KLE Technological University
Creating Value
Leveraging Knowledge

KLE Tech - VIKAS

Value Added Training Courses

2018-19

Course I: VATHR001

Course II: VATHR002

Course III: VATHR003

Resource Partner

Innovations Unlimited Training Services, Bangalore

AT KLE's Tech value added courses are designed to prepare the students for placements. The course ensures the overall developments of the student's personality.

These courses focus on:

- Enhancing the employability of the students and prepare them for the corporate world
- Developing the professional skills
- Inducing the analytical and mathematical abilities and language comprehension

All the three courses are spread over 3 years starting from II year. In all 94 hours of training is designed on various topics indicates below:

VAT Course I (VATHR001)	
Module/semester	II year
Communicate With confidence	04
The Winning Presenter	04
Spoken English	04
Mathematical Thinking	04
Analytical Thinking	04
Written English	08
Discussions & Debates	04
Total	32

VAT course II (VATHR002)	
Module/semester	III year
Pen power	04
Spoken English	02
Mathematical Thinking	06
Analytical Thinking	04
Written English	06
Interview handling Skills	04
Lateral & Creative Thinking	04
The leader and the Team player	02
Total	32

VAT Course III (VATHR003)	
Module/semester	IV year
Lateral & Creative thinking	04
The leader and the team player	02
Resume Building	02
Mock Interviews	04
Communicative Ability Assessment	02
Company specific training	16
Total	30

The detailed content of the courses

Communicate with Confidence — 4 Hours

Utility:

Improves the communicative ability of the trainee. At least 25% of the points awarded to a candidate in a group discussion or HR interview are for communication skills.
A better communicator is preferred at every stage in the industry and hence will develop and grow faster

Topics:

- Silent tools of communication – Listening and BodyLanguage
- ListeningActively
  - Manage mind and body to payattention
  - ControllingDistraction
  - Showing respect whilelistening
  - Keeping mind free ofbarriers
- Improving your bodylanguage
  - Establishing direct eye and facial contact withspeaker
  - Postures andgestures
  - Open and closed body language
- The vocal tool of communication
  - Verbal tool –words
  - Paraphrase the speaker'smessage
  - Choice of words to respondempathetically
  - Using InternationalPhrases
  - Basicconversations

Pen Power — 4 Hours

Utility:

Helps the trainees understand written communication and its importance. **Right from the covering letter of a resume written communication plays an important role in the trainee's career in the industry.**

Topics:

- Successful Job Applications
  - What do employers want?
  - What do you want from an employer?
  - Choosing a job
  - Covering Letter
  - Résumé writing
- Writing Skills
  - Essays
  - Letters and Emails

The Winning Presenter — 4 Hours

- Grooming
- Managing Anxiety
- Visual and Vocal Presentations
- Communicating informally
- Speaking persuasively
- Giving and receiving feedback – PNPTechnique

Spoken English — 4 Hours

Utility:

Improves the English diction of the trainee, helping him/her to perform better in group discussions and interviews

Topics:

- Phonetic and non-phonetic languages
- Introduction to IPA
- Accurate pronunciation of vowels, consonants
- Word Stress
- Pausing and Stress in Sentences
- Rhythm
- Intonation and reduced pronunciation through the use of models

Mathematical Thinking — 10 Hours

Utility:

Prepares trainees for arithmetical reasoning section of aptitude test. Getting through the aptitude test of a company's selection process doubles and sometimes triples a trainee's chance of eventually getting the job. **A study has shown that successful people are very good with basic Mathematical calculations.**

Topics:

- Shortcuts and Strategyon
  - Number System, Linear Equations
  - HCF and LCM, Ratios &Proportions
  - Percentage, Profit & Loss + PnC
  - Averages and Mixtures
  - Time and Distance
  - Permutations and combinations
- Questions from recent recruitment tests

Analytical Thinking — 8 Hours

Utility:

Prepares trainees for analytical & logical reasoning sections of aptitude test. Getting through the aptitude test of a company's selection process doubles and sometimes triples a trainee's chance of eventually getting the job.

Companies test students on Logic to measure their

Topics:

- Analytical Puzzles
- Classification Puzzles
- Mathematical Puzzles
- Human Relations
- Directional tests
- Coding and decoding
- Series completion – Verbal and Non-verbal

Written English — 14 Hours

Utility:

Prepares trainees for Communicative English section of aptitude test. Getting through the aptitude test of a company's selection process doubles and sometimes triples a trainee's chance of eventually getting the job.

Good language structure and great vocabulary help everywhere.

Topics:

- Vocabulary is Fun!
- Formatting and feeding correct structures Synonyms and Antonyms
- Analogies
- Sentence Completion
- Error Detection and Correction
- Faster reading of Passages
- Questions from the Industry

Discussions and Debates — 4 hours

Utility:

Prepares trainees for Group Discussions.

Topics:

- Understanding Discussions
- Parameters measured in GDs
- Video Analysis of GDs
- Knowledge base and Ideas
- Taking the initiative
- Introduction and Conclusion

Interview Handling Skills — 4 hours

Utility:

Prepares trainees for HR and Management Skills Interviews.

Topics:

- Most common personal interview questions
- What companies expect
- Showing Commitment and Learning Ability
- Handling difficult questions
- Understanding interviewer psychology
- Situation Reaction and Presence of Mind
- Dressing right
- Interview etiquette

Enhance Your Creativity — 4 Hours

Utility:

Helps trainees think laterally and come up with out of the box solutions.
Creative People are highly productive

Topics:

- Use of LateralThinking
  - Thinking out of thebox
  - The generation ofalternatives
- ChallengingAssumptions
- Innovation and SuspendedJudgment
- Design,Fractionation
- Brainstorming
- Activities to prove everyone can becreative

The Leader and theTeam-player — 2hours

Utility:

A prospective employee of a company needs the ability to work in a team.
Being a leader will help the candidate grow in the industry.
These skills are also judged during a Group Discussion.

Topics:

- Working inTeams
- Self evaluation - How good are your people skillsnow?
- Delegation oftasks

Faculty Profile:

Ms. Dipti Dihingia

Qualification: M A (Mass Communication and Journalism)

Industry Experience:

- Worked as Research Lead with Unisys
- Worked as a process trainer with Convergys

Training Experience:

- Trained and evaluated many students and professionals

Forte:

- Business Communication
- Soft skills
- Creativity

Mr. Dinesh Gosai

Qualification: M. B. A.

Industry Experience:

- Over 15 years of varied Industry experience
- Close to five years of recruitment experience
- Worked with companies like Ranbaxy Ltd, Benchmark Management Services

Training Experience:

- Mentored Senior and Mid-Level Management Representatives from the industry
- Works as a consultant for ISBM

Forte:

- Team Building
- HR Skills
- Interview Etiquette
- Communication

Ms. Ankita Bhatia

Qualification: B.A.

Total Experience: 11 years

Industry Experience:

- Works with IBM, Bangalore
- Worked with Aditya Birla, Microland

Training Experience:

- Trained several engineers, doctors, managers
- Trained at several colleges

Forte:

- Business Communication
- Soft skills

- Voice and Accent
- Written English

Mr. Selva Kumar

Qualification: M.B.A. (Finance)
Industry Experience:
- Over 10 years of experience in accounting, HR and Training

Training Experience:
- Trained a large number of corporates in ENVI, IBM
- Trained a large number of students and new hires

Forte:
- Team Building
- HR Skills
- Interview Etiquette
- Communication

Mr. Jayanth N
Qualification: B.E.
Total Experience: 5 years
Training Experience:
- Trained many students on Mathematical Ability
- Has helped students get through tough Aptitude tests, SSB, CAT, Bank PO etc.

Forte:
- Quantitative Aptitude
- Logical Reasoning

Mr. Manjesh S P
Qualification: Diploma in Automobile Engineering
Industry Experience:
- Worked with Infosys, IBM, Aviva Life Insurance
- Has founded a company that deals with electronic components

Training Experience:
- Trained at Aviva Global, Infosys

Forte:
- Spoken English
- Written English
- Presentation Skills
- Critical Reasoning

Mr. Jaideep Komali

Qualification: B. E.

Training Experience:

- Trained over 3000 students on Mathematical Ability
- Has helped students get through tough Aptitude tests

Forte:

- Quantitative Aptitude
- Logical Reasoning

Ms. Brunda Nagaraj **Qualification:** MA in Psychology

Total Experience: 11 years

Industry Experience:

- Worked as a Lead Recruiter with Mindtree
- Worked with Cresspoint, ACS, OneIndia News

Training Experience:

- Trained several IT and Media professionals
- Trained many students

Forte:

- Business Communication
- Soft skills
- Basic Language Enhancement
- Creativity
- HR

Ms. Jeevitha Raju

Qualification:MBA

Total Experience: 5 years

Industry Experience:

- Worked with Narayana Group

Training Experience:

- Trained over 1000 students

Forte:

- Business Communication
- Soft skills

Ms. Ujwala Makkenna

Qualification: B.E. (Bio-medical Engineering)

Total Experience: 4 years

Industry Experience:

- Works for an Education chain for children

Training Experience:

- Trained over 3000 students

Forte:

- Quantitative Aptitude
- Verbal and Non-verbal reasoning
- Data Analysis

Mr. Pratyus Pratye

Qualification:B.Tech

. **Total Experience:** 6 years

Industry Experience:

- Woking with an Inter Tutorial Company

Training Experience:

- Trained students for CAT, GRE, GMAT etc

Forte:

- Quantitative Aptitude
- Logical Reasoning
- Vedic Maths

Mr. Vineet Mann

Qualification: B. Sc. (Mathematics)

Industry Experience:

- Worked with Pizza Hut and as an administrator
- Ex- state level Athlete

Training Experience:

- Trained over 10000 students on Mathematical Ability
- Has helped students get through tough Aptitude tests, GRE, CAT
- Lead Aptitude Trainer at I U Training Services

Forte:

- Quantitative Aptitude
- Logical Puzzles

Mr. Amit Singh

Qualification: B. E. **Industry**

Experience:

- Worked with IT Industry

Training Experience:

- Trained many students on Mathematical Ability
- Has helped students get through tough Aptitude tests, SSB, CAT, Bank PO etc.

Forte:

- Quantitative Aptitude
- Data Analysis

Mr. Saravanan Sarathy

Qualification: M.B.A (HR)

Industry Experience:

- Over 11 years of experience in HR and Training with companies such as Aviva, IBM
- Presently working with IBM

Forte:

- HR Skills
- Interview Etiquette
- Communication
- Voice and Accent
- Written and Spoken English

Mr. Sanil Rao

Qualification: MBA in Finance

Industry Experience:

- Worked with Axis Securities as regional training manager
- Conducted induction programs for new joiners in various organisations

Training Experience:

- Trained professionals on interpersonal and HR skills

Forte:

- Business Communication
- Soft skills
- HR
- Finance
- Creativity

Ms. Neena Nair

Qualification: MBA in Marketing & International Business

Industry Experience:

- Worked with Bajaj Allianz, ICICI Bank

Training Experience:

- Trained and evaluated many students and professionals

Forte:

- Business Communication
- Soft skills
- Basic Language Enhancement
- Creativity

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Batch Details

3rd Semester	
A1	Automation and Robotics
A2	Biotechnology
A3	Civil (A)
A4	Civil (B)
A5	Computer Science (A)
A6	Computer Science (B)
A7	Computer Science (C)
A8	Computer Science (D)
A9	Electronics and Communication (A)
A10	Electronics and Communication (B)
A11	Electronics and Communication (C)
A12	Electronics and Communication (D)
A13	Electrical and Electronics (A)
A14	Electrical and Electronics (B)
A15	Mechanical (A)
A16	Mechanical (B)
A17	Mechanical (C)
A18	Mechanical (D)
A19	*MCA 1st sem*
A20	*PG 1st Sem (All Branches - DE,VLSI,CS,ES,SE,PM,MD)*

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Batch Details

4th Semester	
B1	Automation and Robotics
B2	Biotechnology
B3	Civil (A)
B4	Civil (B)
B5	Computer Science (A)
B6	Computer Science (B)
B7	Computer Science (C)
B8	Computer Science (D)
B9	Electronics and Communication (A)
B10	Electronics and Communication (B)
B11	Electronics and Communication (C)
B12	Electronics and Communication (D)
B13	Electrical and Electronics (A)
B14	Electrical and Electronics (B)
B15	Mechanical (A)
B16	Mechanical (B)
B17	Mechanical (C)
B18	Mechanical (D)
B19	*MCA 1st sem*
B20	*PG 1st Sem (All Branches - DE,VLSI,CS,ES,SE,PM,MD) (6 sessions)*

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S.No.	Day	Date of training	Timings	Class Room	
				LHC 206	LHC 207
1	Wednesday	08/08/2018	8.00 am to 12.10 pm	A1-CS-Brunda	A2-WE-Manjesh
			1.45 pm to 5.55 pm	A3-CS	A4-WE
2	Thursday	09/08/2018	8.00 am to 12.10 pm	A5-CS	A6-WE
			1.45 pm to 5.55 pm	A7-CS	A8-WE
3	Friday	10/08/2018	8.00 am to 12.10 pm	A9-CS	A10-WE
			1.45 pm to 5.55 pm	A11-CS	A12-WE
4	Monday	13/08/2018	8.00 am to 12.10 pm	A13-CS-Amit	A14-WE-Manjesh
			1.45 pm to 5.55 pm	A15-CS	A16-WE
5	Tuesday	14/08/2018	8.00 am to 12.10 pm	A17-CS	A18-WE
			1.45 pm to 5.55 pm	A1-WE	A2-CS
6	Friday	24/08/2018	8.00 am to 12.10 pm	A3-WE-Manjesh	A4-CS-Brunda
			1.45 pm to 5.55 pm	A5-WE	A6-CS
7	Monday	27/08/2018	8.00 am to 12.10 pm	A7-PS-Srinivas	A8-CS
			1.45 pm to 5.55 pm	A9-PS	A10-CS
8	Tuesday	28/08/2018	8.00 am to 12.10 pm	A11-WE-Amit	A12-CS
			1.45 pm to 5.55 pm	A13-WE	A14-CS
9	Wednesday	29/08/2018	8.00 am to 12.10 pm	A15-WE-Manjesh	A16-CS
			1.45 pm to 5.55 pm	A17-WE	A18-CS
10	Thursday	06/09/2018	8.00 am to 12.10 pm	A1-AT-Anil	A2-PS-Brunda
			1.45 pm to 5.55 pm	A3-AT	A4-PS
11	Friday	07/09/2018	8.00 am to 12.10 pm	A5-AT	A6-PS
			1.45 pm to 5.55 pm	A7-AT	A8-PS
12	Monday	10/09/2018	8.00 am to 12.10 pm	A9-AT	A10-PS
			1.45 pm to 5.55 pm	A11-AT	A12-PS
13	Tuesday	11/09/2018	8.00 am to 12.10 pm	A13-AT	A14-PS
			1.45 pm to 5.55 pm	A15-AT	A16-PS
14	Monday	24/09/2018	8.00 am to 12.10 pm	A17-AT-Arun	A18-PS-Manjesh
			1.45 pm to 5.55 pm	A19-AT	A20-we
15	Thursday	04/10/2018	8.00 am to 12.10 pm	A3-PS-Amit	A4-AT-Arun
			1.45 pm to 5.55 pm	A5-PS	A6-AT
16	Friday	05/10/2018	8.00 am to 12.10 pm	A7-WE	A8-AT
			1.45 pm to 5.55 pm	A9-WE	A10-AT
17	Tuesday	09/10/2018	8.00 am to 12.10 pm	A11-PS-Brunda	A12-AT-Arun
			1.45 pm to 5.55 pm	A13-PS	A14-AT
18	Wednesday	10/10/2018	8.00 am to 12.10 pm	A15-PS	A16-AT

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S.No.	Day	Date of training	Timings	Class Room	
				LHC 206	LHC 207
			1.45 pm to 5.55 pm	A17-PS	A18-AT
19	Thursday	11/10/2018	8.00 am to 12.10 pm	A19-CS	A20
			1.45 pm to 5.55 pm	A1-PS-Amit	A2-AT-Arun
20	28/01/2019	Monday	8.00 am to 12.10 pm	B1-WE	B2-MT
			1.45 pm to 5.55 pm	B3-WE	B4-MT
21	29/01/2019	Tuesday	8.00 am to 12.10 pm	B5-WE	B6-MT
			1.45 pm to 5.55 pm	B7-WE	B8-MT
22	30/01/2019	Wednesday	8.00 am to 12.10 pm	B9-WE	B10-MT
			1.45 pm to 5.55 pm	B11-WE	B12-MT
23	31/01/2019	Thursday	8.00 am to 12.10 pm	B13-WE	B14-MT
			1.45 pm to 5.55 pm	B15-WE	B16-MT
24	01/02/2019	Friday	8.00 am to 12.10 pm	B17-WE	B18-MT
			1.45 pm to 5.55 pm	B1-MT	B2-WE
25	11/02/2019	Monday	8.00 am to 12.10 pm	B3-GD	B4-SE
			1.45 pm to 5.55 pm	B5-GD	B6-SE
26	12/02/2019	Tuesday	8.00 am to 12.10 pm	B7-GD	B8-SE
			1.45 pm to 5.55 pm	B9-GD	B10-SE
27	13/02/2019	Wednesday	8.00 am to 12.10 pm	B11-GD	B12-SE
			1.45 pm to 5.55 pm	B13-GD	B14-SE
28	14/02/2019	Thursday	8.00 am to 12.10 pm	B15-GD	B16-SE
			1.45 pm to 5.55 pm	B17-GD	B18-SE
29	07/03/2019	Thursday	8.00 am to 12.10 pm	*B20-AT*	B2-SE
			1.45 pm to 5.55 pm	B3-MT	B4-WE
30	08/03/2019	Friday	8.00 am to 12.10 pm	B5-MT	B6-WE
			1.45 pm to 5.55 pm	B7-MT	B8-WE
31	11/03/2019	Monday	8.00 am to 12.10 pm	B9-MT	B10-WE
			1.45 pm to 5.55 pm	B11-MT	B12-WE
32	12/03/2019	Tuesday	8.00 am to 12.10 pm	B13-MT	B14-WE
			1.45 pm to 5.55 pm	B15-MT	B16-WE
33	13/03/2019	Wednesday	8.00 am to 12.10 pm	B17-MT	B18-WE
			1.45 pm to 5.55 pm	B19-WE	*B20-MT*
34	20/03/2019	Wednesday	8.00 am to 12.10 pm		
			1.45 pm to 5.55 pm	*B19-MT*	D2-WE
35	02/04/2019	Tuesday	8.00 am to 12.10 pm	B1-SE	B2-GD
			1.45 pm to 5.55 pm	B3-SE	B4-GD
36	03/04/2019	Wednesday	8.00 am to 12.10 pm	B5-SE	B6-GD
			1.45 pm to 5.55 pm	B7-SE	B8-GD

S.No.	Day	Date of training	Timings	Class Room	
				LHC 206	**LHC 207**
37	04/04/2019	Thursday	8.00 am to 12.10 pm	B9-SE	B10-GD
			1.45 pm to 5.55 pm	B11-SE	B12-GD
38	09/04/2019	Tuesday	8.00 am to 12.10 pm	B13-SE	B14-GD
			1.45 pm to 5.55 pm	B15-SE	B16-GD
39	10/04/2019	Wednesday	8.00 am to 12.10 pm	B17-SE	B18-GD
			1.45 pm to 5.55 pm	B1-GD	*B19-SE*
40	To be scheduled after PG CoE		8.00 am to 12.10 pm	B19-GD	B20-SE
			1.45 pm to 5.55 pm	**B20-PI**	B20-GD

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VAT-I 2018-19

LIST OF STUDENTS

Automation & Robotics

S.No	USN	Name of the Students
1.	01FE17BAR001	Aadithya vinay naik
2.	01FE17BAR002	Adarsh s shet
3.	01FE17BAR003	Aishwarya m ankola
4.	01FE17BAR004	Aishwarya v s
5.	01FE17BAR005	Alwin m reji
6.	01FE17BAR006	Anushree chetan nilavar
7.	01FE17BAR007	Arjun a rao
8.	01FE17BAR008	Arpita huggi
9.	01FE17BAR009	Arzaan ahmed kankudti
10.	01FE17BAR010	Bagi neelesh vidyadhar
11.	01FE17BAR011	Bharatha vishnugouda patila
12.	01FE17BAR012	C pinku
13.	01FE17BAR013	Chinmaya manohar sabnis
14.	01FE17BAR014	Darshan jain
15.	01FE17BAR015	Dinesh shankar goudar
16.	01FE17BAR016	Faraz ahmed dadapeer irakal
17.	01FE17BAR017	Gagan m sirur
18.	01FE17BAR018	Girish v kulkarni
19.	01FE17BAR019	Keyur g kulkarni
20.	01FE17BAR020	Kishan bijjur
21.	01FE17BAR021	Laxmi d hulyalkar
22.	01FE17BAR022	Lingineni sai dixit brahmam garu
23.	01FE17BAR023	Malkar omkar rajendra
24.	01FE17BAR024	Mallesh b mashetty
25.	01FE17BAR025	Manjunath kini
26.	01FE17BAR026	Manjunatha mallammanavar
27.	01FE17BAR027	Manojkumar u n
28.	01FE17BAR028	Mriganayni navale
29.	01FE17BAR029	N anjana
30.	01FE17BAR030	Nagaraj
31.	01FE17BAR031	Nagaraj angadi
32.	01FE17BAR032	Nagendra k hebbar
33.	01FE17BAR033	Nakulsingh
34.	01FE17BAR034	Nandan
35.	01FE17BAR035	Nekaljay romit amit
36.	01FE17BAR036	Nischitha v
37.	01FE17BAR037	Niteshkumar
38.	01FE17BAR038	Onkar prashant kulkarni

39.	01FE17BAR039	Pooja c math
40.	01FE17BAR040	Poornima shailesh joshi
41.	01FE17BAR041	Prakruthi mavinakatti
42.	01FE17BAR042	Prerana r h
43.	01FE17BAR043	Prithvi m deshpande
44.	01FE17BAR044	Priyanka goudar
45.	01FE17BAR045	Qureshi mohammed ehraaz zuber
46.	01FE17BAR046	Raksha bhat
47.	01FE17BAR047	Ramya v a
48.	01FE17BAR048	Ranjitha a g
49.	01FE17BAR049	Rohit chougale
50.	01FE17BAR050	Rohit lewis y yeshamala
51.	01FE17BAR051	Samruddhi s parwapur
52.	01FE17BAR052	Santrupti patil
53.	01FE17BAR053	Sarika sharma
54.	01FE17BAR054	Shreyas b n
55.	01FE17BAR055	Shwetha rajkumar jagamani
56.	01FE17BAR056	Sneha janagoudar
57.	01FE17BAR057	Sushma r hiremath
58.	01FE17BAR058	Tushar b kulkarni
59.	01FE17BAR059	Vachanarashmi vinay paramadi
60.	01FE17BAR060	Veerabhadrappa basavarajappa gali

Bio-Technology

61.	01FE17BBT001	Abhay v shidling
62.	01FE17BBT002	Aditi g katti
63.	01FE17BBT003	Aditya shetty
64.	01FE17BBT004	Aishwarya nagaraj rao
65.	01FE17BBT005	Ancila j u p
66.	01FE17BBT006	Anupama p menon
67.	01FE17BBT007	Anusha j prabhu
68.	01FE17BBT008	Arpita kariyannavar
69.	01FE17BBT009	Avomma mangalore
70.	01FE17BBT010	Bhavyshree karajigi
71.	01FE17BBT011	Brinda konaraddi
72.	01FE17BBT012	Chavan christopher yash
73.	01FE17BBT013	Deepti bhat
74.	01FE17BBT014	Divya arun naik
75.	01FE17BBT015	Haripriya patil
76.	01FE17BBT016	Jovita rajesh deodhar
77.	01FE17BBT017	Kannika siddharudha gejjihalli
78.	01FE17BBT018	Kavya hiremath
79.	01FE17BBT019	Komal bakale
80.	01FE17BBT020	Mansi saraf

81.	01FE17BBT021	Mohan a arshid
82.	01FE17BBT022	Muttu ramesh toranagatti
83.	01FE17BBT023	Nagaruchika k hemadri
84.	01FE17BBT024	Naheeda akhtari halwoor
85.	01FE17BBT025	Naik ajay pramod
86.	01FE17BBT026	Nameera r managooli
87.	01FE17BBT027	Neelam tegur
88.	01FE17BBT028	Netra jamadade
89.	01FE17BBT029	Nidhi desai
90.	01FE17BBT030	Omkar p pote
91.	01FE17BBT031	Phalguni g laxmeshwar
92.	01FE17BBT032	Poorvi r attigeri
93.	01FE17BBT033	Prarthana vaman devagiri
94.	01FE17BBT034	Prasad ashok pitagi
95.	01FE17BBT035	Rachana mahindrakar
96.	01FE17BBT036	Rajeshwari h patil
97.	01FE17BBT037	Raksha pandharinath vaidya
98.	01FE17BBT038	Raveena patil
99.	01FE17BBT039	Raveena chidambar patil
100.	01FE17BBT040	S j anudeep
101.	01FE17BBT041	Sadhana s joshi
102.	01FE17BBT042	Sanjana s adur
103.	01FE17BBT043	Sayali ramachandra manjarekar
104.	01FE17BBT044	Soujanya patted
105.	01FE17BBT045	Sufiya sadaf a baligar
106.	01FE17BBT046	Suhaskumar shankar pawar
107.	01FE17BBT047	Sunita v kundgol
108.	01FE17BBT048	Sushmitha gadagina mathad
109.	01FE17BBT049	Tanmay rajendra mahindrakar
110.	01FE17BBT050	Vaishnavi inamdar
111.	01FE17BBT051	Vaishnavi m kulkarni
112.	01FE17BBT052	Varsha lambi
113.	01FE17BBT053	Vimal kathare
114.	01FE17BBT054	Vivekanand

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115.	01FE17BCV001	Abhay lengti
116.	01FE17BCV002	Abhishek s hugar
117.	01FE17BCV003	Abhishek yaranal
118.	01FE17BCV004	Aishwarya someshwar
119.	01FE17BCV005	Akshata nandigoud
120.	01FE17BCV006	Akshay v kurtkoti
121.	01FE17BCV007	Ameenul hasan m belagali
122.	01FE17BCV008	Amit raveendra karoshi

123.	01FE17BCV009	Anand muttappa pujeri
124.	01FE17BCV010	Anusha adiveppa honnavar
125.	01FE17BCV011	Arbaaz ashfak gudagi
126.	01FE17BCV012	Arun koti
127.	01FE17BCV013	Avinash anneppanavar
128.	01FE17BCV014	Basavaraj sangappa maskanal
129.	01FE17BCV015	Basavaraja byali
130.	01FE17BCV016	Bharat r ronad
131.	01FE17BCV017	Bharati bhojedar
132.	01FE17BCV018	Bhoomika manjunath kalasur
133.	01FE17BCV019	C hariprasad reddy
134.	01FE17BCV020	Carolyn gundimi
135.	01FE17BCV021	Chandrashekhar allikatti
136.	01FE17BCV022	Chidanand g meti
137.	01FE17BCV023	D abhishek choudhary
138.	01FE17BCV024	Darshan j bhure
139.	01FE17BCV025	Divya dileep melavanki
140.	01FE17BCV026	Gururaj kambalashetti
141.	01FE17BCV027	Hemanth n pai
142.	01FE17BCV028	Hrishikesh dixit
143.	01FE17BCV029	Impana sudhakar kattimani
144.	01FE17BCV030	Iranna r vannur
145.	01FE17BCV031	Janhavi naik
146.	01FE17BCV032	K r srikrishna setty
147.	01FE17BCV033	Karthik chakrasali
148.	01FE17BCV034	Kashinath m walikar
149.	01FE17BCV035	Kavyashree dasar
150.	01FE17BCV036	Keerthi m chatrad
151.	01FE17BCV037	Keerti s kondabhingi
152.	01FE17BCV038	Kiran dwaranahalli
153.	01FE17BCV039	Kiran madari
154.	01FE17BCV040	Kishor chavhan
155.	01FE17BCV041	Krutika iraddi
156.	01FE17BCV042	Mallappa kavalikai
157.	01FE17BCV043	Manish kulkarni
158.	01FE17BCV044	Manjula kodaganur
159.	01FE17BCV045	Mohammadyaseen abidhussain kittur
160.	01FE17BCV046	Murgesh haller
161.	01FE17BCV047	Neelufar makandar
162.	01FE17BCV048	Neha a naik
163.	01FE17BCV049	Nehal habib
164.	01FE17BCV050	Netravati sharanappa myagalamani
165.	01FE17BCV051	Nikhil bendigeri
166.	01FE17BCV052	Nikhil kumar
167.	01FE17BCV053	Nisheemappa didagur

168.	01FE17BCV054	Nitya pradeep
169.	01FE17BCV055	Omkar maruti babari
170.	01FE17BCV056	Parvati
171.	01FE17BCV057	Pavankumar
172.	01FE17BCV058	Pradeep basavaraj mahabalshetti
173.	01FE17BCV059	Pradeep prasun
174.	01FE17BCV060	Prajwal dilip lonare
175.	01FE17BCV061	Prajwal jambanna channashetti
176.	01FE17BCV062	Prasad b hiremath
177.	01FE17BCV063	Prashant ramesh kotagi
178.	01FE17BCV064	Praveen c kulenur
179.	01FE17BCV065	Praveen krishna papti
180.	01FE17BCV066	Raghu asangeppa nakkargundi
181.	01FE17BCV067	Rahul chavan
182.	01FE17BCV068	Rahul chidanand bagalkot
183.	01FE17BCV069	Rajendra sogalad
184.	01FE17BCV070	Rajesh sidharam loni
185.	01FE17BCV071	Reshma m rathod
186.	01FE17BCV072	Rohan mugeri
187.	01FE17BCV073	S swetha
188.	01FE17BCV074	Sachiket basavaraj mungarawadi
189.	01FE17BCV075	Sachin managuli
190.	01FE17BCV076	Sagar maruti kadakadiyavar
191.	01FE17BCV077	Sahana kenchi
192.	01FE17BCV078	Sai jatin r naidu
193.	01FE17BCV079	Saiprasad t goled
194.	01FE17BCV080	Saisanket
195.	01FE17BCV081	Samruddhi y sannakki
196.	01FE17BCV082	Samrudh
197.	01FE17BCV083	Sandeep gangadhar kumbar
198.	01FE17BCV084	Sandeep rayamall rathod
199.	01FE17BCV085	Sandesh parashuram chavan
200.	01FE17BCV086	Saptami a kamble
201.	01FE17BCV087	Sayeed akthar g irakal
202.	01FE17BCV088	Shahanawaz noorudeen gudadur
203.	01FE17BCV089	Shahnawaz m risaldar
204.	01FE17BCV090	Shivakumar swami ramagirimath
205.	01FE17BCV091	Shivanagouda patil
206.	01FE17BCV092	Shivanand nandi
207.	01FE17BCV093	Shreeshail kadagol
208.	01FE17BCV094	Shreyas shetty
209.	01FE17BCV095	Shrishaila
210.	01FE17BCV096	Shruti kiran totla
211.	01FE17BCV097	Shweta tatakoti
212.	01FE17BCV098	Siddanagoud basanagoud patil

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214.	01FE17BCV100	Siddhi sandeep rane
215.	01FE17BCV101	Sindhu V T
216.	01FE17BCV102	Soumya m janali
217.	01FE17BCV103	Srinivas akbar
218.	01FE17BCV104	Suchitra kengapur
219.	01FE17BCV105	Surekha sheelavantra
220.	01FE17BCV106	Sushant hegde
221.	01FE17BCV107	Sushant s halagi
222.	01FE17BCV108	Sushmita budni
223.	01FE17BCV109	Swathi k shetty
224.	01FE17BCV110	Syed yaseen attar
225.	01FE17BCV111	Takanagouda adiveppagouda patil
226.	01FE17BCV112	Tejashwini m pattar
227.	01FE17BCV113	Udaya bhaskar k
228.	01FE17BCV114	Veerendra K N
229.	01FE17BCV115	Venkatesh hombal
230.	01FE17BCV116	Vijayalaxmi kurtakoti
231.	01FE17BCV117	Vinay munavalli
232.	01FE17BCV118	Vinutkumar patil
233.	01FE17BCV119	Vishal m kadadi
234.	01FE17BCV120	Vishal mallappa nidoni

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236.	01FE17BCS002	Aarushi agarwal
237.	01FE17BCS003	Aatish ranjan
238.	01FE17BCS004	Abhijit m kulkarni
239.	01FE17BCS005	Abhishek gadag
240.	01FE17BCS006	Abhishek goddale
241.	01FE17BCS007	Abhishek n m
242.	01FE17BCS008	Abhishek patil
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244.	01FE17BCS010	Adarsh sharanabasappa karadi
245.	01FE17BCS011	Adil nizamuddin mohsin
246.	01FE17BCS012	Aditi iyer
247.	01FE17BCS013	Aditya ajit sarda
248.	01FE17BCS014	Aditya kumar pandey
249.	01FE17BCS015	Aditya yadav
250.	01FE17BCS016	Aishwarya g mensinkai
251.	01FE17BCS017	Akanksha rao
252.	01FE17BCS018	Akash chidanand yadagouda
253.	01FE17BCS019	Akash doddwad

254.	01FE17BCS020	Akash r bilgi
255.	01FE17BCS021	Akash tomar
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257.	01FE17BCS023	Akhilesh c harti
258.	01FE17BCS024	Akshata
259.	01FE17BCS025	Akshata m hiremath
260.	01FE17BCS026	Akshaykumar gunari
261.	01FE17BCS027	Aman s ladwa
262.	01FE17BCS028	Amey devarshi
263.	01FE17BCS029	Amit kumar jha
264.	01FE17BCS030	Amit mallappa tiparaddi
265.	01FE17BCS031	Anchal r jain
266.	01FE17BCS032	Anirudh p
267.	01FE17BCS033	Anisha p bennur
268.	01FE17BCS034	Anjali vishwanathraddy gaddikeri
269.	01FE17BCS035	Annadanishwar hosamath
270.	01FE17BCS036	Annapurna
271.	01FE17BCS037	Annapurna umadi
272.	01FE17BCS038	Anuradha tasgaonkar
273.	01FE17BCS039	Anuroop vilas sutkatti
274.	01FE17BCS040	Anusha k m
275.	01FE17BCS041	Anusha m k
276.	01FE17BCS042	Anvitha g bheemareddy
277.	01FE17BCS043	Apeksha hatarki
278.	01FE17BCS044	Apurva anand
279.	01FE17BCS045	Arati mahadev kallur
280.	01FE17BCS046	Arinjay pralhad kamble
281.	01FE17BCS047	Arjun b
282.	01FE17BCS048	Arpitha s kori
283.	01FE17BCS049	Ashish annappa magadum
284.	01FE17BCS050	Ashish hulkoti
285.	01FE17BCS051	Ashish shreesh bhat
286.	01FE17BCS052	Atul kashyap
287.	01FE17BCS053	Ayesha anawaruddin sotakanal
288.	01FE17BCS054	Ayub ansari
289.	01FE17BCS055	Ayush anand
290.	01FE17BCS056	Ayush singh
291.	01FE17BCS057	Ayushi singh
292.	01FE17BCS058	B b priyanka
293.	01FE17BCS059	B chandan rao
294.	01FE17BCS060	Bhagya
295.	01FE17BCS061	Bharathkumar m mundinamani
296.	01FE17BCS062	Bibi ayeesha darugar
297.	01FE17BCS063	C s riteesh ram
298.	01FE17BCS064	Chaitanya mehta

299.	01FE17BCS065	Daksha hegde
300.	01FE17BCS066	Darshan bangera alike
301.	01FE17BCS067	Dhanya r sangolli
302.	01FE17BCS068	Dhruva g n reddy
303.	01FE17BCS069	Dinesh c dhotrad
304.	01FE17BCS070	Gaddam gokul krishna reddy
305.	01FE17BCS071	Gadige tharun kumar
306.	01FE17BCS072	Gaurav bhushan
307.	01FE17BCS073	Gaurav chourasia
308.	01FE17BCS074	Gavin joshua platel
309.	01FE17BCS075	Geetanjali c masur
310.	01FE17BCS076	Gopal bhogar
311.	01FE17BCS077	Goutami d honagannavar
312.	01FE17BCS078	Harshit shrikant jalisatgi
313.	01FE17BCS079	Harshvardhan raj
314.	01FE17BCS080	Himanshu yadav
315.	01FE17BCS081	Hrithik kumar gurondia
316.	01FE17BCS082	Hrushikesh ponarkar
317.	01FE17BCS083	Inzamam sayyed
318.	01FE17BCS084	Ishu sagar
319.	01FE17BCS085	J sreepada shastry
320.	01FE17BCS086	Joshi sachetan sanjay
321.	01FE17BCS087	Junaid parvan mollah
322.	01FE17BCS088	Jyotiba mane
323.	01FE17BCS089	K j ashish
324.	01FE17BCS090	K kruthika
325.	01FE17BCS091	K lokesh
326.	01FE17BCS092	K.sai sandeep
327.	01FE17BCS093	Katageri siddharth gangadhar
328.	01FE17BCS094	Kavya nagappagol
329.	01FE17BCS095	Koushik ullagaddi
330.	01FE17BCS096	Kshitij n ijari
331.	01FE17BCS097	Kumar abhimanyu
332.	01FE17BCS098	Kumar gaurav
333.	01FE17BCS099	Kunal jadhav
334.	01FE17BCS100	Kushal nagalingappa bentur
335.	01FE17BCS101	Laxmi b savadi
336.	01FE17BCS102	Madasu veeranjaneyulu
337.	01FE17BCS103	Malatishree shettikeri
338.	01FE17BCS104	Mallikarjun p patil
339.	01FE17BCS105	Manjunath narayan bhat
340.	01FE17BCS106	Manthan chittora
341.	01FE17BCS107	Megha s chalageri
342.	01FE17BCS108	Mirza zain baig
343.	01FE17BCS109	Mohammed ibrahim zeeshan

