowledge to real and possibly ill-defined problems; learn how to identify and acquire new knowledge; learn to collaborate with people from other disciplines.
- **Professional Preparation:** Develop the broad set of skills needed to be successful in the changing global workplace & world.

### Course Content:

- Detailed Design
- Bottom-up development of component Design
- Develop Design Specifications for components
- Design Analysis
- Proof of concept/ Prototyping

### Faculty Profile:

#### Faculty pool

SI No	Faculties
1	Dr. Sanjay Kotabagi
2	Dr. Gopal Joshi
3	Ms. Vani Yalamali
4	Ms. Geeta S Maralappanavar
5	Mr. Shashidhar Neelakkanthmath

### Resource person

<b>Sl No</b>	<b>Resource person</b>
1	Dr. R Balasubramanyam
2	Mr Hemant M N
3	Dr. Prakash Bhat
4	Captain C S Anand
5	Mr. Sudarshan P
6	Prof. Chidananda Reddy S Patil
7	Mr Sham Kashyap
8	Mr Salimath
9	Mr Praveen Kumar Sayyaparaju
10	Mr Someshaker

#### **List of Students Enrolled**

<b>Sl.No</b>	<b>Student Name</b>	<b>USN</b>	<b>Branch</b>
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5.	Kumar gaurav	01FE17BCS098	CSE
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8.	James Mathew	01FE17BEC071	ECE
9.	Komal R	01FE17BEC081	ECE
10.	Laxmi M	01FE17BEC085	ECE
11.	Pallavi Bhat	01FE17BEC112	ECE
12.	Vikas Kulkarni	01FE17BEC244	ECE
13.	Nagabashan W	01FE17BME103	MEE
14.	Sarvesh G M	01FE17BME170	MEE
15.	Shamanth Shetty	01FE17BME173	MEE
16.	Sharad N Patil	01FE17BME175	MEE
17.	Trishul Jain	01FE17BME205	MEE

## **Certificates:**



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## Department of Humanities and Social Sciences

# Certificate

*This is to certify that*

**Sharad N Patil**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

A blue ink signature of the Course Instructor.

Course Instructor

A blue ink signature of the Head of Department.

Head of Department

A blue ink signature of the Controller of Examinations.

Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Shamanth Shetty**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Sarvesh G M**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Nagabashan W**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Vikas Kulkarni**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

A blue ink signature of the Course Instructor.

Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Pallavi Bhat**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Head of Department

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Laxmi M**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Komal R**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**James Mathew**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Head of Department

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Deepti A**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Head of Department

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Controller of Examinations



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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Riddhi Mehta**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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Controller of Examinations





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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Kumar gaurav**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

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# *Certificate*

*This is to certify that*

**Daksha Hedge**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**

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Controller of Examinations



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University

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Carolyn Gundimi**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

A blue ink signature of the Course Instructor.

Course Instructor

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Head of Department

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Controller of Examinations





**KLE** Technological  
University

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Leveraging Knowledge

## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Manjunath Kini**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Course Instructor

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## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Arpita Huggi**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Controller of Examinations





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University

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Leveraging Knowledge

## Department of Humanities and Social Sciences

# *Certificate*

*This is to certify that*

**Trishul Jain**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Product/Design Development (Phase-II)**  
.....

*from* **01.01.2020** *to* **01.05.2020** .....

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Controller of Examinations

# **Value Added Training**

**Course: Database Management System  
(2019-20)**

# School Of Computer Science & Engineering

## Value Added Course on

## Data Mining and Analytics

### Course Outcomes

1. Apply fundamental concepts of database systems to analyze, design and normalize the Database.
2. Formulate relational algebra and SQL queries to manage the data.
3. Apply concepts of transaction processing and security techniques for multi-user access of database systems.
4. Describe other popular database systems like NoSQL and columnar database.
5. Design and implement a database application for a real-world problem.

**Resource Person:**Mr. Uday Kulkarni

**Last Date to apply** – 29<sup>th</sup> Dec 2017

**Program Duration** – Jan 2018 to May 2018

**Coordinator** – Dr. Narayan D. G.

narayan\_dg@kletech.ac.in

+91 9448635627





## Database Management System

Unit –I		
1	<b>Introduction and ER Model</b> Introduction to DBMS and an example ; Data models, schemas and instances; Three-schema architecture; Database languages; Using High-Level Conceptual Data Models for Database Design; An Example Database Application; Entity Types, Entity Sets, Attributes and Keys, Relationship types, Relationship Sets. Roles and Structural Constraints; Weak Entity Types; Refining the ER Design; ER Diagrams, Naming Conventions and Design Issues.	06 hrs
2	<b>Relational Data Model</b> Relational Model Concepts; Relational Model Constraints and Relational Database Schemas; Update Operations and dealing with constraint violations; Unary Relational Operations: SELECT and PROJECT; Binary Relational Operations: CARTESIAN PRODUCT, JOIN; Additional Relational Operations; Relational Database Design Using ER- to-Relational Mapping.	06 hrs
Unit –II		
3	<b>Database Design</b> Informal Design Guidelines for Relation Schemas; Functional Dependencies; Normal Forms Based on Primary Keys; 3rd Normal Form.	06 hrs
4	<b>SQL</b> SQL Data Definition and Data Types; Specifying basic constraints in SQL; Schema change statements in SQL; Insert, Delete and Update statements in SQL; Basic queries in SQL, JOIN operations, Complex SQL Queries.	06 hrs
Unit –III		
5	<b>Introduction to Transaction Processing and Concurrency Control</b> Introduction to Transaction Processing; Transactions and System concepts; Desirable Properties of Transactions; Characterizing schedules based on Serializability.	06 hrs
<b>Text Books:</b> 1. Elmasri R. and Navathe S., Fundamentals Database Systems, 6 <sup>th</sup> edition, Pearson Education, 2011.		
<b>References:</b> 1. Ramakrishnan S. and Gehrke J., Database Management Systems, 3 <sup>rd</sup> edition, McGraw Hill, 2007. 2. Silberschatz A., Korth H.F. and Sudharshan S., Data base System Concepts, 5th Edition, Mc- GrawHill, 2006.		
Experiments		Lab assignments/experiment
3-Demonstration		SQL
4-Exercise		Set Theory Operators, Cartesian Product, Aggregate Functions, Nested Queries, Joins
2-Structured Enquiry		Database Design, Complex SQL queries

### **Biodata Of Resource person**



Mr. Uday Kulkarni is Assistant Professor indepartment of School of Computer Science and Engineering, K LE Technological University Hubballi. I am having 5 years of industry experience and 7 years of teaching experience.

I have a work experience in data mining, machine learning and deep learning domains. I had worked as PhD intern in SAMSNG for 9 months where my work focus was on porting AI/ML models on edge devices. I have oracle, .Net and informatica professional certification.

I have good no publications in IEEE, Scopus, WOS supported conference and journals. I have engaged workshop for various colleges on AI/ML domains.

**Time Table for the Value Added Course**

Course	Name of the Faculty	Venue
Database Management System	Prof. Uday Kulkarni	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Database Management System
Friday		Database Management System
Saturday	Database Management System	



Coordinator Signature



Head,  
SoCSE

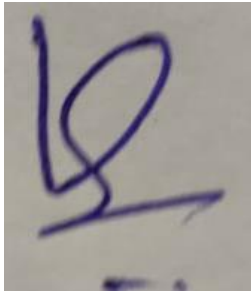


## Attendance Sheet

Course: Database Management System

[illegible]

Mr. Uday Kulkarni

[illegible]

[illegible]

**Student List****Course: Database Management System**

Sl No	Name of Student	USN
1	NISCHITHA V	01FE17BAR036-M
2	SNEHA JANAGOUDAR	01FE17BAR056-M
3	AVINASH S KALRA	01FE17BAR062-M
4	HARSH S PATIL	01FE17BEE026-M
5	POORNIMA VIJAYASHANKAR KULKARNI	01FE17BEE065-M
6	SHRIVALLI SHIGGAON	01FE17BEE096-M
7	SNEHA VEERANNA PATIL	01FE17BEE098-M
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# **Value Added Training**

**Course: Data Mining and analytics  
(2019-20)**

# School Of Computer Science & Engineering

## Value Added Course on

## Data Mining and Analytics

### Course Outcomes

- Apply appropriate data preprocessing techniques on raw data to obtain processed data.
- Analyze the processed data by applying pattern mining, classification and clustering techniques.
- Evaluate the performance of various data mining techniques.
- Develop and analyze a data mining solution to solve a given problem.

**Resource Person: Mr. Uday Kulkarni**

**Last Date to apply – 29<sup>th</sup> Dec 2017**

**Program Duration – Jan 2018 to May 2018**

**Coordinator – Dr. Narayan D. G.**

narayan\_dg@kletech.ac.in

+91 9448635627



## Data Mining and analytics

Unit –I		
1	<b>Data Pre-Processing</b> Introduction to data mining, data Types of data Sets and attribute Values, basic statistical descriptions of data, data visualization, measuring data similarity data quality, major tasks in data preprocessing, data reduction, data transformation and data Discretization, data cleaning and data integration.	06 hrs
2	<b>Mining Frequent Patterns, Associations and Correlations:</b> Concepts and Methods Basic Concepts, Efficient and Scalable Frequent Item set Mining Methods, finding interesting Patterns, Pattern Evaluation Methods, Applications of frequent pattern and associations, Advanced Frequent Pattern Mining, Frequent Pattern and Association Mining: A Road Map, Mining Various Kinds of Association Rules.	06 hrs
Unit –II		
3	<b>Classification</b> Classification: Basic Concepts, Decision Tree Induction, Naïve Bayesian classification Methods, Rule-Based Classification, Model Evaluation and Selection, Techniques to Improve Classification Accuracy: ensemble Methods, Bayesian belief networks.	06 hrs
4	<b>Cluster Analysis</b> Cluster Analysis Partitioning methods, Hierarchical Methods, Density based methods, Outlier Detection.	06 hrs
Unit –III		
5	<b>Big data fundamentals:</b> Introduction to big data – Data storage and analysis – Rational data base management systems. Map reduce – data format – analyzing the data with Unix or Hadoop or SAS .	06 hrs
<b>Text Books:</b> <ol style="list-style-type: none"><li>1. Jiawei Han, MichelineKamber, and Jian Pei, Data Mining: Concepts and Techniques, 3rd edition, Morgan Kaufmann, 2011.</li></ol>		
<b>References:</b> <ol style="list-style-type: none"><li>1. Ian H. Witten, Eibe Frank, Mark A. Hall, Data Mining - Practical Machine Learning Tools and Techniques (3rd Ed), Elsevier Inc - 2011.</li><li>2. M. H. Dunham, “Data Mining: Introductory and Advanced Topics”, Pearson Education. 2008.</li><li>3. Pang-Ning, Michael Steinbach, Vipin Kumar, “Introduction to Data Mining”, Pearson Education, 2007.</li></ol>		

Experiments	Lab assignments/experiment
3-Demonstration	Pentaho and weka tools demonstration
4-Exercise	Implementation of Data Description techniques using Python language.
2-Structured Enquiry	Implementation of KDD process using python language.



### **Biodata Of Resource person**



**Mr. Uday Kulkarni** is Assistant Professor indepartment of School of Computer Science and Engineering, K LE Technological University Hubballi. I am having 5 years of industry experience and 7 years of teaching experience.

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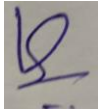
SoCSE

### Attendance Sheet

**Course:** Data Mining and Analytics

Sl No	Name of Student	USN	Attendance									
			9/5/2020	10/5/2020	6/6/2020	7/6/2020	4/7/2020	5/7/2020	25/7/2020	26/7/2020	1/8/2020	2/8/2020
1	AKANKSHA N PIKLE	01FE17BME010-M	P	P	P	P	P	P	P	P	P	P
2	SNEHA VEERANNA PATIL	01FE17BEE098-M	P	P	P	P	P	P	P	P	P	P
3	BHARATH ASHOK AJJAMMANAVAR	01FE17BME033-M	P	P	P	P	P	P	P	P	P	P
4	RAVIRAJ M BHAT	01FE17BME151-M	P	P	P	P	P	P	P	A	P	P
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6	SRUSHTI RAVINDRA GANAMUKHI	01FE17BME196-M	P	P	P	P	P	P	P	P	P	P
7	POORNIMA V KULKARNI	01FE17BEE065-M	P	P	P	P	P	P	P	P	P	P
8	KOUSTUB	01FE17BME080-M	A	A	A	A	A	A	A	A	A	A
9	SANGAMESH S BANKAPURMATH	01FE17BME166-M	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
10	TANMAY SHRIVASTAVA	01FE17BME204-M	A	A	A	A	A	A	A	A	A	A
11	VEERABHADRAPPA B GALI	01FE17BEE121-M	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
12	NISCHITHA V	01FE17BAR036-M	P	P	P	P	P	P	P	P	P	P
13	HARSH S PATIL	01FE17BEE026-M	P	P	P	P	P	P	P	P	P	P
14	SNEHA JANAGOUDAR	01FE17BAR056-M	P	P	P	P	P	P	P	P	P	P
15	AVINASH S KALRA	01FE17BAR062-M	P	P	P	P	P	P	P	P	P	P
16	SUDHANVA S J	01FE17BME197-M	A	A	A	A	A	A	A	A	A	A

**Mr. Uday Kulkarni**



**Student List****Course:** Data Mining and Analytics

Sl No	Name of Student	USN
1	AKANKSHA N PIKLE	01FE17BME010-M
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*from* **4-5-2020** *to* **14-8-2020** .....