344.	01FE17BCS110	Mohammed jawaadpasha h maniyar
345.	01FE17BCS111	Mubin a
346.	01FE17BCS112	Naik gauravi naresh
347.	01FE17BCS113	Najeerasab hawaldar
348.	01FE17BCS114	Nandeesh aivalli
349.	01FE17BCS115	Neelendra singh
350.	01FE17BCS116	Neha p desai
351.	01FE17BCS117	Neha r deshpande
352.	01FE17BCS118	Nidhi m mamadapur
353.	01FE17BCS119	Nihal banajwad
354.	01FE17BCS120	Niketan doddamani
355.	01FE17BCS121	Nikhil r lingadhal
356.	01FE17BCS122	Niranjini k
357.	01FE17BCS123	Nisha ravindra rao
358.	01FE17BCS124	Nithish t
359.	01FE17BCS125	Nitin verma
360.	01FE17BCS126	Nivedita navilyal
361.	01FE17BCS127	Orra sai sumanth reddy
362.	01FE17BCS128	Pavanakumar
363.	01FE17BCS129	Pooja kher
364.	01FE17BCS130	Poorna anand kulkarni
365.	01FE17BCS131	Prajwal a nazre
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367.	01FE17BCS133	Prajwal s banakar
368.	01FE17BCS134	Prameela p k
369.	01FE17BCS135	Praneet kurtkoti
370.	01FE17BCS136	Prasad muttappa kamble
371.	01FE17BCS137	Prasanna j hiremath
372.	01FE17BCS138	Pratiksha u danti
373.	01FE17BCS139	Praveen mallikarjun pol
374.	01FE17BCS140	Preetam rajput
375.	01FE17BCS141	Prem ravi kulkarni
376.	01FE17BCS142	Priyanka neelakanth gadagi
377.	01FE17BCS143	Priyanka v mannangi
378.	01FE17BCS144	Puneet gupta
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380.	01FE17BCS146	Raghavendra anand gotur
381.	01FE17BCS147	Raghavi rajashekhar patil
382.	01FE17BCS148	Rahetul asquin
383.	01FE17BCS149	Rahul elagoudanavar
384.	01FE17BCS150	Rajaram m joshi
385.	01FE17BCS151	Rajat ravindra patil
386.	01FE17BCS152	Rajesh narayana hebbar
387.	01FE17BCS153	Raksha r hiremath
388.	01FE17BCS154	Ramanath v shanbhag

389.	01FE17BCS155	Rashmi vivekanand
390.	01FE17BCS156	Revathi gudi
391.	01FE17BCS157	Riddhi m mehta
392.	01FE17BCS158	Ritbik bharti
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397.	01FE17BCS163	Sagar hotapeti
398.	01FE17BCS164	Sagar mallanna yankanchi
399.	01FE17BCS165	Sagar v kulkarni
400.	01FE17BCS166	Saikrishna m vernekar
401.	01FE17BCS167	Samant soumitra kishor
402.	01FE17BCS168	Samay deepak naik
403.	01FE17BCS169	Sammed dadasaheb kininge
404.	01FE17BCS170	Sammed s payagoudar
405.	01FE17BCS171	Sampat a yaligar
406.	01FE17BCS172	Samreen mulla
407.	01FE17BCS173	Sandhya umesh ager
408.	01FE17BCS174	Sanjana s ashtaputre
409.	01FE17BCS175	Sanjana shivalingappa kadapatti
410.	01FE17BCS176	Sanjey chavan
411.	01FE17BCS177	Sanjota ramachandra nayak
412.	01FE17BCS178	Satwik m belaldavar
413.	01FE17BCS179	Seema hussainbadashah mangalore
414.	01FE17BCS180	Shaik rubina
415.	01FE17BCS181	Shantanu kumar
416.	01FE17BCS182	Sharan v chunamari
417.	01FE17BCS183	Shashank alalageri
418.	01FE17BCS184	Shashi prakash
419.	01FE17BCS185	Shefali deepak digikar
420.	01FE17BCS186	Shikshita juyal
421.	01FE17BCS187	Shivam kumar verma
422.	01FE17BCS188	Shivam ralli
423.	01FE17BCS189	Shivam wadhera
424.	01FE17BCS190	Shivani basavaraj nandihalli
425.	01FE17BCS191	Shivaraj chattannavar
426.	01FE17BCS192	Shravan s hiremath
427.	01FE17BCS193	Shreedevi b olekar
428.	01FE17BCS194	Shrenik halyal
429.	01FE17BCS195	Shreyas salimath
430.	01FE17BCS196	Shreyas vijay katagi
431.	01FE17BCS197	Shrinivas miskin
432.	01FE17BCS198	Shrivardhan kamble
433.	01FE17BCS199	Shriya bannikop

434.	01FE17BCS200	Shubha nayak
435.	01FE17BCS201	Shweta roy
436.	01FE17BCS202	Siddharth c janamatti
437.	01FE17BCS203	Sindhoori sanjay ichalakaranji
438.	01FE17BCS204	Sindhu hachadad
439.	01FE17BCS205	Siri rajesh kini
440.	01FE17BCS206	Sneha k bankolli
441.	01FE17BCS207	Sonam jadhav
442.	01FE17BCS208	Sougat paul
443.	01FE17BCS209	Soujanya
444.	01FE17BCS210	Soujanya s hiregoudar
445.	01FE17BCS211	Soumya gangadhar sangammanavar
446.	01FE17BCS212	Soumya shamarao jahagirdar
447.	01FE17BCS213	Soundarya s tambe
448.	01FE17BCS214	Sourabh jain
449.	01FE17BCS215	Spoorthi n sambaragi
450.	01FE17BCS216	Spoorthi s muddi
451.	01FE17BCS217	Spoorthy shivappa kamanavalli
452.	01FE17BCS218	Srushti n kodli
453.	01FE17BCS219	Srushti s basavaraddi
454.	01FE17BCS220	Sudeep pradeep gumaste
455.	01FE17BCS221	Suman b shiri
456.	01FE17BCS222	Sushant subhash mudalgi
457.	01FE17BCS223	Sushmita h talawar
458.	01FE17BCS224	Suvrojyoti mandal
459.	01FE17BCS225	Suyog satish bhat
460.	01FE17BCS226	Swastik tiwari
461.	01FE17BCS227	Sweekar burji
462.	01FE17BCS228	Tanaya n nagekar
463.	01FE17BCS229	Tanya s ejanthkar
464.	01FE17BCS230	Taru vatsa
465.	01FE17BCS231	Tejaswini kale
466.	01FE17BCS232	Tejaswini savadatti
467.	01FE17BCS233	Tushar irappa pharale
468.	01FE17BCS234	Ujwal kumar
469.	01FE17BCS235	Usman khan
470.	01FE17BCS236	Vaishakh s nargund
471.	01FE17BCS237	Vangala krishna saketh
472.	01FE17BCS238	Varshita narayan bhat
473.	01FE17BCS239	Veena gopal kamble
474.	01FE17BCS240	Vibha g hegde
475.	01FE17BCS241	Vidya akbar
476.	01FE17BCS242	Vinayak pundalik dharmatti
477.	01FE17BCS243	Vivekanand channappa roodagi
478.	01FE17BCS244	Yashas j

479.	01FE17BCS245	Yeshwanth kumar v s

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481.	01FE17BEC002	Aarti miskin
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484.	01FE17BEC005	Abhishek r pamadi
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487.	01FE17BEC008	Aditya s patil
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489.	01FE17BEC010	Afzal s buwaji
490.	01FE17BEC011	Aishwarya
491.	01FE17BEC012	Aishwarya amareshwar g
492.	01FE17BEC013	Aishwarya j harakari
493.	01FE17BEC014	Aishwarya m hugar
494.	01FE17BEC016	Ajaysingh
495.	01FE17BEC017	Akshata anant madguni
496.	01FE17BEC018	Akshata kanagoudar
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502.	01FE17BEC024	Akshay r gachinakatti
503.	01FE17BEC025	Amit hosur
504.	01FE17BEC026	Amit tabagouda umarani
505.	01FE17BEC027	Anagha b varahamurthy
506.	01FE17BEC028	Anoop m abbigeri
507.	01FE17BEC029	Anusha ashok maganur
508.	01FE17BEC030	Anvita shankargouda patil
509.	01FE17BEC031	Aparna s pawar
510.	01FE17BEC032	Apoorva odugoudar
511.	01FE17BEC033	Apoorva tenginakai
512.	01FE17BEC034	Arbazkhan g kittur
513.	01FE17BEC035	Arpita anant kulkarni
514.	01FE17BEC036	Ashwini chandrakant nayak
515.	01FE17BEC037	Asmita kathari
516.	01FE17BEC038	Avinash k patil
517.	01FE17BEC039	Bheemashankar kaddenahalli
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519.	01FE17BEC041	Chaitra l korlahalli

520.	01FE17BEC042	Chaitra m gabbur
521.	01FE17BEC043	Chetan b madiwalar
522.	01FE17BEC044	Chinmaya hegde
523.	01FE17BEC045	Chinmayi v k
524.	01FE17BEC046	Damodhar sanjay pai
525.	01FE17BEC047	Deep desai
526.	01FE16BEC158	Sainath katnalli
527.	01FE17BEC048	Deepali raju kandekar
528.	01FE17BEC049	Deepti ayyanagoudar
529.	01FE17BEC050	Devendrappa
530.	01FE17BEC051	Dikshith c s
531.	01FE17BEC052	G k praful
532.	01FE17BEC053	Ganesh satish bhat
533.	01FE17BEC054	Girish dattatray hegde
534.	01FE17BEC055	Gourav mahajan
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959.	01FE17BME130	Prasaad A Basti
960.	01FE17BME131	Prasad B Sarwad
961.	01FE17BME132	Prashant Sajjanar
962.	01FE17BME133	Prathik G Desai

963.	01FE17BME134	Praveen N A
964.	01FE17BME135	Praveen R Kammar
965.	01FE17BME136	Praveen Rampati
966.	01FE17BME137	Praveenkumar Metri
967.	01FE17BME138	Prithviraj Dattatray Kandekar
968.	01FE17BME139	Raghavendra Prakash Sangam
969.	01FE17BME140	Raghavendra V Nilogal
970.	01FE17BME141	Raghavendra Wali
971.	01FE17BME142	Rahul Ashok Kotyal
972.	01FE17BME143	Rahul M Kulkarni
973.	01FE17BME144	Rahul Shashidhar Zandennavar
974.	01FE17BME145	Rajat Dandoti
975.	01FE17BME146	Rajat Deshmukh
976.	01FE17BME147	Rajat Sinnur
977.	01FE17BME148	Rakesh Girish Melligeri
978.	01FE17BME149	Raman R Kalbandi
979.	01FE17BME150	Ranganath Bijapur
980.	01FE17BME151	Raviraj M Bhat
981.	01FE17BME152	Rehan Ahmed Shaikh
982.	01FE17BME153	Revanasiddappa
983.	01FE17BME154	Riyaz Nadaf
984.	01FE17BME155	Rohan C Dhapalapur
985.	01FE17BME156	Rohan Kulkarni
986.	01FE17BME157	Rohit A Ulligeri
987.	01FE17BME158	Rudresh Kallurmath
988.	01FE17BME159	Sachinkumar Mohareer
989.	01FE17BME160	Sagar Vasu
990.	01FE17BME161	Samarth Dalavi
991.	01FE17BME162	Sameer S Deshpande
992.	01FE17BME163	Sampreetayya Astagimath
993.	01FE17BME164	Sandeep Bhadrannavar
994.	01FE17BME165	Sangamesh Charantimath
995.	01FE17BME166	Sangamesh S Bankapurmath
996.	01FE17BME167	Sanjay Sateendra Madi
997.	01FE17BME168	Santoshkumar V Hosamani
998.	01FE17BME169	Saransh Sharma
999.	01FE17BME170	Sarvesh G Mallaiah
1000.	01FE17BME171	Sawan Hosamani
1001.	01FE17BME172	Sayedabrar S Patil
1002.	01FE17BME173	Shamanth S Shetty
1003.	01FE17BME174	Shankar Suresh Bidaramalli
1004.	01FE17BME175	Sharad Neelkanth Patil
1005.	01FE17BME176	Sharanappagouda Sullad Arahunasi
1006.	01FE17BME177	Shashank G S
1007.	01FE17BME178	Shashikant S Nadugaddi

1008.	01FE17BME179	Shivalingappa Modagi
1009.	01FE17BME180	Shivanagouda Mudigoudra
1010.	01FE17BME181	Shivangouda C Patil
1011.	01FE17BME182	Shoaib Bhandari
1012.	01FE17BME183	Shreyash V G
1013.	01FE17BME184	Shridhar C Navale
1014.	01FE17BME185	Shridhar Ganiger
1015.	01FE17BME186	Shrinidhi P Jahagirdar
1016.	01FE17BME187	Shrish S Manakeshwar
1017.	01FE17BME188	Shrivatsa Shrinivas Nargund
1018.	01FE17BME189	Shubham A Jujar
1019.	01FE17BME190	Shubham Jaishing Naik
1020.	01FE17BME191	Sohan Mugeri
1021.	01FE17BME192	Somaling Koti
1022.	01FE17BME193	Somashekhar D V
1023.	01FE17BME194	Sourabh M Kulkarni
1024.	01FE17BME195	Srinath Vijayan Menon
1025.	01FE17BME196	Srushti Ravindra Ganamukhi
1026.	01FE17BME197	Sudhanva S J
1027.	01FE17BME198	Sujay C
1028.	01FE17BME199	Sumant Hegde
1029.	01FE17BME200	Sunil T
1030.	01FE17BME201	Suraj P Chanchi
1031.	01FE17BME202	Sutej Girish Kulkarni
1032.	01FE17BME203	Swaroop S Shenoy
1033.	01FE17BME204	Tanmay Shrivastava
1034.	01FE17BME205	Trishul R Jain
1035.	01FE17BME206	Vaibhav
1036.	01FE17BME207	Vaibhav Soni
1037.	01FE17BME208	Vamana Yallappa Bhovivaddar
1038.	01FE17BME209	Varadendra Sudheendra Ayachit
1039.	01FE17BME210	Vedant Deshmukh
1040.	01FE17BME211	Vignesh B Mallapur
1041.	01FE17BME212	Vinay Hadagali
1042.	01FE17BME213	Vinay Kumar
1043.	01FE17BME214	Vinay Melavanki
1044.	01FE17BME215	Vinayak Bantwal Baliga
1045.	01FE17BME216	Vinayak Burud
1046.	01FE17BME217	Vinayak Kademani
1047.	01FE17BME218	Vinaykumar B Kalakoti
1048.	01FE17BME219	Vineet Pavate
1049.	01FE17BME220	Vinod Waddarkal
1050.	01FE17BME221	Virupaxi Khot
1051.	01FE17BME222	Vishal A Mudhole
1052.	01FE17BME223	Vishal Baligar

1053.	01FE17BME224	Vishal R Kulkarni
1054.	01FE17BME225	Vishal Y Soraganvi
1055.	01FE17BME226	Vishwanath Arakeri
1056.	01FE17BME227	Vishwanath B Puradangoudra
1057.	01FE17BME228	Vivek Paul K
1058.	01FE17BME229	Vivekanand Mallanagoud Patil
1059.	01FE17BME230	Yajnesh Manjunath Poojari
1060.	01FE17BME231	Zuber Riyazahmed

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VAT Course II

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Batch Details:

5th Semester	
C1	Automation and Robotics
C2	Biotechnology
C3	Civil (A)
C4	Civil (B)
C5	Computer Science (A)
C6	Computer Science (B)
C7	Computer Science (C)
C8	Computer Science (D)
C9	Electronics and Communication (A)
C10	Electronics and Communication (B)
C11	Electronics and Communication (C)
C12	Electronics and Communication (D)
C13	Electrical and Electronics
C14	Mechanical (A)
C15	Mechanical (B)
C16	Mechanical (C)
C17	Mechanical (D)
C18	MCA 3rdsem

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Batch Details:

6th Semester	
D1	Automation and Robotics
D2	Biotechnology
D3	Civil (A)
D4	Civil (B)
D5	Computer Science (A)
D6	Computer Science (B)
D7	Computer Science (C)
D8	Computer Science (D)
D9	Electronics and Communication (A)
D10	Electronics and Communication (B)
D11	Electronics and Communication (C)
D12	Electronics and Communication (D)
D13	Electrical and Electronics
D14	Mechanical (A)
D15	Mechanical (B)
D16	Mechanical (C)
D17	Mechanical (D)
D18	MCA 4th Sem

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Sl. No	Day	Date	Time	Class Room	
				LHC-206	LHC-207
1	Wednesday	16/08/2017	8.00 to 12.00	C1-WE	C2-AT
			1.45 to 5.45	C3-WE	C4-AT
2	Thursday	17/08/2017	8.00 to 12.00	C5-WE	C6-AT
			1.45 to 5.45	C7-WE	C8-AT
3	Friday	18/08/2017	8.00 to 12.00	C9-WE	C10-AT
			1.45 to 5.45	C11-WE	C12-AT
4	Monday	21/08/2017	8.00 to 12.00	C13-WE	C14-AT
			1.45 to 5.45	C15-WE	C16-AT
5	Tuesday	22/08/2017	8.00 to 12.00	A17-WE	C18-AT
			1.45 to 5.45	C17-AT	
6	Wednesday	30/08/2017	8.00 to 12.00	C3-AT	C4-PI
			1.45 to 5.45	C1-AT	C2-PI
7	Thursday	31/08/2017	8.00 to 12.00	C7-AT	C8-PI
			1.45 to 5.45	C5-AT	C6-PI
8	Friday	1/09/2017	08.00 to 12.00	C11-AT	C12-PI
			1.45 to 5.45	C9-AT	C10-PI
9	Monday	4/09/2017	8.00 to 12.00	C15-AT	C16-PI
			1.45 to 5.45	C13-AT	C14-PI
10	Tuesday	12/09/2017	8.00 to 12.00	C17-MT	C18-WE
			1.45 to 5.45	C1-MT	C2-WE
11	Wednesday	13/09/2017	8.00 to 12.00	C3-MT	C4-WE
			1.45 to 5.45	C5-MT	C6-WE
12	Thursday	14/09/2017	8.00 to 12.00	C7-MT	C8-WE
			1.45 to 5.45	C9-MT	C10-WE
13	Friday	15/09/2017	8.00 to 12.00	C11-MT	C12-WE
			1.45 to 5.45	C13-MT	C14-WE
14	Monday	25/9/2017	8.00 to 12.00	C15-MT	C16-WE
			1.45 to 5.45	C17-WE	C18-MT

15	Monday	9/10/2017	8.00 to 12.00	C1-PI	C2-MT
			1.45 to 5.45	C3-PI	C4-MT
16	Tuesday	10/10/2017	8.00 to 12.00	C5-PI	C6-MT
			1.45 to 5.45	C7-PI	C8-MT
17	Wednesday	11/10/2017	8.00 to 12.00	C9-PI	C10-MT
			1.45 to 5.45	C11-PI	C12-MT
18	Thursday	12/10/2017	8.00 to 12.00	C13-PI	C14-MT
			1.45 to 5.45	C15-PI	C16-MT
19	Friday	13/10/2017	8.00 to 12.00	C17-PI	
			1.45 to 5.45		C18-PI
20	Monday	22/01/2018	8.00 to 12.00	D15-MT+WC	D18-WC+MT
			1.45 to 5.45	D1-MT+WC	D2-WC+MT
21	Tuesday	23/01/2018	8.00 to 12.00	D3-MT+WC	D4-WC+MT
			1.45 to 5.45	D5-MT+WC	D6-WC+MT
22	Wednesday	24/01/2018	8.00 to 12.00	D7-MT+WC	D10-WC+MT
			1.45 to 5.45	D9-MT+WC	D12-WC+MT
23	Thursday	25/01/2018	8.00 to 12.00	D11-MT+WC	D8-WC+MT
			1.45 to 5.45	D13-MT+WC	D16-WC+MT
24	Monday	29/01/2018	8.00 to 12.00	D17-MT+WC	D14-WC+MT
25	Monday	5/02/2018	8.00 to 12.00		D10-LCT
			1.45 to 5.45	D1-GD	
26	Tuesday	6/02/2018	8.00 to 12.00	D3-GD	D4-LCT
			1.45 to 5.45	D5-GD	D18-LCT
27	Wednesday	7/02/2018	8.00 to 12.00	D7-GD	D8-LCT
			1.45 to 5.45	D9-GD	D2-LCT
28	Thursday	8/02/2018	8.00 to 12.00	D11-GD	D14-LCT
			1.45 to 5.45	D13-GD	D12-LCT
29	Friday	9/02/2018	8.00 to 12.00	D15-GD	D16-LCT
			1.45 to 5.45	D17-GD	D6-LCT

30	Tuesday	27/02/2018	8.00 to 12.00	D1-LCT	D4-WE
			1.45 to 5.45		
31	Wednesday	28/02/2018	8.00 to 12.00	D3-LCT	D6-GD
			1.45 to 5.45	D5-LCT	D2-GD
32	Thursday	1/03/2018	8.00 to 12.00	D9-LCT	D8-GD
			1.45 to 5.45	D7-LCT	D10-GD
33	Friday	2/03/2018	8.00 to 12.00	D13-LCT	D12-GD
			1.45 to 5.45	D11-LCT	D14-GD
34	Monday	5/03/2018	8.00 to 12.00	D15-LCT	D18-GD
			1.45 to 5.45	D17-LCT	D16-GD
35	Monday	12/03/2018	8.00 to 12.00	D3-WE	D2-GD
			1.45 to 5.45	D17-WE	D16-GD
36	Tuesday	13/03/2018	8.00 to 12.00	D1-WE	D6-GD
			1.45 to 5.45	D5-WE	D10-GD
37	Wednesday	14/03/2018	8.00 to 12.00	D7-WE	D8-GD
			1.45 to 5.45	D9-WE	D4-GD
38	Thursday	15/03/2018	8.00 to 12.00	D11-WE	D18-GD
			1.45 to 5.45	D13-WE	D12-GD
39	Friday	16/03/2018	8.00 to 12.00	D15-WE	
			1.45 to 5.45		
40	Thursday	05/04/2018	8.00 to 12.00		D14-GD
			1.45 to 5.45		

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List of students

Automation & Robotics

Roll.No	Usn	Name Of The Student
1.	01FE16BAR001	Abhijith V S
2.	01FE16BAR002	Abhishek Basanna Goud Patil
3.	01FE16BAR003	Achyuta Parameshwara Hegde
4.	01FE16BAR004	Aditya V Patil
5.	01FE16BAR005	Akshay Narayan Bhat
6.	01FE16BAR006	Akshay Yadawad
7.	01FE16BAR007	Amrut S M
8.	01FE16BAR008	Anagha A Nooji
9.	01FE16BAR009	Anusha J Shetty
10.	01FE16BAR010	Apoorva A Sabnis
11.	01FE16BAR011	Apoorva Dinesh Doddamani
12.	01FE16BAR012	Avadooth T Jadhav
13.	01FE16BAR013	Avani C N
14.	01FE16BAR014	Bhagya S Patil
15.	01FE16BAR015	Bhava Sukruth Reddy Ms
16.	01FE16BAR016	Bilal Mulimani
17.	01FE16BAR017	Chinmay Bhagwat
18.	01FE16BAR018	Elvis Eric G Soans
19.	01FE16BAR019	Gouri G Naik
20.	01FE16BAR020	Harsh Shiyal
21.	01FE16BAR021	Jain Akashkumar Siremalji
22.	01FE16BAR022	K Prasanna Kumar Reddy
23.	01FE16BAR023	Karthik V Malakannavar
24.	01FE16BAR024	Madduluri Pranay Rao
25.	01FE16BAR025	Mahantesh Prakash Nashi
26.	01FE16BAR026	Megha Koujageri
27.	01FE16BAR027	Muskan
28.	01FE16BAR028	Namrata Revankar
29.	01FE16BAR029	Naveed Ahmed
30.	01FE16BAR030	Nikhil Srinivas Waddar
31.	01FE16BAR031	Prajwal P Kulkarni
32.	01FE16BAR032	Prasad Jnyaneshwar Shimpi
33.	01FE16BAR033	Rahul Gadkar
34.	01FE16BAR034	Rishabh Kumar
35.	01FE16BAR035	Rohan S Majigoudar
36.	01FE16BAR036	Samarth S Tikare
37.	01FE16BAR037	Sameeksha C Shetty
38.	01FE16BAR038	Sanketh K
39.	01FE16BAR039	Seetharam Namadev Shahapur

40.	01FE16BAR040	Shefali
41.	01FE16BAR041	Shoaib Abrar Surkhi
42.	01FE16BAR042	Shreehari Dheerendra Bagalkot
43.	01FE16BAR043	Shreyas Burde
44.	01FE16BAR044	Shriya K Revankar
45.	01FE16BAR045	Srisha R Deshpande
46.	01FE16BAR046	Sudeep K Nellur
47.	01FE16BAR047	Sujay Roddam
48.	01FE16BAR048	Sushet Tadahal
49.	01FE16BAR049	Swati Basavaraj Angadi
50.	01FE16BAR050	Tejashwini K
51.	01FE16BAR051	Umair Ahmed Mujahid
52.	01FE16BAR052	V Sridhar Reddy
53.	01FE16BAR053	Vaishakh I Kuppast
54.	01FE16BAR054	Vikas Jamadandi
55.	01FE16BAR055	Vinayak Mahabaleshwar Boormane
56.	01FE16BAR056	Vishwanatha M
57.	01FE16BAR057	Yogita R Kadammanavar
58.	01FE17BAR504	Shabaaz S Mohsin
59.	01FE15BAR003	Akash Thakur
60.	01FE15BAR022	Kunal Patil
61.	01FE17BAR401-T	Shanawaz M Kittur
62.	01FE17BAR402-T	Samuel Mara
63.	01FE17BAR403-T	Madan S Yaragatti
64.	01FE17BAR404-T	Sharat Byahatti
65.	01FE17BAR405-	Tmohammadaslam Naganoor
66.	01FE17BAR406-	Amit A Dani
67.	01FE17BAR407-T	Sidrameshwar Kantikar

Bio-technology

68.	01FE16BBT001	Aahan Tabrez
69.	01FE16BBT002	Abhishek Arun Nalwad
70.	01FE16BBT003	Aishwarya Anilkumar Korishetty
71.	01FE16BBT004	Aishwarya Basavaraj Mantanvar
72.	01FE16BBT005	Anjali Jha
73.	01FE16BBT006	Annapoorna S Hegde
74.	01FE16BBT007	Anuradha Koti
75.	01FE16BBT008	Aparna Devarmani
76.	01FE16BBT009	Arati Ganesh Lohar
77.	01FE16BBT010	Arpita Dattatreya Hublikar
78.	01FE16BBT011	B Sheetal
79.	01FE16BBT012	Bharath K Guranalli
80.	01FE16BBT013	Bhavika Kumari
81.	01FE15BBT038	Sayed Maaz Naswale

82.	01FE16BBT014	Bibiamina N Kolkar
83.	01FE16BBT015	Chaitra G Soratur
84.	01FE16BBT016	Deepa R Revankar
85.	01FE16BBT017	Deepali V Patil
86.	01FE16BBT018	Diksha Sanjay Dessai
87.	01FE16BBT019	Divyashri V Kondagoli
88.	01FE16BBT020	Keerthi Sajjanar
89.	01FE16BBT021	Lohar Manjiri Shankar
90.	01FE16BBT022	Mayur Kiran Kanthi
91.	01FE16BBT023	Meeta M Gavade
92.	01FE16BBT024	Mekhala Muralidhar Huilgol
93.	01FE16BBT025	Mithun Rathod
94.	01FE16BBT026	Naaz Husain Khan Pathan
95.	01FE16BBT027	Namrata P Doddawad
96.	01FE16BBT056	Suraj Basavaraj Butale
97.	01FE16BBT028	Neeta Naganagouda Patil
98.	01FE16BBT030	Netra H
99.	01FE16BBT031	Pooja Contractor
100.	01FE16BBT032	Pushti Mahesh Darbar
101.	01FE16BBT033	Ragini Girish Kerur
102.	01FE16BBT034	Rani C Patil
103.	01FE16BBT035	Rashmi Patil
104.	01FE16BBT036	Rashmi U B
105.	01FE16BBT037	Rashmy C Mudgal
106.	01FE16BBT038	Reema S Kamble
107.	01FE16BBT039	Ronak Shetty
108.	01FE16BBT040	Sakshi Malagi
109.	01FE16BBT041	Sanjana More
110.	01FE16BBT042	Sequeira Lisa Naomi
111.	01FE16BBT043	Shameen Sultana
112.	01FE16BBT029	Neha Hegde
113.	01FE16BBT044	Shilpashree S Kalawad
114.	01FE16BBT045	Shreya M S
115.	01FE16BBT046	Sneha Agarwal
116.	01FE16BBT047	Sneha Chiniwal
117.	01FE16BBT048	Sneha V Hegde
118.	01FE16BBT049	Soumya Garawadmath
119.	01FE16BBT050	Spoorti C K
120.	01FE16BBT051	Swagat Upase
121.	01FE16BBT052	Umme Fazal E Habiba M Rudgi
122.	01FE16BBT053	Vaibhavi Patil
123.	01FE16BBT054	Vaishnavi Prabhu
124.	01FE16BBT055	Venessa Dsouza
125.	01FE16BBT056	Suraj Basavaraj Butale

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Civil

126.	01FE16BCV001	Abhilash Ramesh Hosamani
127.	01FE16BCV002	Abhinandan Tone
128.	01FE16BCV003	Abhinav Patil
129.	01FE16BCV004	Abhinay M Reachetti
130.	01FE16BCV005	Abhishek H Maradi
131.	01FE16BCV006	Abhishek R Hiremath
132.	01FE16BCV007	Ahmed Maaz Wantmuri
133.	01FE16BCV008	Ajay Palkar
134.	01FE16BCV009	Akash Vijayakumar
135.	01FE16BCV010	Akhilesh A Janadri
136.	01FE16BCV012	Akshatha R Manikanavar
137.	01FE16BCV013	Akshay M Badni
138.	01FE16BCV014	Akshay Sajjan
139.	01FE16BCV015	Akshaykumar Magadum
140.	01FE16BCV016	Aman V Sanghvi
141.	01FE16BCV017	Anand Ganiger
142.	01FE16BCV018	Anirudh J K
143.	01FE16BCV019	Anudeep Arun Todkar
144.	01FE16BCV020	Arpita Billashivannavar
145.	01FE16BCV021	Arpita Virupakshappa Kusabi
146.	01FE16BCV022	Ashish S Porwal
147.	01FE16BCV023	Atiya Yaragatti
148.	01FE16BCV024	Avadhoot S T
149.	01FE16BCV025	Bomnuk Don
150.	01FE16BCV026	Channa Basava
151.	01FE16BCV027	Chetankumar N Donurmath
152.	01FE16BCV028	Chinmay S Kubihal
153.	01FE16BCV029	Damodar L Shanbhag
154.	01FE16BCV030	Daraan R Mujahid
155.	01FE16BCV031	Drishya Subramanian
156.	01FE16BCV033	Fairoz Sultana Pathan
157.	01FE16BCV035	Hanamant Y Patil
158.	01FE16BCV037	Jayalakshmi A Melgiri
159.	01FE16BCV039	Kartik Ashok Happalad
160.	01FE16BCV041	Kiran Arjun Sagar
161.	01FE16BCV043	Madhumati S Hittalamani
162.	01FE16BCV045	Mahantesh Aravind Managuli
163.	01FE16BCV047	Mahantesh Shidaraddi
164.	01FE16BCV049	Manjunath Anand Waddar
165.	01FE16BCV051	Manjunath Rotti
166.	01FE16BCV053	Megha Sompur

167.	01FE16BCV055	Moinahmed R Chandshah
168.	01FE16BCV057	Namita Gaddadavar
169.	01FE16BCV059	Neelamma Ranganagouda Patil
170.	01FE16BCV061	Nitish Rotti
171.	01FE16BCV063	Oset Tagi
172.	01FE16BCV065	Patil Rohit Rudragouda
173.	01FE16BCV067	Pragathi S Badiger
174.	01FE16BCV069	Prajwal Sukhadev Bidari
175.	01FE16BCV071	Prateek Nagesh Ritti
176.	01FE16BCV073	Preksha Pramodkumar Porwal
177.	01FE16BCV075	Rakeshgouda Patil
178.	01FE16BCV077	Ramesh Biradar Patil
179.	01FE16BCV079	Reshma Rathod
180.	01FE16BCV081	Rohit B Manupati
181.	01FE16BCV083	Sachin Gurupadayya Mareguddi
182.	01FE16BCV085	Sampada Satish Mirji
183.	01FE16BCV087	Sarfaraj A J
184.	01FE16BCV089	Shahistanaz
185.	01FE16BCV091	Shashidhar C Ganiger
186.	01FE16BCV093	Shreyas V Mamani
187.	01FE16BCV095	Shweta H
188.	01FE16BCV097	Siddanagoud Patil
189.	01FE16BCV099	Sneha R Devadhar
190.	01FE16BCV101	Subham Rangdal
191.	01FE16BCV103	Sudhakar V M
192.	01FE16BCV105	Sunil Yemu Pammar
193.	01FE16BCV107	Tadu Hanya
194.	01FE16BCV109	Tejus Bellad
195.	01FE16BCV111	Uday Y Waster
196.	01FE16BCV113	Vijaykumar V Sangannavar
197.	01FE16BCV115	Virendra Siddappa Turadi
198.	01FE16BCV117	Vishal Chavan
199.	01FE16BCV119	Yashwant R Prabhakar
200.	01FE16BCV056	Mushreef Ladkhan – 113
201.	01FE16BCV066	Pawan S Mahajan – 118
202.	01FE16BCV086	Santosh Basavanagouda Patil – 128
203.	01FE16BCV112	Veeru Y Salimath – 141
204.	01FE16BAR016	Bilal Mulimani
205.	01FE16BME225	Vipinkumar Mourya
206.	01FE16BCV032	Durga Shravani C
207.	01FE16BCV034	Geli Bam
208.	01FE16BCV036	Indudhar M Hosamath
209.	01FE16BCV038	Jeevan Kumar Rathod
210.	01FE16BCV040	Kavya H Sankannavar

211.	01FE16BCV042	Kiran Nagaral
212.	01FE16BCV044	Mahammadashif Rayabag
213.	01FE16BCV046	Mahantesh Laxman Kavalapur
214.	01FE16BCV048	Mallikarjun Rajur
215.	01FE16BCV050	Manjunath Meti
216.	01FE16BCV052	Manjunath Unki
217.	01FE16BCV054	Mihir Dileep Kulkarni
218.	01FE16BCV058	Naveenkumar Kerutagi
219.	01FE16BCV060	Ningappa Gadigeppa Madar
220.	01FE16BCV062	Omkar U Kulkarni
221.	01FE16BCV064	Padmavati Laxmanrao Pol
222.	01FE16BCV068	Prajwal B Hubli
223.	01FE16BCV070	Prashant M Horakeri
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225.	01FE16BCV074	Raghavendra Somashekhar Eresimi
226.	01FE16BCV076	Ramangouda Shivangouda Patil
227.	01FE16BCV078	Rashmi Basavantasingh Hajeri
228.	01FE16BCV080	Rohan D Prabhu
229.	01FE16BCV082	Rohit Meharwade
230.	01FE16BCV084	Samiulla Mujawar
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232.	01FE16BCV090	Sharan Bembalgi
233.	01FE16BCV092	Shreyas Joshi
234.	01FE16BCV094	Shrinidhi Navale
235.	01FE16BCV096	Siddalingappa Shekhappa Malaghan
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237.	01FE16BCV100	Srisowmya A
238.	01FE16BCV102	Sudha G Kammar
239.	01FE16BCV104	Sujitkumar Iddalagi
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244.	01FE16BCV116	Viresh Sajjan
245.	01FE16BCV118	Vivek V Hunagund
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247.	01FE17BCV402-T	S Sai Suraj Reddy – B1
248.	01FE15BCV027	Basavaraj M Jambagi – B2
249.	01FE15BCV019	Aravind Arakeri – B2
250.	01FE15BCV060	Mohammed Afzul Nadaf – B3
251.	01FE17BCV403-T	Saif Ahamed Makarabbi – B2
252.	01FE17BCV404-T	Vinaykumar V Kuratti – B2

253.	01FE17BCV405-T	Ishratjahan Mudhol – B2
254.	01FE17BCV406-T	Nagaraj R Pujar – B3
255.	01FE17BCV407-T	Manjunath Bakale – B3
256.	01FE17BCV408-T	Basavaraj Palki – B3
257.	01FE17BCV409-T	Aishwarya R Sontakki – B4
258.	01FE16BCV501	Akshay Hiremath
259.	01FE17BCV410-T	Ambrish P Wagmode – B4
260.	01FE17BCV411-T	Anil Sagar – B4
261.	01FE17BCV412-T	Gopalreddi Devareddi Kiresur – B2
262.	01FE17BCV413-T	Sandeepa B T – B1
263.	01FE17BCV414-T	Pradeep V Parvatikar – B1
264.	01FE17BCV415-T	Ramkumar Kollappa Katagi
265.	01FE17BCV416-T	Praveen Hubballi
266.	01FE17BCV417-T	Butta Raghavendra
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271.	01FE17BCV422-T	Sanjeev Patil
272.	01FE17BCV423-T	Sujith L
273.	01FE17BCV424-T	Viresh Patil
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289.	01FE16BCS012	Aditya Sanjay Khot
290.	01FE16BCS013	Aditya Singh
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292.	01FE16BCS015	Aishwarya Joshi