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<h3>About the Workshop</h3>	<h3>Instructors</h3>	<h3>For Further Details, Please Contact</h3>
<p>Junos OS is the FreeBSD-based operating system used in Juniper Networks hardware routers. It is an operating system that is used in Juniper's routing, switching and security devices. Juniper offers a Software Development Kit to partners and customers to allow additional customization.</p>	<p>Dr. Jayalaxmi G N Mr. Anand S Meti Mrs. Pooja Shettar Mr. Vishal P Mr. Md. Moin Mr. Sandeep K</p>	<p>Dr. Narayan D G Professor School Of Computer Science <b>Mobile:</b> 9448635627 <b>Email:</b> narayan_dg@kletech.ac.in</p>
<h3>Topics</h3>	<h3>Objectives</h3>	<h3>Registration</h3>
<ul style="list-style-type: none"> <li>• Junos Fundamentals</li> <li>• Operational Monitoring and Maintainance</li> <li>• Routing Fundamentals</li> <li>• Routing Policy</li> <li>• Firewall Filters</li> </ul>	<p><b>By the end of workshop Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• To understand basics of Junos and Junos CLI</li> <li>• To configure VLAN, DHCP, OSPF routing protocol on Juniper devices</li> <li>• Should be able to appear for JNCIA-102 certification.</li> <li>• To carry out projects on Juniper device.</li> </ul>	<p>Name: ..... Department: ..... SRN: ..... Mobile : ..... Email-id:.....</p>

## JNCIA Certification Overview

Workshop aims to learn the fundamental concepts of networking, master all JNCIA concepts, administer a network running Juniper devices, and troubleshoot a Juniper devices network. **JNCIA-Junos** course will add value to your knowledge and will improve your confidence to pass the exam.

## Juniper Networks Training and Certification

MOU is been signed with Juniper networks as an initiative towards Industry institute interaction, to strengthen the networking vertical. Faculties are trained by the Juniper experts for JNCIA course and certified for the same. Students are given training for JNCIA course by the certified staff. JNCIA certification exam is conducted in collaboration with industry. In table 1 number of students, trained, certified and placed in Juniper networks during for the last year 2019-2020 is represented. **This certification has helped the students to get through different companies such as Microsoft, Akamai, Mercedes Benz (IT infrastructure division).**

### Summary of Juniper Training and Certification:

Year	2019-2020
No. of students trained	95
No. of students certified	30
Number of students placed	10

## Resource Person's



**Dr. Jayalaxmi G. Naragund** is Associate Professor in department of School of Computer Science and Engineering, K L E Technological University Hubballi. She has worked in area of Wireless Mesh networks (WMN) and Software Defined Networks (SDN). She has carried out her research using NS2 and NS3 network simulator tool. Professor has conducted state level 3 days' workshop on NS2 in 2008. She has also become resource person in NS3 workshop at different institutes. She has good number of publications in IEEE explorer, springer book chapter and Elsevier conferences. Publications are indexed by Scopus and Web of Science. She has won best research paper award in IEEE International conference in the year 2013. She is always eager to explore herself to new technologies like deep learning and Robotic Process Automation (RPA). She has more than 10 years of experience in computer network research field and also served in rural areas of north Karnataka.



Shamshuddin K holds a Master's degree in Computer Network Engineering from National Institute of Engineering, Mysore. He is working as an Assistant professor in KLE Technological University, Hubballi, Karnataka and is having teaching experience of 13 years. His research interest includes cryptography, network security and privacy. He has handled Computer communication network. He has published papers in the area of privacy in 5G networks and teaching pedagogy in international conferences.



Pooja Shettar holds a Master's degree in Computer Science Engineering from BVB College of Engineering, Hubli in the year 2013. She is working as an Assistant professor in KLE Technological University, Hubballi, Karnataka and having teaching experience of 10 years. Her research interest includes cryptography, cloud security and privacy. She has handled ADBMS ,Information Security, Software Engineering. She has published papers in the area of privacy in Cloud Security and teaching pedagogy in international conferences.



Mohammed Moin Mulla holds a Master's degree in Computer Science. He is an Assistant professor in KLE Technological University, Hubballi, Karnataka, and has teaching experience of 3 years. His research interest includes Computer Networks, Software Defined Networks, and Cloud Computing and currently working on network traffic engineering and security. The goal of my research is to improve network QoS and secure the networks. He is involved as a member of the teaching team for the Juniper and AWS Certification courses at various institutions. He is playing an active role in designing Networking and Cloud computing courses for the Computer science department.



## Training content

Part 1	Hrs
<b>Junos operating system fundamentals:</b> Introduction to Junos OS, Traffic processing, Overview of Junos Device	4 hours
<b>User interface options:</b> Junos CLI, Operational mode, Configuration mode	4 hours
<b>Initial Configuration:</b> Factory-Default configuration, Initial Configuration, Interface Configuration	4 hours
<b>Secondary Configuration:</b> Authorization Overview, Deny and Allow Overrides, System Logging, Interpreting Message Codes, Monitoring NTP, Automated Configuration Backup, SNMP Operation, Monitoring SNMP Operation	4 Hours
<b>Operational Monitoring and Maintenance:</b> Monitoring Tools, Monitoring System Operation, Monitoring the Chassis, Gathering Extensive Interface Information, Monitoring Traffic, Network Utilities, Determining the Junos OS Release, Unified ISSU, Password Recovery.	4 Hours
Part 2	
<b>Routing Fundamentals:</b> Routing Components, Routing Information Sources, Forwarding Table, Multiple Routing Tables, Preferred Routing Information Sources, Viewing the Route Table, Dynamic Routing, Case Study: Objective and Topology, Case Study: Configuring OSPF	4 Hours
<b>Routing Policy:</b> An Overview of Routing Policy, Default Routing Policies, Route Filters, Defining Routing Policy, Applying Routing Policy, Case Study: Objective and Topology, Case Study: Applying the Policy	4 Hours
<b>Firewall Filters:</b> Building Blocks of Firewall Filters, Common Match Criteria, Common Actions, Defining a Firewall Filter, Filtering Traffic on Interfaces.	4 Hours

## **JUNIPER NETWORK TRAINING FOR JUNOS ASSOCIATE, JNCIA-JUNOS (JN0- 102)**

### **Schedule (2019-2020)**

<b>SL.no</b>	<b>DAY/DATE</b>	<b>TOPICS TO BE COVERED</b>
<b>PART-I</b>		
1.	MONDAY 16/9/2019	JUNOS OPERATING SYSTEM FUNDAMENTALS
2.	TUESDAY 17/9/2019	USER INTERFACE OPTIONS
3	WEDNESDAY 18/9/2019	INITIAL CONFIGURATION
4	THURSDAY 19/9/2019	SECONDARY SYSTEM CONFIGURATION
5	FRIDAY 20/9/2019	OPERATIONAL MONITORING AND MAINTAINANCE
<b>PART-II</b>		
6	MONDAY 21/9/2019	ROUTING FUNDAMENTALS
7	WEDNESDAY 22/9/2019	ROUTING POLICY
8	THURSDAY 24/9/2019	FIREWALL FILTERS

### **Instructors**

1. Dr Jayalaxmi G N
2. Mr Moin Mulla
3. Mr Shamshuddin
4. Mr Sandeep Kulkarni
5. Mr Anil Kabbur

## Attendance list

Attendance JNCIA 2019-20

Sl No	Name	16/9	17/9	18/9	19/9	20/9	21/9	22/9	24/9
1.	Chandan Shanbhag	P	P	P	P	P	P	P	P
2.	Babu Mallappanavar	P	A	P	P	P	P	P	P
3.	Smita C Yadavannavar	P	P	P	A	P	P	P	P
4.	Mukthabai Karajagi	P	P	P	P	P	P	P	P
5.	J S Yashas	P	P	P	P	P	P	P	P
6.	Zeba Ara Patel	P	P	P	P	A	P	P	P
7.	Medha Ramakrishna Bhat	P	P	P	P	P	P	P	P
8.	Vaishnavi Jarimalli	P	P	P	P	P	P	P	P
9.	Husen Mulla	P	P	P	A	P	P	P	P
10	Basavaraj Navalgund	P	P	P	P	P	P	P	P
11	Vaishakh I Kuppast	P	P	P	P	P	P	P	P
12	Saraswati Kandkur	P	P	P	P	P	P	P	P
13	Mohd Adil Baig	P	P	A	P	P	P	P	P
14	Aishwarya Shetty	P	P	P	P	P	P	P	P
15	Ritika Vernekar	P	P	P	P	P	A	P	P
16	Lakshmi Badiger	P	P	P	P	P	P	P	P
17	Venkataramana Shakhapur	P	P	A	P	P	P	P	P
18	Disha Mahajan	P	P	P	A	P	P	P	P
19	Mohammed Amaan Arab	P	P	P	P	P	P	P	P
20	Priya Sule	P	P	P	P	P	P	P	P
21	Vanishree Kadakol	P	P	P	A	P	P	P	P
22	Rohan Jakkannavar	P	P	P	P	P	P	P	P
23	Rachana Jingade	P	P	P	P	P	P	P	P
24	Naveen Jadhav	P	P	P	P	P	P	P	P
25	Rohan Roy	P	P	P	P	P	P	P	P
26	Sachin Benageri	P	P	P	P	P	P	P	P
27	Gowri D	P	P	P	P	P	P	P	P
28	Kusumavati Dharwadkar	P	P	P	P	P	P	P	P
29	Neha C Panji	P	P	P	A	P	P	P	P
30	Ishwar Malavade	P	P	P	P	P	P	P	P
31	Aakanksha Patil	P	P	P	P	P	P	P	P
32	Atheeth A Naik	P	P	A	P	P	P	P	P
33	Chetana Sarangamath	P	P	P	P	P	P	P	P
34	Naveen Angadi	P	P	P	P	P	P	P	P
35	Shrinidhi Katti	P	P	P	P	P	P	P	P
36	Gajanan Bhat	P	P	A	P	P	P	P	P
37	Gourav Bhat	P	P	P	P	P	P	P	P
38	Karthik Bandihal	P	P	P	P	P	P	P	P

*[Handwritten signatures and initials]*

39	Sagar Hosmani	P	P	P	P	P	P	P	P
40	Karthik Shellikeri	A	P	P	P	P	P	P	P
41	Manjesh Hukkeri	A	P	A	P	P	P	P	P
42	Shekhar Naik	P	P	P	P	P	P	P	P
43	Aishwarya S	P	P	P	P	P	P	P	P
44	Gayatri Kiresur	A	P	P	A	P	P	P	P
45	Nidhi Vasant Mehata	P	P	P	A	P	A	P	P
46	Radhika Kodagali	P	P	P	P	P	P	P	P
47	Akshay Hegade	A	P	P	P	P	P	P	P
48	R Shilpa	P	P	P	P	P	P	P	P
49	Pratiksha Paramanand Aigal	P	P	P	P	P	P	P	P
50	Anusha Rajesh Prabhu	P	P	P	P	P	P	P	P
51	Kajal Jain	P	P	P	P	P	P	P	P
52	Soniya Somaling Halagatti	P	P	P	P	P	P	P	P
53	Prajna Manjunath Yaji	P	P	P	P	P	P	A	P
54	Pavitra Haveri	P	P	A	P	P	P	P	P
55	Deepali D Naik	P	P	P	P	P	P	P	P
56	Navya Telang	P	P	P	P	P	P	P	P
57	Priyanka Shejekar	P	P	A	P	P	P	P	P
58	Vellala Vineeth Kumar	P	P	P	P	A	P	P	P
59	Jayashree A V	P	P	P	P	P	P	P	P
60	Manas Kumar	P	P	P	P	P	P	P	P
61	Prashant Jalisatgi	P	P	P	P	P	P	P	P
62	Saqub Mullanavar	P	P	P	P	P	P	P	P
63	Priyanka Ramesh Babu	P	P	P	P	P	P	P	P
64	Rashmi U B	P	P	A	P	P	P	P	P
65	Divya Vivek Shanbhag	P	P	P	P	P	P	A	P
66	Arpita Kulkarni	P	P	P	P	P	P	P	P
67	Megha Koujageri	P	P	P	P	P	P	P	P
68	Vinay Naik	P	P	A	P	P	P	P	P
69	Saurav Singh	P	P	P	P	P	P	P	P
70	Sanketh Prabhu	P	P	P	P	P	P	P	P
71	Nageshwar Albur	P	P	P	P	P	P	P	P
72	Vijeth Patil	P	P	P	P	P	P	P	P
73	Namita Rayangoudar	P	P	A	P	P	P	P	P
74	Sonali Santosh Naik	P	P	P	P	P	P	P	P
75	Sunaina A M	P	P	P	P	A	P	P	P
76	Apoorva Dayanand Prabhu	P	P	P	P	P	P	P	P
77	Pooja Vibhutimath	P	P	P	P	P	P	P	P
78	Vaishnavi Y P	A	P	P	P	P	P	P	P
79	Vineet Prakash Kavishetty	P	P	P	P	A	P	P	P
80	Manojna B	P	P	P	P	P	P	P	P

*Shruti*

*AK*

*mu*

*AK*



### **Certified Student List**

<b>Sl.No</b>	<b>Name</b>
<b>1</b>	Gayatri R M
<b>2</b>	Anup Ravikumar
<b>3</b>	Mihir M Ambli
<b>4</b>	Mohammed Saquib Mullanavar
<b>5</b>	Namrata Hosamani
<b>6</b>	Nidhi Vasant Mehata
<b>7</b>	Nikhil Laxmidas Nayak
<b>8</b>	Pradeep Prakash Badiger
<b>9</b>	Prajana Y
<b>10</b>	R Shilpa
<b>11</b>	Sanketh V Prabhu
<b>12</b>	Tejaswi Nayak U
<b>13</b>	Rashmi U B
<b>14</b>	Vellala Vineeth Kumar
<b>15</b>	Aishwarya S
<b>16</b>	Zeba Ara Patel
<b>17</b>	Disha Mahajan
<b>18</b>	Gajanan Shridhar Bhat
<b>19</b>	Gourav Krishna Bhat
<b>20</b>	Ishwar Manjunath Malavade

<b>21</b>	J S Yashas
<b>22</b>	Karthik Vedavyas Bandihal
<b>23</b>	Mohd Adil Baig
<b>24</b>	Neha C Panji Junos
<b>25</b>	Priya B Sule
<b>26</b>	Ritika Uday Vernekar
<b>27</b>	Rohan Roy
<b>28</b>	Sachin N B
<b>29</b>	Vanishree Kadakol
<b>30</b>	Medha Ramakrishna Bhat



CERTIFIED  
ASSOCIATE

## CERTIFICATE OF ACHIEVEMENT

This certifies that

Gayatri Ramangouda Kiresur

is recognized as a

### Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

Rami Rahim  
Chief Executive Officer

Pradeep Sindhu  
Vice Chairman

Code: 1SG404VQ0N44Q83J  
Verify at <https://www.certmetrics.com/juniper/public/verification.aspx>



CERTIFIED  
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Wednesday, October 23, 2019

Rami Rahim  
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Pradeep Sindhu  
Vice Chairman

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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Anup Ravikumar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Saturday, November 28, 2020

A handwritten signature in black ink, appearing to read "Rami Rahim".

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Mihir M Ambli

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Mohammed Saquib Mullanavar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Namrata Hosamani

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist





CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Nidhi Vasant Mehata

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Nikhil Laxmidas Nayak

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Pradeep Prakash Badiger

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Prajna Manjunath Yaji

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist





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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

R Shilpa

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Sanketh V Prabhu

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Thursday, October 24, 2019

A handwritten signature in black ink, appearing to read "Rami Rahim".

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Tejaswi Nayak U

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Rashmi U B

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist





CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Vellala Vineeth Kumar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Aishwarya S

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Zeba Ara Patel

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

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Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Disha Mahajan

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Gajanan Shridhar Bhat

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

A handwritten signature in black ink, appearing to read "Rami Rahim".

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist





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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Gourav Krishna Bhat

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

A handwritten signature in black ink, appearing to read "Rami Rahim".

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Ishwar Manjunath Malavade

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman

# CERTIFICATE OF ACHIEVEMENT

This certifies that

J S Yashas

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Karthik Vedavyas Bandihal

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Mohd Adil Baig

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, October 22, 2019

A handwritten signature in black ink, appearing to read "Rami Rahim", positioned above a horizontal line.

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu", positioned above a horizontal line.

Pradeep Sindhu  
Founder & Chief Scientist



# CERTIFICATE OF ACHIEVEMENT

This certifies that

Neha C Panji

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Priya B Sule

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist



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ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Ritika Uday Vernekar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Rohan Roy

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

A handwritten signature in black ink, appearing to read "Rami Rahim".

Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Sachin N B

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Tuesday, October 22, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



# CERTIFICATE OF ACHIEVEMENT

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Sachin N B

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Tuesday, October 22, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Vanishree Kadakol

is recognized as a

Juniper Networks  
Certified Associate

Junos (JNCIA-Junos)

Tuesday, October 22, 2019



Rami Rahim  
Chief Executive Officer



Pradeep Sindhu  
Vice Chairman



CERTIFIED  
ASSOCIATE

# CERTIFICATE OF ACHIEVEMENT

This certifies that

Medha Ramakrishna Bhat

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, October 23, 2019

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Rami Rahim  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Pradeep Sindhu".

Pradeep Sindhu  
Founder & Chief Scientist

**Essentials of IT Training for Non-IT Students**

**School of Computer Science and**

**Engineering**

**KLE technological University**

## Essential of IT Training

Information Technology (IT) industry is consistently treading on a high growth path in recent years. This has given rise to huge job opportunities for fresh graduates in the industry. Thus, IT companies like Infosys, Accenture are recruiting Non-IT graduates in large numbers to pick the best workforce. Furthermore, Non-IT students are aspiring career in the IT field. However, facing technical interviews of IT companies is always a challenge for these students. In recent years, some of the Non-IT students were rejected in interviews as they lacked programming skills and basic concepts of IT. Towards this, we train the Non-IT students in Essentials of IT to make them more employable. The training has helped the students to get placed in IT industry.

### Summary of Essential of IT training and Effectiveness:

Year	Toal
No. of students trained	133
No. of students certified	81
Number of students placed	25


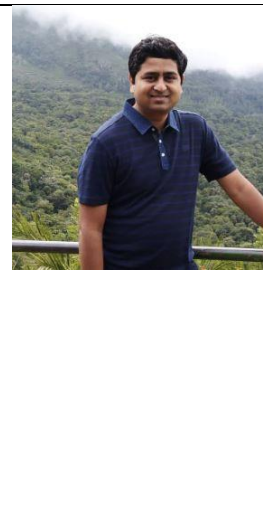


About the Training	Objectives	Registration
<p>Information Technology (IT) industry is consistently treading on a high growth path in recent years. IT companies like Infosys, Accenture are recruiting Non-IT graduates in large numbers to pick the best workforce. However, facing interviews of IT companies is always a challenge for these students. In recent years, some of the Non-IT students were rejected in interviews as they lacked programming skills and basic concepts of IT. Towards this, we plan to train the Non-IT students in Essentials of IT to make them more employable.</p>	<p><b>By the end of the workshop participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Explain process, memory and file management concepts of operating system.</li> <li>• Demonstrate the object oriented concepts and data structure.</li> <li>• Design ER models based on problem specifications.</li> <li>• Write SQL queries and optimize queries to improve performance of RDBMS.</li> </ul>	<p>For registration click on the following link:</p> <p><a href="https://forms.gle/58PcsBKv3jVg3Suk8">https://forms.gle/58PcsBKv3jVg3Suk8</a></p> <p><b>For more details contact:</b>  <b>Dr. Narayan D G</b>  <b>Professor</b>  <b>School of Computer Science</b>  <b>KLE Technological University</b>  <b>Vidyanagar Hubli-580031</b>  <b>email:narayan_dg@kletech.ac.in</b></p>
Topics	Resource Persons	
<ul style="list-style-type: none"> <li>• Computer hardware, system softwares</li> <li>• Operating system SDLC</li> <li>• Problem solving using C</li> <li>• Data structures and DBMS</li> </ul>	<ul style="list-style-type: none"> <li>• Mr. Vijay Bhajantri</li> <li>• Mr. Shivaraj Kengond</li> <li>• Mr. Altaf Husain</li> <li>• Mr. Vijay Biradar</li> <li>• Ms. Jayalaxmi G</li> <li>• Mr. K M M Rajashekharaiiah</li> <li>• Mr.Somshekar Patil</li> <li>• Mr.Mahesh Patil</li> </ul>	

**Training Content:**

Topics	Day	Topic	Lecture / Hands-on Sessions
Introduction to computer systems	1	Components of computer systems, Program execution cycle, Computer networks, Software and its classification,	Lecture Session 2 hours
	2	Operating Systems, SDLC	Lecture Session 2 Hours
C Programming	3	Introduction to Problem Solving, Control structure in C	Lecture + hands on 4hours (Programming Exercises)
	4	Loops, Arrays	Lecture + hands on 4 hours (Programming Exercises)
	5	Strings, Structures	Lecture + hands on 4hours (Programming Exercises)
	6	Structures, Functions, Pointers	Lecture + hands on 4hours (Programming Exercises)
Data Structures	7	Stacks, Queues	Lecture + hands on 4hours (Programming Exercises )
	8	Linked lists, Binary Search Trees	Lecture + hands on 4 hours (Programming Exercises)
DBMS	9	Characteristics of DBMS, ER model, Normalization	Lecture Session 4 Hours
	10	SQL queries	Lecture + hands on 4 Hour

## Profile of Resource person

	<p>Somashekar Patil holds a Master's degree in Computer Networks and currently pursuing PhD in the area of Networking . He is working as an Assistant professor in KLE Technological University, Hubballi, Karnataka and is having teaching experience of 10 years. His research interest includes Computer Networks, Software Defined Networks and Cloud Computing.He was also involved as member of teaching team for the popular Infosys campus connect foundation courses at various institutions. He is playing an active role in designing Data structures and Algorithms course of computer science department.</p>
	<p>Mahesh S Patil graduated from SLNCE Raichur in 2008; post-graduation from MVJCE Bangalore, Karnataka in 2011. He is in to teaching field since 2010 and has worked in the institutes KNSIT Bangalore and KLETech University ( formerly known as BVBCET) Hubli. His field of interest are Engineering education and System Engineering. He has Undergone IUCEE international Engineering Education Certificate program and also published several papers in engineering education. He was also resource person for Android , HTML5+javascripts Mobile Application development and has conducted several workshops. Currently he is perusing his PhD in computer science at KLETech University on parallel computing. His current area of research are Parallel Computing, AI (ML and deep learning) and compiler applications.</p>

## Essentials of IT (2019)

### Batch Details:

Batch No.	Department	Roll. Nos.	Venue	Faculty
B1	Mechanical	1 to 40	LAB-5	Prof. Vijay Bajantri
B2	Mechanical	41 to 83	LAB-6	Prof. Mahesh Patil
B3	CIVIL,AR and BT	84 to 137	Microsoft Lab	Prof. Somashekar Patil