293.	01FE16BCS016	Aishwarya R
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303.	01FE16BCS026	Amogha P Shettar
304.	01FE16BCS027	Amoolya P Shettar
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306.	01FE16BCS029	Amruta Pikle
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431.	01FE16BCS133	Omkar Dayanand Sabade
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544.	01FE17BCS430-T	Srinivas Vaidya
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561.	01FE15BCS075	Harsh Shah (Rr)

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599.	01FE16BEC037	Apoorva A Sanikop
600.	01FE16BEC038	Arpit Pravindra Mishra
601.	01FE16BEC039	Arpita S Desai
602.	01FE16BEC040	Arvind Manohar Patil

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608.	01FE16BEC046	Avinash S Bennur
609.	01FE16BEC047	Ayush S B
610.	01FE16BEC195	Swathi Basavaraj D
611.	01FE16BEC048	Basavaraj Somashekhar Sanshi
612.	01FE16BEC049	Chaitra Udayakumar Shet
613.	01FE16BEC050	Chandan V Shanbhag
614.	01FE16BEC051	Chetan P
615.	01FE16BEC052	Chetana J Sarangamath
616.	01FE16BEC053	Chinmay C
617.	01FE16BEC054	Chinmay Dharwad
618.	01FE16BEC055	Chinmay H Hasabi
619.	01FE16BEC056	Chinmayi G Nadiger
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621.	01FE16BEC058	D K Samyak Jain
622.	01FE16BEC059	D R Shweta
623.	01FE16BEC060	Darpan Rangappa Patil
624.	01FE16BEC061	Darshan Kumbar H K
625.	01FE16BEC062	Deepa B Amasi
626.	01FE16BEC063	Deepa Shivappa Badli
627.	01FE16BEC064	Deepti B Hegde
628.	01FE16BEC065	Dikshit Hegde
629.	01FE16BEC066	Disha S Mahajan
630.	01FE16BEC067	Eisa Ashraf Ali
631.	01FE16BEC068	Gajanan Shridhar Bhat
632.	01FE16BEC069	Gautam Shrikant Purohit
633.	01FE16BEC070	Gayatri Bheemanna Nyamagoud
634.	01FE16BEC071	Gourav Krishna Bhat
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636.	01FE16BEC073	Gowri D
637.	01FE16BEC075	Hardik S Patel
638.	01FE16BEC076	Harish D Giraddi
639.	01FE16BEC077	Hema Kelagade
640.	01FE16BEC079	Husen Mulla
641.	01FE16BEC080	Ishwar Malavade
642.	01FE16BEC081	J S Yashas
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644.	01FE16BEC083	Karthik S Bisale
645.	01FE16BEC084	Karthik V Bandihal
646.	01FE16BEC085	Keertish S Kapase
647.	01FE16BEC086	Komal A Kalkutkar

648.	01FE16BEC087	Krishnappa Kuri
649.	01FE16BEC088	Kusumavati Dharwadkar
650.	01FE16BEC089	M Swetha
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654.	01FE16BEC093	Manoj S Tegginmani
655.	01FE16BEC094	Mayur C K
656.	01FE16BEC095	Megha Nagaraj Karadi
657.	01FE16BEC096	Megha S Asundi
658.	01FE16BEC097	Megharaj C Kamanabudi
659.	01FE16BEC098	Mohammed Amaan Arab
660.	01FE16BEC099	Mohd. Adil Baig
661.	01FE16BEC100	Mrudula V Morageri
662.	01FE16BEC101	Mukthabai
663.	01FE16BEC102	Muskan Akhtar Allan
664.	01FE16BEC103	Mutturaj Shivanand Harage
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666.	01FE16BEC105	Nagaraj Talawar
667.	01FE16BEC106	Namrata Vijaykumar Gadagi
668.	01FE16BEC107	Nandini S Kumbar
669.	01FE16BEC108	Naveen A Jadhav
670.	01FE16BEC109	Naveen Basavaraj Angadi
671.	01FE16BEC110	Neha C Panji
672.	01FE16BEC111	Netra Fakkirayya Kerimath
673.	01FE16BEC112	Nidhi Banajwad
674.	01FE16BEC113	Nidhi Purohit
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676.	01FE16BEC115	Nimisha R Honnalli
677.	01FE16BEC116	Nishant Hegde
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679.	01FE16BEC118	Padmavati B Rangannavar
680.	01FE16BEC119	Parvatesh V Pol
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682.	01FE16BEC121	Pavankumar Shrirang Mahuli
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684.	01FE16BEC123	Pooja Chandrakant Shinde
685.	01FE16BEC124	Pooja Tatawati
686.	01FE16BEC125	Pradeep Shankar Matroji
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690.	01FE16BEC129	Prateek J Purohit
691.	01FE16BEC130	Prateek Pise
692.	01FE16BEC131	Prateeksha Manjunath Raikar

693.	01FE16BEC132	Prathamesh Desai
694.	01FE16BEC133	Pratik Pujari
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696.	01FE16BEC135	Pratiksha Patil
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698.	01FE16BEC137	Priyanka Ashok Kurkuri
699.	01FE16BEC138	R Nagasai Anudeep
700.	01FE16BEC139	Rachana S Jingade
701.	01FE16BEC140	Rahul M S
702.	01FE16BEC141	Raj Mishra
703.	01FE16BEC142	Rajshekar Mattikop
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707.	01FE16BEC146	Rashmi Ashok Kubsad
708.	01FE16BEC147	Rishab Pankajkumar Ostawal
709.	01FE16BEC148	Ritika U Vernekar
710.	01FE16BEC149	Ritu Shashidhar Hiremath
711.	01FE16BEC150	Rohan Jakkannavar
712.	01FE16BEC151	Rohan Roy
713.	01FE16BEC152	Sachin Gomadi
714.	01FE16BEC153	Sachin M Baraddi
715.	01FE16BEC154	Sachin N B
716.	01FE16BEC155	Sagar Gaddikeri
717.	01FE16BEC156	Sagar S Hosmani
718.	01FE16BEC157	Sahana Goudar
719.	01FE16BEC158	Sainath R Katnalli
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721.	01FE16BEC160	Samrah Attar
722.	01FE16BEC161	Sanjana Mohan Gunaga
723.	01FE16BEC162	Sanjana Shiddalingeshwar Hurkadli
724.	01FE16BEC163	Santosh Kulkarni
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727.	01FE16BEC166	Sayed Mohammad Dhalayat
728.	01FE16BEC167	Shambhavi S Uppin
729.	01FE16BEC168	Sharath Neelappa Saunshi
730.	01FE16BEC169	Shashank D Kulkarni
731.	01FE16BEC170	Shekhar Rajendra Naik
732.	01FE16BEC171	Shraddha S Pattar
733.	01FE16BEC172	Shreesh Vilas Joshi
734.	01FE16BEC173	Shreya Kulkarni
735.	01FE16BEC174	Shrinidhi R Mokhashi
736.	01FE16BEC175	Shrinidhi V Katti
737.	01FE16BEC176	Shrinivas Arun Kulkarni

738.	01FE16BEC177	Shrishailkumar P Helavar
739.	01FE16BEC178	Siddalingesh Sibandi
740.	01FE16BEC179	Siddharth M Kolhar
741.	01FE16BEC180	Soniya R Shinge
742.	01FE16BEC181	Soumya M Gaddi
743.	01FE16BEC182	Soumya Nayak
744.	01FE16BEC183	Spoorti Patil
745.	01FE16BEC184	Subhangi Kasture
746.	01FE16BEC185	Subrahmanya Gunaga
747.	01FE16BEC186	Sudarshan J Viraktamath
748.	01FE16BEC187	Sumedh G Nadiger
749.	01FE16BEC188	Sumedh Hanamant Sabade
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751.	01FE16BEC190	Suprita Mantur
752.	01FE16BEC191	Supriya S Ambi
753.	01FE16BEC192	Sushma
754.	01FE16BEC193	Sushma Naganagoudar
755.	01FE16BEC194	Sushma R Annigeri
756.	01FE16BEC196	Swathi P Patil
757.	01FE16BEC197	Swathi Tegginkeri
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759.	01FE16BEC199	T Santoshkumar
760.	01FE16BEC200	Tage Kunya
761.	01FE16BEC201	Vaibhav S Langoti
762.	01FE16BEC202	Vaishnavi D Jarimalli
763.	01FE16BEC203	Vaishnavi S Rajaput
764.	01FE16BEC204	Vajra Harish Nayak
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767.	01FE16BEC207	Varsha V Devagiri
768.	01FE16BEC208	Varshini Prakash Kadoli
769.	01FE16BEC209	Venkataramana Shakhapur
770.	01FE16BEC210	Vijayalakshmi S Kaki
771.	01FE16BEC211	Vikas L Mantagani
772.	01FE16BEC212	Vinay A Naidu
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777.	01FE16BEC217	Vinod Ramesh Koraddi
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780.	01FE16BEC220	Yadavannavar Smita Channabasappa
781.	01FE16BEC221	Yashaswini V Jadhav
782.	01FE16BEC222	Zeba Ara Patel

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785.	01FE16BEE002	Aditya W Ashtikar
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787.	01FE16BEE004	Aishwarya R Pattar
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789.	01FE16BEE006	Ajit Dadasaheb Hukkire
790.	01FE16BEE007	Akshata M Kolavi
791.	01FE16BEE008	Akshay Math
792.	01FE16BEE009	Amit K Burli
793.	01FE16BEE010	Ankita D Baadkar
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795.	01FE16BEE012	Anushka S Shivalli
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797.	01FE16BEE014	Aqeel Aalia A Shaikh
798.	01FE16BEE015	Aravind Mahadev Danole
799.	01FE16BEE016	Arpita A Kulkarni
800.	01FE16BEE017	Arun Kumar
801.	01FE16BEE018	Aruna A H
802.	01FE16BEE019	Ashish Kumar Chaurasia
803.	01FE16BEE020	Ashwitha
804.	01FE16BEE021	Avinash Shirakol
805.	01FE16BEE022	Bhaganna
806.	01FE16BEE023	Bharati V Chimmalagi
807.	01FE16BEE024	Bhavani
808.	01FE16BEE025	Borkar Tejas Prasad
809.	01FE16BEE026	Chetan Dhaduti
810.	01FE16BEE027	Chethan Kumar B
811.	01FE16BEE028	Deepa S Biradar
812.	01FE16BEE029	Dhananjay Kumar Jagateri
813.	01FE16BEE030	Divya C Badiger
814.	01FE16BEE031	Faisal Sabeeh K Mulla
815.	01FE16BEE032	Gopal A Parvati
816.	01FE16BEE033	Goutam Umesh Kamble
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818.	01FE16BEE035	Jayamala A Goravi
819.	01FE16BEE036	K S Sujit
820.	01FE16BEE037	Kavita Mallikarjun Naik
821.	01FE16BEE038	Kavyashree Sawadi
822.	01FE16BEE039	Kirthi Kamath
823.	01FE16BEE040	Lakshmi Badiger
824.	01FE16BEE041	Lakshminarayana R Pai

825.	01FE16BEE042	Laxmi P Navalagi
826.	01FE16BEE043	Maheshwari Patil
827.	01FE16BEE044	Mallayya Mathapati
828.	01FE16BEE045	Medha Ramakrishna Bhat
829.	01FE16BEE046	Megha Naikar
830.	01FE16BEE047	Meghana M Gurikar
831.	01FE16BEE048	Mithun Channayanamath
832.	01FE16BEE049	Mohammad A H Attar
833.	01FE16BEE050	Mohammed Bilal
834.	01FE16BEE051	Moshin B Ronad
835.	01FE16BEE052	Nagaraj R Koujalagi
836.	01FE16BEE053	Narendra S Padalale
837.	01FE16BEE054	Naveen Chikkamath
838.	01FE16BEE055	Naveenkumar K Yarabal
839.	01FE16BEE056	Neelambika
840.	01FE16BEE073	Priyanka H K
841.	01FE16BEE074	R Suchita
842.	01FE16BEE075	Rahul Sharma
843.	01FE16BEE076	Rajat Mehta
844.	01FE16BEE077	Rajendra L Hanagodi
845.	01FE16BEE078	Ravikumar M Pise
846.	01FE16BEE079	Rohit P
847.	01FE16BEE080	Santosh R Korimath
848.	01FE16BEE081	Santoshkumar G Asooti
849.	01FE16BEE082	Sateesh Badiger
850.	01FE16BEE083	Sathyam Parasharam Naik
851.	01FE16BEE084	Satwik S Managavi
852.	01FE16BEE085	Shaik Mohammad Tajuddin
853.	01FE16BEE086	Shashank Mangloor
854.	01FE16BEE087	Shekharappa
855.	01FE16BEE088	Shivakumar S Koti
856.	01FE16BEE089	Shivaraj Mohan Kamble
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858.	01FE16BEE091	Shrinivas R Palankar
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860.	01FE16BEE093	Shruti G M
861.	01FE16BEE094	Sneha Kuder
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863.	01FE16BEE096	Soumya M Kalagi
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865.	01FE16BEE098	Srujana K Pillay
866.	01FE16BEE099	Sujata Kulkarni
867.	01FE16BEE100	Sukhjeet Vyasasamudra
868.	01FE16BEE101	Suparna Shridhar Joshi
869.	01FE16BEE102	Sushma S Indi

870.	01FE16BEE103	Sushmita D Tatti
871.	01FE16BEE104	Syeda Fazlunnisa Begum
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877.	01FE16BEE110	Vinay Karnam
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890.	01FM16MCA009	Asha T
891.	01FM16MCA010	Bharati N Hulgeri
892.	01FM16MCA011	Bhuvan U Shirahatti
893.	01FM16MCA012	Chetankumar Jampannanavar
894.	01FM16MCA013	Deepa Karale
895.	01FM16MCA014	Geeta F Patil
896.	01FM16MCA015	Geeta F Sollapur
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899.	01FM16MCA018	Kartik V Muttinpendimath
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904.	01FM16MCA023	Netra S Matolli
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908.	01FM16MCA028	P Kiran Kumar
909.	01FM16MCA029	Pooja K Kulkarni
910.	01FM16MCA030	Poojashree Nimbaragi
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919.	01FM16MCA039	Sandeepa Pawara
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921.	01FM16MCA041	Sharathkumar Patil
922.	01FM16MCA042	Shivaraj Lambi
923.	01FM16MCA043	Shreekrishna S Havaldar
924.	01FM16MCA044	Shubham Arunkumar Katti
925.	01FM16MCA045	Shyamala T
926.	01FM16MCA046	Soumya M Kurahatti Desai
927.	01FM16MCA047	Soumya Sonar
928.	01FM16MCA048	Soumyashri Gurumath
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930.	01FM16MCA050	Sushrut Kamat
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940.	01FE15BME135	Rajashekhar Alaundi
941.	01FE16BME047	Dhanraj M Pattanashetti
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961.	01FE16BME020	Akshay Ramesh Gadekar
962.	01FE16BME021	Amir Fazlu Munshi
963.	01FE16BME022	Amit J Jain
964.	01FE16BME023	Amit V Shet
965.	01FE16BME024	Amol Bashetti
966.	01FE16BME025	Anish Bhairava Hegde
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968.	01FE16BME027	Anoop Uday Kotarkar
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972.	01FE16BME031	Avinash U Gollarahalli
973.	01FE16BME032	Azeem Jaheer Ahmad Bellary
974.	01FE16BME033	B A Karthik Datta
975.	01FE16BME034	Babu Mallappanavar
976.	01FE16BME035	Basanagouda L Kulkarni
977.	01FE16BME036	Basavaraj Goparaddy Anesur
978.	01FE16BME037	Basavaraj Kallappa Laxmeshwar
979.	01FE16BME038	Bharatkumar A Biradar
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981.	01FE16BME040	Bomge Koyu
982.	01FE16BME041	Chandan B Maliyavar
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986.	01FE16BME045	Darshan D B
987.	01FE16BME046	Darshan Mattikalli
988.	01FE15BME137	Raju Madar
989.	01FE16BME048	Doddappa Sasalatti
990.	01FE16BME049	Firoz Shafeersab Itagi
991.	01FE16BME050	G Sujay
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993.	01FE16BME052	Gaurang H Chhapia
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996.	01FE16BME055	Gururaj Girish Tonapi
997.	01FE16BME056	Harish Ashok Vernekar
998.	01FE16BME057	Harshakumar Kembhavi

999.	01FE16BME058	Javed Khan
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1002	01FE16BME061	Junaid Rahman Shaikh
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1004	01FE16BME063	K R Gagandeep
1005	01FE16BME064	Kaling Taram
1006	01FE16BME065	Kapil Shivnath Kalgutkar
1007	01FE16BME066	Karan Pankaj Ladhad
1008	01FE16BME067	Karthik S Deshpande
1009	01FE16BME068	Kartik Basavaraj Rayangoudar
1010	01FE16BME069	Kartik Sangamesh Yalameli
1011	01FE16BME070	Katipogu Godwin
1012	01FE16BME071	Kedarnath
1013	01FE16BME072	Keerthi Kumar K G
1014	01FE16BME073	Ketan Raju Dalabanjan
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1021	01FE16BME080	Kumar Yallappa Lakamapur
1022	01FE16BME081	Kushal Mehta
1023	01FE16BME082	Leslie W Pinto
1024	01FE16BME083	Levi Jonathan Bekkam
1025	01FE16BME084	M R Rahulroy
1026	01FE16BME085	Mallikarjun Jagadish Kavatagimath
1027	01FE16BME086	Manjunath G Hiremath
1028	01FE16BME087	Manjunath Patil
1029	01FE16BME088	Manjunatha Husenappa Salamani
1030	01FE16BME089	Md Sakeeb A Naikwadi
1031	01FE16BME090	Mohammad Musab Ahmer
1032	01FE16BME091	Mohammed Aghyas Ahmed
1033	01FE16BME092	Mrutyunjaya Sangresakoppa
1034	01FE16BME093	N S Shiva
1035	01FE16BME094	Naman Herwatta
1036	01FE16BME095	Nandish P Ramenahalli
1037	01FE16BME096	Naveen C
1038	01FE16BME097	Nayak Suraj Ramesh
1039	01FE16BME098	Nayan Kumar
1040	01FE16BME099	Neelakant Shivanand Chavan
1041	01FE16BME100	Niket Kalal
1042	01FE16BME101	Nikhil Anvekar
1043	01FE16BME102	Nikhil C Hiremath

1044	01FE16BME103	Nikhil Prakash Kulkarni
1045	01FE16BME104	Nikhil Prasad Katti
1046	01FE16BME105	Nikhil R Baddi
1047	01FE16BME106	Nikhit Bharat Kamble
1048	01FE16BME107	Nikshep M Patil
1049	01FE16BME108	Ningappa Rathod
1050	01FE16BME109	Niranjan K Bhustali
1051	01FE16BME110	Nishanth B S
1052	01FE16BME111	Nitilaksh Shankarayya Salimat
1053	01FE16BME112	Nyamat Allah Noorahmad Momin
1054	01FE16BME113	Omkar Sali
1055	01FE16BME114	Pankaj Ravindra Naik
1056	01FE16BME115	Pankajanabh V Shetti
1057	01FE16BME116	Pavan Anand Kulkarni
1058	01FE16BME117	Pavankumar Basavaraj Navalli
1059	01FE16BME118	Pavitra Kanavi
1060	01FE16BME119	Piyushkumar V Gudi
1061	01FE16BME120	Prabhudev S Yavagal
1062	01FE16BME121	Prajhot P Naik
1063	01FE16BME122	Prajwal Deshpande
1064	01FE16BME123	Pramod Metre
1065	01FE16BME124	Pranav Girish Banvi
1066	01FE16BME125	Prasan Prakash Sulebhavi
1067	01FE16BME126	Prashant S Mathapati
1068	01FE16BME127	Prashanth R
1069	01FE16BME128	Prashanth Virupakshappa Hurkadli
1070	01FE16BME129	Premsingh Bansi
1071	01FE16BME130	Priyanka Mallappa Nabapure
1072	01FE16BME131	Pundaleek Irappa Sattennavar
1073	01FE16BME133	Puneeth Shenoy
1074	01FE16BME134	Raghavendra M Naikar
1075	01FE16BME135	Raghavendra R Nyamgoud
1076	01FE16BME136	Rahul D Rathod
1077	01FE16BME137	Rahul Khan
1078	01FE16BME138	Rahul M Disale
1079	01FE16BME139	Rahul Mamdapur
1080	01FE16BME140	Rahul P
1081	01FE16BME141	Rahul R Pattar
1082	01FE16BME142	Rahul Rayadurg
1083	01FE16BME143	Rahul Sasanur
1084	01FE16BME144	Rajat Bammigatti
1085	01FE16BME145	Rajat Hiremath
1086	01FE16BME146	Rajat Shivanand Kotagi
1087	01FE16BME147	Ram Manohar Talla
1088	01FE16BME148	Ramesh

1089	01FE16BME149	Ravi S Mendigeri
1090	01FE16BME150	Ravi Veerappa Hadapad
1091	01FE16BME151	Rhashikesh R Rane
1092	01FE16BME152	Ritesh Madan Ghodake
1093	01FE16BME153	Rohan A Benakatti
1094	01FE16BME154	Rohan S Gaonkar
1095	01FE16BME155	Rohan S Togarsi
1096	01FE16BME156	Rohan Satyabodh Pandurangi
1097	01FE16BME157	Rohit S Anvekar
1098	01FE16BME158	Ronaldo Sherwin V
1099	01FE16BME159	S B Suhas
1100	01FE16BME160	Sachin Kulkarni
1101	01FE16BME161	Sagar Patil
1102	01FE16BME162	Sagar Raibagi
1103	01FE16BME163	Sajjad A Naikwadi
1104	01FE16BME164	Samarth B M
1105	01FE16BME165	Sandeep Deshpande
1106	01FE16BME166	Sanjay S M
1107	01FE16BME167	Sanjeev Basavaraj Madhalli
1108	01FE16BME168	Sankalp Hanumant Melli
1109	01FE16BME169	Sanket
1110	01FE16BME170	Sanketh Ashok Sambrani
1111	01FE16BME171	Sarvesh
1112	01FE16BME172	Sarvesh S Sadashivanavar
1113	01FE16BME173	Sayyed Ahmed Zuhair
1114	01FE16BME174	Shamanth G Bidari
1115	01FE16BME175	Sharanabasu Mopagar
1116	01FE16BME176	Sharanbasappa
1117	01FE16BME177	Sharathkumar Gali
1118	01FE16BME178	Shashank Gopalkrishna Shanbhag
1119	01FE16BME179	Shashank Patil
1120	01FE16BME180	Shashikant Adiveppa Angadi
1121	01FE16BME181	Shiddalingesh V Angadi
1122	01FE16BME182	Shivam Patel
1123	01FE16BME183	Shivam Sharma
1124	01FE16BME184	Shivaprasad Tippannavar
1125	01FE16BME185	Shivaputra Uday Jadhav
1126	01FE16BME186	Shravya Manjunath Sanu
1127	01FE16BME187	Shreyas Giriyappanavar
1128	01FE16BME188	Shreyas R Patil
1129	01FE16BME189	Shreyas S
1130	01FE16BME190	Shridhar N Hadimani
1131	01FE16BME132	Puneet B Gani
1132	01FE16BME191	Shrinidhi Srinivas Jahagirdar
1133	01FE16BME192	Shrinivas A Gunda

1134	01FE16BME193	Siddharth B Kshatri
1135	01FE16BME194	Siddharth Gasti
1136	01FE16BME195	Sohail Ahmed
1137	01FE16BME196	Soham Sharad Kanguri
1138	01FE16BME197	Somashekharaiah Andanaiah Mathada
1139	01FE16BME198	Soumya Kanyal
1140	01FE16BME199	Sourabh S Harapanahalli
1141	01FE16BME200	Sourav S Kulkarni
1142	01FE16BME201	Srikar H I
1143	01FE16BME202	Srinivasa R Yelgodkar
1144	01FE16BME203	Srivatsa S Joshi
1145	01FE16BME204	Sumeet S Magi
1146	01FE16BME205	Sumit Bhosale
1147	01FE16BME206	Sumit S Ankalagi
1148	01FE16BME207	Suraj Vishwanath Reddy
1149	01FE16BME208	Suyash Kumar
1150	01FE16BME209	Swaroop R Nandi
1151	01FE16BME210	Techi Palo
1152	01FE16BME211	Tejas Sujit Lengade
1153	01FE16BME212	Tenzin Rinchin Dirkhipa
1154	01FE16BME213	Uday R Hiremath
1155	01FE16BME214	Ugvekar Hrishikesh Suresh
1156	01FE16BME215	Vaibhav Divanaji
1157	01FE16BME216	Vallabh V Parab
1158	01FE16BME217	Varadaraj Tigadikar
1159	01FE16BME218	Varun Patil
1160	01FE16BME219	Vasudeva H
1161	01FE16BME220	Vijeth Patil
1162	01FE16BME221	Vikas S Hiremath
1163	01FE16BME222	Vinay M Hiremath
1164	01FE16BME223	Vinayak S Naik
1165	01FE16BME224	Vinodkumar Shashikant Kammar
1166	01FE16BME225	Vipinkumar P Mourya
1167	01FE16BME226	Vishal Hanamant Pawar
1168	01FE16BME227	Vishal S Solanki
1169	01FE16BME228	Vishal S Vandakar
1170	01FE16BME229	Vishwanath Y Goudar
1171	01FE16BME230	Yahya Faheem
1172	01FE16BME231	Yashwant Mallanagouda Patil
1173	01FE16BME232	Yogesh N Joshi
1174	01FE16BME233	Yogesh R Agiwal

KLE Technological University
Creating Value
Leveraging Knowledge

VAT Course III

24-Aug	**Batch 1**	**CSA+CSB**		**Batch 2**	**ECE A+B+MCA-V+EEE-A**
	VENUE	**BT Seminar Hall**		**VENUE**	**BT Auditorium**
	0800-0830	Orientation + Infosys /Accenture Overview		**0900-0930**	Orientation + Infosys /Accenture Overview
	0830-0945	Accenture est 1		**0930-1045**	Accenture est 1
	0945-1015	Answers+Analysis		**1045-1115**	Answers+Analysis
	1015-1115	Analytical Thinking Arithmetical Reasoning		**1115-1215**	Analytical Thinking Arithmetical Reasoning
	1115-1200	Communicative English		**1215-1300**	Communicative English
	1200-1300	Accenture Test 2		**1300-1330**	Accenture Test 2
	Batch 3	**CSC +CSD**		**Batch 4**	**ECE C+D+EEE-B**
	VENUE	**BT Seminar Hall**		**VENUE**	**BT Auditorium**
	1300-1330	Orientation + Infosys /Accenture Overview		**1400-1430**	Orientation + Infosys /Accenture Overview
	1330-1445	Accenture est 1		**1430-1545**	Accenture est 1
	1445-1515	Answers+Analysis		**1545-1615**	Answers+Analysis
	1515-1615	Analytical Thinking Arithmetical Reasoning		**1615-1715**	Analytical Thinking Arithmetical Reasoning
	1615-1700	Communicative English		**1715-1800**	Communicative English
	1700-1830	Accenture Test 2		**1800-1900**	Accenture Test 2

25-Aug	**Batch 5**	**BT+AR**		**Batch 6**	**CIV A+B**
	VENUE	**BT Seminar Hall**		**VENUE**	**MBA seminar Hall**
	0800-0830	Orientation + Infosys /Accenture Overview		**0900-0930**	Orientation + Infosys /Accenture Overview
	0830-0945	AccentureTest 1		**0930-1045**	AccentureTest 1
	0945-1015	Answers+Analysis		**1045-1115**	Answers+Analysis
	1015-1115	Analytical Thinking Arithmetical Reasoning		**1115-1215**	Analytical Thinking Arithmetical Reasoning
	1115-1200	Communicative English		**1215-1300**	Communicative English
	1200-1230	Accenture Test 2		**1300-1330**	Accenture Test 2
	Batch 7	**ME A+B**		**Batch 8**	**ME C+D**
	VENUE	**BT Seminar Hall**		**VENUE**	**MBA seminar Hall**
	1300-1330	Orientation + Infosys /Accenture Overview		**1400-1430**	Orientation + Infosys /Accenture Overview
	1330-1445	AccentureTest 1		**1430-1545**	AccentureTest 1
	1445-1515	Answers+Analysis		**1545-1615**	Answers+Analysis
	1515-1615	Analytical Thinking Arithmetical Reasoning		**1615-1715**	Analytical Thinking Arithmetical Reasoning

	1615-1700	Communicative English		**1715-1800**	Communicative English
	1700-1730	Accenture Test 2		**1800-1900**	Accenture Test 2

List of students

SI.no	USN	Students Name
1.	01FE15BAR001	Aditya Y Pawar
2.	01FE15BAR002	Akash Mahalamani
3.	01FE15BAR003	Akash Thakur
4.	01FE15BAR004	Akshay Mallikarjun Sangolli
5.	01FE15BAR005	Akshaykumar B N
6.	01FE15BAR006	Amitsingh P Rajput
7.	01FE15BAR007	Amrutesh V Devadas
8.	01FE15BAR008	Anjali G
9.	01FE15BAR009	Anusha M Kabbur
10.	01FE15BAR010	Apeksha Ghatge
11.	01FE15BAR011	Apeksha Prakash Kamatagi
12.	01FE15BAR012	Bhavana S Munjoji
13.	01FE15BAR013	Bhuvanesh Patel
14.	01FE15BAR014	D Malatesh
15.	01FE15BAR015	D R Akshay
16.	01FE15BAR016	Darshan S Lakkundi
17.	01FE15BAR017	G Harivardhan Reddy
18.	01FE15BAR018	Grishma Gajanan Habib
19.	01FE15BAR019	Haresh Naidu
20.	01FE15BAR020	Junaid Ahmed
21.	01FE15BAR021	Karthik D M
22.	01FE15BAR022	Kunal Patil
23.	01FE15BAR023	Manish M Krishna
24.	01FE15BAR024	Manoj C Bhat
25.	01FE15BAR025	Murali Sadashiv Hegde
26.	01FE15BAR026	Mutturaj Dambal
27.	01FE15BAR027	Nikhil Panguluri

28.	01FE15BAR028	Patil Pranav Pramod
29.	01FE15BAR029	Prasad Subhash Kangralkar
30.	01FE15BAR030	Priyanka A Jain
31.	01FE15BAR031	Rajath Bahadur
32.	01FE15BAR032	Rakesh G R
33.	01FE15BAR033	Ramu Saunshi
34.	01FE15BAR034	Rohan Rajakumar Dhanna
35.	01FE15BAR035	Rohini Angadi
36.	01FE15BAR036	Roshan S Andrews
37.	01FE15BAR037	Saatvika Jagdish Godihal
38.	01FE15BAR038	Sahana S Shetty
39.	01FE15BAR039	Samatha V
40.	01FE15BAR040	Sanket M Yadavannavar
41.	01FE15BAR041	Shakeel Nadaf
42.	01FE15BAR042	Shanbhag Panchami Krishnadas
43.	01FE15BAR044	Shilpa N Katti
44.	01FE15BAR045	Shreya B Jogalekar
45.	01FE15BAR046	Shriprad S Gaydole
46.	01FE15BAR047	Srilaxmi Sanjeev Ritti
47.	01FE15BAR048	Subrahmanya Ganapati Gaonkar
48.	01FE15BAR049	Sukanya S Bhairappanavar
49.	01FE15BAR050	Sunil Ramesh Hullur
50.	01FE15BAR051	Suraj Khoday
51.	01FE15BAR052	Tejashree Betgar
52.	01FE15BAR053	Vikram V
53.	01FE15BAR054	Vinay Sanjay Hanje
54.	01FE15BAR055	Vinayak S Kangokar
55.	01FE15BAR056	Yash Agrawal
56.	01FE15BAR057	Yash M Bafna
57.	01FE16BAR401-T	Shivaprasad B Hondayyanavaramath
58.	01FE16BAR402-T	Sushma Raibagi
59.	01FE16BAR403-T	Zeenat Parveen Bankapur
60.	01FE16BAR404-T	Ranajit Chavan
61.	01FE16BAR405-T	Prashant Sasane
62.	01FE16BAR406-T	Santosh Vasudev Ghodke
63.	01FE16BAR407-T	Patil Shubham Sharad
64.	01FE16BAR408-T	Manoj Uday Dixit
65.	01FE16BAR409-T	Harish Talawar
66.	01FE16BAR410-T	Abbutalib Shafi Nadaf
67.	01FE16BAR411-T	Bhagyeshwari S Inamdar
68.	01FE16BAR412-T	Mithun Jagadish Hiremath
69.	01FE16BAR413-T	Kaviraj Doddamani
70.	01FE16BAR414-T	Karthik Holeyannavar

71.	01FE16BAR415-T	Sujeet S Shintre
72.	01FE16BAR416-T	Akshay Nesur
73.	01FE16BAR417-T	Giridharmaraj B
74.	01FE16BAR418-T	Sharan S Mattimani

Bio-Technology

75.	01FE15BBT001	Akshata Ganiger
76.	01FE15BBT002	Amulya M Reddy
77.	01FE15BBT003	Andrea Wilson
78.	01FE15BBT004	Annapoorneshwari V Kurahatti
79.	01FE15BBT005	Asha C Nadaf
80.	01FE15BBT006	Ashwini Hegde
81.	01FE15BBT007	G Vandhana
82.	01FE15BBT008	G. Haripriya
83.	01FE15BBT009	Jayateerth S Bhavikatti
84.	01FE15BBT010	Karthik Gali
85.	01FE15BBT011	Kartik Cholpady Kamath
86.	01FE15BBT012	Kaveri S Badiger
87.	01FE15BBT013	Lohit R
88.	01FE15BBT014	Mahima M Kothari
89.	01FE15BBT015	Manali M Patil
90.	01FE15BBT016	Manjunathswamy G Hiremath
91.	01FE15BBT017	Manoj D Magadum
92.	01FE15BBT018	Moiza Shafqain Ron
93.	01FE15BBT019	Namrata N Khatawkar
94.	01FE15BBT020	Namratha Gorur
95.	01FE15BBT021	Netravati Shirol
96.	01FE15BBT022	Niharika C Honakeri
97.	01FE15BBT023	Nikhita Achyut Naik
98.	01FE15BBT024	Nisarg K Kanthi
99.	01FE15BBT025	Omkareshwari M Jakkali
100.	01FE15BBT026	Pallavi S Madagunaki
101.	01FE15BBT027	Pooja S Prabhudevarmath
102.	01FE15BBT028	Preethivani A
103.	01FE15BBT029	Prerana Prakash
104.	01FE15BBT030	Pushpa
105.	01FE15BBT031	Rahul Kamagond
106.	01FE15BBT032	Rakshanda P Sanglikar
107.	01FE15BBT033	Rohan Madhav Kamat
108.	*01FE15BBT034*	Sagar Naik
109.	01FE15BBT035	Saikrishnarahul M Bodducharl
110.	01FE15BBT036	Samarth Pai
111.	01FE15BBT037	Samay Honnangi
112.	01FE15BBT038	Sayed Maaz Naswale

113.	01FE15BBT039	Sheela Kamatagi
114.	01FE15BBT040	Shivani Kulkarni
115.	01FE15BBT041	Simran Hiremath
116.	01FE15BBT042	Sonal Badi
117.	01FE15BBT043	Soundarya Badami
118.	01FE15BBT044	Sumit Malashetty Jamadar
119.	01FE15BBT045	Susmitha Desai
120.	01FE15BBT046	Tajalli Shaikh
121.	01FE15BBT047	Tanksali Kavita Sagar
122.	01FE15BBT048	Thite Bhavana Ramakrishna
123.	01FE15BBT049	Uzmataiyaba Peerzade
124.	01FE15BBT050	Vaishnavi Malavade
125.	01FE15BBT051	Vidyashree
126.	01FE15BBT052	Vishwanath Bhimaraddi Abbigeri

Civil Engineering

127.	01FE15BCV001	Abhishek M Patil
128.	01FE15BCV002	Adil Sayeed
129.	01FE15BCV003	Aishwarya B Kiresur
130.	01FE15BCV004	Akash S Khandri
131.	01FE15BCV005	Akash Vasanth Padaki
132.	01FE15BCV006	Akshata Kattimani
133.	01FE15BCV007	Akshay Kadagad
134.	01FE15BCV008	Amrut R Megharaj
135.	01FE15BCV009	Amrut V Shetti
136.	01FE15BCV010	Anirudh Kulkarni
137.	01FE15BCV011	Anjana Dharwad
138.	01FE15BCV012	Anoop Sajjan
139.	01FE15BCV013	Anup Agarwal
140.	01FE15BCV014	Anup Ramesh Kulkarni
141.	01FE15BCV015	Anuradha Mallikarjun Bali
142.	01FE15BCV016	Anuradha R Prabhu
143.	01FE15BCV017	Apoorva Allappa Pawadi
144.	01FE15BCV018	Appanna Bardol
145.	01FE15BCV019	Aravind Arakeri
146.	01FE15BCV020	Arjun Gugawad
147.	01FE15BCV021	Arunkumar S
148.	01FE15BCV022	Ashwini Umachagi
149.	01FE15BCV023	Asif Ahmed Ballary
150.	01FE15BCV024	B C Bhoomika
151.	01FE15BCV025	Basanagouda Patil
152.	01FE15BCV026	Basavaneppa
153.	01FE15BCV027	Basavaraj M Jambagi