### Training Schedule:

**Training Dates:** 23<sup>rd</sup> July 2019 to 4<sup>th</sup> August 2019

**Daily Sessions:** 2

**Session 1:** 9.00 AM to 11:00 AM

**Session 2:** 11.30 AM to 1.30 PM

## Attendance List- 2019-20

### essentials of IT 2019-20 Students attendance list

Sl. No.	USN	Name	7/23/2019	7/24/2019	7/25/2019	7/26/2019	7/27/2019	7/28/2019	7/29/2019	7/30/2019	7/31/2019	8/1/2019	8/2/2019
1.	01fe16bme228	Vishal Shridhar Vandakar	P	P	P	P	A	P	P	P	P	A	P
2.	01FE16BME172	Sarvesh S Sadashivanavar	P	P	P	P	A	P	P	P	P	A	P
3.	01FE16BME015	Ajaykumar Hiremath	P	P	A	P	P	P	P	P	P	P	P
4.	01fe17bme410	Basavaraj sahaddev kapolkar	P	P	P	A	P	P	P	P	P	P	P
5.	01FE16BME112	Nyamat Allah Noorahmad Momin	P	P	P	P	P	P	P	P	P	P	A
6.	01FE16BME211	TEJAS S LENGADE	P	P	A	P	A	P	P	P	P	A	P
7.	01FE16BME150	RAVI VEERAPPA HADAPAD	P	P	P	A	P	P	P	P	P	A	P
8.	01FE17BME408	Ananat Shrikant Inamdar	P	P	P	P	P	P	P	P	P	P	A
9.	01FE16BME045	Darshan D B	P	P	P	A	P	P	P	P	P	P	P
10.	01FE16BME152	Ritesh Madan Ghodake	P	P	A	P	P	P	P	A	P	P	P
11.	01FE16BME031	Avinash U Gollarahalli	P	P	P	A	P	P	P	P	P	P	P
12.	01FE16BME060	Jayaraj F.Hiremath	P	P	A	P	P	P	A	P	P	P	A
13.	01FE17BME430	MD IMTIYAZ B	P	P	A	P	P	P	P	P	P	P	P
14.	01fe16bme025	Anish Bhairava Hegde	P	P	P	P	P	P	P	P	P	A	A
15.	01FE16BME113	Omkar Mahagundayya Sali	P	P	P	P	P	P	P	P	P	P	A
16.	01FE16BME217	Varadaraj V Tigadikar	P	A	A	P	A	P	A	P	P	P	P
17.	01fe16bme222	Vinay M Hiremath	P	P	P	P	P	P	P	P	A	P	A
18.	01FE16BME087	MANJUNATH VITTAPPA PATIL	P	P	P	P	P	P	P	P	P	P	P
19.	01FE16BME200	Sourav Kulkarni	A	P	P	P	A	P	P	A	P	P	A
20.	01fe16bme202	Srinivas Ramesh Yelgodkar	P	P	P	P	P	P	A	P	P	A	P
21.	01FE16BME235	Sameeksha C Shetty	P	P	P	P	P	P	P	P	P	P	A
22.	01FE17BME445	Sanket Jagadeesh Gouri	A	A	P	P	A	P	P	P	P	P	P
23.	01FE16BME044	Chetan Prakash Yadal	P	P	P	P	P	P	P	P	P	P	P
24.	01FE16BME050	G Sujay	P	P	P	P	A	P	P	P	A	P	P
25.	01FE17BME412	GADIGEPPA SHIVAMAHAVEVAPPA KULKARNI	P	P	A	P	P	P	P	P	A	P	P
26.	01FE16BME071	KEDARNATH SANJEEVKUMAR POTDAR	P	P	P	P	P	P	P	P	P	P	P
27.	01FE16BME169	Sanket kurbet	P	A	P	P	P	A	P	P	P	P	P
28.	01fe16bme041	Chandan Basappa Maliyavar	P	P	P	P	P	A	P	P	P	P	A

*Handwritten signatures and initials.*

### Essentials of IT 2019-20 Students attendance list

29.	01fe16bme017	Akash M Bulbule	A	P	P	P	P	P	P	P	P	A	P
30.	01FE16BME238	Shripasthree S Kalawad	P	P	P	P	P	P	P	A	P	A	P
31.	01FE16BME125	PRASAN PRAKASH SULEBHAVI	P	P	P	A	P	P	P	P	P	P	A
32.	01FE16BME142	Rahul Subodh Rasadurg	P	P	P	P	P	P	P	P	P	P	P
33.	01fe17bme428	Manish Patil	A	P	P	P	P	P	P	P	A	P	P
34.	01FE16BME077	Kishor Vijay Gaonkar	P	P	P	P	P	P	P	P	P	P	P
35.	01FE16BME232	Yogesh Joshi	P	P	P	A	P	P	A	P	P	P	A
36.	01fe16bme161	Sagar Patil	P	P	A	P	P	P	A	P	P	P	P
37.	01FE16BME147	Ram Manohar Talbe	P	A	P	P	P	P	P	P	P	A	P
38.	01FE16BME107	Nikhil M Patil	P	P	P	P	A	P	P	P	P	A	P
39.	01FE16BME136	Pavan Anand Kulkarni	P	P	P	P	P	P	P	P	P	P	P
40.	01FE16BME120	Prabhudev Shambhu Yezagel	P	A	P	P	P	P	P	P	P	A	A
41.	01FE16BME174	SHAMANTH GOPAL BICARI	A	P	P	P	P	P	P	P	A	P	P
42.	01FE17BME443	RAMAKRISHNA TATAPPA GANDOLI	P	P	P	A	P	P	P	P	P	A	P
43.	01FE16BME444	Sakumar B Dani	P	P	P	P	P	P	P	P	P	P	P
44.	01FE16BME076	Koustubh B	P	A	P	P	P	P	P	P	P	P	A
45.	01FE16BME117	Pavan Kumar B. Kuvale	P	P	A	P	P	P	P	P	P	A	P
46.	01FE16BME117	Sneha Chinkwal	P	P	P	P	P	P	P	P	P	P	P
47.	01fe16bme055	Vinayak Mahabaleshwar Boormane	A	P	P	P	P	P	P	P	A	P	P
48.	01fe16bme044	Shriya Kishore Bhanurkar	P	A	P	P	P	P	A	P	P	P	P
49.	01FE16BME030	Seetharam Namadev Shahuagar	A	P	P	P	P	P	P	P	P	A	P
50.	01FE16BME010	Aswara Aravind Sabnis	P	P	P	P	P	P	P	P	P	P	P
51.	01FE17BME401	Anil A Dand	P	P	P	P	A	P	P	P	A	P	P
52.	01fe16bme008	Anagha S Nigad	P	P	A	P	P	P	P	P	P	P	A
53.	01FE16BME050	Tejashwini Kori	A	P	P	P	P	P	P	A	P	P	P
54.	01fe16bme022	Kunal Patil	P	P	P	P	P	P	P	P	P	P	P
55.	01FE16BME036	Samarth Shrikant Tikare	A	P	A	P	P	P	A	P	P	P	A
56.	01fe16bme035	Rohan Shankaragouda magdumkar	P	P	P	A	P	P	P	P	P	A	P
57.	01FE16BME057	Yugita Ramesh Kadammannavar	P	A	P	P	P	P	P	P	P	P	A

*Handwritten signatures and initials.*



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# ***Certificate of Completion***

*This is to certify that*

**VISHAL SHRIDHAR VANDAKAR**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

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Dr. Meena S. M  
HoD, SoCSE

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Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

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**SARVESH S SADASHIVANAVAR**

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HoD, SoCSE

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**AJAYKUMAR HIEMATH**

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**BASAVARAJ SAHADEV KAPOLKAR**

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# ***Certificate of Completion***

*This is to certify that*

**NYAMAT ALLAH NOORAHMAD MOMIN**

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**TEJAS S LENGADE**

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*This is to certify that*

**RITESH MADAN GHODAKE**

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*This is to certify that*

**AVINASH U GOLLARAHALLI**

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# ***Certificate of Completion***

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**JAYARAJ.F.HIREMATH**

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Dr. Narayan D G  
Coordinator



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**MD IMTIYAZ B**

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**OMKAR MAHAGUNDAYYA SALI**

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*This is to certify that*

**VARADARAJ V TIGADIKAR**

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Dr. Meena S. M  
HoD, SoCSE

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Dr. Narayan D G  
Coordinator



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*This is to certify that*

**VINAY M HIEMATH**

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HoD, SoCSE

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Dr. Narayan D G  
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*This is to certify that*

**MANJUNATH VITTAPPA PATIL**

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**SOURAV KULKARNI**

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HoD, SoCSE

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Dr. Narayan D G  
Coordinator





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*This is to certify that*

**SRINIVAS RAMESH YELGODKAR**

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Dr. Meena S. M  
HoD, SoCSE

Dr. Narayan D G  
Coordinator



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from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

Dr. Meena S. M  
HoD, SoCSE

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**SHEETAL BEDRE**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**SAKSHI NANAPPA MALAGI**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**SHREYAS S.**

---

has successfully completed ***“Essentials of IT”***  
*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator





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# ***Certificate of Completion***

*This is to certify that*

**PAVAN J. KULKARNI**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**VIRESH SAJJAN**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**VINAYAK**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**ANIL ALLAPUR**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**NARAYAN BADIGER**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**ADARSH M AMARGOL**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator





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# ***Certificate of Completion***

*This is to certify that*

**DARSHAN MATTIKALLI**

---

has successfully completed ***“Essentials of IT”***

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---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator



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# ***Certificate of Completion***

*This is to certify that*

**SUDHA KAMMAR**

---

has successfully completed ***“Essentials of IT”***

*Training conducted by* School of Computer Science and Engineering  
from 23<sup>rd</sup> July 2019 to 2<sup>nd</sup> August 2019.

---

Dr. Meena S. M  
HoD, SoCSE

---

Dr. Narayan D G  
Coordinator

## Machine Learning Workshop (June 1 – June 15, 2020)

The workshop introduces fundamental concepts of Machine Learning and provides hands-on experience of implementing Machine Learning algorithms in Python programming language for solving real world problems. The Workshop was conducted by AI/ML team from School of Computer Science and Engineering.

#	Session	Concepts covered
1.	I	Introduction to Machine Learning, Supervised, Unsupervised Learning
	II	Lab session: Demo on Classification and clustering
2.	I	Reinforcement Learning
	II	Lab session : Demo
3.	I	Statistics for ML
	II	Lab session Correlation and regression problems.
4.	I	Data Mining and Analysis
	II	Lab session: Data Pre-processing techniques (Data reduction, data transformation and data Discretization)
5.	I	Frequent Pattern and Association Mining
	II	Lab session: Apriori algorithm.
6.	I	Classification
	II	Lab session: ensemble Methods
7.	I	Classification – Contd...
	II	Lab session: Bayesian belief networks
8.	I	Regression – Predictive Modelling, Regularization
	II	Lab session : Feature Selection ,Metrics for Prediction ,Visualization
9.	I	Regression – Contd...
	II	Lab Session: Random forest , Metrics for Classification and Visualization
10.	I	Clustering
	II	Lab session: Partitioning methods
11.	I	Clustering – Contd...
	II	Lab session: Hierarchical Methods
12.	I	Project Implementation
	II	



**Workshop**

**at**

**June 1 – June 15, 2020**

**Register Early**

**Only 40 Students are allowed**

## Registered Students Information

Sl No	Students Name	USN	Email Id	Contact No
1	Karnika Bhardwaj	01FE18BCS085	karnika20k@gmail.com	6265886272
	Sakshi Jha	01FE18BCS182	jhasakshi1234@gmail.com	8105839562
	Sanjay Keshwar	01FE18BCS192	sanjaykeshwar55@gmail.com	8247496077
	Savitri Khyadad	01FE18BCS196	savitrikyadad15@gmail.com	7899547294
2	Shiva V. Naik	01FE18BCS200	shivanaik2623@gmail.com	9483426650
	Soujanya Naik	01FE18BCS218	soujanya.bnaik@gmail.com	7349610246
	Suraj M Dandin	01FE18BCS233	surajdandin09@gmail.com	8217703974
	Sneha K Majjigudda	01fe18bcs211	snehamajjigudda@gmail.com	9108358068
3	Sindhu R Bagal	01FE18BCS209	bksindhubagal@gmail.com	9606778207
	Shivani Nazare	01FE18BCS201	shivaninazare1234@gmail.com	8050975649
	Vaishnavi H	01FE18BCS244	vaishnavihayagreev05@gmail.com	6360184375
	Tatpada R	01fe18bcs239	tatpadarraikar@gmail.com	8496807037
4	Madhura Shanbhag	01FE18BCS108	madhurashanbhag2001@gmail.com	7406330470
	Swapnil Kore	01FE18BCS098	swapnillkore@gmail.com	8956285075
	Abhimalya Chowdhury	01FE18BCS007	abhimalyachowdhury@gmail.com	7349623358
	Md Zakee	01fe18bcs113	01fe18bcs113@kletech.ac.in	7892611302
5	Vinay S G	01fe18bcs255	vinaygudarad@gmail.com	9513182271
	Vivek Janamatti	01fe18bcs261	svjanamatti@gmail.com	8762730328
	Namrata K	01fe18bcs120	01fe18bcs120@kletech.ac.in	8050930537
	Vrushabh A	01FE18BCS262	vrush.amarashetty@gmail.com	9972336948
	Haritha B	01fe18bcs079	01fe18bcs079@kletech.ac.in	9381813876
6	Winston Dcosta	01fe18bcs264	dcostawinston6@gmail.com	9110697931
	Vineet Lokur	01fe18bcs259	vineetlokur@gmail.com	8861893157
	Rohan Venkatesh Sirigeri	01fe18bcs176	rohanvs2000@gmail.com	9481426558
	Sajal Porwal	01fe18bcs181	sajal.anshulp310@gmail.com	7424904298
7	Abhishek PM	01FE18BCS010	abhishekpm54@gmail.com	8904657730
	Pooja Doddannavar	01FE18BCS141	poojadoddannavar@gmail.com	9964778281
	Anishma Naik	01FE18BCS037	anishmanaik85@gmail.com	8296942686
	Rachana patil	01FE18BCS060	patilrachna999@gmail.com	8884687777
8	Aditi Chillal	01fe18bcs014	01fe18bcs014@kletech.ac.in	7795974194
	Sridevi K	01fe18bcs221	01fe18bcs221@kletech.ac.in	8277713645