154.	01FE15BCV028	Chaithanya Kumar K
155.	01FE15BCV029	Chaitra Kallatti
156.	01FE15BCV030	Chaitra Sindagi
157.	01FE15BCV031	Chetan Awati
158.	01FE15BCV032	Chetan Madagoudar
159.	01FE15BCV033	Chetankumar D Doddamani
160.	01FE15BCV034	Chethana A N
161.	01FE15BCV035	Darshan M Hooli
162.	01FE15BCV036	Deeptesh Pawasakar
163.	01FE15BCV037	Dinesh Ningaraj Pujari
164.	01FE15BCV038	Gaju Pujari
165.	01FE15BCV039	Ganesh Manjunathgowda
166.	01FE15BCV040	Gayatri Vaidya
167.	01FE15BCV041	Hage Gambo Guro
168.	01FE15BCV042	Halesh R T
169.	01FE15BCV043	Harhsa Ramesh Hoonur
170.	01FE15BCV044	Hipparagi Abhishek Gurubasappa
171.	01FE15BCV045	Kalaje Rohini Anil
172.	01FE15BCV046	Kartik Shravanakumar Katti
173.	01FE15BCV047	Kavan Mankani
174.	01FE15BCV048	Kavya Ganganahalli
175.	01FE15BCV049	Kiran V Gurlahosur
176.	01FE15BCV050	Kiranraddi Govindraddi Kiresur
177.	01FE15BCV051	Kirthi Sarda
178.	01FE15BCV052	Krishna Ganapati Patil
179.	01FE15BCV053	Kumar
180.	01FE15BCV054	Manjunath Kuri
181.	01FE15BCV055	Manjunath Vishwanath Magdum
182.	01FE15BCV056	Manjunatha Basavaraj Rati
183.	01FE15BCV057	Megha Dhongadi
184.	01FE15BCV058	Meghana Hubli
185.	01FE15BCV059	Mohammadhusen S Yalagi
186.	01FE15BCV060	Mohammed Afzul Nadaf
187.	01FE15BCV061	Mohmadaarif Mohmadshareef Hirehal
188.	01FE15BCV062	Naveen A Mundas
189.	01FE15BCV063	Navneet Deshpande
190.	01FE15BCV064	Nikhil M Vernekar
191.	01FE15BCV065	Nivedita Rao
192.	01FE15BCV066	Parashuram R Mahendrakar
193.	01FE15BCV067	Pavan Kumar
194.	01FE15BCV068	Pavitra S Totad
195.	01FE15BCV069	Pooja B Kondagoli
196.	01FE15BCV070	Pradeep Gurappa Sanadi
197.	01FE15BCV071	Pradeep Sadashiv Nayakodi
198.	01FE15BCV072	Prajwal H Badiger

199.	01FE15BCV073	Prithvi M Medleri
200.	01FE15BCV074	Priyanka D Pujar
201.	01FE15BCV075	Priyusha G
202.	01FE15BCV076	Puneet Kulkarni
203.	01FE15BCV077	Punyashree H M
204.	01FE15BCV078	Rajalaxmi Bhandiwaddar
205.	01FE15BCV079	Ramesh M Binnal
206.	01FE15BCV080	Ramkrishna
207.	01FE15BCV081	Ramyashree A G
208.	01FE15BCV082	Ravi Mallanagouda Goudar
209.	01FE15BCV083	Ravindra Shridhar Naik
210.	01FE15BCV084	Renuka Desai
211.	01FE15BCV085	Rohan S Deshanur
212.	01FE15BCV086	Sagar
213.	01FE15BCV087	Sampath Kumar C M
214.	01FE15BCV088	Samreen Begum Hullur
215.	01FE15BCV089	Samrin
216.	01FE15BCV090	Sangamesh
217.	01FE15BCV091	Sangamesh Bidarakundi
218.	01FE15BCV092	Sanjana Mahalank
219.	01FE15BCV093	Sanjeevkumar Dodamani
220.	01FE15BCV094	Sarthak Nayak
221.	01FE15BCV095	Shabarinath A Patil
222.	01FE15BCV096	Sharat Bhat
223.	01FE15BCV097	Shashikumar K Kabbinakantimath
224.	01FE15BCV098	Shivani D Patil
225.	01FE15BCV099	Shreyas Abbigeri
226.	01FE15BCV100	Shriharsha S Pandurangi
227.	01FE15BCV101	Shruti S Bandenawar
228.	01FE15BCV102	Shubham S Joshi
229.	01FE15BCV103	Siddarth Pawadabasappa Garasangi
230.	01FE15BCV104	Siddharth Dagga
231.	01FE15BCV105	Siddu Teli
232.	01FE15BCV106	Soumya S Chavan
233.	01FE15BCV107	Sourabh Kotur
234.	01FE15BCV108	Sourabh M V
235.	01FE15BCV109	Sugareddi Bendegumbal
236.	01FE15BCV110	Surekha
237.	01FE15BCV111	Sushmita Kulkarni
238.	01FE15BCV112	Syed Sarfaraaz Hussain
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670.	01FE15BEC184	Shridhar S Itagi
671.	01FE15BEC185	Shriharsh V Patil
672.	01FE15BEC186	Shruti Kulkarni
673.	01FE15BEC187	Shubham Krishna Pandey
674.	01FE15BEC188	Shubhangi D Mashalkar
675.	01FE15BEC189	Shweta G Kumbar
676.	01FE15BEC190	Shweta P Mujumdar
677.	01FE15BEC191	Sita Laxman Bhadargade
678.	01FE15BEC192	Sneha V Shetty
679.	01FE15BEC193	Sonal M Prasad

680.	01FE15BEC194	Sonalee Ranjan
681.	01FE15BEC195	Soumya Bhat
682.	01FE15BEC196	Soumya D Kamat
683.	01FE15BEC197	Soumya Ingale
684.	01FE15BEC198	Subhash S Bhat
685.	01FE15BEC199	Suchit Vinod Asnotkar
686.	01FE15BEC200	Sudeep R Jantali
687.	01FE15BEC201	Sudhanva Joshi
688.	01FE15BEC202	Suhas B Hiremath
689.	01FE15BEC203	Sujaykumar S Kulkarni
690.	01FE15BEC204	Sujit Kumar
691.	01FE15BEC205	Suraj Godi
692.	01FE15BEC206	Suresh Venkatesh Karnool
693.	01FE15BEC207	Sushma S B
694.	01FE15BEC208	Swati Pandu Kuchanoor
695.	01FE15BEC209	T Diwakar Sai
696.	01FE15BEC210	Tanmay M Nadgeer
697.	01FE15BEC211	Tejas Arlimatti
698.	01FE15BEC212	Tejashwini Ganachari
699.	01FE15BEC213	Uday M Hiremath
700.	01FE15BEC214	V Anni Shiny
701.	01FE15BEC215	Vadiraj Krishna Kerur
702.	01FE15BEC216	Vaishnavi J Hurakadli
703.	01FE15BEC217	Varsha Manjunath Jain
704.	01FE15BEC218	Venkatesh J Chawan
705.	01FE15BEC219	Vidisha Niteen Hulyalkar
706.	01FE15BEC220	Vijaya Ballari
707.	01FE15BEC221	Vijeta Venkatesh
708.	01FE15BEC222	Vikas B Pawar
709.	01FE15BEC223	Vinay Sagar
710.	01FE15BEC224	Vinay V Panaganti
711.	01FE15BEC225	Vinayak Hanamsagar
712.	01FE15BEC226	Vinodkumar B Byahatti
713.	01FE15BEC227	Vishak P G
714.	01FE15BEC228	Vishal G Sarashetti
715.	01FE15BEC229	Vishal Satish Mangasuli
716.	01FE15BEC230	Vishnu P Kadiyala
717.	01FE15BEC231	Vittal R Miskin
718.	01FE15BEC232	Vivek A Gadakari
719.	01FE15BEC233	Vrishali Venkatesh Alur
720.	01FE15BEC234	Yakub I Khan
721.	01FE15BEC235	Yashaswini M Itagi

Electrical & Electronics Engineering

722.	01FE15BEE001	Akshata Patil

723.	01FE15BEE002	Akshay Hiremath
724.	01FE15BEE003	Akshay S Ganganagoudar
725.	01FE15BEE004	Aliston Peter Dsouza
726.	01FE15BEE005	Amit
727.	01FE15BEE006	Amruta Bhaskar Hegde
728.	01FE15BEE007	Arunkumar M Dodamani
729.	01FE15BEE008	Asha Malakkanavar
730.	01FE15BEE009	Ashwini R Harti
731.	01FE15BEE010	Avinash Agni
732.	01FE15BEE011	Channappa Takkod
733.	01FE15BEE012	Chucharitha S
734.	01FE15BEE013	Deepa N Basava
735.	01FE15BEE014	Dhanashree Nandaragi
736.	01FE15BEE015	Divyajyoti Revankar
737.	01FE15BEE016	Fathekhan Rasul Sab Desai
738.	01FE15BEE017	Francis Miranda
739.	01FE15BEE018	Gali Asha
740.	01FE15BEE019	Karuna V Divate
741.	01FE15BEE020	Kavya N
742.	01FE15BEE021	Kavya S Kachaver
743.	01FE15BEE022	Kotresh G T
744.	01FE15BEE023	Mahadevi Jinnur
745.	01FE15BEE024	Megha Veerendragouda Patil
746.	01FE15BEE025	Muhammad Talha Khatib
747.	01FE15BEE026	Nikhita Bijapur
748.	01FE15BEE027	Pooja P Potdar
749.	01FE15BEE028	Pooja Waghamore
750.	01FE15BEE029	Prabhat Hegde
751.	01FE15BEE030	Pradeepkumar Bharamappa Helavar
752.	01FE15BEE031	Priyanka R Rathod
753.	01FE15BEE032	Rachana V S
754.	01FE15BEE033	Raghu K Pawar
755.	01FE15BEE034	Rajratn Kamble
756.	01FE15BEE035	Rashmi
757.	01FE15BEE036	S Linsy Sandhya
758.	01FE15BEE037	Sakeeb Mahammadsharif Bisanal
759.	01FE15BEE038	Sanjana Galagali
760.	01FE15BEE039	Satish Shinde
761.	01FE15BEE040	Shambhavi Indaragi
762.	01FE15BEE041	Sharanabasava Indi
763.	01FE15BEE042	Shivakumar S Tariwal
764.	01FE15BEE043	Shreegouri D Patil
765.	01FE15BEE044	Shreya Manasali
766.	01FE15BEE045	Shriram L Bhat
767.	01FE15BEE046	Shrishail Biradar

768.	01FE15BEE047	Shruti Roopanavar
769.	01FE15BEE048	Shubh M Kambalyal
770.	01FE15BEE049	Shweta
771.	01FE15BEE050	Shweta Talwar
772.	01FE15BEE051	Suma Masuti
773.	01FE15BEE052	Suman Madivalar
774.	01FE15BEE053	Sushmita S Nadkarni
775.	01FE15BEE054	Swati Savanur
776.	01FE15BEE055	V Nuthna
777.	01FE15BEE056	Vaibhav Vikrant Pethkar
778.	01FE15BEE057	Varsha Hosamani
779.	01FE15BEE058	Varun Patil
780.	01FE15BEE059	Veeramma Pujar
781.	01FE15BEE060	Veerendra Jagadeesh Gadad
782.	01FE15BEE061	Vijaykumar Madagi
783.	01FE15BEE062	Vinayak Hadkar

Mechanical Engineering

784.	01FE15BME001	A M Dhanush
785.	01FE15BME002	A S Shridhar
786.	01FE15BME003	Aaditya S Bhagat
787.	01FE15BME004	Abhay Barad
788.	01FE15BME005	Abhilash Tukkar
789.	01FE15BME006	Abhishek Joshi
790.	01FE15BME007	Abhishek V Bendre
791.	01FE15BME008	Achal Gotadke
792.	01FE15BME009	Achyutkumar I Chavadi
793.	01FE15BME010	Adarsh Dattatraya
794.	01FE15BME076	Kumar H Pujeri
795.	01FE15BME012	Aditya Kulkarni
796.	01FE15BME077	Kumar Manjunath Naik
797.	01FE15BME014	Akash Pol
798.	01FE15BME015	Akash R Naik
799.	01FE15BME078	Kunal Dattatrya Shanbagh
800.	01FE15BME017	Akshay C S
801.	01FE15BME018	Akshay Bhat
802.	01FE15BME019	Akshay Kattimani
803.	01FE15BME020	Akshay Kumar
804.	01FE15BME021	Akshay N R
805.	01FE15BME022	Akshay Vernekar
806.	01FE15BME023	Alok R Shivappagoudar
807.	01FE15BME024	Amit S Gali
808.	01FE15BME025	Amogh Naik
809.	01FE15BME026	Anandgal Aniketh

810.	01FE15BME027	Aniruddh A R
811.	01FE15BME028	Aniruddh Deshpande
812.	01FE15BME029	Anirudh V Kuber
813.	01FE15BME030	Arshad Ahmed Havaldar
814.	01FE15BME031	Arun B Madyal
815.	01FE15BME032	B Raghavendra
816.	01FE15BME033	Badderu Vinod
817.	01FE15BME034	Balavant Dattatraya Kulkarni
818.	01FE15BME035	Basavaraj
819.	01FE15BME036	Basavaraj S Mulasavalagi
820.	01FE15BME037	Beeresh N Karajigi
821.	01FE15BME038	Bharat Kumar
822.	01FE15BME039	Bindu Sainath Reddy K
823.	01FE15BME040	Chandrashekhar Patil
824.	01FE15BME041	Chetan M Surag
825.	01FE15BME042	Chinmay Patil
826.	01FE15BME043	Danesh S Umarani
827.	01FE15BME044	Darshan Basavaraj Wali
828.	01FE15BME045	Deepak L Kambar
829.	01FE15BME046	Dhananjay N Nayak
830.	01FE15BME047	Dheeraj Ajaykumar Bhande
831.	01FE15BME048	Dravid Jakkappanavar
832.	01FE15BME079	Kushal Bollempalli
833.	01FE15BME050	Gagan Umesh Hiredesai
834.	01FE15BME051	Gaurav
835.	01FE15BME052	Goudappa B Patil
836.	01FE15BME053	Gourish U Aigal
837.	01FE15BME054	Gowni Sachin Kumar
838.	01FE15BME055	Gurulingaswamy C Hiremath
839.	01FE15BME056	Guruprasad Jinaga
840.	01FE15BME057	Guruprasad N S
841.	01FE15BME058	Gururaj S Shetty
842.	01FE15BME059	H M Suryatej
843.	01FE15BME060	Hanamant Kumbar
844.	01FE15BME061	Handral Prashant
845.	01FE15BME062	Irfan Jamadar
846.	01FE15BME063	Jnanadev Belamkar
847.	01FE15BME064	Junaid Ahmed Mansabdar
848.	01FE15BME065	K Channaveer
849.	01FE15BME066	K M Vinay
850.	01FE15BME067	K Naveen
851.	01FE15BME068	Kalimili Sujay
852.	01FE15BME069	Karthik B
853.	01FE15BME070	Kartik Kulkarni
854.	01FE15BME071	Kartik S Tandel

855.	01FE15BME072	Kartik Tupsundar
856.	01FE15BME073	Kenge Kamchi
857.	01FE15BME074	Ketan V Pandurangi
858.	01FE15BME075	Kiran B Patil
859.	01FE15BME151	S Gowtham
860.	01FE15BME152	S Sourabh
861.	01FE15BME153	Sachin Dhareppa Chandannavar
862.	01FE15BME154	Sachin Mahesh Modagi
863.	01FE15BME080	Lambani Shankranaik
864.	01FE15BME081	Like Lingu
865.	01FE15BME082	Lingaraj K Balehosur
866.	01FE15BME083	Luv Shankrappa Budihal
867.	01FE15BME084	M Shanawaz
868.	01FE15BME085	Mahesh J Sabannavar
869.	01FE15BME086	Mahesh Ramesh Kulkarni
870.	01FE15BME087	Malik Farhan Ahmad Mansoor
871.	01FE15BME088	Mallikarjun Kambar
872.	01FE15BME089	Mallikarjun Shivaputra Kaisolagi
873.	01FE15BME090	Manish G Shettar
874.	01FE15BME091	Manish M Patil
875.	01FE15BME092	Manjunath Lalabahaddur Patil
876.	01FE15BME093	Manjunath Laxman Chitagubbi
877.	01FE15BME094	Manjunath Ramappa Boranatti
878.	01FE15BME095	Manoj Hegde
879.	01FE15BME096	Manoj Mahadev Madnur
880.	01FE15BME097	Md Zafer Shamim
881.	01FE15BME155	Sachin P Turamari
882.	01FE15BME099	Mithilesh Sunil Kembhavi
883.	01FE15BME100	Mohammad Sabaullah
884.	01FE15BME101	Mohammed Faizan
885.	01FE15BME102	Mohemmed Abdul Mateen
886.	01FE15BME103	Mukesh Mularam Mali
887.	01FE15BME104	Nagaraj V Naik
888.	01FE15BME105	Nagarohan Hemadri
889.	01FE15BME106	Nandan R Kampli
890.	01FE15BME107	Nandeesh
891.	01FE15BME108	Naveen Tonage
892.	01FE15BME109	Naveenkumar Kuruvinshetti
893.	01FE15BME110	Nikhil Deshpande
894.	01FE15BME111	Nikhil J Scaria
895.	01FE15BME112	Nikhil Rajendra Pattar
896.	01FE15BME113	Nikhil Sawakar
897.	01FE15BME114	Nikhil Uday Shetty
898.	01FE15BME115	Nishant Vishwanath Badiger
899.	01FE15BME116	Omkar N Kuntoji

900.	01FE15BME117	Parikshit Pai
901.	01FE15BME118	Pavan Hottigoudar
902.	01FE15BME119	Pavan Ravi Teli
903.	01FE15BME120	Pavan Teli
904.	01FE15BME121	Pavankumar S Jakkali
905.	01FE15BME122	Pradeep Swamy Hiremath
906.	01FE15BME123	Prajwal Vadavadagi
907.	01FE15BME124	Prakash Naik
908.	01FE15BME125	Prashant Shrikant Bidare
909.	01FE15BME126	Praveen Ganapati Bhat
910.	01FE15BME127	R M Veerappan
911.	01FE15BME128	Raghavendra Raju Kokane
912.	01FE15BME129	Rahul Argi
913.	01FE15BME130	Rahul G D
914.	01FE15BME131	Rahul J Hirur
915.	01FE15BME132	Rahul Kumar
916.	01FE15BME133	Rahul P Kurdekar
917.	01FE15BME134	Rahul Rajkumar Vernekar
918.	01FE15BME135	Rajashekhar Alaundi
919.	01FE15BME136	Rajesh Panchalingalu
920.	01FE15BME137	Raju Madar
921.	01FE15BME138	Ramesh Narayan Madar
922.	01FE15BME139	Ravi Kumar G
923.	01FE15BME140	Rehan Ahmed
924.	01FE15BME141	Rishab Sulegaon
925.	01FE15BME142	Rochan Anand Desai
926.	01FE15BME143	Rohan Chikali
927.	01FE15BME144	Rohan Kanagotagi
928.	01FE15BME145	Rohit Bhandage
929.	01FE15BME146	Rohit Kanakannavar
930.	01FE15BME147	Rohit Pal
931.	01FE15BME148	Rohit R Sureban
932.	01FE15BME149	Rohit Y Masarakall
933.	01FE15BME150	Rushank Jayanand Munvalli
934.	01FE15BME194	Snehitshivanandshiraguppi
935.	01FE15BME195	Sourabh Kulkarni
936.	01FE15BME196	Sourabhnaik
937.	01FE15BME197	Srinivas
938.	01FE15BME198	Subbu Sai Nagesh
939.	01FE15BME156	Sachinshivalingappamugalkhod
940.	01FE15BME148	Rohit R Sureban
941.	01FE15BME158	Sadhikahmadmahmadsabkadakol
942.	01FE15BME159	Sagarbiradar
943.	01FE15BME160	Sagarvrashabhanathgundale
944.	01FE15BME161	Saikiran K Joshi

945.	01FE15BME162	Sanathkumarpattanashetti
946.	01FE15BME163	Sandesh Sudarshanhemadri
947.	01FE15BME164	Sangamesh Subhas Shettar
948.	01FE15BME165	Sangameshyallappasarawad
949.	01FE15BME166	Sanjay D Lamani
950.	01FE15BME167	Sanjaygoudmahanteshgoudpatil
951.	01FE15BME168	Sanjeev Suresh Hegde
952.	01FE15BME169	Sanket S Kulkarni
953.	01FE15BME170	Sanketshivanandlagashetti
954.	01FE15BME171	Santosh Fulari
955.	01FE15BME172	Satwik B M
956.	01FE15BME173	Saurav V Naik
957.	01FE15BME174	Sharan R Gujjar
958.	01FE15BME175	Sharavanan A
959.	01FE15BME176	Shashank K Joshi
960.	01FE15BME177	Shashikanth N Magajikondi
961.	01FE15BME178	Shishir Shetty
962.	01FE15BME179	Shivanandramagoudamagadum
963.	01FE15BME199	Suhithmotagi
964.	01FE15BME181	Shivappa S Dange
965.	01FE15BME182	Shivaprasad
966.	01FE15BME183	Shivarajgurubasappapatil
967.	01FE15BME184	Shivashankarkotiwale
968.	01FE15BME239	Vishvam P Naik
969.	01FE15BME186	Shreyasgopalraomanvi
970.	01FE15BME187	Shriganeshmanjunathnaik
971.	01FE15BME188	Shrinidhikamat
972.	01FE15BME189	Shrivatsahegde
973.	01FE15BME190	Shubhamkarmari
974.	01FE15BME191	Shubhamrajarampatil
975.	01FE15BME192	Shubhang Girish Kadadevaru
976.	01FE15BME193	Siddhant A Shetty
977.	01FE15BME019	Akshaykattimani
978.	01FE15BME046	Dhananjay N Nayak
979.	01FE15BME049	Fizanaaz Fatima
980.	01FE15BME098	Meghajamkhandikar
981.	01FE15BME180	Shivangi U S
982.	01FE16BME401-T	Syed Abed Mahedi
983.	01FE16BME402-T	Hanumanthmadar
984.	01FE16BME403-T	Ramachandra V Kulkarni
985.	01FE16BME404-T	Vrushab A Gongadi
986.	01FE16BME405-T	Ninganagouda Kannur
987.	01FE16BME406-T	Nikhil Laxmansarangrej
988.	01FE16BME407-T	Viveknirwani
989.	01FE16BME408-T	Anilkumarpatil

990.	01FE16BME409-T	Karthikmanjunathutagi
991.	01FE16BME410-T	Kishanpailawanwale
992.	01FE16BME411-T	Vinay Jangalikhanuwale
993.	01FE16BME412-T	Mahammadmuzammilalour
994.	01FE16BME413-T	Neelakantagugri
995.	01FE16BME414-T	Pravinagouda S Channappagoudr
996.	01FE16BME415-T	Amit Allimatti
997.	01FE16BME416-T	Pramodrajkumarkurade
998.	01FE16BME417-T	Sharan Adiveppakubyal
999.	01FE16BME418-T	Prashant Ramachandra Vibhuti
1000.	01FE16BME419-T	Siddappa Maruti Pujari
1001.	01FE16BME420-T	Ashifmahammadrafimulla
1002.	01FE16BME421-T	Shubham Santosh Raikar
1003.	01FE16BME422-T	Veeresh
1004.	01FE16BME423-T	Ajarivenkatesh Girish
1005.	01FE16BME427-T	Sagar R Mane
1006.	01FE16BME425-T	Ashok Basavarajhosamath
1007.	01FE15BME201	Sumanthhegde
1008.	01FE15BME202	Sumanth K G
1009.	01FE15BME203	Sunal S
1010.	01FE15BME204	Suneel B Biradar
1011.	01FE15BME205	Sunil Singoti
1012.	01FE15BME206	Surajachari
1013.	01FE15BME207	Surajpatil
1014.	01FE15BME208	Sushant Kumar
1015.	01FE15BME209	Swapneeldattatrayakotharkar
1016.	01FE15BME210	Swapnil Khandake
1017.	01FE15BME211	Swaraj M Hachadad
1018.	01FE15BME212	Swaroop C V
1019.	01FE15BME213	Taduribya
1020.	01FE15BME214	Tahir Hasan Akki
1021.	01FE15BME215	Tapishtalaich
1022.	01FE15BME216	Thushar Bhat G
1023.	01FE15BME217	Tsering Zimba
1024.	01FE15BME218	Vaibhavsonth
1025.	01FE15BME219	Vajrapuvineel
1026.	01FE15BME220	Vallabh Joshi
1027.	01FE15BME221	Varun Kulkarni
1028.	01FE15BME222	Varun Ramannavar
1029.	01FE15BME223	Venkatesh
1030.	01FE15BME224	Vijay Veerabhadraattimarad
1031.	01FE15BME225	Vijaykumar M K
1032.	01FE15BME226	Vinay Kattegoudar
1033.	01FE15BME227	Vinay Laxmanappatirakannanavar
1034.	01FE15BME228	Vinay M Badiger

1035.	01FE15BME229	Vinay Patil
1036.	01FE15BME230	Vinayak A Honawad
1037.	01FE15BME231	Vinayakchannaveerswamyshirurmath
1038.	01FE15BME232	Vinayak R Habib
1039.	01FE15BME233	Vineetanandbedarman
1040.	01FE15BME234	Vineet N Naik
1041.	01FE15BME235	Vineeth M Bhat
1042.	01FE15BME236	Vishal Angadi
1043.	01FE15BME237	Vishal Prakash Dalawai
1044.	01FE15BME238	Vishal R Patil
1045.	01FE15BME200	Sujeetkalaskar
1046.	01FE15BME240	Vithalreddy
1047.	01FE15BME241	Vrushabneelgundmath
1048.	01FE15BME242	Y Linganagowd
1049.	01FE15BME243	Yash V Gathani
1050.	01FE16BME426-T	Vrushabjitendratalathi
1051.	01FE16BME424-T	Swaroopsreenivas
1052.	01FE16BME428-T	Neeraj Prakash Pandit
1053.	01FE16BME429-T	Prajwaltelsang
1054.	01FE16BME430-T	Kishan M Sanganal
1055.	01FE16BME431-T	Deepak Salunke
1056.	01FE16BME432-T	Rahul Ashok Sankannavar
1057.	01FE16BME433-T	Roshankumar S Hatti
1058.	01FE16BME434-T	Premkumar S Patil
1059.	01FE16BME435-T	Pratikvardhan J Hilli
1060.	01FE16BME436-T	Shashidhar S Shivananchi
1061.	01FE16BME437-T	Rizwankhanjahagirdar
1062.	01FE16BME438-T	Omkarjagadishchoulge
1063.	01FE16BME439-T	Mungurwadi Nipun Nitin
1064.	01FE16BME440-T	Prashant Dhavali
1065.	01FE16BME441-T	Shivashankar Mindenavar
1066.	01FE16BME442-T	Santosha Lokre
1067.	01FE16BME443-T	Pavankumar Ganapati Pattar
1068.	01FE16BME444-T	Vivek Vijay Balam
1069.	01FE15BME077	Kumar Manjunathnaik
1070.	01FE15BME185	Shreya V Unchalli
1071.	01FE15BME068	Kalimilisujay

Value Added Training

Course: Database Management System

(2018-19)

KLE Technological University
Creating Value
Leveraging Knowledge

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: Prof. Nagratna Kulennavar

Last Date to apply – 29th Dec 2017
Program Duration – Jan 2018 to May 2018
Coordinator – Dr. Narayan D. G.
narayan_dg@kletech.ac.in
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Database Management System

Unit –I		
1	**Introduction and ER Model** 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	**Relational Data Model** 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	**Database Design** Informal Design Guidelines for Relation Schemas; Functional Dependencies; Normal Forms Based on Primary Keys; 3rd Normal Form.	**06 hrs**
4	**SQL** 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	**Introduction to Transaction Processing and Concurrency Control** Introduction to Transaction Processing; Transactions and System concepts; Desirable Properties of Transactions; Characterizing schedules based on Serializibilty.	**06 hrs**

Text Books:

1. Elmasri R. and Navathe S., Fundamentals Database Systems, 6th edition, Pearson Education, 2011.

References:

1. Ramakrishnan S. and Gehrke J., Database Management Systems, 3rd 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

Prof. Nagaratna Kulenavar is currently working as a Associate Professor in the School of Computer Science and Engineering at KLE Technological University, Hubballi, India. She obtained MTech from Visvesvaraya Technological University, Belgaum in 20004. She obtained B.E. in Computer Science and Engineering from Karnataka University in 2000. She has 20 years of teaching and research experience. She teaches courses like compiler design, system software and DBMS. She has published papers in conferences and journals.

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Database Management System	Prof. N.K.Kulennavar	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

Sl No	USN	Name of Student	Attendance									
			18/8/2018	19/8/2018	09.08.2018	09.09.2018	10.06.2018	10.07.2018	11.10.2018	11.11.2018	15/12/2018	16/12/2018
1	01FE16BEC002-M	A KAVYASHREE	P	P	P	P	P	P	P	P	P	P
2	01FE16BEC010-M	AISHWARYA H R	P	P	P	P	P	P	P	P	P	P
3	01FE16BEC014-M	AISHWARYA S	P	P	P	P	P	P	P	P	P	P
4	01FE16BEC015-M	AISHWARYA VASANTH SHETTY	P	P	P	P	P	P	P	P	P	P
5	01FE16BEC018-M	AKHIL KULKARNI	P	P	A	P	P	P	P	P	P	P
6	01FE16BEC033-M	ANMOL BENAGI	P	P	P	P	P	P	P	P	P	P
7	01FE16BEC038-M	ARPIT PRAVINDRA MISHRA	P	P	P	P	P	P	P	P	P	P
8	01FE16BEC039-M	ARPITA S DESAI	P	P	P	P	P	P	P	P	P	P
9	01FE16BEC045-M	ATIQ AHMED M KHUDAVAND	P	P	P	P	P	P	A	P	P	P
10	01FE16BEC050-M	CHANDAN V SHANBHAG	P	P	P	P	P	P	P	P	P	P
11	01FE16BEC054-M	CHINMAY DHARWAD	P	P	P	A	P	P	P	P	P	P
12	01FE16BEC068-M	GAJANAN SHRIDHAR BHAT	P	P	P	P	P	P	P	P	P	P
13	01FE16BEC071-M	GOURAV KRISHNA BHAT	P	P	P	P	P	P	P	P	P	P
14	01FE16BEC072-M	GOUTAM MOHAN NAIK	P	P	P	P	P	P	P	P	P	P
15	01FE16BEC083-M	KARTHIK S BISALE	P	P	P	P	P	P	P	P	P	P
16	01FE16BEC093-M	MANOJ S TEGGINMANI	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
17	01FE16BEC139-M	RACHANA S JINGADE	P	P	P	P	P	P	P	P	P	P
18	01FE16BEC140-M	RAHUL M S	P	P	P	P	P	P	P	P	P	P
19	01FE16BEC152-M	SACHIN GOMADI	P	P	P	P	P	P	P	P	P	P
20	01FE16BEC153-M	SACHIN M BARADDI	P	P	P	P	P	P	A	P	P	P
21	01FE16BEC156-M	SAGAR S HOSMANI	P	A	P	P	P	P	A	P	P	P
22	01FE16BEC162-M	SANJANA SHIDDALINGESHWAR HURKADLI	P	P	P	P	P	P	P	P	P	P
23	01FE16BEC174-M	SHRINIDHI R MOKHASHI	P	P	P	P	P	P	P	P	P	P
24	01FE16BEC175-M	SHRINIDHI V KATTI	P	P	P	P	P	P	P	P	P	P
25	01FE16BEC184-M	SUBHANGI KASTURE	P	P	P	P	P	P	P	P	P	P
26	01FE16BEC185-M	SUBRAHMANYA GUNAGA	P	P	P	P	P	P	P	P	P	P
27	01FE16BEC225-M	LAKSHMI BADIGER	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
28	01FE16BEC230-M	VAISHAKH I KUPPAST	P	P	P	P	P	P	P	P	P	P
29	01FE16BEC231-M	SHREYAS BURDE	P	P	P	P	P	P	P	P	P	P
30	01FE16BEE002-M	ADITYA W ASHTIKAR	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
31	01FE16BEE006-M	AJIT DADASAHEB HUKKIRE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
32	01FE16BEE008-M	AKSHAY MATH	P	P	P	P	P	P	P	P	P	P
33	01FE16BEE014-M	AQEEL AALIA A SHAIKH	P	P	A	P	P	P	P	P	P	P
34	01FE16BEE015-M	ARAVIND MAHADEV DANOLE	P	P	P	P	P	P	P	P	P	P
35	01FE16BEE020-M	ASHWITHA	P	P	P	P	P	P	P	P	P	P
36	01FE16BEE023-M	BHARATI V CHIMMALAGI	P	P	P	P	P	P	A	P	P	P
37	01FE16BEE031-M	FAISAL SABEEH K MULLA	A	P	P	P	P	A	P	P	P	P
38	01FE16BEE041-M	LAKSHMINARAYANA RAMESH PAI	P	P	P	P	P	P	P	P	P	P
39	01FE16BEE046-M	MEGHA NAIKAR	P	P	P	P	P	P	P	P	P	P
40	01FE16BEE048-M	MITHUN CHANNAYANAMATH	P	P	P	P	P	P	P	P	P	P
41	01FE16BEE050-M	MOHAMMED BILAL	P	P	P	P	P	P	P	P	A	P
42	01FE16BEE051-M	MOSHIN B RONAD	P	P	P	P	P	P	P	P	P	P
43	01FE16BEE098-M	SRUJANA KRISHNAMURTHY PILLAY	P	P	P	P	P	P	P	P	P	P
44	01FE16BME053-M	GOUTAM C HEGDE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

45	01FE16BME074-M	KIRAN LALASANGI	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
46	01FE16BME076-M	KOUSTUB R	P	P	P	A	P	P	P	P	P	P
47	01FE16BME077-M	KSHITIZ VIJAY GAONKAR	P	P	P	P	P	P	P	P	P	P
48	01FE16BME087-M	MANJUNATH PATIL	P	P	P	P	P	P	A	P	P	P
49	01FE16BME095-M	NANDISH P RAMENAHALLI	P	P	P	P	P	P	P	P	P	P
50	01FE16BME096-M	NAVEEN C	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
51	01FE16BME100-M	NIKET KALAL	A	P	P	P	P	P	P	P	P	P
52	01FE16BME186-M	SHRAVYA MANJUNATH SANU	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
53	01FE16BME199-M	SOURABH S HARAPANAHALLI	P	P	P	P	P	P	P	P	P	P
54	01FE16BME200-M	SOURAV S KULKARNI	P	P	P	P	P	P	A	P	P	P
55	01FE17BEC405-M	DIVYA SOOJI	P	P	P	P	P	P	P	P	P	P

Nagaratna Kulenavar

NDK

Student List

Course: Database Management System

Sl No	USN	Name of Student
1	01FE16BEC002-M	A KAVYASHREE
2	01FE16BEC010-M	AISHWARYA H R
3	01FE16BEC014-M	AISHWARYA S
4	01FE16BEC015-M	AISHWARYA VASANTH SHETTY
5	01FE16BEC018-M	AKHIL KULKARNI
6	01FE16BEC033-M	ANMOL BENAGI
7	01FE16BEC038-M	ARPIT PRAVINDRA MISHRA
8	01FE16BEC039-M	ARPITA S DESAI
9	01FE16BEC045-M	ATIQ AHMED M KHUDAVAND
10	01FE16BEC050-M	CHANDAN V SHANBHAG
11	01FE16BEC054-M	CHINMAY DHARWAD
12	01FE16BEC068-M	GAJANAN SHRIDHAR BHAT
13	01FE16BEC071-M	GOURAV KRISHNA BHAT
14	01FE16BEC072-M	GOUTAM MOHAN NAIK
15	01FE16BEC083-M	KARTHIK S BISALE
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17	01FE16BEC139-M	RACHANA S JINGADE
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35	01FE16BEE020-M	ASHWITHA
36	01FE16BEE023-M	BHARATI V CHIMMALAGI
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41	01FE16BEE050-M	MOHAMMED BILAL
42	01FE16BEE051-M	MOSHIN B RONAD
43	01FE16BEE098-M	SRUJANA KRISHNAMURTHY PILLAY
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45	01FE16BME074-M	KIRAN LALASANGI
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47	01FE16BME077-M	KSHITIZ VIJAY GAONKAR
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53	01FE16BME199-M	SOURABH S HARAPANAHALLI
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55	01FE17BEC405-M	DIVYA SOOJI

KLE TECH

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. A KAVYASHREE

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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This is to certify that

Mr./Miss. AISHWARYA H R

has successfully completed the Value Addition Training Course on

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KLE TECH

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Certificate

This is to certify that

Mr./Miss. AISHWARYA VASANTH SHETTY

has successfully completed the Value Addition Training Course on

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Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. AKHIL KULKARNI

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

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This is to certify that

Mr./Miss. AKSHAY MATH

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. ANMOL BENAGI

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE Technological University

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KLE TECH

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AQEEL AALIA A SHAIKH

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. ARAVIND MAHADEV DANOLE

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **ARPIT PRAVINDRA MISHRA**

has successfully completed the Value Addition Training Course on

Database Management System

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. ARPITA S DESAI

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

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Certificate

This is to certify that

Mr./Miss. ASHWITHA

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. ATIQ AHMED M KHUDAVAND

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **BHARATI V CHIMMALAGI**

has successfully completed the Value Addition Training Course on

Database Management System

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. CHANDAN V SHANBHAG

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. CHINMAY DHARWAD

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

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Certificate

This is to certify that

Mr./Miss. **FAISAL SABEEH K MULLA**

has successfully completed the Value Addition Training Course on

Database Management System

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GAJANAN SHRIDHAR BHAT

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOURAV KRISHNA BHAT

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOUTAM MOHAN NAIK

has successfully completed the Value Addition Training Course on

Database Management System

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Data Mining and analytics (2018-19)

KLE Technological University
Creating Value
Leveraging Knowledge

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: Dr Suvarna G kanakaraddi

Last Date to apply – 29th 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	**Data Pre-Processing** 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	**Mining Frequent Patterns, Associations and Correlations:** 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	**Classification** 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	**Cluster Analysis** Cluster Analysis Partitioning methods, Hierarchical Methods, Density based methods, Outlier Detection.	**06 hrs**
Unit –III		
5	**Big data fundamentals:** 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**

Text Books:

1. Jiawei Han, MichelineKamber, and Jian Pei, Data Mining: Concepts and Techniques, 3rd edition, Morgan Kaufmann, 2011.

References:

1. Ian H. Witten, Eibe Frank, Mark A. Hall, Data Mining - Practical Machine Learning Tools and Techniques (3rd Ed), Elsevier Inc - 2011.
2. M. H. Dunham, “Data Mining: Introductory and Advanced Topics”, Pearson Education. 2008.
3. Pang-Ning, Michael Steinbach, Vipin Kumar, “Introduction to Data Mining”, Pearson Education, 2007.

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

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	**Dr Suvarna G kanakaraddi** , Associate Professor at School of Computer Science and Engineering, K L E Technological University Hubballi. She is working in the area of Natural Language Understanding Using Fuzzy logic, Data mining and Big data analytics. Professor has done the project on Satellite image data analysis using Deep learning techniques in collaboration with BEENET University, Noida. Currently she is working in the area of Deep learning for the applications such as sentiment analysis of twitter data, stock market analysis using Machine learning techniques. Articles published by her are in the area of Natural Language processing and deep learning, which are also indexed by Scopus, Web of science and Google scholar. Currently she is nominated as SPOC for UIPATH Bangalore Robotic Process Automation. She has conducted workshops on Information Storage and Management, Big data Analytics and AICTE sponsored workshop on Data Science. She has more than 15 years of research experience in Artificial Intelligence domain

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Data Mining and analytics	Prof. Suvarna Kanakreddi	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Data Mining and analytics
Friday		Data Mining and analytics
Saturday	Data Mining and analytics	

Coordinator Signature

Head,

SoCSE

Attendance Sheet

Course: Data Mining and Analytics

Sl No	USN	Name of Student	Attendance									
			26/01/2019	27/01/2019	16/02/2019	17/02/2019	23/3/2019	24/3/2019	04.06.2019	04.07.2019	05.11.2019	05.12.2019
1	01FE16BEC014-M	AISHWARYA S	P	P	P	P	P	P	P	P	P	P
2	01FE16BEC018-M	AKHIL KULKARNI	P	P	P	P	P	P	P	P	P	P
3	01FE16BEC033-M	ANMOL BENAGI	P	P	P	P	P	P	P	P	P	P
4	01FE16BEC038-M	ARPIT PRAVINDRA MISHRA	P	P	P	P	P	P	P	P	P	P
5	01FE16BEC045-M	ATIQ AHMED M KHUDAVAND	P	P	A	P	P	P	P	P	P	P
6	01FE16BEC050-M	CHANDAN V SHANBHAG	P	P	P	P	P	P	P	P	P	P
7	01FE16BEC068-M	GAJANAN SHRIDHAR BHAT	P	P	P	P	P	P	P	P	P	P
8	01FE16BEC071-M	GOURAV KRISHNA BHAT	P	P	P	P	P	P	P	P	P	P
9	01FE16BEC072-M	GOUTAM MOHAN NAIK	P	P	P	P	P	P	A	P	P	P
10	01FE16BEC083-M	KARTHIK S BISALE	P	P	P	P	P	P	P	P	P	P
11	01FE16BEC140-M	RAHUL M S	P	P	P	A	P	P	P	P	P	P
12	01FE16BEC152-M	SACHIN GOMADI	P	P	P	P	P	P	P	P	P	P
13	01FE16BEC230-M	VAISHAKH I KUPPAST	P	P	P	P	P	P	P	P	P	P
14	01FE16BEC231-M	SHREYAS BURDE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
15	01FE16BEE014-M	AQEEL AALIA A SHAIKH	P	P	P	P	P	P	P	P	P	P
16	01FE16BEE023-M	BHARATI V CHIMMALAGI	P	P	P	A	P	P	P	P	P	P
17	01FE16BEE046-M	MEGHA NAIKAR	P	P	P	P	P	P	P	P	P	P
18	01FE16BEE098-M	SRUJANA KRISHNAMURTHY PILLAY	P	P	P	P	P	P	P	P	P	P
19	01FE16BME076-M	KOUSTUB R	P	P	P	P	P	P	P	P	P	P
20	01FE16BME077-M	KSHITIZ VIJAY GAONKAR	P	P	P	P	P	P	A	P	P	P
21	01FE16BME087-M	MANJUNATH PATIL	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
22	01FE16BME095-M	NANDISH P RAMENAHALLI	P	P	P	P	P	P	P	P	P	P
23	01FE16BME100-M	NIKET KALAL	P	P	P	P	P	P	P	P	P	P
24	01FE16BME186-M	SHRAVYA MANJUNATH SANU	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Dr Suvarna G kanakaraddi



Student List

Course: Data Mining and Analytics

Sl No	USN	Name of Student
1	01FE16BEC014-M	AISHWARYA S
2	01FE16BEC018-M	AKHIL KULKARNI
3	01FE16BEC033-M	ANMOL BENAGI
4	01FE16BEC038-M	ARPIT PRAVINDRA MISHRA
5	01FE16BEC045-M	ATIQ AHMED M KHUDAVAND
6	01FE16BEC050-M	CHANDAN V SHANBHAG
7	01FE16BEC068-M	GAJANAN SHRIDHAR BHAT
8	01FE16BEC071-M	GOURAV KRISHNA BHAT
9	01FE16BEC072-M	GOUTAM MOHAN NAIK
10	01FE16BEC083-M	KARTHIK S BISALE
11	01FE16BEC140-M	RAHUL M S
12	01FE16BEC152-M	SACHIN GOMADI
13	01FE16BEC230-M	VAISHAKH I KUPPAST
14	01FE16BEC231-M	SHREYAS BURDE
15	01FE16BEE014-M	AQEEL AALIA A SHAIKH
16	01FE16BEE023-M	BHARATI V CHIMMALAGI
17	01FE16BEE046-M	MEGHA NAIKAR
18	01FE16BEE098-M	SRUJANA KRISHNAMURTHY PILLAY
19	01FE16BME076-M	KOUSTUB R
20	01FE16BME077-M	KSHITIZ VIJAY GAONKAR
21	01FE16BME087-M	MANJUNATH PATIL
22	01FE16BME095-M	NANDISH P RAMENAHALLI
23	01FE16BME100-M	NIKET KALAL
24	01FE16BME186-M	SHRAVYA MANJUNATH SANU

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AISHWARYA S

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2019 *to* 30-5-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AKHIL KULKARNI

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2020 *to* 30-5-2020

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **ANMOL BENAGI**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2021** *to* **30-5-2021**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AQEEL AALIA A SHAIKH

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2032 *to* 30-5-2032

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **ARPIT PRAVINDRA MISHRA**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2022** *to* **30-5-2022**

Course Instructor | **Head of School** | **Controller of Examinations**

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **ATIQ AHMED M KHUDAVAND**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2023** *to* **30-5-2023**

Course Instructor | **Head of School** | **Controller of Examinations**

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **BHARATI V CHIMMALAGI**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2033** *to* **30-5-2033**

Course Instructor | **Head of School** | **Controller of Examinations**

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **CHANDAN V SHANBHAG**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2024** *to* **30-5-2024**

Course Instructor	Head of School	Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GAJANAN SHRIDHAR BHAT

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2025 *to* 30-5-2025

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOURAV KRISHNA BHAT

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2026 *to* 30-5-2026

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOUTAM MOHAN NAIK

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2027 *to* 30-5-2027

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. KARTHIK S BISALE

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2028 *to* 30-5-2028

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. KOUSTUB R

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2036 *to* 30-5-2036

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. KSHITIZ VIJAY GAONKAR

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2037 *to* 30-5-2037

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **MEGHA NAIKAR**

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from **22-1-2034** *to* **30-5-2034**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. NANDISH P RAMENAHALLI

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2038 *to* 30-5-2038

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. NIKET KALAL

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2039 *to* 30-5-2039

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. RAHUL M S

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2029 *to* 30-5-2029

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SACHIN GOMADI

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2030 *to* 30-5-2030

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SRUJANA KRISHNAMURTHY PILLAY

has successfully completed the Value Addition Training Course on

Data Mining and Analytics

from 22-1-2035 *to* 30-5-2035

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Cloud Computing

(2018-19)

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Value Added Course
on
Cloud Computing

Course Outcomes

- Apply the fundamental principles of distributed computing, virtualization to enable the development of cloud computing.
- Explain the cloud architecture, characteristics and challenges emerging from various models and services.
- Apply suitable cloud programming technologies, policies for optimization of cloud resources, manage cloud security risks.
- Design and develop secured applications best suited for cloud service and delivery models.

Resource Person: Mr. M.M.Moin

Last Date to apply – 29th Dec 2017
Program Duration – Jan 2018 to May 2018
Coordinator – Dr. Narayan D. G.
narayan_dg@kletech.ac.in
+91 9448635627

Cloud Computing

Unit –I		
1	**Distributed System Models and Enabling Technologies** Scalable Computing over the Internet, Technologies for Network-Based Systems, System Models for Distributed and Cloud Computing, Software Environments for Distributed Systems and Clouds.	**06 hrs**
2	**Virtual Machines and Virtualization of Clusters and Data Centers** Implementation Levels of Virtualization, Virtualization Structures/Tools and Mechanisms, Virtualization of CPU, Memory, and I/O Devices, Virtual Clusters and Resources Management, Virtualization for Data-Center Automation.	**06 hrs**
Unit –II		
3	**Cloud Platform Architecture over Virtualized Data Centers** Cloud Computing and Service Models, Architectural Design of Compute and Storage Clouds, Public Cloud Platforms, Cloud Security and Trust Management	**06 hrs**
4	**Cloud Programming and Software Environments** Features of Cloud and Grid Platforms, Parallel and Distributed Programming Paradigms, Programming Support of Google App Engine, Emerging Cloud Software Environments.	**06 hrs**
Unit –III		
5	**Cloud Resource Management** Policies and mechanisms for resource management, Applications of control theory to task scheduling on a cloud, Stability of a two-level resource allocation architecture, Feedback control based on dynamic thresholds, Coordination of specialized autonomic performance managers, A utility-based model for cloud-based web services. Resource management in OpenStack	**06 hrs**

Text Books:

1. Kai Hwang, Geoffrey C. Fox, Jack J. Dongarra, Distributed and Cloud Computing from Parallel Processing to the Internet of Things, 1, Elsevier, 2012
2. Dan C. Marinescu , Cloud Computing Theory and Practice, 1, Elsevier, 2013

References:

3.Rajkumar Buyya, Christian Vecchiola, S.Thamarai Selvi , Mastering Cloud Computing, 1, McGraw Hil, 2013
4. Anthony T. Velte, Toby J. Velte, Robert Elsenpeter, Cloud Computing, A Practical Approach, 1, McGraw Hil, 2010

Experiments	Lab assignments/experiment
1	Type I and II hypervisors
2	Sinle-node cloud installation using OpenStack
3	Multi-node private installation
4	FWaas, LBaas integration
5	Software defined network demonstration

Biodata Of Resource person



Mohammed MoinMulla 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 coursesforthe computer science department.

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Cloud Computing	Prof. M.M.Moin	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Cloud Computing
Friday		Cloud Computing
Saturday	Cloud Computing	

Coordinator Signature

Head,

SoCSE

Attendance Sheet

Course: Cloud Computing

Sl No	USN	Name of Student	Attendance									
			26/01/2019	27/01/2019	16/02/2019	17/02/2019	23/3/2019	24/3/2019	04.06.2019	04.07.2019	05.11.2019	05.12.2019
1	01FE16BAR001-M	ABHIJITH V S	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2	01FE16BAR019-M	GOURI G NAIK	P	P	P	P	P	P	P	P	P	P
3	01FE16BAR045-M	SRISHA R DESHPANDE	P	P	P	P	P	P	P	P	P	P
4	01FE16BEC002-M	A KAVYASHREE	P	P	P	P	P	P	P	P	P	P
5	01FE16BEC010-M	AISHWARYA H R	P	P	A	P	P	P	P	P	P	P
6	01FE16BEC015-M	AISHWARYA VASANTH SHETTY	P	P	P	P	P	P	P	P	P	P
7	01FE16BEC039-M	ARPITA S DESAI	P	P	P	P	P	P	P	P	P	P
8	01FE16BEC054-M	CHINMAY DHARWAD	P	P	P	P	P	P	P	P	P	P
9	01FE16BEC066-M	DISHA S MAHAJAN	P	P	P	P	P	P	A	P	P	P
10	01FE16BEC073-M	GOWRI D	P	P	P	P	P	P	P	P	P	P
11	01FE16BEC081-M	J S YASHAS	P	P	P	A	P	P	P	P	P	P
12	01FE16BEC137-M	PRIYANKA ASHOK KURKURI	P	P	P	P	P	P	P	P	P	P
13	01FE16BEC139-M	RACHANA S JINGADE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
14	01FE16BEC146-M	RASHMI ASHOK KUBSAD	P	P	P	P	P	P	P	P	P	P
15	01FE16BEC153-M	SACHIN M BARADDI	P	P	P	P	P	P	P	P	P	P
16	01FE16BEC156-M	SAGAR S HOSMANI	P	P	P	P	P	P	P	P	P	P
17	01FE16BEC162-M	SANJANA SHIDDALINGESHWAR HURKADLI	P	P	P	P	P	P	P	P	P	P
18	01FE16BEC174-M	SHRINIDHI R MOKHASHI	P	P	P	P	P	P	P	P	P	P
19	01FE16BEC175-M	SHRINIDHI V KATTI	P	P	P	P	P	P	P	P	P	P
20	01FE16BEC184-M	SUBHANGI KASTURE	P	P	P	P	P	P	P	P	P	P
21	01FE16BEC185-M	SUBRAHMANYA GUNAGA	P	P	P	P	P	P	P	P	P	P
22	01FE16BEE020-M	ASHWITHA	P	P	P	P	P	P	P	P	P	P
23	01FE16BEE041-M	LAKSHMINARAYANA RAMESH PAI	P	P	P	P	P	P	P	P	P	P
24	01FE16BEE048-M	MITHUN CHANNAYANAMATH	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
25	01FE16BME039-M	BHUSHAN SHEDABAL	P	P	P	P	P	P	P	P	P	P
26	01FE16BME044-M	CHETAN P YADAL	P	P	P	P	P	P	P	P	P	P
27	01FE16BME049-M	FIROZ SHAFEERSAB ITAGI	P	P	P	P	P	P	P	P	P	P
28	01FE16BME050-M	G SUJAY	P	P	P	P	P	P	P	P	P	P
29	01FE16BME067-M	KARTHIK S DESHPANDE	P	P	P	P	P	P	P	P	P	P
30	01FE16BME069-M	KARTIK SANGAMESH YALAMELI	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
31	01FE16BME199-M	SOURABH S HARAPANAHALLI	P	P	P	P	P	P	P	P	P	P
32	01FE16BME200-M	SOURAV S KULKARNI	P	P	P	P	P	P	P	P	P	P
33	01FE17BEC405-M	DIVYA SOOJI	P	P	P	P	P	P	P	P	P	P

Moin



Student List

Course: Cloud Computing

Sl No	USN	Name of Student
1	01FE16BAR001-M	ABHIJITH V S
2	01FE16BAR019-M	GOURI G NAIK
3	01FE16BAR045-M	SRISHA R DESHPANDE
4	01FE16BEC002-M	A KAVYASHREE
5	01FE16BEC010-M	AISHWARYA H R
6	01FE16BEC015-M	AISHWARYA VASANTH SHETTY
7	01FE16BEC039-M	ARPITA S DESAI
8	01FE16BEC054-M	CHINMAY DHARWAD
9	01FE16BEC066-M	DISHA S MAHAJAN
10	01FE16BEC073-M	GOWRI D
11	01FE16BEC081-M	J S YASHAS
12	01FE16BEC137-M	PRIYANKA ASHOK KURKURI
13	01FE16BEC139-M	RACHANA S JINGADE
14	01FE16BEC146-M	RASHMI ASHOK KUBSAD
15	01FE16BEC153-M	SACHIN M BARADDI
16	01FE16BEC156-M	SAGAR S HOSMANI
17	01FE16BEC162-M	SANJANA SHIDDALINGESHWAR HURKADLI
18	01FE16BEC174-M	SHRINIDHI R MOKHASHI
19	01FE16BEC175-M	SHRINIDHI V KATTI
20	01FE16BEC184-M	SUBHANGI KASTURE
21	01FE16BEC185-M	SUBRAHMANYA GUNAGA
22	01FE16BEE020-M	ASHWITHA
23	01FE16BEE041-M	LAKSHMINARAYANA RAMESH PAI
24	01FE16BEE048-M	MITHUN CHANNAYANAMATH
25	01FE16BME039-M	BHUSHAN SHEDABAL
26	01FE16BME044-M	CHETAN P YADAL
27	01FE16BME049-M	FIROZ SHAFEERSAB ITAGI
28	01FE16BME050-M	G SUJAY
29	01FE16BME067-M	KARTHIK S DESHPANDE
30	01FE16BME069-M	KARTIK SANGAMESH YALAMELI
31	01FE16BME199-M	SOURABH S HARAPANAHALLI
32	01FE16BME200-M	SOURAV S KULKARNI
33	01FE17BEC405-M	DIVYA SOOJI

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. A KAVYASHREE

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2021

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AISHWARYA H R

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2022

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **AISHWARYA VASANTH SHETTY**

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2023**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. ARPITA S DESAI

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2024

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. ASHWITHA

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2038

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **BHUSHAN SHEDABAL**

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2040**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. CHETAN P YADAL

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2041

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. CHINMAY DHARWAD

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2025

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **DISHA S MAHAJAN**

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2026**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. DIVYA SOOJI

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2047**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. FIROZ SHAFEERSAB ITAGI

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2042**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. G SUJAY

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2043

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOURI G NAIK

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOWRI D

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2027**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. J S YASHAS

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2028

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. KARTHIK S DESHPANDE

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2044

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Certificate

This is to certify that

Mr./Miss. LAKSHMINARAYANA RAMESH PAI

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2039

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. PRIYANKA ASHOK KURKURI

has successfully completed the Value Addition Training Course on

Cloud Computing

from **22-1-2019** *to* **30-5-2029**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. RASHMI ASHOK KUBSAD

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2030

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SACHIN M BARADDI

has successfully completed the Value Addition Training Course on

Cloud Computing

from 22-1-2019 *to* 30-5-2031

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Computer Networks

(2018-19)

KLE Technological University
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School Of Computer Science & Engineering

Value Added Course
on
Computer Networks

Course Outcomes

- Explain the fundamental concepts of computer networking.
- Illustrate the design principles of application layer protocols: DNS, SMTP, HTTP and DHCP.
- Demonstrate the transport layer services using socket programming.
- Describe network layer and data link layer functionalities to perform communication between the hosts.
- Apply the open source tools for network protocols and perform the traffic analysis for QoS parameters.

Resource Person: Prof. Jayalaxmi G.N

Last Date to apply – 29th Dec 2017
Program Duration – Jan 2018 to May 2018
Coordinator – Dr. Narayan D. G.
narayan_dg@kletech.ac.in
+91 9448635627

Computer Networks

Unit –I		
1	**Introduction** Internet, The Network Edge and Core, Protocol layer and service models: OSI and TCP/IP, Networks attacks, History of computer network and Internet	**06 hrs**
2	**Application Layer** Principles of Network Applications , HTTP , SMTP, DNS	**06 hrs**
Unit –II		
3	**Transport-Layer Services** Introduction, connectionless transport, principles of reliable data transfer protocol, connection-oriented and connectionless transport, principle of congestion control, TCP congestion control	**06 hrs**
4	**Network Layer: Data plane** Introduction to data and control plane and, virtual circuit and datagram networks, Internet protocol: datagram format, fragmentation, IP addressing, NAT, IPv6, generalized forward and SDN	**06 hrs**
Unit –III		
5	**Network layer control plane:** routing algorithms, routing in internet, broadcast and multicast routing, SDN control plane, Error-Detection and -Correction Techniques, LAN	**06 hrs**

Text Books:

1. J. F. Kurose, K. W. Ross, "Computer Networking, A Top-Down Approach", 6th Edition, Pearson Education, 2016.

References:

1. Peterson, Larry L, "Computer networks : a systems approach", 5th Edition, The Morgan Kaufmann series in networking, 2012
2. Behrouz Forouzan, Data Communications and Networking, McGraw Hill 4ed., 2007

Experiments	**Lab assignments/experiment**
3-Demonstration	Socket Programming, Wireshark
4-Exercise	Protocol packet analysis, client server programs using socket programming
2-Structured Enquiry	FTP, Email client, Ping programs using socket programming

Biodata Of Resource person



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 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 become as resource person in AICET sponsored workshop on Data Science in 2020. She has more than 10 years of experience in computer network research field and also served in rural areas of north Karnataka.

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Computer Networks	Prof. Jayalaxmi G.N	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Computer Networks
Friday		Computer Networks
Saturday	Computer Networks	

Coordinator Signature

Head,

SoCSE

Attendance Sheet

Course: Computer Networks

Sl No	USN	Name of Student	Attendance									
			18/8/2018	19/8/2018	09.08.2018	09.09.2018	10.06.2018	10.07.2018	11.10.2018	11.11.2018	15/12/2018	16/12/2018
1	01FE16BAR001-M	ABHIJITH V S	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2	01FE16BAR019-M	GOURI G NAIK	P	P	P	P	P	P	P	P	P	P
3	01FE16BAR045-M	SRISHA R DESHPANDE	P	P	P	P	P	P	P	P	P	P
4	01FE16BEC066-M	DISHA S MAHAJAN	P	P	P	P	P	P	P	P	P	P
5	01FE16BEC073-M	GOWRI D	P	P	A	P	P	P	P	P	P	P
6	01FE16BEC081-M	J S YASHAS	P	P	P	P	P	P	P	P	P	P
7	01FE16BEC137-M	PRIYANKA ASHOK KURKURI	P	P	P	P	P	P	P	P	P	P
8	01FE16BEC146-M	RASHMI ASHOK KUBSAD	P	P	P	P	P	P	P	P	P	P
9	01FE16BME039-M	BHUSHAN SHEDABAL	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
10	01FE16BME044-M	CHETAN P YADAL	P	P	P	P	P	P	P	P	P	P
11	01FE16BME049-M	FIROZ SHAFEERSAB ITAGI	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
12	01FE16BME050-M	G SUJAY	P	P	P	P	P	P	P	P	P	P
13	01FE16BME067-M	KARTHIK S DESHPANDE	P	P	P	P	P	P	P	P	P	P
14	01FE16BME069-M	KARTIK SANGAMESH YALAMELI	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

Dr. Jayalaxmi G. Naragund



Student List

Course: Computer Networks

Sl No	USN	Name of Student
1	01FE16BAR001-M	ABHIJITH V S
2	01FE16BAR019-M	GOURI G NAIK
3	01FE16BAR045-M	SRISHA R DESHPANDE
4	01FE16BEC066-M	DISHA S MAHAJAN
5	01FE16BEC073-M	GOWRI D
6	01FE16BEC081-M	J S YASHAS
7	01FE16BEC137-M	PRIYANKA ASHOK KURKURI
8	01FE16BEC146-M	RASHMI ASHOK KUBSAD
9	01FE16BME039-M	BHUSHAN SHEDABAL
10	01FE16BME044-M	CHETAN P YADAL
11	01FE16BME049-M	FIROZ SHAFEERSAB ITAGI
12	01FE16BME050-M	G SUJAY
13	01FE16BME067-M	KARTHIK S DESHPANDE
14	01FE16BME069-M	KARTIK SANGAMESH YALAMELI

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. CHETAN P YADAL

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **DISHA S MAHAJAN**

has successfully completed the Value Addition Training Course on

Computer Networks

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. G SUJAY

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOURI G NAIK

has successfully completed the Value Addition Training Course on

Computer Networks

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. GOWRI D

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. J S YASHAS

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. PRIYANKA ASHOK KURKURI

has successfully completed the Value Addition Training Course on

Computer Networks

from **16-8-2018** *to* **28-12-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. RASHMI ASHOK KUBSAD

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SRISHA R DESHPANDE

has successfully completed the Value Addition Training Course on

Computer Networks

from 16-8-2018 *to* 28-12-2018

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Data structures and Algorithms (2018-19)

KLE Technological University
Creating Value
Leveraging Knowledge

School Of Computer Science & Engineering

Value Added Course
on
Data Structures and Algorithms

Course Outcomes

- Analyze the role of data structures in structuring and manipulating data and implement them using array or list representation.
- Discuss the properties, operations, applications, strengths and weaknesses of the different data structures and their effect on algorithms.
- Analyze, interpret and compare various sorting, searching and graph algorithms and perform efficiency analysis.
- Design solutions for real-world problems, optimize existing code using algorithms and data structures.

Resource Person: Prof. Jayalaxmi G N

Last Date to apply – 29th Dec 2017
Program Duration – Jan 2018 to May 2018
Coordinator – Dr. Narayan D. G.
narayan_dg@kletech.ac.in
+91 9448635627

Data structures and Algorithm

Unit –I		
1	**Introduction to Data Structures** Primitive Data structures in C, Arrays, pointers, functions, structures, Notion of Algorithm, Fundamentals of Algorithmic Problem Solving, Asymptotic Notations and Basic Efficiency Classes, Mathematical Analysis of Non-Recursive Algorithms and Non-Recursive algorithms**.**	**06 hrs**
2	**Stacks and Queues** Stack Introduction, Implementation of stack, Applications, Queue introduction, Queue implementations, applications	**06 hrs**
3	**Lists** Introduction to Lists, Implementation, types of Lists, Applications	**04 hrs**
Unit –II		
4	**Tree and Hash Data structures** **Tree:** Introduction to graphs, Trees, Binary Search trees, Tree Traversals, and Applications, **Hashing**: General Idea, Hash Function, Collision Resolution Techniques	**06 hrs**
5	**Sorting** Sorting, Bubble sort, Insertion Srt, selection sort, Merge Sort, Quick Sort, Heap sort	**06 hrs**
6	**Graphs and Graph Algorithms** DFS, BFS, Topological sort, Shortest Path Algorithms, Minimum Spanning Tree, implementation and applications.	**05 hrs**
Unit –III		
7	**Algorithm Design techniques** Greedy algorithms, Divide and conquer	**04 hrs**
8	**Algorithm Design techniques (contd..)** Dynamic programming, Randomized algorithms, Backtracking algorithms.	**04 hrs**

Text Books:

1. Mark Allen Weiss, “Data Structures and Algorithm Analysis in C”, 2nd Edition, Pearson Education, 2010.

References:

1. Ellis Horowitz, Sartaj Sahani, and Susan Anderson Freed, “Fundamentals of Data Structures in C”, 2nd Edition, Orient Blackswan 2008.
2. Aron M. Tenenbaum, et. al, “Data Structures using C”, PHI, 2006.
3. Levitin A., “Introduction to the Design and Analysis of Algorithms”, 2nd Edition, Pearson Education, 2008.

Experiments	**Lab assignments/experiments**
2-Demonstration	Programming Assignments on C language Features, structures time complexity calculations
6–Exercise	Stack, Queue, Linked List, Tree ,Hash, Sorting and Searching Algorithms
1-Structured Enquiry	Graphs and Dynamic Programming
1- Course Project	Develop a real world application by selecting appropriate data structure and algorithms.

Biodata Of Resource person



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 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 become as resource person in AICET sponsored workshop on Data Science in 2020. She has more than 10 years of experience in computer network research field and also served in rural areas of north Karnataka.

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Data Structures and Algorithms	Prof. Jayalaxmi G N	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Data Structures and Algorithms
Friday		Data Structures and Algorithms
Saturday	Data Structures and Algorithms	

Coordinator Signature

Head,

SoCSE

Attendance Sheet

Course: **Data Structures and Algorithms**

Sl No	Name of Student	USN	Attendance									
			26/01/2019	27/01/2019	16/02/2019	17/02/2019	23/03/2019	24/03/2019	13/04/2019	14/04/2019	05.11.2019	05.12.2019
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 AJJAMMANAVA	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
5	SHRIVALLI SHIGGAON	01FE17BEE096-M	P	P	A	P	P	P	P	P	P	P
6	SRUSHTI RAVINDRA GANAMUKHI	01FE17BME196-M	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
7	POORNIMA V KULKARNI	01FE17BEE065-M	P	P	P	P	P	P	P	P	P	P
8	KOUSTUB	01FE17BME080-M	P	P	P	P	P	P	P	P	P	P
9	SANGAMESH S BANKAPURMATH	01FE17BME166-M	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
10	TANMAY SHRIVASTAVA	01FE17BME204-M	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
11	VEERABHADRAPPA B GALI	01FE17BEE121-M	P	P	P	P	P	A	P	P	P	P
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	P	P	P	P	P	P	P	P	P	P

Jayalaxmi G. Naragund



Student List

Course: Data Structures and Algorithms

Sl No	Name of Student	USN
1	AKANKSHA N PIKLE	01FE17BME010-M
2	SNEHA VEERANNA PATIL	01FE17BEE098-M
3	BHARATH ASHOK AJJAMMANAVAR	01FE17BME033-M
4	RAVIRAJ M BHAT	01FE17BME151-M
5	SHRIVALLI SHIGGAON	01FE17BEE096-M
6	SRUSHTI RAVINDRA GANAMUKHI	01FE17BME196-M
7	POORNIMA V KULKARNI	01FE17BEE065-M
8	KOUSTUB	01FE17BME080-M
9	SANGAMESH S BANKAPURMATH	01FE17BME166-M
10	TANMAY SHRIVASTAVA	01FE17BME204-M
11	VEERABHADRAPPA B GALI	01FE17BEE121-M
12	NISCHITHA V	01FE17BAR036-M
13	HARSH S PATIL	01FE17BEE026-M
14	SNEHA JANAGOUDAR	01FE17BAR056-M
15	AVINASH S KALRA	01FE17BAR062-M
16	SUDHANVA S J	01FE17BME197-M

KLE TECH

KLE Technological University

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School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AKANKSHA N PIKLE

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AVINASH S KALRA

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **BHARATH ASHOK AJJAMMANAVAR**

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from **22-1-2019** *to* **30-05-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. HARSH S PATIL

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from **22-1-2019** *to* **30-05-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. KOUSTUB

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. NISCHITHA V

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. POORNIMA V KULKARNI

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from **22-1-2019** *to* **30-05-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. RAVIRAJ M BHAT

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from **22-1-2019** *to* **30-05-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SHRIVALLI SHIGGAON

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SNEHA JANAGOUDAR

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SNEHA VEERANNA PATIL

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SUDHANVA S J

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. VEERABHADRAPPA B GALI

has successfully completed the Value Addition Training Course on

Data Structures and Algorithms

from 22-1-2019 *to* 30-05-2019

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Object Oriented Programming with Python

(2018-19)

KLE Technological University
Creating Value
Leveraging Knowledge

School Of Computer Science & Engineering

Value Added Course
on
Object Oriented Programming with Python

Course Outcomes

1 Explain object oriented programming concepts

2. Apply encapsulation, inheritance and polymorphism concepts to solve a given problem.

3. Identify and manage runtime errors using exception handling mechanism of python.

4. Design a user interface for a given application.

5. Write an event driven program to implement a business rule of an application.

Resource Person: Prof. K.M.M Rajashekaraih

Last Date to apply – 29th Dec 2017
Program Duration – Jan 2018 to May 2018
Coordinator – Dr. Narayan D. G.
narayan_dg@kletech.ac.in
+91 9448635627

Object Oriented Programming with Python

	Unit –I	
1	**Introduction** Introduction to OOP concepts, Python Basic: Types, Variables, and Simple I/O, Branching and Looping, Numbers, Lists and Dictionaries, Tuples, Regular Expressions, Functions, Files.	**7 hrs**
2	**Classes and Instances** Creating classes, instances, Creating and customizing constructors, Encapsulation of Data, Methods, Mutable and Immutable instances.	**5 hrs**
	Unit –II	
3	**Inheirance and Specialization** Basic inheirtance. types of inheritance, Polymorphism - method overloading, overrding, operator overloading, interfaces, multiple inheritance and composition.	**6 hrs**
4	**Generics and Exception handling** Parametric polymorphism, duck typing, generic class, Raising exception, effects, handling exceptions, Exception hierarchy, Organization of OOP codde, modules and packages.	**6 hrs**
	Unit –III	
5	**Python GUI Programming** Creating the GUI Form and Adding Widgets, Layout managment, Look and Feel cutomization, Event-driven programming.	**6 hrs**

Text Books:

1. Mark Lutz, Programming Python: Powerful Object-Oriented Programming, 4th edition, O' REILLY, 2013
2. Gaston C Hilla, Learning Object Oriented Programming, 1st edition, Packt publisher, 2015,

Reference Books:

3. Dusty Phillips: Python 3 Object-oriented Programming, 2nd edition, Packt publisher, 2015

Biodata Of Resource person



K M M Rajashekharaiah is Associate Professor at School of Computer Science and Engineering of KLE Technological University. He is passionate to teach object oriented programming courses for undergraduate students of computer science. 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 object oriented theory and lab courses of computer science department.

He is also a resource person to teach object oriented programming using python as part of “Machine Learning Workshop” conducted at KLE Technological University. He designed and delivered an object oriented programming course for Mechanical engineering undergraduate students of KLE Technological university.