School of Computer Science and Engineering

	Akshata N	01fe18bcs025	01fe18bcs025@kletech.ac.in	7406613203
	Akhilesh Harti	01fe17bcs023	<a href="mailto:akhilharti92@gmail.com">akhilharti92@gmail.com</a>	8310342253
9	Abhinav Kumar	01FE18BCS008	abhinavkcs11@gmail.com	7702605221
	Nandita Malakar	01FE18BCS123	nandita31071999@gmail.com	9340908580
	Navdeep Singh Bagga	01FE18BCS127	navdeepsinghbagga1999@gmail.com	7408064159
	PavanKumar Benakatti	01FE18BCS140	pavanben1999@gmail.com	7022718392
10	Nidhi Mamadapur	01fe17bcs118	nidhimamadapur123@gmail.com	9945980414
	Prem Kulkarni	01fe17bcs141	premkulkarni16@gmail.com	9742942255
	Puroshottam Kumar	01fe18bcs160	purshottam863@gmail.com	6205827020
	Mirza Zain Baig	01fe17bcs108	zain.baig98@gmail.com	9880541870





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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Karnika Bhardwaj**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* ..... **Sakshi Jha** .....

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in black ink.

Course Instructor

A handwritten signature in purple ink.

Head of School

A handwritten signature in blue ink.

Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Sanjay Keshwar**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Savitri Khyadad**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

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Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **Shiva V. Naik**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Soujanya Naik**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Suraj M Dandin**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Sneha K Majjigudda**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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# Certificate

*This is to certify that*

*Mr./Miss.* **Sindhu R Bagal**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Shivani Nazare**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in black ink, appearing to be 'V.S.' or similar.

Course Instructor

A handwritten signature in purple ink, appearing to be 'Mena'.

Head of School

A handwritten signature in blue ink, appearing to be 'M.K.' or similar.

Controller of Examinations



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# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Vaishnavi H**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in black ink.

Course Instructor

A handwritten signature in blue ink.

Head of School

A handwritten signature in blue ink.

Controller of Examinations



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# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Tatpada Raikar**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in black ink, appearing to be 'V.R.' or similar.

Course Instructor

A handwritten signature in purple ink, appearing to be 'Mema'.

Head of School

A handwritten signature in blue ink, appearing to be 'M.R.' or similar.

Controller of Examinations





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# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Madhura Shanbhag**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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# *Certificate*

*This is to certify that*

*Mr./Miss.* **Swapnil Kore**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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# Certificate

*This is to certify that*

*Mr./Miss.* **Abhimalya Chowdhury**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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# *Certificate*

*This is to certify that*

*Mr./Miss.* **Md Zakee Hungund**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, appearing to be 'VQ'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'Mema'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. H.'.

Controller of Examinations



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# Certificate

*This is to certify that*

*Mr./Miss.* **Vinay S G**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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# Certificate

*This is to certify that*

*Mr./Miss.* **Vivek Janamatti**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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# Certificate

*This is to certify that*

*Mr./Miss.* **Namrata K**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Vrushabh A**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, appearing to be 'Vr'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'Mena'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.'.

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# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Haritha B**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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# *Certificate*

*This is to certify that*

*Mr./Miss.* **Winston Dcosta**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, appearing to be 'VQ'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'Mena'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.'.

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# *Certificate*

*This is to certify that*

*Mr./Miss.* **Vineet Lokur**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **Rohan Venkatesh Sirigeri**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

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Course Instructor

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Head of School

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Controller of Examinations





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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Sajal Porwal**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Abhishek P M**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, appearing to be 'VQ'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'Mena'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.'.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Pooja Doddannavar**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Anishma Naik**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **Rachana patil**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Aditi Chillal**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Sridevi K**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Akshata N**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Akhilesh Harti**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in black ink, appearing to be 'V.R.'.

Course Instructor

A handwritten signature in purple ink, appearing to be 'Mema'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. H.'.

Controller of Examinations





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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Abhinav Kumar**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* ..... **Nandita Malakar** .....

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, appearing to be 'V.R.'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'Mena'.

Head of School

A handwritten signature in blue ink, appearing to be 'M.K.'.

Controller of Examinations



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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Navdeep Singh Bagga**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations





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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **PavanKumar Benakatti**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **Nidhi Mamadapur**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE**

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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Controller of Examinations



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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* .....

**Prem Kulkarni**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

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Head of School

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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* .....

**Puroshottam Kumar**

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* ..... **1<sup>st</sup> JUNE** ..... *to* ..... **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

A handwritten signature in blue ink, likely belonging to the Head of School.

Head of School

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## School of Computer Science & Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **Mirza Zain Baig** .....

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

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Head of School

A handwritten signature in blue ink, likely belonging to the Controller of Examinations.

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## School of Computer Science & Engineering

# Certificate

*This is to certify that*

*Mr./Miss.* **Sujay Tadahal** .....

*has successfully completed the Value Addition Training Course on*

**MACHINE LEARNING WORKSHOP**

*from* **1<sup>st</sup> JUNE** *to* **15<sup>th</sup> JUNE** .....

A handwritten signature in blue ink, likely belonging to the Course Instructor.

Course Instructor

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Head of School

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**Value Added Training**  
**Course: Automotive Electronics**  
**(2016-20)**

# Value Added Training (VAT)

School of Electronics & Communication Engineering

## Automotive Electronics

### Course Outcomes

- Understand automotive electronics technology basics
- Understand the use and design of automotive electronic component like ECU etc.
- Understand automotive communication protocols like CAN, LIN, MOST, Flexray.
- Understand the diagnostic tools and software

Last Date to apply – Jan 15th 2019

Training Duration – Jan 15th to May 3rd 2019

Coordinator – Prof. Venkatesh Mane

Prof. Bhagyashree K

mane@kletech.ac.in

+91 9886654510

			<b>Teaching Hours</b>
<b>Course Title: Automotive Electronics</b>		<b>Course Code:</b>	
<b>L-T-P: 3-0-0</b>	<b>Credits: 3</b>	<b>Contact Hours: 3Hrs/week</b>	
<b>CIE Marks: 50</b>	<b>SEE Marks:50</b>	<b>Total Marks: 100</b>	
<b>Teaching Hours: 40 Hrs</b>	<b>Examination Duration:03 Hrs</b>		
<b>Unit – I</b>			
<b>Chapter 1: Automotive Systems, Design cycle and Automotive industry overview</b> Overview of Automotive industry, Vehicle functional domains and their requirements, automotive supply chain, global challenges. Role of technology in Automotive Electronics and interdisciplinary design. Introduction to modern automotive systems and need for electronics in automobiles and application areas of electronic systems in modern automobiles, Introduction to power train, Automotive transmissions system ,Vehicle braking fundamentals, Steering Control, ,Overview of Hybrid Vehicles, ECU Design Cycle : Types of model development cycles( V and A) , Components of ECU, Examples of ECU on Chassis, Infotainment, Body Electronics and cluster.			7Hrs
<b>Chapter 2: Embedded system in Automotive Applications &amp; Automotive safety systems</b> Automotive grade microcontrollers: Architectural attributes relevant to automotive applications, Automotive grade processors ex: Renesas, Quorivva, and Infineon. EMS: Engine control functions, Fuel control, Electronic systems in Engines , Development of control algorithm for EMS, Look-up tables and maps, Need of maps, Procedure to generate maps, Fuel maps/tables, Ignition maps/tables, Engine calibration, Torque table, Dynamometer testing Safety Systems in Automobiles: Active and Passive safety systems: ABS, TCS, ESP, Brake assist, Airbag systems etc.			8Hrs
<b>Unit –II</b>			
<b>Chapter 3: Automotive Sensors and Actuators</b> Sensor characteristics, Sensor response, Sensor error, Redundancy of sensors in ECUs, Avoiding redundancy, Smart Nodes, Examples of sensors: Accelerometer (knock sensors),wheel speed sensors, Engine speed sensor, Vehicle speed sensor, Throttle position sensor, Temperature sensor, Mass air flow (MAF) rate sensor, Exhaust gas oxygen concentration sensor, Throttle plate angular position sensor, Crankshaft angular position/RPM sensor, Manifold Absolute Pressure (MAP) sensor. Actuators: Engine Control Actuators, Solenoid actuator, Exhaust Gas Recirculation Actuator.			8Hrs
<b>Chapter 4: Automotive communication protocols</b> Overview of Automotive communication protocols : CAN, LIN , Flex Ray, MOST			7Hrs
<b>Unit –III</b>			
<b>Chapter 5: Advanced Driver Assistance Systems (ADAS) and Functional safety standards</b> Advanced Driver Assistance Systems (ADAS):Examples of assistance applications: Lane Departure Warning, Collision Warning, Automatic Cruise Control, Pedestrian Protection, Headlights Control, Connected Cars technology and trends towards Autonomous vehicles. Functional Safety: Need for safety standard-ISO 26262, safety concept, safety process for product life cycle, safety by design, validation.			5Hrs
<b>Chapter 6: Diagnostics</b> Fundamentals of Diagnostics: Basic wiring system and Multiplex wiring system, Preliminary checks and adjustments, Self-diagnostic system. Fault finding and corrective measures, Electronic transmission checks and Diagnosis, Diagnostic procedures and sequence, On board and off board diagnostics in Automobiles, OBDII, Concept of DTCs, DLC, MIL, Freeze Frames, History memory, Diagnostic tools, Diagnostic protocols: KWP2000 and UDS			5Hrs

**Text Book (List of books as mentioned in the approved syllabus)**

1. Ribbens, Understanding of Automotive electronics, 6th Edition, Elsevier, 2003
2. Denton.T, Automobile Electrical and Electronic Systems, Elsevier, 3rd Edition, 2004
3. Denton.T, Advanced automotive fault diagnosis, 2000

**References**


1. Ronald K Jurgen, Automotive Electronics Handbook, 2nd Edition, McGraw-Hill, 1999
2. James D Halderman, Automotive electricity and Electronics, PHI Publication, 2000
3. Allan Bonnick, Automotive Computer Controlled Systems Diagnostic Tools and Techniques, Elsevier Science, 2001
4. Nicholas Navet , Automotive Embedded System Handbook , 2009

**Recourse Persons****Prof. Venkatesh Mane**

Assistant Professor, School of Electronics and Communication  
Area of Interests: Automotive Electronics, RTOS, C++, AutoSAR

**Prof. Bhagyashree K.**

Assistant Professor, School of Electronics and Communication  
Area of Interests: Digital Electronics, Embedded Design, Automotive Electronics, RTOS



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**School of Electronics and Communication Engineering**  
**Time Table for Minor Program**

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**Time Table**

**Semester: VI**

**Term:** 15/1/19  
3/5/19

DAY/ TIME	8.00-9.00	9.00-10.00	10.00-10.15	10.15-11.15	11.15-12.15	12.15-1.30	1.30-2.30	2.30-3.30	3.30-4.30	4.45-5.45
<b>Monday</b>			BREA K			BREA K				
<b>Tuesday</b>			BREA K			BREA K				Automotive Electronics
<b>Wednesday</b>			BREA K			BREA K				
<b>Thursday</b>			BREA K			BREA K				Automotive Electronics
<b>Friday</b>			BREA K			BREA K				
<b>Saturday</b>			BREA K			BREA K	Automotive Electronics			

Term: 15/1/19  
3/5/19

PREPARED BY: A. S. Naik

VERIFIED BY: R. M. Shet

APPROVED BY: Dr. Nalini C Iyer

**Head of School**  
**Electronics & Communication Engg**  
**KLE Technological University**





Attendance Sheet

From 15/1/19 To 3/5/19

Staff Member Name: Venkatesh M Bhogyaachra

Subject: Automotive Electronics

Code: M16EECCF301

Roll No	USN	Students' Name	B/F		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL		Att n %
			e	a	21/1	22/1	23/1	24/1	25/1	26/1	27/1	28/1	29/1	30/1	31/1	1/2	2/2	3/2	4/2	5/2	6/2	7/2	8/2	9/2	10/2	e	a
1	01FE16BCS019	AKHILA JOSHI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
2	01FE16BCS041	APOORVA S MALEMATH			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
3	01FE16BCS083	JYOTHI S HOSAMANI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
4	01FE16BCS113	NAMRATA HOSAMANI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
5	01FE16BCS137	PAVAN U DURGADSIMI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
6	01FE16BCS213	SWATI DHADEKAR			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
7	01FE16BCS242	PRAISON JOSHUA T			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
8	01FE16BCS250	VELLALA VINEETH KUMAR			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
9	01FE16BME055	GURURAJ GIRISH TONAPI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
10	01FE16BME065	KAPIL S KALGUTKAR			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
11	01FE16BME115	PANKAJANABH V SHETTI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
12	01FE16BME137	RAHUL KHAN																									
13	01FE16BME180	SHASHIKANT A ANGADI																									
14	01FE16BME181	SHIDDALINGESH V ANGADI			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
15	01FE16BME211	TEJAS SUJIT LENGAGE			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
16	01FE17BME436	PRAJWAL F PUTTIYAVAR			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
17	01FE17BME455	VIJAYAKUMARREDDY B																									

Theory ☐ Practical ☐

B/F: Brought Forward; e: Classes Engaged; a: Classes Attended; Note: Mark P for Present and A for Absent  
(For Practical/Lab. Classes the attendance sheet shall be maintained batch wise)

Signature of Staff Member:

Co-ordinator  
School of Electronics



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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **AKHILA JOSHI** .....

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**  
.....

*from* **15/01/2019** *to* **03/05/2019** .....

A handwritten signature in black ink, appearing to be 'D. V.' with a horizontal line underneath.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy' with a horizontal line underneath.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.' with a horizontal line underneath.

Controller of Examinations



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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **APOORVA S MALEMATH** .....

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**  
.....

*from* **15/01/2019** *to* **03/05/2019** .....

A handwritten signature in black ink, appearing to be 'D. V.' or similar, written over a horizontal line.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jyoti', written over a horizontal line.

Head of School

A handwritten signature in blue ink, appearing to be 'K. S.', written over a horizontal line.

Controller of Examinations





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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **GURURAJ GIRISH TONAPI** .....

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**  
.....

*from* **15/01/2019** *to* **03/05/2019** .....

A handwritten signature in black ink, appearing to be 'D. V.'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.'.

Controller of Examinations



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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **JYOTHI S HOSAMANI**

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**

*from* **15/01/2019** *to* **03/05/2019**

A handwritten signature in black ink, appearing to be 'D. V.', written over a horizontal line.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy', written over a horizontal line.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.', written over a horizontal line.

Controller of Examinations





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# *Certificate*

*This is to certify that*

*Mr./Miss.* **KAPIL S KALGUTKAR**

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**

*from* **15/01/2019** *to* **03/05/2019**

A handwritten signature in black ink, appearing to be 'D. V.'.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy'.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.'.

Controller of Examinations



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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **NAMRATA HOSAMANI** .....

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**  
.....

*from* **15/01/2019** *to* **03/05/2019** .....

A handwritten signature in black ink, appearing to be 'D. V.' with a checkmark, written over a horizontal line.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy', written over a horizontal line.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.', written over a horizontal line.

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## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **PANKAJANABH V SHETTI**

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**

*from* **15/01/2019** *to* **03/05/2019**

A handwritten signature in black ink, appearing to be 'D. V.' with a checkmark, written over a horizontal line.

Course Instructor

A handwritten signature in blue ink, appearing to be 'N. C. Jy', written over a horizontal line.

Head of School

A handwritten signature in blue ink, appearing to be 'M. S.', written over a horizontal line.

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Creating Value  
Leveraging Knowledge

## School of Electronics & Communication Engineering

# *Certificate*

*This is to certify that*

*Mr./Miss.* **PAVAN U DURGADSIMI** .....

*has successfully completed the Value Addition Training Course on*  
**Automotive Electronics**  
.....

*from* **15/01/2019** *to* **03/05/2019** .....

A handwritten signature in black ink, appearing to be 'D.V.', written over a horizontal line.

Course Instructor

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Head of School

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Controller of Examinations



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**Value Added Training**  
**Course: Project Work**  
**(2016-20)**

# Value Added Training (VAT)

**School of Electronics & Communication Engineering**

## Project

### Project Outcomes

1. Perform effective literature survey used to solve engineering problem.
2. Apply the knowledge of all electronic courses in project work.
3. Use of appropriate modern tools to execute the project work.
4. Communicate effectively and develop writing competence through technical report and presentations.

**Last Date to apply – June 10th 2019**

**Training Duration – June 10th to Aug 01st 2019**

**Coordinator –Prof. Nalini C**

**Prof. R. M. Shet**

**raghu@kletech.ac.in**

**+91 9886659327**

Minor in Electronics			Teaching Hours
Course Title: Project		Course Code: M16EECW301	
L-T-P: 0-0-2	Credits: 2	Contact Hours: 5 Hrs/week	
CIE Marks: 50	SEE Marks: 50	Total Marks: 100	
Teaching Hours: 5Hrs	Examination Duration: 02 Hrs		
Theme : Embedded Applications Project Work for minor Course in Electronics includes. Tasks: <ul style="list-style-type: none"> <li>Sensor Selection and Characterization to acquire real world data</li> <li>Signal Conditioning for acquired data</li> <li>Signal processing and interfacing with suitable controller using proper communication protocol</li> <li>Actuator selection and Interfacing</li> </ul> Deliverables <ul style="list-style-type: none"> <li>Complete ES to demonstrate the functionalities of the chosen application</li> </ul>			05Hrs

### Recourse Persons

#### Prof. Nalini C. Iyer

Professor, School of Electronics and Communication

Area of Interests: Network Security, Embedded Design, Automotive Electronics

#### Prof. R. M. Shet

Assistant Professor, School of Electronics and Communication

Area of Interest: Signals and Systems, DSP, Process control, Automation, Control System

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**KLE Technological University,**  
**School of Electronics and Communication Engineering**  
**Time Table for Minor Program**

**Time Table**

**Semester: VI-S**

**Term:**

*5th & 10<sup>th</sup> -  
Aug 01<sup>st</sup> 2019*

DAY/ TIME	8.00-9.00	9.00-10.00	10.00-10.15	10.15-11.15	11.15-12.15	12.15-1.30	1.30-2.30	2.30-3.30	3.30-4.30	4.45-5.45
<b>Monday</b>			BREA K			BREA K				
<b>Tuesday</b>			BREA K	Project Review						
<b>Wednesday</b>			BREA K			BREA K				
<b>Thursday</b>			BREA K			BREA K				
<b>Friday</b>			BREA K			BREA K				
<b>Saturday</b>			BREA K			BREA K				

PREPARED BY: A. S. Naik

VERIFIED BY: R. M. Shet

APPROVED BY: Dr. Nalini C. Iyer

**Head of School**  
Electronics & Communication Engineering  
KLE Technological University



Attendance Sheet

From 10/6/19 To 01/8/19

Staff Member Name: Dr. Nalini C  
R. M. S. et

Subject: Project

Code: M16FECW301

Roll No	USN	Students' Name	B/F		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL		Att n %
			e	a																					e	a	
1	01FE16BCS019	AKHILA JOSHI			P	P	P	P																			
2	01FE16BCS041	APOORVA S MALEMATH			P	P	P	P																			
3	01FE16BCS083	JYOTHI S HOSAMANI			P	P	P	P																			
4	01FE16BCS113	NAMRATA HOSAMANI			P	P	P	P																			
5	01FE16BCS137	PAVAN U DURGADSIMI			P	P	P	P																			
6	01FE16BCS213	SWATI DHADEKAR			P	P	P	P																			
7	01FE16BCS242	PRAISON JOSHUA T			P	P	P	P																			
8	01FE16BCS250	VELLALA VINEETH KUMAR			P	P	P	P																			
9	01FE16BME055	GURURAJ GIRISH TONAPI			P	P	P	P																			
10	01FE16BME065	KAPIL S KALGUTKAR			P	P	P	P																			
11	01FE16BME115	PANKAJANABH V SHETTI			P	P	P	P																			
12	01FE16BME137	RAHUL KHAN																									
13	01FE16BME180	SHASHIKANT A ANGADI																									
14	01FE16BME181	SHIDDALINGESH V ANGADI			P	P	P	P	P																		
15	01FE16BME211	TEJAS SUJIT LENGADE																									
16	01FE17BME436	PRAJWAL F PUTTIYAVAR			P	P	P	P	P																		
17	01FE17BME455	VIJAYAKUMARREDDY B																									

Theory ☐ Practical ☐

B/F: Brought Forward; e: Classes Engaged; a: Classes Attended; Note: Mark P for Present and A for Absent  
(For Practical/Lab. Classes the attendance sheet shall be maintained batch wise)

Signature of Staff Member:

Co-ordinator  
School of Electronics



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## School of Electronics & Communication Engineering

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*Mr./Miss.* **AKHILA JOSHI** .....

*has successfully completed the Value Addition Training Course on*  
**Project Work**  
.....

*from* **10/06/2019** *to* **01/08/2019** .....

A blue ink signature of the Course Instructor.

Course Instructor

A blue ink signature of the Head of School.

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*Mr./Miss.* **GURURAJ GIRISH TONAPI** .....

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*Mr./Miss.* **JYOTHI S HOSAMANI** .....

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## Fundamentals of Business, Venture Investments and Intellectual Property

### Course Outcome

- Evaluate user experience with prototype and build product
- Create a Business Plan and pitch deck
- Apply for patent/trademark/copyright



**Last Date to apply – 29<sup>th</sup> Oct 2018**  
**Program Duration – Nov 2019 to Jan 2020**  
**Coordinator – Ms. Soumya Kudagi**  
soumya.kudagi@kletech.ac.in  
+91 98867 07196

## **CENTER FOR TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP**

### **VALUE ADDED TRAINING**

#### **Fundamentals of Business, Venture Investment and Intellectual Property**

This course enables the students to understand the Business basics, how and why is external funding/ investment required in the business and how-to safeguard the business by filing for the right kind of intellectual property.

##### **It will cover:**

- Fundamentals of Business – What it takes to build a successful business. Be it people, operations, accounting, strategy, finance and marketing, how to address it all and run an organization. How to address conflicting roles/responsibilities and address the team for positive growth of organization.

Teams must have all the details ready to register themselves as a company. They must identify and assign roles and responsibilities to every team member and run their business.

- Venture Investment – Why is it important to raise money in first place. Whom can you raise the funds from? Right from family to friends, to angel investors, seed capital, to venture capitalist – Series A, Series B, Series C funding to private equity to IPO, how the evolution of funding occurs in a business. Analysing at what stage of business growth, what kind of funding is relevant.

Teams must have the business plan including market and financial details – break even, revenue and profits over next five years and the pitch deck ready to be presented to the investors.

- Intellectual Property – What is that one thing in your business which you do not want your competitors to copy or copy easily, can you protect it by filing for copyright, trademark or patent. Is this intellectual property already identified or about to be created? How does valuation of a company change basis the strong backing of intellectual property.

Teams must develop the product, understand the engineering that has gone in developing the product. Teams must also file for patents to protect themselves.

##### **After successful completion of this course students should be able to**

- Evaluate user experience with prototype and build product, L5
- Create a Business Plan and pitch deck, L5
- Apply for patent/trademark/copyright, L5

##### **Syllabus**

- Fundamentals of Business – List out people, operations, accounting, strategy, finance and/or marketing requirements for your venture
  - Evaluate requirements to build sustainable and scalable business, L5
  - Identify support/partners required for business to grow, L4
- Venture Investment – Evaluate between choice of investment options from family, friends to venture capitalist and private equity

- Identify funding requirements and its volume, L4
  - Analyse how the business would grow with funds coming in, L4
- Intellectual Property – copywrites, trademarks, patents
  - Identify the need to protect business by having intellectual property, L4
  - Identify what feature can be protected, L4
  - Evaluate firm valuation post having intellectual property, L5

The course will be delivered with workshops held on defined topics intermittently. This course is more for students to work on their own and develop materials to set up their venture.