Time Table for the Value Added Course

Course	Name of the Faculty	Venue
Object Oriented Programming with Python	Prof. K.M.M Rajashekaraih	ISE Achiever Lab

DAY/TIME	11.00 to 1.00 pm	4.45 to 5.45 pm
Thursday		Object Oriented Programming with Python
Friday		Object Oriented Programming with Python
Saturday	Object Oriented Programming with Python	

Coordinator Signature

Head,

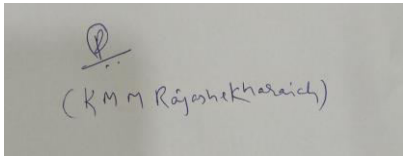
SoCSE

Attendance Sheet

Course: Object Oriented Programming with Python

Sl No	Name of Student	USN	Attendance								
			06.08.2019	06.09.2019	22/6/2019	23/6/2019	07.06.2019	07.07.2019	13/7/2019	14/7/2019	27/7/2019
1	AKANKSHA N PIKLE	01FE17BME010-M	P	P	P	P	P	P	P	P	P
2	SNEHA VEERANNA PATIL	01FE17BEE098-M	P	P	P	P	P	P	P	P	P
3	BHARATH ASHOK AJJAMMANAVAR	01FE17BME033-M	P	P	P	P	P	P	P	P	P
4	RAVIRAJ M BHAT	01FE17BME151-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
5	SHRIVALLI SHIGGAON	01FE17BEE096-M	P	P	A	P	P	P	P	P	P
6	SRUSHTI RAVINDRA GANAMUKHI	01FE17BME196-M	P	P	P	P	P	P	P	P	P
7	POORNIMA V KULKARNI	01FE17BEE065-M	P	P	P	P	P	P	P	P	P
8	KOUSTUB	01FE17BME080-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
9	SANGAMESH S BANKAPURMATH	01FE17BME166-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
10	TANMAY SHRIVASTAVA	01FE17BME204-M	P	P	P	P	P	P	P	P	P
11	VEERABHADRAPPA B GALI	01FE17BEE121-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
12	NISCHITHA V	01FE17BAR036-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
13	HARSH S PATIL	01FE17BEE026-M	P	P	P	P	P	P	P	P	P
14	SNEHA JANAGOUDAR	01FE17BAR056-M	P	P	P	P	P	P	P	P	P
15	AVINASH S KALRA	01FE17BAR062-M	NE	NE	NE	NE	NE	NE	NE	NE	NE
16	SUDHANVA S J	01FE17BME197-M	NE	NE	NE	NE	NE	NE	NE	NE	NE

K M M Rajashekharaiah



28/7/2019
P
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Student List

Course: Object Oriented Programming with Python

Sl No	Name of Student	USN
1	AKANKSHA N PIKLE	01FE17BME010-M
2	SNEHA VEERANNA PATIL	01FE17BEE098-M
3	BHARATH ASHOK AJJAMMANAVAR	01FE17BME033-M
4	RAVIRAJ M BHAT	01FE17BME151-M
5	SHRIVALLI SHIGGAON	01FE17BEE096-M
6	SRUSHTI RAVINDRA GANAMUKHI	01FE17BME196-M
7	POORNIMA V KULKARNI	01FE17BEE065-M
8	KOUSTUB	01FE17BME080-M
9	SANGAMESH S BANKAPURMATH	01FE17BME166-M
10	TANMAY SHRIVASTAVA	01FE17BME204-M
11	VEERABHADRAPPA B GALI	01FE17BEE121-M
12	NISCHITHA V	01FE17BAR036-M
13	HARSH S PATIL	01FE17BEE026-M
14	SNEHA JANAGOUDAR	01FE17BAR056-M
15	AVINASH S KALRA	01FE17BAR062-M
16	SUDHANVA S J	01FE17BME197-M

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. AKANKSHA N PIKLE

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. **BHARATH ASHOK AJJAMMANAVAR**

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from **03-06-2019** *to* **30-07-2019**

Course Instructor | **Head of School** | **Controller of Examinations**

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. HARSH S PATIL

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. POORNIMA V KULKARNI

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SHRIVALLI SHIGGAON

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SNEHA JANAGOUDAR

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SNEHA VEERANNA PATIL

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. SRUSHTI RAVINDRA GANAMUKHI

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Computer Science & Engineering

Certificate

This is to certify that

Mr./Miss. TANMAY SHRIVASTAVA

has successfully completed the Value Addition Training Course on

Object Oriented Programming with Python

from 03-06-2019 *to* 30-07-2019

Course Instructor

Head of School

Controller of Examinations

JNCIA Certification Program

School of Computer Science and Engineering

KLE Technological University

Vidyanagar

Hubbaalli-580031



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 2018-2019 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	**2018-2019**
No. of students trained	82
No. of students certified	30
Number of students placed	3

Training content

Part 1	Hrs
Junos operating system fundamentals: Introduction to Junos OS, Traffic processing, Overview of Junos Device	4 hours
User interface options: Junos CLI, Operational mode, Configuration mode	4 hours
Initial Configuration: Factory-Default configuration, Initial Configuration, Interface Configuration	4 hours
Secondary Configuration: Authorization Overview, Deny and Allow Overrides, System Logging, Interpreting Message Codes, Monitoring NTP, Automated Configuration Backup, SNMP Operation, Monitoring SNMP Operation	4 Hours
Operational Monitoring and Maintenance: 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	
Routing Fundamentals: 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
Routing Policy: 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
Firewall Filters: Building Blocks of Firewall Filters, Common Match Criteria, Common Actions, Defining a Firewall Filter, Filtering Traffic on Interfaces.	4 Hours

Resource Person(s) and Biodata

	**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, and 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.

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

Schedule (2018-2019)

SL.no	DAY/DATE	TOPICS TO BE COVERED
	PART-I	
1.	MONDAY 22/4/2018	JUNOS OPERATING SYSTEM FUNDAMENTALS
2.	TUESDAY 23/4/2018	USER INFTERFACE OPTIONS
3	WEDNESDAY 24/4/2018	INITIAL CONFIGURATION
4	THURSDAY 25/4/2018	SECONDARY SYSTEM CONFIGURATION
5	FRIDAY 26/4/2018	OPERATIONAL MONITORING AND MAINTAINANCE
	PART-II	
6	MONDAY 29/4/2018	ROUTING FUNDAMENTALS
7	WEDNESDAY 30/4/2018	ROUTING POLICY
8	THURSDAY 2/5/2018	FIREWALL FILTERS

Instructors

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

Attendance List

Attendance List - JNCIA 2018-19

Sl No	Name	22/4	23/4	24/4	25/4	26/4	29/4	30/4	2/5
1.	Spoorthi Vaidya	P	P	P	P	P	P	P	P
2.	Haripriya G	P	A	P	P	P	P	P	P
3.	Megha A Hichkad	P	P	P	P	P	P	P	P
4.	Saurav Suman	P	P	P	P	P	P	P	P
5.	Preeti Chandrashekhar Pardeshi	P	P	P	P	P	P	P	P
6.	Rajratan Basavaraj Kolhar	P	P	P	P	P	P	P	P
7.	Roshan Parashuram Hebballi	P	P	P	P	P	P	P	P
8.	Supriya Satyappanavar	P	P	P	P	P	P	P	P
9.	Anusha D Nayak	P	P	P	P	P	P	P	P
10.	Karan Virupakshar	P	P	P	P	P	P	P	P
11.	Pooja Harish Pandit	P	P	P	P	P	P	P	P
12.	Niroop Janagoudar	P	P	P	P	P	P	P	P
13.	G. Apoorva	P	P	P	P	P	P	P	P
14.	Chethan P	P	P	P	P	P	A	P	P
15.	Saikumar Somashekhar Mullalli	P	P	P	P	P	P	P	P
16.	Chandrashekhar Patil	P	P	P	A	P	P	P	P
17.	Kiran Angadi	P	P	P	P	P	P	P	P
18.	Nanditha S	P	P	P	P	P	P	P	P
19.	Riya Suman	P	P	P	P	P	P	P	P
20.	Ronak Shah	P	P	P	P	P	P	P	P
21.	Aparna Narayan Bhat	P	P	P	P	P	P	P	P
22.	Divyansh S	P	P	P	P	P	A	P	P
23.	Farianaaz Z.J.	P	P	P	P	P	P	P	P
24.	Deepa G Bhoopali	P	P	P	A	P	P	P	P
25.	Pooja Shekharappa Galer	P	P	P	P	P	P	P	P
26.	Swathi Satyanarayana Pasala	P	P	P	P	P	P	P	P
27.	Vijayalaxmi Rajashekhar Shettar	P	P	P	P	P	P	P	P
28.	Meghana Karanandi	P	P	P	P	P	P	P	P
29.	Smita B Patil	P	P	P	P	P	P	P	P
30.	Kavana Jagannath Bhatkal	P	P	P	A	P	P	P	P
31.	Darshan Patil	P	P	P	P	P	P	P	P
32.	Khadeer Usman	P	P	P	P	P	P	P	P
33.	Aadil Kazi	P	P	P	P	P	P	P	P
34.	Sarjith R M	P	P	P	P	P	P	P	P
35.	Nagamani C Gunjal	P	P	P	P	P	P	P	P
36.	Rajath Keshav Bhat	P	P	P	P	P	P	P	P
37.	Aishwarya Kundagolmatha	P	A	P	P	A	P	P	P
38.	Monika K E	P	P	P	P	P	P	P	P
39.	Priyanka S Jigalur	P	P	P	P	P	P	P	P
40.	Shreya Sanjay Talwai	P	P	P	P	P	P	P	P
41.	Neha Naaz	P	P	P	P	P	P	P	P

42.	Shreenidhi Nagendra Bhat	A	P	P	P	P	P	P	P
43.	Nagashree S Shetti	P	P	P	P	P	P	P	P
44.	Laxmi Basavaraj Ittangihal	P	P	P	P	P	P	P	P
45.	Sushma Gajanan Bhandari	P	P	P	P	P	P	P	P
46.	Vishal Gurunathasa Bhandage	P	A	P	P	P	A	P	P
47.	Vachana Satish Belgavi	P	P	P	P	P	P	P	P
48.	Shweta Shankar Gumaste	P	P	P	P	P	P	P	P
49.	Rahul Kumar Mishra	P	P	P	A	P	P	P	P
50.	Shifanaaz Imamhussain Mulla	P	P	P	P	P	P	P	P
51.	Manjunath B Asundi	P	P	P	P	P	P	A	P
52.	Namrata Rajgopal Shetty	P	P	P	P	P	P	P	P
53.	Ashwini Parameshwar Bhat	A	P	P	P	P	P	P	P
54.	Shreya Shrinath Huilgol	P	P	P	A	P	P	P	P
55.	Darshan Narayan Nayak	P	P	P	P	P	P	P	P
56.	Pallavi Ramdas Pauskar	P	P	P	P	P	P	P	P
57.	Akshata Budihal	A	P	P	P	P	P	P	P
58.	Tulasi Mandla	P	P	P	A	P	P	P	P
59.	Megha L	P	P	P	P	P	P	P	P
60.	Netra Rameshchandra Gorbal	P	P	P	P	P	P	P	P
61.	Soukhya S Hegde	P	P	P	P	P	P	P	P
62.	Babagouda G Patil	P	P	P	P	P	P	P	P
63.	Elluru Pruthvi Sai	P	P	P	P	P	P	P	P
64.	Swapna Dadasaheb Kininge	P	P	P	A	P	P	A	P
65.	Nandini S	P	P	P	P	P	P	P	P
66.	Sphoorti A Kulkarni	P	P	P	P	P	P	P	P
67.	Suma Veerasangappa Uddan	P	P	P	P	P	P	P	P
68.	Priyanka Hanumantappa Halyal	P	P	A	P	P	P	P	P
69.	Suma K	P	P	P	P	P	P	P	P
70.	Girish P Mallya	P	P	P	P	P	P	P	P
71.	Aditya Kumar Verma	P	A	P	P	P	P	P	P
72.	Sagar Ishwarappa Pattanashett	P	P	P	A	P	P	P	P
73.	Maitrayee S Shimpiger	A	P	P	P	P	A	P	P
74.	Akash A Malla	P	P	P	P	P	P	P	P
75.	Chandrika Veerkar	P	P	P	P	P	P	P	P
76.	Ku Namrata	P	P	A	P	P	P	P	A
77.	Namrata P Honawad	P	P	P	P	P	P	P	P
78.	Chaitra M Potdar	P	P	P	P	P	P	P	P
79.	Amaresh Shivaputra Hiremani	P	P	P	P	P	P	P	P
80.	Subham Sourabh	P	P	P	P	P	P	P	P
81.	Fakkiresh Karaveeramath	P	A	P	A	P	P	P	P
82.	Kishor H Channal	P	P	P	P	P	P	P	P

Certified Student List

Sl.No	Name
1	Aadil Kazi
2	Aditya Kumar Verma
3	Akash A Malla
4	Amaresh Shivaputra Hiremani
5	Anup Ravikumar
6	Babagouda G Patil
7	Chethan P
8	Darshan Narayan Nayak Jr.
9	Divyajyoti Revankar
10	Elluru Pruthvi Sai
11	Feroz S
12	Karan B. Virupakshar
13	Vachana Satish Belgavi
14	Darshan Patil
15	Manjunath B Asundi
16	Vaibhav Sonth
17	Kiran Angadi
18	Meghana Karanandi
19	Niroop Virupakshagowda Janagoudar

	Jr
20	Fakkiresh B Karaveeramath
21	Priyanka S Jigalur
22	Rajesh Mannenavar
23	Riya Suman
24	Ronak Shah Jr
25	Roshan Parashuram Hebballi Jr
26	Shrinidhi B
27	Varsha Hosamani
28	Vijayalaxmi Rajashekhar Shettar
29	Saniya B Desai
30	Rahul Kumar Mishra

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Aadil Kazi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: 0EX9HNTYXMF1QJG4
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Aditya Kumar Verma

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: G7QXG8F501111NKT
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Akash A Malla

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: LXTWGZH5XEV41YWQ
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Amaresh Shivaputra Hiremani

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: YYSXG7J57JQ4Q53J
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Anup Ravikumar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Saturday, November 28, 2020

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: Q7D5TXLS41R41Y3M
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Babagouda G Patil

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: CNH0H8R581FE10S0
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Chethan P

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: WY7ZC36Q41Q11V9R
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Darshan Narayan Nayak Jr.

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 9Q66DPZQ7E4EQMGF
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Divyajyoti Revankar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: XW3VZE158JVEQD5V
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Elluru Pruthvi Sai

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: G4C484ES8B41QF3B
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Feroz S

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: YG9QDPXQVBQ4QRCD
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Girish P Mallya

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: 6Y34W7VS8N4E1JCK
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Karan B. Virupakshar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: HQR9CYNQ7MQ1163L
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Vachana Satish Belgavi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: K824ZVCYXNFQ1BW4
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Darshan Patil

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 37B7TNTS0JEE1P54
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Manjunath B Asundi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: NPH0DMB5VERQQES6
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Vaibhav Sonth

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: N2SVSZHSVM1Q1RGL
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Kiran Angadi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: D8Z8GNT58NQ41MS9
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

This badge was issued to Kishor H Channal on 24 July 2018.

Expires on 24 July 2021

Verify



Juniper Networks Certified Associate, Junos (JNCIA-Junos)

Issued by Juniper Networks

The JNCIA-Junos credential validates an understanding of networking fundamentals and core functionality of the Junos OS. A certification holder at this level has demonstrated entry-level to intermediate knowledge of networking.

Skills

Ethernet | Firewalls | IP Addressing | IP Subnetting | IPv4 And IPv6 Fundamentals | Junos OS

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Mahantesh Pyati Jr

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: P79XHYVY0E441MGT
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Meghana Karanandi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: SBR08R1Y0BVQQ9WW
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

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CERTIFICATE OF ACHIEVEMENT

This certifies that

Niroop Virupakshagowda Janagoudar Jr

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: Y358DMDQ8JF4QHW8
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Fakkiresh B Karaveeramath

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: DW0KB1M54JF1QYK3
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Preeti Pardeshi

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: C499CNF5XNV4Q2G6
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Priyanka S Jigalur

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: JM8VH7PY7N4EQDWT
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JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Rahul Kumar Mishra

is recognized as a

Juniper Networks Certified Associate

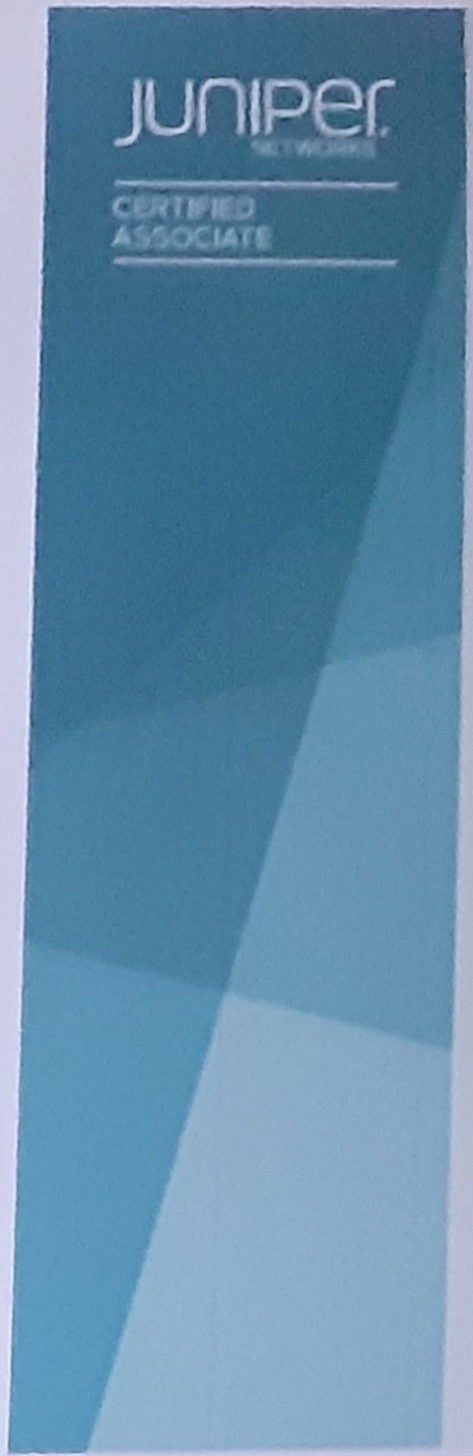
Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: NGSVGNF50NEE19C1
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CERTIFICATE OF ACHIEVEMENT

This certifies that

Rajesh Manenavar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: WR2SSJRYXNEEQ6G6
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Riya Suman

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Vice Chairman

Code: 74BWY1GQ0EBQQSSN
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JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Ronak Shah Jr

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 8YZZD6ZY7NEEQJK7
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JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Roshan Parashuram Hebballi Jr

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 2YE8D3FYXJQE123Q
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JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Saniya B Desai

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: H3TBT90S7NB1QCSG
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JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF

ACHIEVEMENT

This certifies that

Shrinidhi B

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 2P70HYVQXM14Q4SM
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Varsha Hosamani

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Wednesday, July 25, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: 9HJZDPHSVMBQQ4WQ
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

JUNIPER NETWORKS

CERTIFIED ASSOCIATE

CERTIFICATE OF ACHIEVEMENT

This certifies that

Vijayalaxmi Rajashekhar Shettar

is recognized as a

Juniper Networks Certified Associate

Junos (JNCIA-Junos)

Tuesday, July 24, 2018

Rami Rahim
Chief Executive Officer

Pradeep Sindhu
Founder & Chief Scientist

Code: QFEWHMJQ4JQ11BG5
Verify at https://www.certmetrics.com/juniper/public/verification.aspx

Value Added Training

Course: Embedded Systems

(2016-20)

KLE Technological University
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Value Added Training (VAT)

School of Electronics & Communication Engineering

Embedded Systems

Course Outcomes

1. Understand the concept of embedded system, and their interactions.
2. Understand embedded system architecture and its flexibility based on application.
3. Ability to understand the role of embedded systems in industry.
4. Foster ability to understand the design concept of embedded systems.

Last Date to apply – Aug 10th 2018
Training Duration – Aug 10th to Dec 06th 2018

Coordinator – Prof. Bhagyashree Kinnal
Prof. Preeti Pillai
bhagyashree@kletech.ac.in
+91 8904871454

			Teaching Hours
Course Title: Embedded Systems		**Course Code:** M16EECC301	
L-T-P: 3-0-1	**Credits: 4**	**Contact Hours: 6 Hrs/week**	
CIE Marks: 50	**SEE Marks:50**	**Total Marks: 100**	
Teaching Hours: 50Hrs	**Examination Duration:03 Hrs**		
Unit – I			
Chapter 1: Introduction Introduction to embedded systems: Introduction, Classification of Embedded System, Major Application Areas, Purpose of Embedded System. Characteristics and quality attributes of Embedded Systems, Challenges in Embedded System Design. Design Process: Requirements, Specifications, Architecture Design, Designing of Components, System Integration. Design Metric and Optimizing the metrics.			09Hrs
Chapter 2: Embedded System Architecture Typical Embedded Systems: Core of Embedded System, Memory, Sensor and Actuators, Communication Network, Embedded Firmware, Components of Embedded System Devices, Serial and Parallel Communication Buses for Devices Network, formalization of system design, Design process and design examples, Skills required for an embedded system designer. I/O types and examples, Serial communication devices-USART, USB, Parallel device ports. Introduction to wireless devices-Zigbee, Bluetooth.			09Hrs
Unit –II			
Chapter 3: ARM Architecture &Programming Architecture of ARM7TDMI, ARM programmer's model, ARM development tools, 3 stage pipeline ARM organization, ARM instruction execution. Introduction to ARM instruction set: Data processing instruction, Branch instruction, Load store instruction, Software interrupt instruction, Program status register instruction, Conditional execution, Example programs			08Hrs
Chapter 4:Program design and Analysis Components of Embedded system: State machines; stream oriented programming and circular buffers, queues. Models of programs: data flow graph and control flow graphs, Assembly, linking and loading. Basic compilation techniques: Statement translation, procedures, data structures. Program optimization: Expression simplification, dead code elimination, procedure in-lining, loop transformations, register allocation, scheduling, instruction selection, interpreters and JIT compilers. Program level performance analysis, software performance optimization, program level energy and power analysis, analysis and optimization of program size. Program validation and testing: Clear box testing, black box testing, evaluating function tests.			08Hrs
Unit-III			
Chapter 5: The IoT Networking Core Technologies involved in IoT Development, IoT Architecture, M2M – Machine to Machine, Web of Things, IoT protocols Applications: Remote Monitoring & Sensing, Remote Controlling, Performance Analysis The Architecture The Layering concepts , IoT Communication Pattern, IoT protocol Architecture, The 6LoWPAN Security aspects in IoT.			08Hrs
Chapter 6: Case Study & advanced IoT Applications IoT applications in home, infrastructures, buildings, security, Industries, Home appliances, other IoT electronic equipments. Use of Big Data and Visualization in IoT, Industry 4.0 concepts. Sensors and sensor Node and interfacing using any Embedded target boards (Raspberry Pi / Intel Galileo/ARM Cortex/ Arduino)			08Hrs
TText Books*:* 1. Introduction to Embedded Systems, by Shibu K V 2. ARM System- on-Chip Architecture" by 'Steve Furber', LPE, Second Edition **Reference Books:** 1. Embedded Systems Architecture: Programming and Design –Rajkamal, 2nd Edition, Tata McGraw Hill, 2008.			

2. Computers as Components Principles of Embedded Computing System Design: Wayne Wolf, second edition, Morgan Kaufmann Publishers is an imprint of Elsevier.
3. Internet of Things: Converging Technologies for Smart Environments and Integrated Ecosystems, Dr. OvidiuVermesan, Dr. Peter Friess, River Publishers.
4. Interconnecting Smart Objects with IP: The Next Internet, Jean-Philippe Vasseur, Adam Dunkels, Morgan Kuffmann

Recourse Persons

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

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

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

Time Table

Semester: V

Term: 10th Aug - Dec 06th 2018

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
Monday			BREAK			BREAK				
Tuesday			BREAK			BREAK				Embedded Systems
Wednesday			BREAK			BREAK				
Thursday			BREAK			BREAK				Embedded Systems
Friday			BREAK			BREAK				
Saturday			BREAK			BREAK	Embedded Systems			

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

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SCHOOL OF ELECTRONICS ENGINEERING

Program: Minor Program

Attendance Sheet

From 10/8/18 **To** 6/12/18

Staff Member Name: Bhagyashree K
Preeti P

Subject: Embedded S/ms

Code: MIBEECC301

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		Attn %
			e	a	14/9	16/8	18/8	25/8	1/9	4/9	8/9	20/9	25/9	26/9	3/10	9/10	23/10	1/11	17/11						e	a	
1	01FE16BCS019	AKHILA JOSHI			P	P	P	P	P	A	P	P	P	P	P	A	P	P	P								
2	01FE16BCS041	APOORVA S MALEMATH			P	P	A	P	P	P	P	P	P	A	P	P	P	P	P								
3	01FE16BCS083	JYOTHI S HOSAMANI			P	P	P	P	P	P	P	P	P	P	P	P	A	P	P								
4	01FE16BCS113	NAMRATA HOSAMANI			P	P	P	P	P	P	P	P	P	A	P	P	P	P	P								
5	01FE16BCS137	PAVAN U DURGADSIMI			P	P	P	P	P	P	P	P	P	P	P	P	A	P	P								
6	01FE16BCS213	SWATI DHADEKAR			P	P	P	P	A	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	A	P	P	P	P								
8	01FE16BCS250	VELLALA VINEETH KUMAR			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	A	P	P								
10	01FE16BME065	KAPIL S KALGUTKAR			A	P	P	A	P	P	P	P	P	P	P	P	P	P	A								
11	01FE16BME115	PANKAJANABH V SHETTI			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	A	P	P	P	P	P	P	P	P	P	P	P								
15	01FE16BME211	TEJAS SUJIT LENGADE			P	A	P	P	P	P	P	P	A	P	P	P	P	P	P								
16	01FE17BME436	PRAJWAL F PUTTIYAVAR			A	P	P	P	P	P	P	P	P	P	P	A	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

KLE TECH

KLE Technological University

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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

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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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

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

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

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

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

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. KAPIL S KALGUTKAR

has successfully completed the Value Addition Training Course on

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

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

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

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

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Certificate

This is to certify that

Mr./Miss. PAVAN U DURGADSIMI

has successfully completed the Value Addition Training Course on

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. PRAISON JOSHUA T

has successfully completed the Value Addition Training Course on

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

Controller of Examinations

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KLE Technological University

Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. PRAJWAL F PUTTIYAVAR

has successfully completed the Value Addition Training Course on

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. SHIDDALINGESH V ANGADI

has successfully completed the Value Addition Training Course on

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. SWATI DHADEKAR

has successfully completed the Value Addition Training Course on

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. TEJAS SUJIT LENGADE

has successfully completed the Value Addition Training Course on

Embedded Systems

from 10/8/2018 *to* 06/12/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. VELLALA VINEETH KUMAR

has successfully completed the Value Addition Training Course on

Embedded Systems

from **10/8/2018** *to* **06/12/2018**

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Automotive Electronics

(2016-20)

KLE Technological University
Creating Value
Leveraging Knowledge

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

			Teaching Hours
Course Title: Automotive Electronics		**Course Code:**	
L-T-P: 3-0-0	**Credits: 3**	**Contact Hours: 3Hrs/week**	
CIE Marks: 50	**SEE Marks:50**	**Total Marks: 100**	
Teaching Hours: 40 Hrs	**Examination Duration:03 Hrs**		
Unit – I			
Chapter 1: Automotive Systems, Design cycle and Automotive industry overview 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
Chapter 2: Embedded system in Automotive Applications & Automotive safety systems 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
Unit –II			
Chapter 3: Automotive Sensors and Actuators 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
Chapter 4: Automotive communication protocols Overview of Automotive communication protocols : CAN, LIN , Flex Ray, MOST			7Hrs
Unit –III			
Chapter 5: Advanced Driver Assistance Systems (ADAS) and Functional safety standards 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
Chapter 6: Diagnostics 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

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

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
Monday			BREAK			BREAK				
Tuesday			BREAK			BREAK				Automotive Electronics
Wednesday			BREAK			BREAK				
Thursday			BREAK			BREAK				Automotive Electronics
Friday			BREAK			BREAK				
Saturday			BREAK			BREAK	Automotive Electronics			

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

KLE Technological University
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Leveraging Knowledge

SCHOOL OF ELECTRONICS ENGINEERING

Program: Minor Program

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

Staff Member Name: Venkatesh M Bhogyashree

Subject: Automotive Electronics **Code:** M16EBCCE301

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		Attn %
			e	a	21/1	23/1	25/1	30/1	1/2	4/2	5/2	13/2	8/3	7/3	12/3	3/3	8/4	21/4	23/4	30/4					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	H	P	P	P	P	P	P							
4	01FE16BCS113	NAMRATA HOSAMANI			P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A							
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	A	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							
8	01FE16BCS250	VELLALA VINEETH KUMAR			A	P	P	P	P	A	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	A	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	A	P	P	P	P	P	P	P	P	P	P							
15	01FE16BME211	TEJAS SUJIT LENGADE			P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P							
16	01FE17BME436	PRAJWAL F PUTTIYAVAR			P	P	P	P	P	P	P	P	P	P	A	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

KLE TECH

KLE Technological University

Creating Value
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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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Certificate

This is to certify that

Mr./Miss. APOORVA S MALEMATH

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Automotive Electronics

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Mr./Miss. GURURAJ GIRISH TONAPI

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Course Instructor

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Controller of Examinations

KLE TECH

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This is to certify that

Mr./Miss. JYOTHI S HOSAMANI

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Automotive Electronics

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Course Instructor

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Mr./Miss. KAPIL S KALGUTKAR

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Automotive Electronics

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Automotive Electronics

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Course Instructor

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KLE TECH

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Certificate

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Mr./Miss. PANKAJANABH V SHETTI

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Mr./Miss. PRAJWAL F PUTTIYAVAR

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Automotive Electronics

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Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. SHIDDALINGESH V ANGADI

has successfully completed the Value Addition Training Course on

Automotive Electronics

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. SWATI DHADEKAR

has successfully completed the Value Addition Training Course on

Automotive Electronics

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Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

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Mr./Miss. TEJAS SUJIT LENGADE

has successfully completed the Value Addition Training Course on

Automotive Electronics

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Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. VELLALA VINEETH KUMAR

has successfully completed the Value Addition Training Course on

Automotive Electronics

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

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Project Work

(2016-20)

KLE Technological University
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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 Corse in Electronics includes. Tasks: • Sensor Selection and Characterization to acquire real world data • Signal Conditioning for acquired data • Signal processing and interfacing with suitable contro0ller using proper communication protocol • Actuator selection and Interfacing Deliverables • Complete ES to demonstrate the functionalities of the chosen application			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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School of Electronics and Communication Engineering
Time Table for Minor Program

Time Table

Semester: VI-S **Term:** June 10th - Aug 01st 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
Monday			BREAK			BREAK				
Tuesday			BREAK	Project Review						
Wednesday			BREAK			BREAK				
Thursday			BREAK			BREAK				
Friday			BREAK			BREAK				
Saturday			BREAK			BREAK				

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

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SCHOOL OF ELECTRONICS ENGINEERING

Program: Minor Program

Attendance Sheet

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

Staff Member Name: Dr. Nalini C
R. M. Sheet

Subject: Project

Code: M16EECW301

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		Attn %
			e	a	15/6	25/6	1/7	30/7																	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																									
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15	01FE16BME211	TEJAS SUJIT LENGADE																									
16	01FE17BME436	PRAJWAL F PUTTIYAVAR		P	P	P	P	P																			
17	01FE17BME455	VIJAYAKUMARREDDY B																									

Theory ☐ Practical ☐

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Signature of Staff Member:

Co-ordinator
School of Electronics

KLE TECH

KLE Technological University

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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

Project Work

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

Course Instructor

Head of School

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Project Work

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Project Work

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Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

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Project Work

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. VELLALA VINEETH KUMAR

has successfully completed the Value Addition Training Course on

Project Work

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

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Analog and Digital Circuits

(2017-21)

KLE Technological University
Creating Value
Leveraging Knowledge

Value Added Training (VAT)

School of Electronics & Communication Engineering

Analog and Digital Circuits

Course Outcomes

1. **Understand performance characteristics of semiconductor device.**
2. **Acquire the knowledge of analog device, digital logic levels and its applications.**
3. **Evaluate circuit response to understand behavior of electronic circuits.**
4. **Design and analyze electronic circuits.**

Last Date to apply – Jan 15th 2019
Training Duration – Jan 15th to May 3rd 2019
Coordinator – Prof. Shraddha H

Prof. Preeti Pillai
shraddha_h@kletech.ac.in
+91 9620616835

			Teaching Hours
Course Title: Analog and Digital Circuits		**Course Code:** M16EECC201	
L-T-P: 2-0-1	**Credits: 3**	**Contact Hours: 3Hrs/week**	
CIE Marks: 50	**SEE Marks:50**	**Total Marks: 100**	
Teaching Hours: 40 Hrs	**Examination Duration:03 Hrs**		
Unit – I			
Chapter 1: Introduction to Analog components Basic Electric components and circuits: Charge, Current, Voltage and Power, Voltage and Current Sources, Ohm's Law. Circuit Analysis Techniques: Linearity and Superposition, Source Transformations, Thevenin's and Norton's Equivalent Circuits, Maximum Power Transfer, Delta-Wye conversion.			08Hrs
Chapter 2: Analog devices Introduction to Linear and Nonlinear Devices (elements), MOSFET, Enhancement and Depletion type MOSFET, Dependence of Drain Current with Drain to Source Voltage, Drain and Transfer Characteristics, Expression for Drain Current in Triode Region and Saturation Region, Channel length Modulation, Application as a Switch.			06Hrs
Chapter 3: Logic devices Logic families – TTL and CMOS families, Fan-in, Fan-out and Noise Margin, datasheets of Digital IC, Comparison of logic families.			02Hrs
Unit –II			
Chapter 4: Combinational Circuits Definition Digital Circuit simplification techniques, code converters, Cascading full adders, Adders, subtractors, Decoders, Encoders, Digital multiplexers, comparators.			08Hrs
Chapter 5: Introduction to Sequential Circuits Basic Bistable Element Latches, Triggering of flip flops, The Master-Slave Flip-Flop, Characteristic Equations.			06Hrs
Unit –III			
Chapter 6: Registers and Counters Shift registers, Counters: Synchronous and asynchronous counter design, Design of a Synchronous mod n counters using Flip-Flops.			06Hrs
Chapter 7: Applications Processor organization, Arithmetic logic unit, Design of Arithmetic circuits, Design of logic circuit, Design of arithmetic logic unit, design of shifter, Design of accumulator.			04Hrs
Text Books 1. Engineering Circuit Analysis, 8th Edition, by William H. Hayt, Jack E. Kemmerly and Steven M. Durbin 2. Electronic Devices and Circuits, by Millman Halkias. 3. Donald D Givone, Digital Principles and Design, Tata McGraw Hill Edition, 2002. 4. John M Yarbrough, Digital Logic Applications and Design, Thomson Learning, 2001. **References** 1. Charles H Roth, Jr; Fundamentals of Logic Design, Thomson Learning, 2004. 2. "ARM Assembly Language Fundamentals and techniques" by William Hohl, CRC Pess 2009.			

Recourse Person Profile

Prof. Shraddha H.
Assistant Professor, School of Electronics and Communication
Area of Interests: Analog Electronics, Embedded Design, VLSI Design

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

17-21

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

Time Table

Semester: IV

Term: 15th Jan 2019 May 3rd

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
Monday			BREAK			BREAK				
Tuesday			BREAK			BREAK				Analog and Digital
Wednesday			BREAK			BREAK				
Thursday			BREAK			BREAK				Analog and Digital
Friday			BREAK			BREAK				
Saturday			BREAK			BREAK	Analog and Digital			

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

KLE Technological University
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SCHOOL OF ELECTRONICS ENGINEERING

Program: Minor Program

Attendance Sheet

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

Staff Member Name: Shraddha H Prof: P

Subject: Analog & Digital Electronics

Code: M16EECC201

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		Attn %
			e	a	21/1	24/1	28/1	29/1	31/1	1/2	6/2	8/2	12/2	2/3	10/3	14/3	31/3	2/4	4/4	3/4	29/4				e	a	
1	01FE17BCS026	Akshaykumar Gunari			P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P						
2	01FE17BCS246	Gourav V Jamakhandi			P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P						
3	01FE17BME065	Kartik			P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A						
4	01FE17BME070	Kartik Zalaki			P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A						
5	01FE17BME097	Mehul H Jain			A	P	P	P	P	A	P	P	P	P	P	P	A	P	P	A	A						
6	01FE17BME128	Pramod V Dalavi			P	P	P	P	P	P	P	P	A	P	A	P	P	A	P	P	P						
7	01FE17BME206	Vaibhav M.K			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P						
8	01FE17BME125	PIYUSH K DESHPANDE			P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P						

Theory ☐ Practical ☐

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Signature of Staff Member:

Co-ordinator
School of Electronics - Minor

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Akshaykumar Gunari

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Gourav V Jamakhandi

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

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Controller of Examinations

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Mehul H Jain

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

Head of School

Controller of Examinations

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. PIYUSH K DESHPANDE

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Pramod V Dalavi

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Vaibhav M .K

has successfully completed the Value Addition Training Course on

Analog and Digital Circuits

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

Course Instructor

Head of School

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Value Added Training

Course: Signal Handling and Data Acquisition

(2017-21)

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Value Added Training (VAT)

School of Electronics & Communication Engineering

Signal Handling and Data Acquisition

Course Outcomes

1. **Understand about signals and systems, its classification, operations performed and various Fourier transformations**
2. **Understand different configurations of operational-amplifier and analyze the circuit.**
3. **Understand different applications based on operational-amplifier, amplifiers, A/D, D/A.**
4. **Design and analyze data acquisition electronic circuits.**

Last Date to apply – June 10th 2019
Training Duration – June 10th to Aug 01st 2019
Coordinator – Prof. R. M. Shet

Prof. Shraddha H.
raghu@kletech.ac.in
+91 9886659327

			Teaching Hours
Course Title: Signal handling & Data Acquisition		**Course Code:** M16EECC202	
L-T-P: 2-0-1	**Credits: 3**	**Contact Hours: 3Hrs/week**	
CIE Marks: 50	**SEE Marks:50**	**Total Marks: 100**	
Teaching Hours: 40 Hrs	**Examination Duration: 03 Hrs**		
Unit – I			
Chapter 1: Introduction to Data Acquisition and Signal Conditioning Signals, Sensors, and Signal Conditioning, Data Acquisition Systems, PC-Based Data Acquisition Equipment			02Hrs
Chapter 2: Signals and Sensors Signals and Systems, types of signals with examples, digital and discrete signals, sampling, sampling theorem, quantization, introduction to Fourier series and Transforms. Basic Characteristics of sensors, Calibration, Classification, temperature sensor, pressure sensor, vibration sensor, piezoelectric sensor, humidity sensor.			08Hrs
Chapter 3: Data acquisition and Converter Fundamental Concepts, ADC Converters, Accuracy and Resolution, Types of ADC, DAC, Frequency-to-Voltage Conversion.			05Hrs
Unit –II			
Chapter 4: Fundamental Signal Conditioning Amplification, Instrumentation Amplifiers, Filtering, Attenuation, Isolation, Linearization, Circuit Protection.			05Hrs
Chapter 5: IC and OP AMP Fabrication of monolithic IC, integration of circuit components, Limitations of ICs, Advantages of IC's over analog circuits, Operational Amplifier (OP AMP), Basic operations of OP AMP, Applications of OP AMP. Ideal and non-ideal OPAMP terminal characteristics, Input and output impedance, Output Offset voltage. OPAMP under Positive and Negative feedback, Impact of Negative feedback on Bandwidth, Input and Output impedances, Offset voltage under negative feedback, Follower property & Inversion Property under linear mode operation.			10Hrs
Unit –III			
Chapter 6: Linear applications of OPAMP DC Amplifiers, AC Amplifiers, Summing, Scaling and Averaging amplifiers (Inverting, Non-inverting and Differential configuration), Integrator, Differentiator, Oscillators, Active Filters –First order Low pass & High pass filters,			05Hrs
Chapter 7: Applications of OPAMP Crossing detectors (ZCD. Comparator), Precision rectifiers, Limiting circuits, Clamping circuits, Peak detectors, sample and hold circuits.			05Hrs
Text Book Text Book (List of books as mentioned in the approved syllabus) 1. Behzad Razavi, Fundamentals of microelectronics, 2nd edition. 2. Phillip E. Allen, Douglas R. Holberg, CMOS Analog Circuit Design, 3. Ramakant A. Gayakwad, "Op - Amps and Linear Integrated Circuits", 4. Simon Haykin and Barry Van Veen, "Signlas and Systems". **References** 1. Sergio Franco, Design with Operational Amplifiers and Analog Integrated Circuits. 2. David A. Bell, Operational Amplifiers and Linear Ics.			

Recourse Persons

Prof. R. M. Shet
Assistant Professor, School of Electronics and Communication
Area of Interest: Signals and Systems, DSP, Process control, Automation, Control System

Prof. Shraddha H.
Assistant Professor, School of Electronics and Communication
Area of Interests: Analog Electronics, Embedded Design, VLSI Design

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

Time Table

Semester: IV

Term: 10th June - Aug 01st 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
Monday			BREAK			BREAK				
Tuesday			BREAK	Signal Handling and Data Acquisition		BREAK				
Wednesday			BREAK	Signal Handling and Data Acquisition		BREAK				
Thursday			BREAK	Signal Handling and Data Acquisition		BREAK				
Friday			BREAK			BREAK				
Saturday			BREAK			BREAK				

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

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KLE TECH.