### Grading

Sl No	Particulars	Marks
1	Attendance & Class Participation	10
2	Assignments & Class based activity	10
3	IP creation and protection	20
4	Report & Presentation	60
	<b>Total</b>	<b>100</b>

The students are continuously graded on their performance during the course. There is no term end examination for the course.

### Attendance & Class Participation

Evaluation of individual student interaction in the class with the resource person and the course coordinator. Tracking student attendance and awarding marks to it accordingly.

### Assignments & Class based activity

The students need to submit periodical assignments which is either individual and/or team based.

During the workshops and regular classes, since we emphasise on experiential learning, we have a lot of activities, where students work individually or as a team to achieve the desired results.

### File Patent/s

Teams now need to identify that core part of product which needs to be protected and which they do not want the competitor to replicate. Hence it is essential they file for suitable patents.

### Report & Presentation

Students need to demonstrate the product during the presentation supported by business plan and pitch deck. The progress of intellectual property protection to be discussed during final presentations.

# Anand Kadakol

[anandkadak@gmail.com](mailto:anandkadak@gmail.com)



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Anand has over 26 years of experience in various industries spanning across many geographies across the world. For the last 16 years he has been involved in innovations in financial services sector where he established Fintech presence in global payments space in two leading banks, one in Malaysia at a Financial conglomerate called CIMB Group as Managing Director, of Global retail payments. He developed a highly successful product called Speedsend which was a leading payments service originating in many countries in South East Asia and South Asia.

Second one was with RakBank in UAE to establish a Fintech unit within the bank where he created and developed a very successful payment product branded as Rakmoneytransfer. While at RakBank he was one of the earliest innovators to use Blockchain technology in global payments business.

Span of operations for Anand during this 16 years tenure was South Asia, South East Asia and Middle East.

He also managed global payments business for a leading Fortune 500 company called Western Union in India, Nepal, Srilanka, Maldives, Singapore, Indonesia, Malaysia.

Apart from Payments Fintech experience Anand has diverse industry exposure. He worked in office equipments, garments, telecom, FMCG and B2B online business where in he was involved in creating products, building brands, marketing and leading teams. Anand had good understanding of these industries as well.

After 26 years of rich experience in corporate world Anand decided to plunge into something very radical to pursue a passion which he had throughout his life, Organic farming. He shifted his base to Dharwad, Karnataka from Dubai and indulged in developing an Organic Farm growing Organic Alphonso Mangoes and other products. These mangoes are now being sold directly to customer without any intervention from middlemen across India and exported to UAE. His passion is to extend this zero budget farming across many communities, develop intense afforestation in depleted forest areas, implement water retention and conservation projects. He wants to share and help other farmers in the region to adopt these which have been successfully implemented in his farm.

Anand's passion is not only in creating and building innovation but also developing, grooming and mentoring his team into great teams which delivered very successful products and remained to be highly engaged and empowered teams across companies. He wants to pursue development and mentoring of professionals and entrepreneurs and help them succeed in their respective ventures.

Currently Anand is based in Dharwad pursuing multiple passions apart from farming. His services are being used by financial institutions in payments fintech space, he has also authored a book titled iKrshna, published by Notion press. It's a story based on Krshna's life as a human being told in first person account, self narrative style.

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## EDUCATION

<b>1993</b>	<b>KARNATAKA UNIVERSITY- Kousali Institute of Management Studies,Dharwad, India</b> Master of Business Administration.
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# Soumya Kudagi

**Mobile: +91 ~ 9886707196**

**E Mail: soumya.kudagi@gmail.com**

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**To convert problem into opportunities**

## Précis

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- ☐ Currently working as **Program Manager with CTIE** (Centre for Technology Innovation and Entrepreneurship), since February 2018 and as **Program Head, VLSI ESDM Incubation Centre**, since July 2019 KLE Technological University, Hubballi,
- ☐ Worked as **Assistant Professor**, B V Bhoomaraddi College of Engineering and Technology, from Oct 2013 to Nov 2015
- ☐ Worked as **Wealth Manager, Axis Bank Ltd.**, from Feb 2013 to Sept 2013
- ☐ Worked as **Holiday Expert, Make My Trip**, from Nov 2012 to Feb 2013
- ☐ Worked as **Private Banker, HDFC Bank Ltd.**, from May 2011 to July 2012
- ☐ **Master of Business Administration**, from **Bharathidasan Institute of Management, Tiruchirappalli**, from June 2009 to May 2011
- ☐ Worked as **Project Engineer, Wipro Technologies**, from Dec 2007 to June 2009
- ☐ Possess strong analytical & problem-solving abilities
- ☐ A keen learner with a constant zest to acquire new skills
- ☐ An effective communicator with excellent interpersonal & relationship building skills

## Academics

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- ☐ MBA (Finance & Marketing) from BIM Trichy with a GPA of **3.075/4**
- ☐ B. E. (Electronics & Communication) from B V Bhoomaraddi College of Engineering and Technology, Hubli, in the year 2007 with an aggregate of **76.43%**
- ☐ PUC II (XII) from P C Jabin Science College, Hubli, in the year 2003, with 69.67%

SL No	Name	USN	Department	8hrs	8hrs	8hrs	8hrs
				05-12-2019	06-12-2019	07-12-2019	08-12-2019
1	JUSTIN AUGISTINE PINHEIRO	01FE16BME062	ME	P	P	P	P
2	SWATI BASAVARAJ D	01FE16BEC195	CS	P	P	P	P
3	MEGHA KOUJAGERI	01FE16BCS241	CS	P	P	P	P
4	KAJAL JAIN	01FE16BCS087	CS	P	P	P	P
5	NAMITA RAYANGOUDAR	01FE16BCS112	CS	P	P	P	P
6	MANJUNATH H M	01FE17BEC418	EC	P	P	P	P
7	ATHEETH A NAIK	01FE16BEC044	EC	P	P	P	P
8	ANANNYA HANJI	01FE16BCS030	CS	P	P	P	P



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## Centre for Technology Innovation & Entrepreneurship (CTIE)

# *Certificate*

*This is to certify that*

**ANANNYA HANJI**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Fundamentals of Business, Venture Investment and Intellectual Property**  
.....

*from* **01-11-2019** *to* **31-01-2020** .....

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Course Instructor

A blue ink signature of the Director - CTIE.

Director - CTIE

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**ATHEETH A NAIK**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
**Fundamentals of Business, Venture Investment and Intellectual Property**  
.....

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## Centre for Technology Innovation & Entrepreneurship (CTIE)

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*This is to certify that*

**JUSTIN AUGISTINE PINHEIRO**

*Mr./Miss.* .....

*has successfully completed the Value Addition Training Course on*  
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.....

*from* **01-11-2019** *to* **31-01-2020** .....

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**Last Date to apply – 29<sup>th</sup> July 2018**  
**Program Duration – Aug 2019 to Dec 2019**  
**Coordinator – Ms. Soumya Kudagi**  
 soumya.kudagi@kletech.ac.in  
 +91 98867 07196

## CENTER FOR TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP

### VALUE ADDED TRAINING

#### **Lean Startup and Product Design**

This course enables the students to design their Minimum Viable Product (MVP) and start their Lean Ventures.

#### **It will cover:**

- Lean Startup
  - Customer Discovery – The students will majorly focus on taking the early stage prototype to the customer. It could be in the form of sketch or a model made of card board, very early stage prototype that resembles the final product. They will gain great insights into look and feel of the product, the functionality aspects, customer's association with it and would the customers recommend others to try it. This will help in nailing down the need and problem statement most appropriately and helps to get the idea validated.
  - MVP – The student teams will apply principles of lean startup to build better and sustainable business. From customer discovery to making solution that is useful to pivoting MVP – The experience of launching their MVP to the target group, testing the MVP in real market, re-working on the failures, and getting back to market with matured offerings. Lean startup does not deal essentially with product alone, but also on the way of setting up the whole business. Teams carry out the fundamental activity of a startup which is to build – measure – learn.
- Business Model Canvas – A holistic view of how your business is going to look like. From the customer stand point – what is the value the business is creating to its customers, through what channels and how is the customer relationship being managed. How do these change basis different segments the teams decide to work with. From the business point – who are the key partners, what are the key resources and the key activities to be deployed to create the necessary value to pull the customer to business offerings. This one view of the business is what the teams should work on to make it a reality.
- Product Design – (UI/UX and Industrial Design) Depending on the responses received on MVP, if it's a software-based problem then students will apply principles of UI/UX Design and for an engineering product, students will apply principles of Industrial Design. If the product has both software and hardware components, students will apply principles of UI/UX and Industrial Design.

#### **After successful completion of this course students should be able to**

- Create MVP for the defined problem, L6
- Modify and validate MVP depending on customer's response, L3
- Create Business Model Canvas, L4
- Apply UI/UX and/or Product Design for building their product/services, L4
- Create prototype for market validation, L6

## Syllabus

- Lean Startup – MVP, customer discovery, continuous deployment, split testing, actionable metrics, pivot, innovation accounting, build – measure – learn. A workshop for 20hrs on lean startup would be engaged where students experientially understand how to build a MVP.
  - Create MVP for defined problem, L6
  - Choose appropriate methods of observing and interviewing customers, L3
  - Analyse customer inputs, L4
  - Evaluate MVP with customer inputs, L5
  - Create Business Model Canvas, L4
  - Apply Lean principles to build a sustainable business, L3
- UI/UX Design – understand, research, sketch, design and implement. A workshop on UI/UX design consisting of 10hrs of engagement would be conducted to help students understand the details of it.
  - Apply UI/UX design on defined problem, L3
- Product Design – product concept, research, product design development, research and development of final design, CAD, CAM, prototype testing, manufacturing, assembly, feedback and testing, product development, final product. A workshop on product design consisting of 10hrs of engagement would be conducted to help students understand the details of it.
  - Apply Product Design on defined problem, L3

The students are however encouraged to utilize the resources on campus to build their product prototypes and connect with related faculty members for helping them with same.

## Grading

Sl No	Particulars	Marks
1	Attendance & Class Participation	10
2	Self-Assessment/Analysis	10
3	Assignments	20
4	Report & Presentation	60
	<b>Total</b>	<b>100</b>

The students are continuously graded on their performance during the course. There is no term end examination for the course.

### Attendance & Class Participation

Evaluation of individual student interaction in the class with the resource person and the course coordinator. Tracking student attendance and awarding marks to it accordingly.

### Self – Assessment/Analysis

Students now need to start understanding areas in which they are strong and areas in which they need more efforts to be put in. This will help them to enhance their knowledge and also assist each other

in team to take things forward. It is individual score to be allotted to each student. Peer to peer scoring can be a part of it, if required.

### **Assignments**

The students need to submit periodical assignments which is either individual and/or team based.

### **Report & Presentation**

The course presentation is divided into three phases.

#### **Phase I Evaluation**

An evaluation post the customer discovery stage, where the student will share their inputs on how the customer responded to their product/service offering, areas to improve on and need of such product/service in their day to day life. Students to be assessed on, whether the gaps have been addressed appropriately and is this the best way to go about solving it. Teams to demonstrate the customer survey if needed by the panel.

#### **Phase II Evaluation**

An evaluation post the MVP stage, to understand how the MVP faired in real market, the inputs the teams received to improvise their offerings on and what is the teams reflections on such inputs. A plan on what is it that the team wants to have and not have in the final product offering and how can the value proposition be enhanced. Teams to demonstrate their MVP during the presentation.

#### **Phase III Evaluation**

An evaluation post the UI/UX and Product Design phase, where the team will in-elaborate discuss their designs. The teams would now emphasize on the Business Model Canvas and explain in detail how each entity is value adding in their business development. Teams to demonstrate the proof of concept.

The course report would consist of a well thought through product, the MVP (pictures, diagrams, CAD models), Business Model Canvas, how the BMC is applied to structure team specific business, UIUX/Product design applied to develop the product POC. Overall plan based on concepts of lean startup methodology.

# Anand Kadakol

[anandkadak@gmail.com](mailto:anandkadak@gmail.com)



Anand has over 26 years of experience in various industries spanning across many geographies across the world. For the last 16 years he has been involved in innovations in financial services sector where he established Fintech presence in global payments space in two leading banks, one in Malaysia at a Financial conglomerate called CIMB Group as Managing Director, of Global retail payments. He developed a highly successful product called Speedsend which was a leading payments service originating in many countries in South East Asia and South Asia.

Second one was with RakBank in UAE to establish a Fintech unit within the bank where he created and developed a very successful payment product branded as Rakmoneytransfer. While at RakBank he was one of the earliest innovators to use Blockchain technology in global payments business.

Span of operations for Anand during this 16 years tenure was South Asia, South East Asia and Middle East.

He also managed global payments business for a leading Fortune 500 company called Western Union in India, Nepal, Srilanka, Maldives, Singapore, Indonesia, Malaysia.

Apart from Payments Fintech experience Anand has diverse industry exposure. He worked in office equipments, garments, telecom, FMCG and B2B online business where in he was involved in creating products, building brands, marketing and leading teams. Anand had good understanding of these industries as well.

After 26 years of rich experience in corporate world Anand decided to plunge into something very radical to pursue a passion which he had throughout his life, Organic farming. He shifted his base to Dharwad, Karnataka from Dubai and indulged in developing an Organic Farm growing Organic Alphonso Mangoes and other products. These mangoes are now being sold directly to customer without any intervention from middlemen across India and exported to UAE. His passion is to extend this zero budget farming across many communities, develop intense afforestation in depleted forest areas, implement water retention and conservation projects. He wants to share and help other farmers in the region to adopt these which have been successfully implemented in his farm.

Anand's passion is not only in creating and building innovation but also developing, grooming and mentoring his team into great teams which delivered very successful products and remained to be highly engaged and empowered teams across companies. He wants to pursue development and mentoring of professionals and entrepreneurs and help them succeed in their respective ventures.

Currently Anand is based in Dharwad pursuing multiple passions apart from farming. His services are being used by financial institutions in payments fintech space, he has also authored a book titled iKrshna, published by Notion press. It's a story based on Krshna's life as a human being told in first person account, self narrative style.

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## EDUCATION

**1993**      **KARNATAKA UNIVERSITY- Kousali Institute of Management Studies,Dharwad, India**  
Master of Business Administration.



# Soumya Kudagi

**Mobile: +91 ~ 9886707196**

**E Mail: soumya.kudagi@gmail.com**

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**To convert problem into opportunities**

## Précis

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- ☐ Currently working as **Program Manager with CTIE** (Centre for Technology Innovation and Entrepreneurship), since February 2018 and as **Program Head, VLSI ESDM Incubation Centre**, since July 2019 KLE Technological University, Hubballi,
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- ☐ Worked as **Project Engineer, Wipro Technologies**, from Dec 2007 to June 2009
- ☐ Possess strong analytical & problem-solving abilities
- ☐ A keen learner with a constant zest to acquire new skills
- ☐ An effective communicator with excellent interpersonal & relationship building skills

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- ☐ B. E. (Electronics & Communication) from B V Bhoomaraddi College of Engineering and Technology, Hubli, in the year 2007 with an aggregate of **76.43%**
- ☐ PUC II (XII) from P C Jabin Science College, Hubli, in the year 2003, with 69.67%

SL No	Name	USN	Department	8hrs	8hrs	8hrs	8hrs
				29-11-2019	30-11-2019	01-12-2019	02-12-2019
1	PRAJHOT R NAIK	01FE16BME121	ME	P	A	A	P
2	HARISH A VERNEKAR	01FE16BME056	ME	P	A	A	A
3	JUSTIN AUGISTINE PINHEIRO	01FE16BME062	ME	P	P	P	P
4	SURAJ REDDY	01FE16BME207	ME	A	A	A	P
5	SAMARTH TIKARE	01FE16BAR036	A&R	A	P	A	P
6	RAJAT MEHTA	01FE16BEE076	EE	A	A	P	P
7	SHYAM SUNDAR AGARWAL	01FE16BCS197	CS	P	A	A	P
8	SWATI BASAVARAJ D	01FE16BEC195	CS	P	P	P	P
9	PRIYANKA NABAPURE	01FE16BCS243	CS	A	A	A	A
10	NISHANTH B S	01FE16BME110	ME	A	A	A	A
11	MEGHA KOUJAGERI	01FE16BCS241	CS	P	P	P	P
12	KAJAL JAIN	01FE16BCS087	CS	P	P	P	P
13	GREESHMA KATARKI	01FE16BCS072	CS	A	A	A	P
14	NAMITA RAYANGOUDAR	01FE16BCS112	CS	P	P	P	P
15	MANJUNATH H M	01FE17BEC418	EC	P	P	P	P
16	ATHEETH A NAIK	01FE16BEC044	EC	P	P	P	P
17	ANANNYA HANJI	01FE16BCS030	CS	P	P	P	P



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*from* **01-08-2019** *to* **31-12-2019** .....

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# Value Added Training (VAT)

## New Venture Formation

### Course Outcome

- Create and launch a venture of their own
- Seek investment
- Build teams
- Sourcing & Manufacturing of the product
- Final launch of the product



**Last Date to apply – 29<sup>th</sup> Oct 2018**  
**Program Duration – Nov 2019 to Jan 2020**  
**Coordinator – Ms. Soumya Kudagi**  
soumya.kudagi@kletech.ac.in  
+91 98867 07196

## CENTER FOR TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP

### VALUE ADDED TRAINING

#### New Venture Formation

##### It will cover:

- New Venture Formation – Teams must plan a small-scale launch for the product built and sell it to the test market, and record user reviews on the product. They must decide on the final product features, pricing, how to go about branding their product/venture and plan for final launch. They need to look into business development of their venture and plan for large scale production. They need to value their firm and plan to raise several stages of investment.

##### After successful completion of this course students should be able to

- Create and launch a venture of their own, L6
- Seek investment, L5
- Build teams, L6
- Sourcing & Manufacturing of the product, L6
- Final launch of the product, L5

##### Syllabus

- New Venture Formation – Teams must plan on taking product to the market by first testing the product in the test market, getting user reviews on the same and implementing changes if required. Plan the pricing of the product, plan for large scale production and value the firm to raise investments.
  - Analyse features to be retained and /or discarded, L4
  - Plan pricing strategy, L6
  - Value firm to raise investments, L6
  - Prepare final business plan, L4

##### Grading

Sl No	Particulars	Marks
1	Running the business venture for six months	80
2	Report	20
	<b>Total</b>	<b>100</b>

The students are continuously graded on their performance during the course. There is no term end examination for the course.

### **Running the business venture for six months**

The students need to launch and run their business venture successfully for six months at least. It could be in any location they choose to.

### **Report**

A report consisting of learning of six months of marketing and selling the product, final business plan and an investment pitch deck that can be presented for the seed or VC Investment.

# Soumya Kudagi

**Mobile: +91 ~ 9886707196**

**E Mail: soumya.kudagi@gmail.com**

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**New Venture Formation**

*from* **01-11-2019** *to* **31-01-2020** .....

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Course Instructor

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Director - CTIE

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## Centre for Technology Innovation & Entrepreneurship (CTIE)

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## Semester VI

### Curriculum Content

<b>Course Code: M16EPDC302</b>	<b>Course Title: Product Development and Realization</b>	
L-T-P: 1-1-2	Credits: 4	Contact Hrs: 7
ISA Marks: 60	ESA Marks: 40	Total Marks: 100
Teaching Hrs: 12	Tutorial + Project Hrs: 72	Exam Duration: Continuous evaluation

#### Course Outcomes

After successful completion of this course, students shall be able to

1. Develop a manufacturing road-map for a product
2. Layout Product Verification and Validation plan for a product – duty cycle, load goals
3. Imbibe how to develop a product family from a successful product
4. Develop a technology development strategy and a technology road-map for a product

Topics	Lecture
<b>Product Development Process</b> Part manufacturing processes, Design and functional review methods, Assembly process and virtual builds, Quality goals and control plans	4 hours
<b>Product Verification and Validation</b> Load goals and duty cycle definition, Reliability and durability goals, Virtual prototyping techniques, Accelerated product verification methods	4 hours
<b>Product family management</b> Product lifecycle management; Evolution of product models and families, Modeling of product family lifecycle, Product Strategy, Product market positioning, Product positioning – psychological, Brand, customer segment.	2 hours
<b>Technology management</b> Technology management methods, Technology as a competitive tool, Critical Component Development Process, Technology Development Process	2 hours
<b>References</b> Product Design and Development by Karl Ulrich and Steven Eppinge The PDMA Handbook of New Product Development, Second Edition by Kenneth B. Kahn Innovation in Product Design: From CAD to Virtual Prototyping by Monica Bordegoni (Editor), Caterina Rizzi (Editor)	



# **Dr. Ravi Guttal**

## **Education:**

Bachelor of Engineering – Civil Engineering: NIT – Karnataka - 1988  
Master of Engineering – Structural Engineering: Indian Institute of Science -1990  
Master of Science in Robotics: Carnegie Mellon Univ. – Pittsburgh, PA, USA - 1991  
Doctorate in Engineering Mechanics: Rensselaer, Troy NY, USA – 1995  
Masters in Business Management: Rensselaer, Troy NY, USA - 2003

## **Professional Career:**

TRW – Vehicle Safety Systems Washington, MI, USA – Senior Consultant – ‘95 – ‘00  
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[illegible]

# Abs	% PRESENT
3	91%
2	94%
3	91%
3	91%
1	97%
2	94%
3	91%



Time Table Schedule for VAT Courses:

VAT Name:

Product Development and Realization	M16EPDC302	WEDNESDAY	1st floor Athena Bldg	17:00:00
Product Development and Realization	M16EPDC302	FRIDAY	1st floor Athena Bldg	17:00:00
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## School of Mechanical Engineering

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*This is to certify that*

*Mr./Miss.* **AKSHAY GANAPATI BHATKOORSE**

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**Product Development and Realization**

*from* **1/9/2020** *to* **10/9/2020**

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# Value Added Training Program for **Organizational Behavior and Business Analytics for Product Development**

**M16EPDC301,  
Summer V**

Aug 2019

*3 Credits*



## Course Highlights:

### **Business Analytics for Product Development**

Engineering Economics – Basics, Product and Customer economics, Finance for product development, Product pricing and costing techniques, Evaluation of product business opportunity – Return on Investment for a product business

### **Organizational Behaviour for Product Development**

Organizational structure for product development, Conflict resolution and negotiation techniques; Understanding team dynamics and influencing without authority, Professional communication skills,

### **Project and Program Management (Stage-gate process)**

## Guidelines

- Intake: Maximum of 20 students
- Eligibility: Applicants must have CGPA 6.75 (I & II Semester) without any backlogs
- Who can apply: Students of 2ND Year B.E. of all branches
- Last Date for Submitting Application: July 27, 2019
- Notification for Selected Students: Aug 04, 2019
- Registration Date: Aug 14, 2019

### **Department Coordinator:**

Mr. Ashwin K  
Assistant Professor  
School of Mechanical Engineering  
Email: ashwinrk@kletech.ac.in , 7405483468

### **Head:**

Dr. Ravi Guttal  
Professor, School of Mechanical Engineering  
Director, Center for Innovation and Product Development  
Email:ravi\_g@kletech.ac.in ,Ph: 9923800242

Download Application from : [student.kletech.ac.in](http://student.kletech.ac.in)

Filled-in applications are to be submitted to the Coordinator of Minor Programmes

Dr. Anil S Badiger, Professor, School of Mechanical Engineering, KLE Tech.,

## Semester V

### Curriculum Content

<b>Course Code: M16EPDC301</b>	<b>Course Title: Organizational Behavior and Business Analytics for Product Development</b>	
L-T-P: 1-1-0	Credits: 2	Contact Hrs: 3
ISA Marks: 60	ESA Marks: 40	Total Marks: 100
Teaching Hrs: 12	Tutorial Hrs: 24	Exam Duration: Continuous evaluation

### Course Outcomes

After successful completion of this course, students shall be able to

1. Analyze and evaluate business viability for a product business opportunity
2. Develop product pricing and costing strategies
3. Understand different aspects of team dynamics and organizational behavior
4. Develop a road-map for product program

Topics	Lecture
<b>Business Analytics for Product Development</b> Engineering Economics – Basics, Product and Customer economics, Finance for product development, Product pricing and costing techniques, Evaluation of product business opportunity - Return on Investment for a product business	6 hours
<b>Organizational Behaviour for Product Development</b> Organizational structure for product development, Conflict resolution and negotiation techniques; Understanding team dynamics and influencing without authority, Professional communication skills,	4 hours
<b>Project and Program Management (Stage-gate process)</b>	2 hours
<b>References</b> The Standard for Program Management – PMI Finance Basics by Harvard Business Review	

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## Attendance list

[illegible]

Time Table Schedule for VAT Courses:

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