SCHOOL OF ELECTRONICS ENGINEERING

Program: Minor Program

Attendance Sheet

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

Staff Member Name: R.M.Sluet / Shraddha H

Subject: Signal Handling & Data acquisition

Code: M16EELC202

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		Attn %
			e	a	10/6	13/6	18/6	19/6	25/6	2/7	9/7	10/7	11/7	23/7											e	a	
1	01FE17BCS026	Akshaykumar Gunari			P	P	P	P	A	P	P	P	P	A													
2	01FE17BCS246	Gourav V Jamakhandi			P	P	P	P	P	P	P	A	P	P													
3	01FE17BME065	Kartik			P	P	A	P	P	P	P	P	P	A													
4	01FE17BME070	Kartik Zalaki			A	P	P	P	P	A	P	P	P	P													
5	01FE17BME097	Mehul H Jain			P	P	P	P	P	P	P	P	P	A													
6	01FE17BME128	Pramod V Dalavi			P	P	A	P	P	P	P	P	P	P													
7	01FE17BME206	Vaibhav M.K			P	P	P	P	P	A	P	P	P	P													
8	01FE17BME125	PIYUSH K DESHPANDE			A	P	A	P	P	P	P	P	P	A													

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

KLE TECH

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Certificate

This is to certify that

Mr./Miss. Akshaykumar Gunari

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. Gourav V Jamakhandi

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. Kartik Zalaki

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. Kartik

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

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This is to certify that

Mr./Miss. **Mehul H Jain**

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

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Certificate

This is to certify that

Mr./Miss. PIYUSH K DESHPANDE

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. Pramod V Dalavi

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

Head of School

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School of Electronics & Communication Engineering

Certificate

This is to certify that

Mr./Miss. Vaibhav M .K

has successfully completed the Value Addition Training Course on

Signal Handling and Data Acquisition

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

Course Instructor

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Value Added Training

Course: Project

(2018-19)

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Minor in Robotics

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Open for 4th semester students of all branches except A & R

Department of Automation & Robotics



Contact:
Arun C.Giriyapur : hod_are@bvb.edu
Shridhar Doddamani : Shridhar_d@bvb.edu

Resource Person Profile	
Minor Program in ROBOTICS	
Mrs. Jyoti Bali	Mrs. Jyoti Bali holds B.E in E&C, M.Tech in Digital Electronics . She is working as Asst. Professor in the department of Automation and Robotics at KLE Technological University, Hubballi, Karnataka from 2011 with 20 years of experience in teaching. She has worked in the department of Mechatronics at NTTF Dharwad as Dy. Manager (Trg.) for 11 years. Her areas of interest include Model based Design, Real-time Mechatronics System design, Low-power and High-Performance Smart system design for Health-care using FPGA and microcontrollers and Power-aware algorithms. She has a good number of papers published in journals of international repute on Signal processing, ANN algorithms, Mechatronics and Engineering education.

Course Outcomes-CO

At the end of the course student will be able to:

1. Carry out market survey, do need analysis and identify suitable problems.
2. Write a project proposal which will involve developing a complete solution for the identified problem from the real world.
3. Apply the principles of engineering design to plan and manage the project.
4. Apply suitable design processes and develop the best possible solution.
5. Develop proof of concepts and models for verification.
6. Prepare production drawings, bill of materials and process plans.

Laboratory Title: **Project**	Lab Code: M16EARW401
Total Hours: **30**	Duration of Exam: **3 Hrs**
Total ESA Marks: 5**0**	Total ISA. Marks: **50**

Experiment wise plan

1. *List of activities planned to meet the requirements of the syllabus*

Week No	***Activities***	***Deliverables***	***CIE Marks out of 50***
1&2	*Need analysis, Problem identification and market survey*	*Project proposal*	*10*
3&4	*Project management*	*Project plan, gantt chart, WBS, Budget*	*10*
5,6,7&8	*Engineering design*	*Component designs & Integration, Proof of concept, modeling and simulation (hardware and software)*	*20*
9&10	*Detailed design*	*Bill of materials, production drawings*	*10*

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Minor Programs

Earlier known as
B. V. B. College of Engineering & Technology

Date: 13-01-2019

NOTICE/Time Table

The students registered for **'Minor Program in Robotics'** are hereby informed that classes will commence from 16-01-2019 as per below mentioned time table

SL No	Course name	Day	Timing	Staff Name
1	Project	Thursday	5.00pm- 6.00pm	Jyoti Bali
		Saturday	10.00am- 1.00pm	

HOD

HEAD OF THE DEPT.
Automation & Robotics
K.L.E. Technological University,
HUBBALLI-31.

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Minor Programs

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FMCM0401-1.0

MINOR PROGRAM IN ROBOTICS ATTENDANCE REPORT

From 13/01/2019 To 30/04/2019

Name of the Staff Member: Jyoti Bali Subject: Project Code:

Theory ☐ Practical ☐

Roll No	Students' Name	USN	B/F		Jan 2019						Feb. 2019							March 2019							TOTAL		Attn %
			e	a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	e	a	
					17/1	19/1	24/1	26/1	30/1	2/2	7/2	9/2	14/2	16/2	21/2	23/2	28/2	2/3	4/3	16/3							
1	Amit S Gali	01FE15BME024			P	A	A	P	P	P	P	A	P	P	P	P	A	A	A	P	P							
2	Bapu Gouda	01FE15BEC048			P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P							
3	Sourabh A Kulakarni	01FE15BME195			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P							
4	Sujit Kumar	01FE15BEC204			A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P							
5	Sanket S Kulakarni	01FE15BME169			P	P	P	A	P	A	P	P	P	P	P	P	A	A	P	P	P							
6	Suraj patil	01FE15BME207			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P							
7	Ashwini R Harti	01FE15BEE009			P	P	A	P	P	P	A	A	P	P	P	P	P	P	A	P	P							
8	Muhammad Talha Khatib	01FE15BEE025			A	P	A	P	P	A	A	A	P	P	P	A	P	P	P	P	P							
9	Channappa P Takkad	01FE15BEE011			P	P	P	P	P	P	A	A	A	A	P	P	P	P	P	P	P							
10	B Shrinidhi	01FE15BEC047			P	A	P	P	A	A	P	P	P	P	P	A	P	P	P	P	P							
11	Sunal S	01FE15BME203			P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P							
12	Thushar bhat	01FE15BME216			P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	A	A							
13	Vinayak K Hanumsagar	01FE15BEC225			A	P	P	P	A	P	P	P	P	P	A	P	A	A	A	A	A							
14	Sushant Kumar	01FE15BME208			P	P	P	P	P	P	P	P	P	P	A	P	A	A	A	P	P							
15	Sumanth K G	01FE15BME202			P	P	A	A	P	A	A	P	A	A	A	P	P	P	A	P	P							
16	Suraj G krish	01FE15BME206			P	P	A	A	P	P	P	P	A	A	P	P	P	P	A	P	P							
17	Hinge Shweta	01FE15BEC074			P	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P							

B/F: Brought Forward; e: Classes Engaged; a: Classes Attended; Note: Mark: P for Present and A for Absent

Signature of Staff Member: JS Bali

Head of Department

KLE TECH

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Certificate

This is to certify that

Mr./Miss. ASHWINI R HARTI

has successfully completed the Value Addition Training Course on

Project

from 17-01-2019 *to* 31-03-2019

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

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Certificate

This is to certify that

Mr./Miss. B SHRINIDHI

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

J. S Bali

Course Instructor

Head of Department

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. BAPU GOUDA

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. MUHAMMAD TALHA KHATIB

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

Course Instructor

Head of Department

Controller of Examinations

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. SOURABH KULKARNI

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

Course Instructor

Head of Department

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. SUNAL S

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

Course Instructor	Head of Department	Controller of Examinations

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. SURAJ PATIL

has successfully completed the Value Addition Training Course on

Project

from **17-01-2019** *to* **31-03-2019**

J. S Bali

Course Instructor

Head of Department

Controller of Examinations

Value Added Training

Course: **Machine learning Lab**

(2018-19)

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Open for 4th semester students of all branches except A & R

Department of Automation & Robotics



Contact:
Arun C.Giriyapur : hod_are@bvb.edu
Shridhar Doddamani : Shridhar_d@bvb.edu

Resource Person Profile	
Minor Program in ROBOTICS	
Mr. Shridhar Doddamani	Mr. Shridhar Doddamani, obtained his undergraduate degree in Computer Science Engineering from SDMCET, Dharwad, Karnataka and Master's degree in Digital Electronics from BVBCET, Hubli, Karnataka. Presently working as a faculty in the Department of Automation & Robotics at KLE Technological University, Hubballi, Karnataka. His areas of interest include PLC, Image Processing, Robotics, Machine Learning, Data Science and Block chain.

Course Outcomes-(CO's)

At the end of the course student will be able to:

i. Use the perspective of machine learning by applying computer programming skills to solve the problems by applying algorithms, flowcharts and debugging to solve domain specific problem.

ii. Students will be able to solve the problems related machine learning concepts using advanced mathematical techniques

iii. Apply various concepts of decision trees,Baysian learning,instanace based learning for Identifying all relevant constraints and requirements and formulate an accurate description of the Problem while designing the machine learning based systems.

iv. Identify, analyze for accuracy and validity of assumptions made during design.

v. Design neural network & genetic algorithm by gathering engineering knowledge from available Literature and to select the most relevant among them.

vi. Formulate computational learning theory and the various theorems of statistical machine learning theory and to solve the problems by partitioning into process or systems to manageable elements for the purpose of analysis modeling or design.

vii. Analyze Hierarchical clusters & to apply Kernel dimensionality reduction

Course Content

Course Code: M16EARP401	Course Title: **Machine learning Lab**	
L-T-P: 3-0-0	Credits: 3	Contact Hrs: 40
ISA Marks: 50	ESA Marks: 50	Total Marks: 100
Teaching Hrs: 40		Exam Duration : 3 hours

Content	Hours
UNIT – 1	
Chapter 1:Introduction to Robot operating system ROS concepts, creating ROS packages writing a minimal ROS publisher, compiling ROS nodes, running ROS nodes, examining running minimal publisher node, scheduling node timing, writing a minimal ROS subscriber compiling and running minimal subscriber, minimal subscriber and publisher node summary writing ROS nodes more ROS tools: catkin simple, ROSlaunch, simplifying cmakelists.txt with catkin simple automating starting multiple nodes viewing output in a ROS console recording and playing back data with ROSbag.	5 hrs
Chapter 2:Messages, Classes and Servers in ROS Defining custom messages, ROS services- service messages, ROS service nodes, manual interaction with ROS services, example ROS service client, running, example service and client, using C++ classes in ROS creating library modules in ROS, introduction to action servers and action clients- creating an action server package, defining custom action-server messages, designing an action client running the example code, introduction to parameter server.	5 hrs
Chapter 3: **Introduction to machine learning** Introduction Machine Learning ,Well posed learning problem, Types of learning, supervised learning ,unsupervised learning and reinforcement learning, Learning Associations, Designing of learning system, perspectives & issues in machine learning, Concept learning task, concept learning search, Find-S: Finding a maximally specific hypotheses, version spaces & candidate elimination algorithm, Remarks - version spaces & candidate elimination algorithm, inductive bias.	5 hrs
UNIT – 2	
Chapter 4: Computational learning theory and decision tree learning Motivation, Estimating hypotheses accuracy, Basics of sampling theory, general approach for deriving confidence intervals, comparing learning algorithm. Probably learning an approximately correct hypothesis, sample complexity for finite hypnosis spaces, sample complexity for infinite hypothesis spaces, instance based learning-K nearest neighbor learning, locally weighted regression, Representation, decision tree algorithm, hypotheses space search in decision tree algorithm inductive bias in decision tree algorithm, issues in DTL, Bayesian decision theory classification.	8 hrs

Chapter 5:Kernel methods and Graphical models Embedding's into feature spaces, the kernel trick, Multiple kernel learning, Kernel dimensionality reduction Canonical Cases for Conditional Independence, Example Graphical Models, Naive Bayes' Classifier, Hidden Markov Model, Linear Regression, d-Separation Belief Propagation, Linkage–Based clustering algorithms-means and other cost minimization clustering.	7 hrs
UNIT – 3	
Chapter 6:Reinforcement Learning The learning task,Q-learning,Nondeterministic rewards & actions, temporal difference learning, generalizing from examples, relationship to dynamic programming.	5 hrs
Chapter 7: Artificial neural network Biological motivation, neural network representations, and appropriate problems for neural network learning, perceptron's, multilayer networks and the back propagation, algorithm, an illustrative example: face recognition	5 hrs

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

1. Wyatt S. Newman " A Systematic Approach to Learning Robot Programming with ROS" CRC Press Taylor & Francis Group, 2018
2. Tom Mitchell "Machine Learning" McGraw-Hill Science/Engineering/Math (March 1, 1997).

References

1. Shai shalev-scwartz and Shai Ben David "Understanding Machine Learning" First Edition, Cambridge Press, USA, 2014.
2. Anis Koubaa "Robot Operating System" The Complete Reference (Volume 1), Springer publications,2016

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Minor Programs

Earlier known as
B. V. B. College of Engineering & Technology

Date: 31-08-2018

NOTICE/Time Table

The students registered for '**Minor Program in Robotics'** are hereby informed that classes will commence from 03-09-2018 as per below mentioned time table

SL No	Course name	Day	Timing	Staff Name
1	Machine Learning	Thursday	5.00pm- 6.00pm	Shridhar Doddamani
		Saturday	10.00am- 1.00pm	

HOD
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HUBBALLI-31.

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Minor Programs

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FMCM0401-1.0

MINOR PROGRAM IN ROBOTICS ATTENDANCE REPORT

From 03/09/2018 To 30/11/2018

Name of the Staff Member: Sheidhar doddamani Subject: Machine learning Code:

Theory ☐ Practical ☐

Roll No	Students' Name	USN	B/F e	B/F a	1 6/9	2 8/9	3 13/9	4 15/9	5 20/9	6 22/9	7 27/9	8 29/9	9 6/10	10 11/10	11 13/10	12 18/10	13 24/10	14 29/10	15 31/10	16	17	18	19	20	TOTAL e	TOTAL a	Attn %
1	Amit S Gali	01FE15BME024		P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P							
2	Bapu Gouda	01FE15BEC048		P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	A	P							
3	Sourabh A Kulakarni	01FE15BME195		A	P	A	A	P	A	P	P	P	A	P	A	P	P	P	P	P							
4	Sujit Kumar	01FE15BEC204		P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P							
5	Sanket S Kulakarni	01FE15BME169		P	P	P	P	P	A	P	P	A	P	P	P	P	P	A	A	P							
6	Suraj patil	01FE15BME207		A	P	P	A	P	P	P	P	A	A	P	P	P	P	P	A	P							
7	Ashwini R Harti	01FE15BEE009		P	A	P	P	A	A	P	A	P	P	A	P	A	P	A	P	P							
8	Muhammad Talha Khatib	01FE15BEE025		A	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P							
9	Channappa P Takkad	01FE15BEE011		P	P	P	P	A	P	P	P	A	P	P	A	P	P	P	P	A							
10	B Shrinidhi	01FE15BEC047		P	P	A	P	A	P	A	P	A	A	P	P	P	P	P	P	P							
11	Sunal S	01FE15BME203		P	P	A	A	P	P	P	P	P	P	P	P	P	A	P	P	P							
12	Thushar bhat	01FE15BME216		P	P	P	P	P	P	A	P	P	P	P	A	P	P	A	P	P							
13	Vinayak K Hanumsagar	01FE15BEC225		A	P	P	P	A	P	P	P	P	A	P	P	P	P	A	P	P							
14	Sushant Kumar	01FE15BME208		P	A	P	P	P	P	A	P	P	P	P	P	P	A	A	P	P							
15	Sumanth K G	01FE15BME202		P	P	P	P	P	A	P	P	A	P	P	A	P	P	P	P	P							
16	Suraj G krish	01FE15BME206		P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P							
17	Hinge Shweta	01FE15BEC074		P	A	P	P	A	A	P	P	P	P	P	P	P	A	P	A	P							

B/F: Brought Forward; e: Classes Engaged; a: Classes Attended; Note: Mark: P for Present and A for Absent

Signature of Staff Member:

Head of Department

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Certificate

This is to certify that

Mr./Miss. **ASHWINI R HARTI**

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

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Certificate

This is to certify that

Mr./Miss. B SHRINIDHI

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor	Head of Department	Controller of Examinations

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KLE Technological University

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. **BAPU GOUDA**

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. **MUHAMMAD TALHA KHATIB**

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. SOURABH KULKARNI

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

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Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. SUNAL S

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

Head of Department

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

Department of Automation & Robotics

Certificate

This is to certify that

Mr./Miss. SURAJ PATIL

has successfully completed the Value Addition Training Course on

Machine Learning

from **03-09-2018** *to* **30-11-2018**

Course Instructor

Head of Department

Controller of Examinations

Value Added Training

Course: Biosensors

(2018-19)

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alue Added Training (VAT)

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Course: Biosensors

Course Outcome

- Apply the knowledge of mathematics and engineering to model the sensor & actuator devices
- Explain the working principles of typical Microsystems
- Describe the steps involved in the process of sensor fabrication
- Explain how to build Microsystems using Biological components

Last Date to apply – 29th May 2018
Program Duration –15th June 2018 to 31st July 2018
Coordinator – Prof. Shivashankar Huddar

shivashankarhuddar@kletech.ac.in
+91 9980135272

Course Title: Biosensors

1. Basic Introduction to sensors: 02 Hours

Introduction to sensors: fundamental characteristics such as Sensitivity, linearity, repeatability, hysteresis, drift. Sensing Principles: optical sensors, electrochemical sensors, micromechanical sensors, surface plasmon sensors, colorimetric Sensors, acoustic sensors

2. Device Microfabrication Technology-I 04 Hours

Design of process flow for device fabrication for application in biology and medicine: Introduction to the Clean room and contaminants, Wafer cleaning processes (DI water, RCA, metallic impurities, etc.), Substrate materials: Silicon, polymer and PCB, Thermal oxidation: Wet and dry oxidation, thin film deposition techniques: PVD- DC and RF Magnetron Sputtering, thermal evaporation, e-beam evaporation, LPCVD, PLD.

3. Device Microfabrication Technology-II 04 Hours

Types of masks: Hard and soft Lithography, Lithography – UV Photolithography, Soft lithography, additive manufacturing. Mask design and fabrication – Photo resists and mechanical mask such as stencils. Types of etching- Wet etching- anisotropic and Isotropic and dry etching RIE and DRIE. Device fabrication and inspection in the clean room.

4. Biosensors: 06 Hours

Introduction: Biosensors and its applications in health care, agriculture, drug discovery and environmental monitoring. Devices for biology and medicine: Microfluidic channels, flow cytometry/ sorting, microchip using electrophoresis, force measurement with cantilevers, micro engineered devices for medical therapeutics, blood pressure sensors, devices for drug delivery, and devices for minimally invasive surgery.

5. Biological components for detection 03 Hours

Enzymes, antigen-antibody reaction, biochemical detection of analysts, organelles, whole cell, receptors, DNA probe, pesticide detection, sensors for pollutant gases. Surface chemistry: Immobilization of biorecognition element, Antigen-Antibody functionalization, assay labels including radioisotopes, fluorophores, dyes.

6. Basics of Tissue culture methods 02 Hours

Types of cell growth, Work area and equipment (Laminar air hoods, CO_2 incubators, Microscopes, Preservation, Vessels, Storage), Maintaining cells (Harvesting, media and growth requirements), Safety considerations, Cell counting

7. Measurement and Signal conditioning 03 Hours

Impedance analyzer, LCR meter (0-2MHz), Op-Amps and circuits, Data processing, LabVIEW based virtual instrumentation.

8. Point of care medical diagnostic devices 02 Hours

Glucose sensors, heavy metal detection and contaminant detection in water, immunoassay sensor –ELIZA, cancer detection devices etc.

Text Books:

1. A.P.F. Turner, I. Karube & G.S. Wilson : Biosensors : Fundamentals & Applications, Oxford University Press, Oxford, 1987.
2. Fundamentals of Microfabrication and Nanotechnology by Marc J. Madou, 3rd edition. Taylor and Francis group.

Reference Books:

1. John G. Webster (ed.) : Medical Instrumentation - Application and Design; Houghton Mifflin Co., Boston, 1992.
2. Richard Aston : Principles of Biomedical Instrumentation and Measurement, Merril Publishing Co., Columbus, 1990.
3. Richard S.C. Cobbold : Transducers for Biomedical Measurements: Principles and Applications, John Wiley & Sons, 1974
4. Ernest O. Doeblin : Measurement Systems, Application and Design, McGraw-Hill, 1985.

Laboratory Experiments:

1. Device fabrication and inspection in the clean room which will involve hands-on experience in wafer cleaning, mask designing, wet etching, etc.
2. Basic characterization of the fabricated device using electrical, mechanical, and optical techniques
3. Introduce to tissue culture methods, processes for maintaining and harvesting cells, and how to carry out cell counting.
4. Use cultured cells in different biosensor applications like live/dead analysis using impedance, pH change etc. This session will teach the students how to load biological samples like cells and tissues in simple micro devices and biosensors.
5. Introduce to major equipment to be used in a biosensor lab like impedance analyzer, peristaltic pump, microscopes, cell counter, micromanipulator, CO2 incubator, bio-safety hood etc. Perform basic experiments using this equipment to understand the protocols with which they are to be used.

Course Outcomes (COs):

1. At the end of the course the student should be able to:
2. Apply the knowledge of mathematics and engineering to model the sensor & actuator devices
3. Explain the working principles of typical Microsystems
4. Describe the steps involved in the process of sensor fabrication
5. Explain how to build Microsystems using Biological components

Resource Person Biodata



Professor Hardik J. Pandya is a core faculty member in the Department of Electronic Systems Engineering, Division of Electrical Sciences, IISc Bangalore where he is developing Advanced Microsystems and Biomedical Devices Facility for Clinical Research and Biomedical and Electronic (10^{-6}-10^{-9}) Engineering Systems Laboratory to carry out cutting-edge research on novel devices to solve unmet problems in biology and medicine. He is recipient of prestigious Early Career Research Award from Science and Engineering Research Board, Government of India. He seek to understand and exploit novel ways of fabricating microengineering devices using glass, silicon, polymers and integrate with unusual classes of micro/nanomaterials. His research interests include integrating biology/medicine with micro- and nanotechnology to develop innovative tools to solve unmet clinical problems. His current research focuses on flexible sensors for smart catheters, microsensors, microfluidic devices, and microelectromechanical systems, all lately with an emphasis on cancer diagnosis, therapeutics, e-nose, and biomedical device technologies. His current work is in collaboration with surgeons from Stanford Medicine, Mayo Clinic, Mazumdar Shaw Medical Foundation, All India Institute for Medical Science, Amrita Institute of Medical Sciences and Rajiv Gandhi University of Health Sciences. Before joining IISc, he worked as a postdoctoral scientist in the Department of Mechanical Engineering, Maryland Robotics Center, University of Maryland, College Park and in the Department of Medicine, Brigham and Women's Hospital–Harvard Medical School affiliated with Harvard-MIT Health Science and Technology. His work has resulted in several patents and publications. His work has been highlighted as "Breaking Research News" by The Physicians Committee for Responsible Medicine and has been featured on IEEE *Transactions on Biomedical Engineering* July 2016 issue cover image as well as IEEE TBME July 2016 feature article for the website and monthly highlights. The work on portable cancer diagnosis tool was also featured on Science Translational Medicine as an Editorial Choice, Breast Cancer Diagnosis, March 2016 and has been highlighted on CapeRay blog as "Biochips and Diagnostic tools" in April 2016. His work has been published in high-quality journals including *Lab on a Chip,* IEEE *Transactions on Biomedical Engineering,* IEEE *Journal of Microelectromechanical Systems, Sensors and Actuators B, Biosensors and Bioelectronics, Nanoscience and Nanotechnology Letters, Sensors and Transducers, and Journal of Micromechanics and Micromachining.*

Resource Person Biodata



Professor Shivashankar A. Huddar is a core faculty member in the School of Electronics & Communication Engineering, KLE Technological University Hubballi. He is pursuing his Ph.D. from VTU Belgaum in the area of Micro-Electro-Mechanical-Systems (MEMS). He is a postgraduate in Digital Communication Engineering from Basaveshwar Engineering College, Bagalkot, and a graduate in Electronics & Communication Engineering from Bapuji Institute of Engineering & Technology, Davangere. He has completed the Tool & Die Making course at Nettur Technical Training Foundation (NTTF) Dharwad. He worked as Design Engineer at Sangeeta Enterprises, Bangalore. He was part of the National integration program in Bihar from 1998-1999. Courses taught: Basic Electronics for Mechanical Science, Basic Electronics for Electrical Science, Control Systems, Analog Communication, Digital Communication, Communication System, Information Theory and Coding, Engineering Design, Product Design and Realization, Telecommunication Switching, Transmission Lines and Wave Guides, Field Theory, Micro Electro Mechanical Systems (MEMS), Engineering Exploration and Biosensor. Areas of Interest: MEMS Technology, Micro-Nano sensors, actuators, Mathematics, Signal Processing, Control Systems, Field Theory, Digital Communication, Engineering Design.

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Time Table for the Academic year 2018-19

FMTM 0208T/1.0

Semester: V

Biosensors (Bio Engineering)

DAY/TIME	8.00 to 9.00am	9.00 to 10.00am	BREAK	11.00 to 12.00pm	12.00 to 1.00pm	BREAK	2.00 to 3.00pm
Wednesday 27-06-2018	Biosensors			Biosensors			Biosensors
Thursday 28-06-2018	Biosensors			Biosensors			Biosensors
Friday 29-06-2018	Biosensors			Biosensors			Biosensors
Saturday 30-06-2018	Biosensors			Biosensors			Biosensors
Sunday 01-07-2018	Biosensors			Biosensors			Biosensors
Monday 02-07-2018	Biosensors			Biosensors			Biosensors
Tuesday 03-07-2018	Biosensors			Biosensors			Biosensors
Wednesday 04-07-2018	Biosensors			Biosensors			Biosensors
Thursday 05-07-2018	Biosensors			Biosensors			Biosensors

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Minor Programs

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Attendance Sheet

School/Department/Centre: **Mechanical Engineering**

Minor Programme: **Bioengineering**

Subject Name: **Biosensors**

Subject Code: **M17EBEC202**

Faculty In charge: **Prof. Shivashankar A. Huddar**

Roll No	SRN	Student Name	Date of engagement								
			27/06	28/06	29/06	30/06	01/07	02/07	03/07	04/07	05/07
1	01FE16BBT004-M	AISHWARYA BASAVARAJ MANTANVAR	P	P	P	P	P	P	P	P	P
2	01FE16BBT006-M	ANNAPOORNA S HEGDE	P	P	P	P	P	P	A	P	P
3	01FE16BBT007-M	ANURADHA KOTI	P	P	P	P	P	P	P	P	P
4	01FE16BBT009-M	ARATI GANESH LOHAR	P	P	P	P	P	P	P	P	P
5	01FE16BBT013-M	BHAVIKA KUMARI	P	P	P	P	P	P	P	P	P
6	01FE16BBT015-M	Chaitra G Soratur	P	P	A	A	P	P	P	P	P
7	01FE16BBT017-M	DEEPALI V PATIL	P	P	P	P	P	P	P	P	P
8	01FE16BBT018-M	DIKSHA SANJAY DESSAI	P	P	P	P	P	P	P	P	P
9	01FE16BBT020-M	KEERTHI SAJJANAR	P	P	P	P	P	P	P	P	P
10	01FE16BBT021-M	LOHAR MANJIRI SHANKAR	P	P	P	P	P	P	P	P	P
11	01FE16BBT023-M	MEETA M GAVADE	P	P	P	P	P	P	P	P	P
12	01FE16BBT024-M	MEKHALA MURALIDHAR HUILGOL	P	P	A	A	P	P	P	P	P

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Minor Programs

Earlier known as
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13	01FE16BBT025-M	MITHUN RATHOD	P	P	P	P	P	P	P	P	P
14	01FE16BBT027-M	NAMRATA P DODDAWAD	P	P	P	P	P	P	P	P	P
15	01FE16BBT029-M	NEHA V HEGDE	P	P	P	P	P	P	P	P	P
16	01FE16BBT032-M	PUSHTI MAHESH DARBAR	P	P	P	P	P	P	P	P	P
17	01FE16BBT043-M	SHAMEEN SULTANA	P	P	P	P	P	P	P	P	P
18	01FE16BBT048-M	SNEHA V HEGDE	P	P	P	P	P	P	P	P	P
19	01FE16BBT052-M	UMME FAZAL E HABIBA M RUDGI	P	P	P	P	P	P	P	P	P
20	01FE16BBT053-M	VAIBHAVI PATIL	P	P	P	P	P	P	P	P	P
21	01FE16BBT057-M	PRANAV GIRISH BANVI	A	P	A	A	A	P	P	P	P
22	01FE16BME161-M	SAGAR PATIL	P	P	P	P	P	P	P	P	P

Note: Each day 5 hrs class (5hr x 9 = 45hrs)

Date: 05/07/2018

Faculty signature

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Certificate

This is to certify that

Mr./Miss. AISHWARYA BASAVARAJ MANTANVAR

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. ANNAPOORNA S HEGDE

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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Mr./Miss. ANURADHA KOTI

has successfully completed the Value Addition Training Course on

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This is to certify that

Mr./Miss. ARATI GANESH LOHAR

has successfully completed the Value Addition Training Course on

Biosensors

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This is to certify that

Mr./Miss. BHAVIKA KUMARI

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

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This is to certify that

Mr./Miss. CHAITRA G SORATUR

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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This is to certify that

Mr./Miss. DEEPALI V PATIL

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

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This is to certify that

Mr./Miss. DIKSHA SANJAY DESSAI

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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This is to certify that

Mr./Miss. KEERTHI SAJJANAR

has successfully completed the Value Addition Training Course on

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This is to certify that

Mr./Miss. LOHAR MANJIRI SHANKAR

has successfully completed the Value Addition Training Course on

Biosensors

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This is to certify that

Mr./Miss. MEETA M GAVADE

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. MEKHALA MURALIDHAR HUILGOL

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. MITHUN RATHOD

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. NAMRATA P DODDAWAD

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

Head of School

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Certificate

This is to certify that

Mr./Miss. NEHA HEGDE

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

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This is to certify that

Mr./Miss. PRANAV GIRISH BANVI

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. PUSHTI MAHESH DARBAR

has successfully completed the Value Addition Training Course on

Biosensors

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Course Instructor

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This is to certify that

Mr./Miss. SAGAR PATIL

has successfully completed the Value Addition Training Course on

Biosensors

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This is to certify that

Mr./Miss. SHAMEEN SULTANA

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

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This is to certify that

Mr./Miss. SNEHA V HEGDE

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

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Certificate

This is to certify that

Mr./Miss. UMME FAZAL E HABIBA M RUDGI

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

Head of School

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Certificate

This is to certify that

Mr./Miss. VAIBHAVI PATIL

has successfully completed the Value Addition Training Course on

Biosensors

from **27-06-2018** *to* **05-07-2018**

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Biomaterials

(2018-19)

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Course: Biomaterials

Course Outcome

- Apply engineering and biology principles in interdisciplinary areas
- Establish an understanding on the variety of materials for diversified applications
- Exemplify the fabrication process for various kinds of biomaterials in the world
- Design and fabricate devices for unmet clinical needs.
- Demonstrate working knowledge of biological and biomedical systems

Last Date to apply – 29th July 2018
Program Duration –16th August 2018 to 15th November 2018
Coordinator – Prof. Arun Patil
arun_p@kletech.ac.in
+91 9620532297

Course : Biomaterials

1. Introduction: **02 Hours**

Background, defining key elements of biomaterials science, interdisciplinary nature of biomaterials science, defining biocompatibility and related concepts, implication of biomaterials science in human healthcare, relevance of biomaterials science to biomedical device development.

2.Types of Biomaterials: **03 Hours**

Generic classification of biomaterials, classification based on biocompatibility and host response (biodegradable polymer scaffolds, bioactive glasses and ceramics), classification based on generic material classes (metallic biomaterials, bioceramics, biopolymers, biocomposites), biocomposites with antimicrobial properties, biocomposites with better toughness properties, HA-Polymer composites with better mechanical properties.

3.Conventional and Advanced Manufacturing of Biomaterials: **04 Hours**

Conventional manufacturing of metallic biomaterials: casting, bulk deformation processes (rolling, forging, extrusion and drawing), metal joining processes (welding, brazing), machining processes, heat treatment; Processing of ceramics: steps involved in producing ceramic compact (ball milling), conventional sintering, microwave sintering, spark plasma sintering based consolidation of ceramics; Consolidation and shaping of polymers: compression molding, injection molding, extrusion; Patient-specific implant / scaffold fabrication using additive manufacturing; 3D powder printing, 3D plotting

4. Mechanical properties of Biomaterials: **04 Hours**

Conceptual understanding of stress and strain; stress strain response of metals under different loading; Difference in tensile stress-strain response among different materials; Deformation and strengthening of metals; Brittle fracture of ceramics; Mechanical properties of polymeric biomaterials; polymers; Practical guidelines for the measurement of mechanical properties: hardness, strength, fracture toughness, elastic modulus

5. Cell-Material interaction: **05 Hours**

Introduction; Biophysical processes involved in biocompatibility: cell-material interaction (protein adsorption isotherm), cell adhesion and morphological changes on biomaterials surfaces; Cell signalling mechanism: soluble signals, classification of signalling mechanism, quantitative aspects of cell signaling, intracellular signalling mechanism, intracellular signaling proteins; Eukaryotic cell fate processes: cell differentiation, cell migration, cell division, cell death; Qualitative and quantitative assessment of cell morphological changes: some fundamentals related to microscopic analysis, fluorescence microscopy; Host response: consequences of the host response to biomaterials (foreign body response)

6. Biocompatibility assessment: **08 Hours**

Probing cell response, *in vitro*: cytotoxicity assays, flow cytometry, differentiation assays for oestrogenic markers, cell culture laboratory-testing, safety and ethical issues (good laboratory practice, cell culture maintenance), ethical considerations (stem cell research – ethical considerations, ethical concerns of tissue-engineered constructs);

Bacterial growth and Biofilm formation: generic description of bacterial cell structure, classification of bacteria, bacteria-material interaction, bacteria growth, biofilm formation, experimental assessment of antibacterial properties, *in vitro*, experimental assessment to characterize biofilm, bacterial culture protocol;
Probing tissue response, *in vivo***:** tissue compatibility assessment, ethical and social issues; design of preclinical study with biomaterials.

Text Books :

1. Bikramjit Basu; Biomaterials Science and Tissue Engineering: Principles and Methods; Cambridge University Press; ISBN: 9781108415156; 2017.

2.Bikramjit Basu; Biomaterials for Musculoskeletal regeneration: concepts, Springer Nature; Singapore,2017[ISBN: 978-981-10-3058-1 (Print) 978-981-10-3059-8 (Online)]

3.Bikramjit Basu and Sourabh Ghosh; Biomaterials for Musculoskeletal regeneration: Applications; concepts, Springer Nature; Singapore; 2017 [ISBN: 978-981-10-3016-1 (Print) 978-981-10-3017-8 (Online)]

Reference Books:

1. Biomaterial Science: An introduction to materials in medicine by Buddy D. Ratner. Publisher: Academic Press, 2012.

2.Polymeric Biomaterials: Medicinal & Pharmaceutical Applications by Severian Dumitriu. Publisher: CRC Press, 2011.

Laboratory Experiments:

1. Compression molding of biopolymers.
2. Sintering of Bioceramics.
3. Additive manufacturing of implantable of biomaterials.
4. Mechanical characterization of polymeric biomaterial and determination of Young's modulus.
5. Evaluation of functional properties of biomaterials: *In vitro* approach.

Course Outcomes (COs):

At the end of the course the student should be able to:

1. **Apply** engineering and biology principles in interdisciplinary areas
2. **Establish** an understanding on the variety of materials for diversified applications
3. **Exemplify** the fabrication process for various kinds of biomaterials in the world
4. **Design** and fabricate devices for unmet clinical needs.
5. **Demonstrate** working knowledge of biological and biomedical systems.

Profile of Resource Person-1:



Bikramjit Basu, PhD, FNAE FNASc FWAST FBAO
(http://mrc.iisc.ernet.in/~bikram;
http://en.wikipedia.org/wiki/Bikramjit_Basu)

Bikramjit Basu is a Professor at the Materials Research Center and an Associate faculty at the Center for BioSystems Science & Engineering at Indian Institute of Science (IISc), Bangalore.

Bikramjit's early contributions in Engineering Ceramics exemplify his rationale and intelligent approaches to enhance the fracture resistance of structural ceramics through manipulation of microstructure at multiple length scales, while using spark plasma sintering (SPS) as superfast processing route. Using experimental and computational analysis, his research has demonstrated how to establish a critical window in process parameter-composition space to develop difficult-to-sinter non-oxide ceramics ($WC/TiB_2/ZrB_2$/SiAlON) with exceptional and reliable fracture toughness properties. In the area of Tribology, his fundamental contribution has been to develop science of microstructure-wear resistance relationship for a wide spectrum of ceramics/cermets in unlubricated/cryogenic environment as well as to establish an analytical framework for tribochemical and tribomechanical wear.

Bikramjit's current research integrates biomaterials and bioengineering approaches to address human healthcare issues. Employing quantitative experiments together with computational and pre-clinical studies, his laboratory has developed new multifunctional biomaterials ('Piezobiocomposites' with bone-mimicking functional properties), new processing approach (multi-stage SPS or 3D inkjet powder printing) and new concepts (intermittent delivery of electrical/magnetic stimulation, *in vitro)* to understand biophysical stimulation mediated modulation of cell functionality. His seminal findings include engineering of microstructure at multiple length scales to develop a broad range of biocomposites (HA-Ti, Sr-doped glass-ceramics, HA-$BaTiO_3$, HA-$CaTiO_3$) with reliable fracture resistance properties (better clinical acceptability) and uncompromised biocompatibility. His research group, in an approach strikingly different from biologists, adopted unique culture protocols to motivate human bone-marrow derived stem cells to change its functionality towards neural/muscle/cardiac-like cells on electroconductive biomaterials (polyaniline, carbon nanofibers), *in vitro*. His research demonstrated similar bioengineering strategy to promote bone formation, when stem cells are grown on magnetoactive biomaterials with weak magnetic field stimulation. Overall, his research provided an understanding for mechanisms of poorly appreciated synergistic interaction among external stimulation parameters and substrate properties towards differentiation of stem cells through a specific lineage. Together, Bikramjit's contributions have significant impact on development of new generation

biomaterials and bioengineering strategies to address clinically relevant problems for musculoskeletal, neural and cardiovascular diseases.

In his leadership roles, Bikramjit has successfully integrated and co-ordinated multi-institutional research programs on musculoskeletal and cardiovascular tissue engineering, which were funded by Indo-US Science and Technology forum (2008-2012) and UK-India Education & Research Initiative, UKIERI (2009-2012). His collaborative research with Brown University on developing PLGA-carbon nanofiber based cardiac patches has received media attention worldwide. Together with UK researchers, his group has established long term implant stability and osseointegration of a new generation of strontium-substituted glass ceramic implants for osteoporosis treatment. An ardent believer of 'Bedside to bench to bedside' concept, he is currently the principal investigator of the first translational Center of Excellence (CoE) on biomaterials for orthopaedic and dental applications with an interdisciplinary team of 50 researchers and companies. In collaboration with clinicians and NIT Rourkela researchers, his research group invented new manufacturing processes to fabricate ceramic femoral heads and polymer-ceramic hybrid acetabular sockets.

Bikramjit's international standing and impact on the field are illustrated by his prolific publication record (> 225 peer-reviewed research papers, including 27 in journals with high impact factor (>5.0), more than 20 invited review papers/book chapters) and citation record (total citation >6000, H-index: 41). He has authored four textbooks, including the first Indian textbook on musculoskeletal biomaterials. A critical citation analysis by Elsevier-Scopus has placed him as the topmost Biomaterial scientist of India, based on the publications during 2010-2015. In promoting Biomaterials research, he has been instrumental in initiating a new international conference series, BIND (Design of Biomaterials). He also organized 20 thematic sessions at major conferences organised by American Ceramic Society and Society for Biomaterials. He has delivered 50 Plenary/Keynote/Public lectures and 140 invited seminars in USA, UK, France, Germany, and Japan. He has been a research adviser to 17 PhD students and mentored 20 academic colleagues/clinicians.

Bikramjit's contributions in Engineering Science have been widely recognised. He is one of the youngest recipients from the Metallurgy/Materials Science community as well as the only Biomaterial Scientist in the complete history of India's most coveted science award, **Shanti Swarup Bhatnagar award** (2013**).** He is an elected Fellow of the Indian National Academy of Engineering (2015), West Bengal Academy of Science and Technology (2014), Society for Biomaterials and Artificial Organs (2014) and National Academy of Sciences, India (2013). In 2015, he received National Bioscience award for unique contributions in the frontier areas of biological sciences. He remains the only Indian from India to receive the prestigious 'Coble Award for Young Scholars' (2008) from the American Ceramic Society.

Bikramjit received his undergraduate degree (1995) from National Institute of Technology, Durgapur; postgraduate degree from IISc, Bangalore and a PhD (2001) from Katholieke Universiteit Leuven, Belgium, all in Metallurgy/Materials

Engineering. Following a brief post-doctoral stint at University of California, Santa Barbara; he joined Indian Institute of Technology (IIT) Kanpur in November 2001 as Assistant Professor and was promoted to full Professor (while on lien at IISc) in March, 2012 at IIT Kanpur, where he also served as Adjunct faculty during 2014-16. He moved to IISc in May, 2011. He is currently a distinguished honorary visiting professor at Indian Institute of Engineering Science and Technology, Shibpur, Howrah.

Profile of Resource Person-2:



Dr. Arun Y. Patil currently working as Assistant Professor in School of Mechanical Engineering, KLE Technological University, Hubballi, Karnataka. He has more than 13 years of research and industry experience worked in government and private sectors. He obtained Masters in Product Design and Manufacturing from National Institute of Engineering, Mysore and completed PhD from Visvesvaraya Technological University(VTU), Belagavi, Karnataka on Biomaterial and Simulation Study. He has published 06 Indian Patents and 56 International/National reputed peer reviewed journals and conferences. He has been nominated by NAFEMS as a core team member for System Modeling and Simulation Working Group (SMSWG) for world organisation. He is appointed as 'Elsevier Advisory Panel member' to co-create Elsevier tools, products and services from 3rd of Oct 2019. He has Certificate of Membership as 'Patent expert' of Institution's Innovation Council established under the aegis of MHRD's Innovation Cell at KLE Technological University, Hubballi from the academic year 2018-19. He is selected as Global Lecturer for Peer Learning Experience program using 3D Experience platform of Dassault System Pvt Ltd. He has received Six Sigma 'Green Belt Certification Award' from LG Electronics pvt. ltd. South Korea. His current research areas include Biomaterial, Bio-inspired product design, Bio-composite, Six Sigma, Finite Element Analysis, Failure analysis in design and Intellectual Property Rights(Patents). He is a reviewer for renowned journals such as Material Research Express(IOP Science), Journal of Engineering Research and Reports, Materials Today Proceedings(Elsevier) and AIP Proceedings

(AIP). Finalist for 'Young Scientist Award' under Dept. of Science and Technology(DST) Proposal, 2017, New Delhi.

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Minor Programs

Earlier known as

B. V. B. College of Engineering & Technology

Attendance Sheet

School/Department/Centre: **Mechanical Engineering**

Minor Programme: **Bioengineering**

Subject Name: **Biomaterials**

Subject Code: **M17EBEC301**

Faculty In charge: **Dr. Arun Y. Patil**

| Roll No | SRN | Student Name | Date of engagement | | |

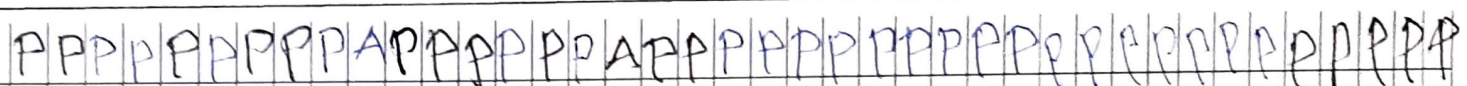
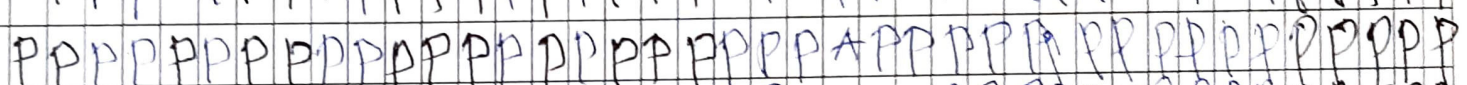
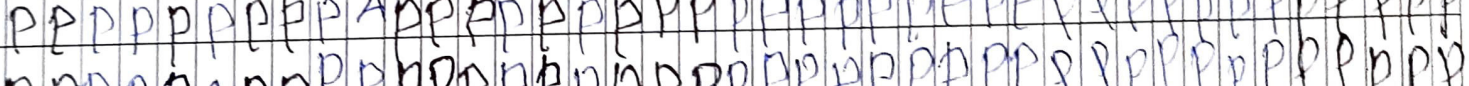
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KLE TECH.

Minor Programs

Earlier known as

B. V. B. College of Engineering & Technology

11	01FE16BBT023-M	MEETA M GAVADE	
12	01FE16BBT024-M	MEKHALA MURALIDHAR HUILGOL	
13	01FE16BBT025-M	MITHUN RATHOD	
14	01FE16BBT027-M	NAMRATA P DODDAWAD	
15	01FE16BBT029-M	NEHA V HEGDE	
16	01FE16BBT032-M	PUSHTI MAHESH DARBAR	
17	01FE16BBT043-M	SHAMEEN SULTANA	
18	01FE16BBT048-M	SNEHA V HEGDE	
19	01FE16BBT052-M	UMME FAZAL E HABIBA M RUDGI	
20	01FE16BBT053-M	VAIBHAVI PATIL	
21	01FE16BBT057-M	PRANAV GIRISH BANVI	
22	01FE16BME161-M	SAGAR PATIL	

Date: 21/10/2018



Faculty signature

Dr. Arun Y. Patil

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Certificate

This is to certify that

Mr./Miss. AISHWARYA BASAVARAJ MANTANVAR

has successfully completed the Value Addition Training Course on

Biomaterials

from **08-08-2018** *to* **20-10-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Certificate

This is to certify that

Mr./Miss. ANNAPOORNA S HEGDE

has successfully completed the Value Addition Training Course on

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Mr./Miss. ANURADHA KOTI

has successfully completed the Value Addition Training Course on

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This is to certify that

Mr./Miss. ARATI GANESH LOHAR

has successfully completed the Value Addition Training Course on

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Mr./Miss. BHAVIKA KUMARI

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This is to certify that

Mr./Miss. CHAITRA G SORATUR

has successfully completed the Value Addition Training Course on

Biomaterials

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Mr./Miss. DEEPALI V PATIL

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This is to certify that

Mr./Miss. DIKSHA SANJAY DESSAI

has successfully completed the Value Addition Training Course on

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This is to certify that

Mr./Miss. KEERTHI SAJJANAR

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This is to certify that

Mr./Miss. LOHAR MANJIRI SHANKAR

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Mr./Miss. MEKHALA MURALIDHAR HUILGOL

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This is to certify that

Mr./Miss. MITHUN RATHOD

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This is to certify that

Mr./Miss. NAMRATA P DODDAWAD

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Biomaterials

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This is to certify that

Mr./Miss. NEHA HEGDE

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Certificate

This is to certify that

Mr./Miss. PRANAV GIRISH BANVI

has successfully completed the Value Addition Training Course on

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. PUSHTI MAHESH DARBAR

has successfully completed the Value Addition Training Course on

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Mr./Miss. SAGAR PATIL

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Mr./Miss. SHAMEEN SULTANA

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Mr./Miss. SNEHA V HEGDE

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This is to certify that

Mr./Miss. UMME FAZAL E HABIBA M RUDGI

has successfully completed the Value Addition Training Course on

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This is to certify that

Mr./Miss. VAIBHAVI PATIL

has successfully completed the Value Addition Training Course on

Biomaterials

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Head of School

Controller of Examinations

Value Added Training

Course: Biomechanics & Control

(2018-19)

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Value Added Training (VAT)

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Course: Biomechanics & Control

Course Outcome

- Analyze biological systems behavior for applied force using Engineering Mechanics theory.
- Develop mathematical models for bio-medical systems and analyze the dynamic behavior of systems for different types of input.
- Analyze the effect of changing system parameters on system stability.

Last Date to apply – 24th December 2018
Program Duration –16th January 2019 to 15th March 2019
Coordinator – Prof. Rajshekhar S. Savadi
rajshekhar_s @kletech.ac.in
+91 9738942074

Course: Biomechanics and Controls

1. Statics and joint mechanics **02 Hours**

Force types, resolution and composition of forces, resultant of forces, Moments of force and couple, Equilibrium of forces and moments. Human joint forces (hip, knee and elbow)

2. Dynamics **02 Hours**

Human body links, Basic principles of linear motion, Angular motion in a plane. Newton's laws of motion. Dynamics of hip joint.

3. Mechanics of Solids **02 Hours**

Stress, axial load and normal stress, stress-strain diagram, torsion, pure bending of beam, moment of Inertia, stress concentration. Geometrical properties of human bone.

4. Tissue mechanics **03 Hours**

Mechanical properties of biological materials, Bone as composite materials, properties of cortical bone and cancellous bones. Viscoelasticity, dynamic behavior, soft tissue mechanics.

5. Cardiovascular and Respiratory mechanics **03 Hours**

Heart valves, Conduction system, cardiac cycle, cardiac output, design of valves, biological valves. Respiratory mechanics, Lung RC, characteristics of respirations

6. Human locomotion **03 Hours**

Gait analysis, variables measured in gait, motion analysis moment of inertia, kinematics, applications in prosthetics

7. Control Theory **02 Hours**

Division of the general control problem into open-loop control and feedback control. Centrality of sensors in implementation of feedback control. Feedback control as a technique to contend with uncertainties and ignorance. Examples of feedback control in nature: temperature control in mammals, blood sugar control, examples of feedback control in engineering disciplines.

Feedback control as a cross-disciplinary subject: examples to illustrate that the mathematical models are more important than physical appearance of systems to be controlled (for eg. velocity control of a DC motor, of a car etc…, have the same approximate mathematical model). Notion of "plant", "reference signal", "disturbance" etc…. The "regulation problem" and the "servomechanism problem". Illustration of these concepts by means of suitable bio-medical systems.

Common techniques for feedback control: ON-OFF control, proportional control, integral and derivative control, with qualitative description of the way they work. Examples of control of bio-medical systems illustrated via MATLAB simulations.

8. Modeling of controls **04 Hours**

LTI ODE. Motivation for modeling by picking an example of relevance to bio-medical engineering. Definition of system order. Solution to non-homogeneous LTI Ordinary differential equation (just the statement involving the convolution integral). Applying convolution to obtain the response of first order systems to impulse, step, ramp and sine inputs. Definition of time constant. Response of the specific bio-medical system chosen at the start of the class to appropriate inputs.

Motivation for modeling by picking an example of a second order under-damped system of relevance to bio-medical engineering. Response of 2nd order systems to impulse, step, sine and ramp inputs.

Definition of damped natural frequency, resonant frequency, damping factor, stiffness. Connection of these definitions to the parameters of the selected bio-medical system.

Laplace transforms. A tabulation of their properties. Laplace transforms of responses of bio-medical systems discussed earlier to practically relevant inputs.

Transfer functions. Transfer functions of bio-medical systems discussed in lectures 4 and 5. Poles, zeros of transfer functions and their significance. System type. Defining transfer functions in MATLAB. Simplifying control block-diagrams to obtain the overall transfer function of a feedback system.

Nyquist plots: Issues of closed-loop stability. Using MATLAB to plot Nyquist plots. Nyquist plots of plants discussed earlier

Verifying closed-loop stability using Nyquist plots. Mentions of Bode plots and root locus (not sure if these are appropriate). Use of Nyquist plots to check the stability of PID-based feedback systems for plants discussed in lectures 4 and 5.

9. Case Studies **03 Hours**

Two Case studies of feedback control applied in biomedical engineering

Reference Books:

1. Textbook of Biomechanics by Subrata Pal, Viva books publication
2. Modern Control Engineering, 5th edition by Katsuhiko Ogata - Pearson Edition
3. Automatic Control Systems in Biomedical Engineering by J. Fernández de Cañete, C. Galindo, J. Barbancho, A Luque Springer Publications

Course Outcomes(COs)

At the end of the course the student should be able to:

1. Analyze biological systems behavior for applied force using Engineering Mechanics theory.
2. Develop mathematical models for bio-medical systems and analyze the dynamic behavior of systems for different types of input.
3. Analyze the effect of changing system parameters on system stability.

Resource Person (s) and Biodata

Dr. G R Jayanth
(Associate Professor, IISc Bangalore)

Contact: jayanth@isu.iisc.ernet.in



Academic Background

Ph. D in Mechanical Engineering (The Ohio State University) (2008)
M.S in Mechanical Engineering (The Ohio State University) (2004)
B. Tech in Mechanical Engineering (IIT Madras) (2002)

Area of Interest:

Precision motion control, Nanometrology, Scanning Probe Microscopy,
Design and modeling of MEMS, Micromanipulation,
Instrumentation for real-world applications

Website link for more information

Dr. G. K. ANANTHASURESH
(Professor, IISc Bangalore)



Contact: suresh@iisc.ac.in

Academic and Industry Background:

- Post-doc Research Associate, Microsystems Technology Laboratories, Electrical Engineering and Computer Science Dept., Massachusetts Institute of Technology, Cambridge, MA, February 1995 – September 1996.
  Adviser: Prof. Stephen D. Senturia
- Ph.D., Mechanical Engineering, University of Michigan, Ann Arbor, MI, December, 1994.
  Thesis: A New Design Paradigm for Micro-Electro-Mechanical Systems and Investigations on Compliant Mechanism Synthesis.
  Adviser: Prof. Sridhar Kota
- M.S., Mechanical Engineering, University of Toledo, Toledo, Ohio, March 1991.
  Thesis: Geometry Based Analysis and Optimal Synthesis of the RSCR Spatial Mechanism.
  Adviser: Prof. Steven N. Kramer
- B.Tech., Mechanical Engineering, Indian Institute of Technology, Chennai (Madras), India, May 1989.
  Adviser: Prof. K. Lakshiminarayana (for the final-year project)

Area of Interest:

Compliant mechanisms, Kinematics, Design optimization
Microelectromechanical systems, Biomedical devices
Biomechanics, Inverse problems

Website link for more information

Rajashekhar Subhas Savadi
(Assistant Professor, KLE Technological University Hubballi)



Contact: rajshekhar_s@kletech.ac.in
Academic and Industry Background:

Assistant Professor (KLE Technological University Hubballi,2015-present)
Assistant Professor (BVBCET, Hubballi, 2013-15)
Software Developer (CAE Simulations Pvt Ltd, Bangalore, 2013)
M.Tech in Mechatronics (NITK Surathkal, 2012)
B.E. in Electronics and Communications (VTU, 2009)

Area of Interest:

MEMS
Control Systems
Bionic Design

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Time Table for the Academic year

FMTM 0208T/1.0

Semester: Minor Program

With effect from : 26/1/2019

DAY/TIME	8.00 to 9.00am	9.00 to 10.00am		10.15 to 11.15am	11.15 to 12.15pm		12.30 to 1.30pm	1.30 to 2.30pm		2.45 to 3.45pm	3.45 to 4.45pm	4.45 to 5.45
Monday												
Tuesday												
Wednesday												Biomechanics and Controls
Thursday												
Friday												
Saturday				Biomechanics and Controls								

Date : 21/1/2019

Prepared by: V N Sanagoudar

School Head

HEAD
School of Mechanical Engineering
KLE Technological University, HUBBALLI

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Minor Programs

Earlier known as

B. V. B. College of Engineering & Technology

Attendance Sheet

School/Department/Centre: **Mechanical Engineering**

Minor Programme: **Bioengineering**

Subject Name: Biomechanics & Control

Subject Code: M17EBEC302

Faculty In charge: Rajashekhar S. Savadi

Roll No	SRN	Student Name	Date of engagement											
			26/1/19	26/1	30/1	30/1	2/2	2/2	5/2	5/2	6/2	6/2	12/2	12/2
1	01FE16BBT004-M	AISHWARYA BASAVARAJ MANTANVAR	P	P	P	P	P	P	A	A	P	P	A	A
2	01FE16BBT006-M	ANNAPOORNA S HEGDE	P	P	P	P	A	A	A	A	P	P	P	P
3	01FE16BBT007-M	ANURADHA KOTI	P	P	P	P	P	P	P	P	P	P	P	P
4	01FE16BBT009-M	ARATI GANESH LOHAR	P	P	P	P	A	A	P	P	P	P	P	P
5	01FE16BBT013-M	BHAVIKA KUMARI	P	P	P	P	P	P	A	A	P	P	P	P
6	01FE16BBT015-M	Chaitra G Soratur	P	P	P	P	P	P	A	A	P	P	P	P
7	01FE16BBT017-M	DEEPALI V PATIL	P	P	P	P	P	P	A	A	P	P	P	P
8	01FE16BBT018-M	DIKSHA SANJAY DESSAI	P	P	P	P	A	A	P	P	P	P	P	P
9	01FE16BBT020-M	KEERTHI SAJJANAR	P	P	P	P	P	P	A	A	P	P	P	P
10	01FE16BBT021-M	LOHAR MANJIRI SHANKAR	P	P	P	P	A	A	P	P	P	P	A	A
11	01FE16BBT023-M	MEETA M GAVADE	P	P	P	P	P	P	P	P	P	P	P	P
12	01FE16BBT024-M	MEKHALA MURALIDHAR HUILGOL	P	P	P	P	P	P	A	A	P	P	P	P

KLE Technological University

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KLE TECH.

Minor Programs

Earlier known as

B. V. B. College of Engineering & Technology

13	01FE16BBT025-M	MITHUN RATHOD	P	P	P	P	P	P	A	A	A	P	P	P
14	01FE16BBT027-M	NAMRATA P DODDAWAD	P	P	P	P	P	P	A	A	A	P	P	P
15	01FE16BBT029-M	NEHA V HEGDE	P	P	P	P	A	A	A	A	A	P	P	P
16	01FE16BBT032-M	PUSHTI MAHESH DARBAR	P	P	P	P	A	A	P	P	P	P	P	P
17	01FE16BBT043-M	SHAMEEN SULTANA	P	P	P	P	P	P	A	A	A	P	P	P
18	01FE16BBT048-M	SNEHA V HEGDE	P	P	P	P	A	A	A	A	A	P	P	P
19	01FE16BBT052-M	UMME FAZAL E HABIBA M RUDGI	P	P	P	P	P	P	P	P	P	P	P	A
20	01FE16BBT053-M	VAIBHAVI PATIL	P	P	P	P	P	P	P	P	P	P	P	P
21	01FE16BBT057-M	PRANAV GIRISH BANVI	P	P	P	P	A	A	A	A	A	P	P	A
22	01FE16BME161-M	SAGAR PATIL	P	P	P	P	P	P	A	A	A	P	P	A

Date: 22/4/19

Faculty signature 22/4/19

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Attendance Sheet

School/Department/Centre: **Mechanical Engineering**

Minor Programme: **Bioengineering**

Subject Name: Biomechanics & Control

Subject Code: MITEBEC302

Faculty In charge: Rajashekhar S. Lavadi

Roll No	SRN	Student Name	Date of engagement											
			13/2	13/2	19/2	19/2	20/2	2/3	3/3	9/3	10/3	10/3	24/3	20/3
1	01FE16BBT004-M	AISHWARYA BASAVARAJ MANTANVAR	P	P	P	P	P	P	P	P	P	P	P	P
2	01FE16BBT006-M	ANNAPOORNA S HEGDE	A	A	A	A	A	P	A	P	P	P	A	A
3	01FE16BBT007-M	ANURADHA KOTI	P	P	P	P	P	P	A	P	P	P	P	P
4	01FE16BBT009-M	ARATI GANESH LOHAR	A	A	A	A	P	P	A	P	P	P	A	A
5	01FE16BBT013-M	BHAVIKA KUMARI	A	A	A	A	P	P	A	P	P	P	A	A
6	01FE16BBT015-M	Chaitra G Soratur	A	A	A	A	P	P	A	P	P	P	P	P
7	01FE16BBT017-M	DEEPALI V PATIL	P	P	P	P	P	P	P	P	P	P	P	P
8	01FE16BBT018-M	DIKSHA SANJAY DESSAI	P	P	P	P	P	P	A	P	P	P	A	A
9	01FE16BBT020-M	KEERTHI SAJJANAR	P	P	P	P	A	P	P	P	P	P	P	P
10	01FE16BBT021-M	LOHAR MANJIRI SHANKAR	A	A	A	A	P	P	A	P	P	P	P	P
11	01FE16BBT023-M	MEETA M GAVADE	P	P	P	P	P	P	P	P	P	P	P	P
12	01FE16BBT024-M	MEKHALA MURALIDHAR HUILGOL	P	P	P	P	P	P	A	P	P	P	P	P

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13	01FE16BBT025-M	MITHUN RATHOD	P	P	P	P	P	P	A	P	P	P	P	P
14	01FE16BBT027-M	NAMRATA P DODDAWAD	P	P	P	P	P	P	A	P	P	P	P	P
15	01FE16BBT029-M	NEHA V HEGDE	A	A	A	A	P	P	A	P	P	P	A	A
16	01FE16BBT032-M	PUSHTI MAHESH DARBAR	A	A	A	A	P	P	A	P	P	P	P	P
17	01FE16BBT043-M	SHAMEEN SULTANA	A	A	A	A	A	P	A	P	P	P	P	P
18	01FE16BBT048-M	SNEHA V HEGDE	A	A	A	A	P	P	A	P	P	P	A	A
19	01FE16BBT052-M	UMME FAZAL E HABIBA M RUDGI	A	A	A	A	A	P	P	P	P	P	P	P
20	01FE16BBT053-M	VAIBHAVI PATIL	P	P	P	P	P	P	P	P	P	P	P	P
21	01FE16BBT057-M	PRANAV GIRISH BANVI	A	A	A	A	P	P	A	P	P	P	P	P
22	01FE16BME161-M	SAGAR PATIL	A	A	A	A	A	P	P	P	P	P	P	P

Date: 22/4/19

22/4/19

Faculty signature

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. AISHWARYA BASAVARAJ MANTANVAR

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

Controller of Examinations

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Certificate

This is to certify that

Mr./Miss. ANNAPOORNA S HEGDE

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

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Controller of Examinations

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This is to certify that

Mr./Miss. ANURADHA KOTI

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Biomechanics & Control

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This is to certify that

Mr./Miss. ARATI GANESH LOHAR

has successfully completed the Value Addition Training Course on

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Mr./Miss. **BHAVIKA KUMARI**

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Course Instructor

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This is to certify that

Mr./Miss. CHAITRA G SORATUR

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

Head of School

Controller of Examinations

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This is to certify that

Mr./Miss. **DEEPALI V PATIL**

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

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Mr./Miss. **DIKSHA SANJAY DESSAI**

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Mr./Miss. LOHAR MANJIRI SHANKAR

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Mr./Miss. MEETA M GAVADE

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This is to certify that

Mr./Miss. MEKHALA MURALIDHAR HUILGOL

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This is to certify that

Mr./Miss. MITHUN RATHOD

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

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Certificate

This is to certify that

Mr./Miss. NAMRATA P DODDAWAD

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

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This is to certify that

Mr./Miss. NEHA HEGDE

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

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This is to certify that

Mr./Miss. PRANAV GIRISH BANVI

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. PUSHTI MAHESH DARBAR

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Certificate

This is to certify that

Mr./Miss. SAGAR PATIL

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **SHAMEEN SULTANA**

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SNEHA V HEGDE

has successfully completed the Value Addition Training Course on

Biomechanics & Control

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Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. UMME FAZAL E HABIBA M RUDGI

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

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KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VAIBHAVI PATIL

has successfully completed the Value Addition Training Course on

Biomechanics & Control

from **26-01-2019** *to* **20-03-2019**

Course Instructor

Head of School

Controller of Examinations

KLE Technological University
Creating Value
Leveraging Knowledge

Value Added Training (VAT)

KLE Ctie
Center for Technology Innovation & Entrepreneurship

Innovation Tools and Methods

Course Outcome

- Write a well-articulated need and problem statement
- Identify and develop novel innovative solution
- Analyse competing products/solutions
- Create user journey maps for the problem
- Outline uniqueness of the solution proposed



Last Date to apply – 29th June 2018
Program Duration – July 2018 to Oct 2018
Coordinator – Ms. Soumya Kudagi
soumya.kudagi@kletech.ac.in
+91 98867 07196

CENTER FOR TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP

VALUE ADDED TRAINING

Innovation Tools and Methods

The teams need to choose the appropriate tool to ideate possible solutions to the defined problem. They need to carry out the competitor analysis and sketch out the user journey map, depicting user engagement in the solution designed, and fill gaps if need be. They need to show a very early-stage prototype of the solution designed either using a sketch, something from cardboard, using some models. This helps them to get first-hand review on their product look and feel.

It will cover:

- Innovations Tools & Methods – TRIZ, Systematic Inventive Thinking (SIT), Scamper, Forced Association, Biomimicry and Frugal Innovation, More from Less for More (MLM), Disruptive Innovation, User Innovation, Open Innovation
- Systematic Innovation – A step by step process, to define every detail of the problem to be addressed. Understand conflicts arising in the process and solve them.
- User Journey Maps – A map showing how a user would interact with the product/service. A detail of every interaction the user would do with the system and immediate stages preceding/following it.
- Competitor Analysis – Analysis of how the defined problem is solved currently by the competitors as well as customers. If there are already existing product/solution to address the problem, then how effective these solutions are.
- Product/Software Design Specifications – A thought on what should be present in the solution we wish to design. If it is product based, then a specification of the product in totality. If it is service based, then define each UI the customer would interact with, and how the system is being established at the backend. Team must also list the USP of their product as compared to their competitors.

After successful completion of this course students should be able to

- Write a well-articulated need and problem statement, L3
- Identify and develop novel innovative solution, L5
- Analyse competing products/solutions, L4
- Create user journey maps for the problem, L5
- Outline uniqueness of the solution proposed, L4

Syllabus

- Innovation Tools – TRIZ, Systematic Inventive Thinking (SIT), Scamper, Forced Association, Biomimicry

The mode of delivery would be through a workshop, for a total engagement of 18hrs. The workshop is aimed at giving students an exposure to innovation tools which can be used on the defined problem statements.

  - Choose the relevant tool for the defined problem statement, L4
  - Resolve conflicts arising in business, L4

- Innovations Methods – Frugal Innovation, More from Less for More (MLM), Disruptive Innovation, User Innovation, Open Innovation.

  The mode of delivery would be through a workshop, for a total engagement of 8hrs. The workshop helps students with choosing an appropriate method to apply in order to address the problem statement in a unique way

  - Analyse the methods to innovate better. L4
- The students to work on user journey map, competitor analysis, specifications of their product/services. These sessions will be on continuous basis during their summer semester, with a total of 14hr engagement.

Grading

Sl No	Particulars	Marks
1	Attendance & Class Participation	10
2	Ability to perform in a Team	10
3	Growth in Learning Curve	10
4	Class Activity	10
5	Assignments	10
6	Report and Presentations	50
	Total	**100**

The students are continuously graded on their performance in workshop and discussions post workshops. There is no term end examination for the course.

Attendance & Class Participation

Since this course is majorly run during the summer vacations between two semesters, few students make it, and few miss it. It is important to exclusively evaluate students on attendance part, as it creates a seriousness in them to take the sessions more positively and deliver.

Participation in class room by a student either by asking relevant questions, answering other's questions, sharing an observation or an experience, peer learning through effectively contributing to reviews, is evaluated continuously.

Ability to perform in Team

The students have chosen the teams to work with. However, engagement of every student in the team is what needs to be measured. This is evident during the interaction with members of team and the teams overall performance.

Growth in Learning Curve

As we are progressing further up in the entrepreneurial journey, and the students are now working in their respective teams. It is important to evaluate the knowledge of every student by continuous interaction and provide them with feedback to perform better.

Class Activity

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

Assignments

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

Report and Presentations

The final report must consist of a well-articulated need, the problem statement, how big is the market, the competitor analysis, a potential innovative solution, and how is it unique, how is this solution different from competitors offer, a very early stage prototype of the solution, may be a sketch, something from card board, just a visual depiction of how the product would look like. The teams make presentations intermittently during the course to peer and faculty in charge and one final presentation at the end of the course to the panel.

Profile of Dr. Aravind Chinchure

http://www.aravindchinchure.com



Dr. Chinchure is an Innovation Professor & Coach, Growth Strategist, IP Specialist.

He has worked with many global innovation thought leaders and Nobel laureates on projects of national and regional significance. He credits these associations for shaping his perceptions and expertise around results-driven innovations. He was part of Indian and global research organizations, and large multinational and Indian companies in diverse technology areas, driving innovation in technology as well as leading intellectual property-driven assets creation at workplaces.

He is credited with designing and implementing India's first two-year residential and experiential MBA course on Innovation and Entrepreneurship, at Symbiosis Institute of Business Management (SIBM), Pune. Currently, Dr. Chinchure is the Chair Professor of Innovation and Entrepreneurship at the Symbiosis International University, Pune, India.

He received the *Innovation Excellence Award* from Indira International for his contributions towards spreading awareness on innovation across India.

Dr. Chinchure has worked with multinationals, large Indian companies, and startups by formulating organic and inorganic strategies for their growth. This includes helping businesses tap growth opportunities through investments, joint ventures and partnerships to succeed in new and prevalent markets.

Dr. Chinchure is known as an IP specialist and guides organizations across the spectrum to support their IP needs, implement IP strategies and train employees on areas such as IP search and analysis.

Dr. Chinchure is on the board of many non-profit organizations, and advisor to over a dozen companies in sectors across technology, business incubation, social entrepreneurship, digital marketing and consultancy.

Dr. Chinchure has played key roles in many large Indian and multinational corporations, leading critical projects related to innovation, intellectual property as well as developing cutting edge technology.

Dr. Chinchure authored 28 research articles published in international journals in the area of condensed matter physics, and has filed four patents as lead and co-inventor in different geographies including US, Europe, Japan in the area of fuel cells.

Dr. Bala Ramadurai



Dr. Bala Ramadurai is an author, coach, consultant and professor. He has authored a book on Design Thinking called Karmic Design Thinking (https://dt.balaramadurai.net). He has 3 patents to his credit and 10+ publications in international research journals. He co-founded TRIZ Innovation India (https://trizindia.org) and is an Adjunct Professor at Symbiosis Institute of Business Management, India (https://www.sibmpune.edu.in). He currently mentors an EdTech enterprise called Knoin Electronics (https://knoin.org) He is a professor at National Programme on Technology Enhanced Learning (https://NPTEL.ac.in).

Education

He has a PhD from Arizona State University, USA, and a B.Tech from IIT Madras, India.

Industrial Experience

He was a Technology Forecasting researcher and designer in the FORMAT project at Politecnico di Milano, Milan, Italy. He managed and designed the handbook for the technology forecasting methodology. (http://handbook.format-project.eu)

Bala was a systematic innovation facilitator at MindTree Ltd (https://www.mindtree.com), India, where he designed and crafted 5*50, a key innovation intrapreneurship program.

Prior to MindTree, he was a Research Scientist at General Electric Global Research, India.

He has mentored students in an entrepreneurship course facilitated by Carnegie Mellon University, USA, and has been cited as an expert in innovation and creativity by Harvard Business Review. (https://hbr.org/product/Mindtree--A-Community-of-/an/311049-PDF-ENG)

Teaching Experience

His teaching experience includes creative problem solving courses at IIT Madras, IIT Gandhinagar, IIT Hyderabad, Symbiosis and IISc Bangalore.

Soumya Kudagi

Mobile: +91 ~ 9886707196

E Mail: soumya.kudagi@gmail.com

To convert problem into opportunities

Précis

- 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

- 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%

				2hrs	2hrs	2hrs	2hrs	2hrs	2hrs	2hrs
SL No	**Name**	**USN**	**Department**	23-07-2018	24-07-2018	25-07-2018	26-07-2018	27-07-2018	28-07-2018	15-08-2018
1	KANAVI PUNIT Y	01FE17BME418	ME	A	A	A	A	A	A	A
2	PRAJHOT R NAIK	01FE16BME121	ME	P	P	P	P	P	A	P
3	HARISH A VERNEKAR	01FE16BME056	ME	P	P	A	A	A	P	P
4	JUSTIN AUGISTINE PINHEIRO	01FE16BME062	ME	P	P	A	A	A	P	P
5	SURAJ REDDY	01FE16BME207	ME	P	P	A	P	A	P	P
6	SAMARTH TIKARE	01FE16BAR036	A&R	P	P	P	P	A	P	P
7	RAJAT MEHTA	01FE16BEE076	EE	P	P	P	P	P	A	P
8	SHYAM SUNDAR AGARWAL	01FE16BCS197	CS	A	P	P	P	P	P	A
9	SWATI BASAVARAJ D	01FE16BEC195	CS	A	P	P	P	P	P	P
10	PRIYANKA NABAPURE	01FE16BCS243	CS	P	P	P	P	P	P	P
11	NISHANTH B S	01FE16BME110	ME	P	P	A	P	P	P	A
12	MEGHA KOUJAGERI	01FE16BCS241	CS	P	P	P	P	A	P	P
13	KAJAL JAIN	01FE16BCS087	CS	P	P	P	P	P	P	P
14	GREESHMA KATARKI	01FE16BCS072	CS	P	P	P	P	A	A	P
15	NAMITA RAYANGOUDAR	01FE16BCS112	CS	P	P	P	P	A	P	P
16	MANJUNATH H M	01FE17BEC418	EC	A	P	P	P	P	P	P
17	ATHEETH A NAIK	01FE16BEC044	EC	A	P	P	P	P	P	P
18	AKANKHSA PATIL	01FE16BEC003	EC	A	A	A	A	A	A	A
19	ANANNYA HANJI	01FE16BCS030	CS	A	P	P	P	A	P	P
20	NEETU DESHPANDE	01FE16BEE057	EE	A	A	A	A	A	A	A
21	KIRTHI KAMATH	01FE16BEE039	EE	A	A	A	A	A	A	A

2hrs	2hrs	8hrs	8hrs	2hrs
16-08-2018	17-08-2018	05-09-2018	24-09-2018	16-10-2018
A	A	A	A	A
P	P	P	P	A
P	P	P	P	A
P	P	P	P	P
P	P	P	P	A
P	P	P	P	P
P	P	P	P	P
A	P	P	P	P
P	P	P	P	P
P	P	P	P	A
P	P	P	P	P
P	A	P	P	P
A	A	P	P	P
P	P	P	P	P
A	P	P	P	A
P	P	A	P	P
P	A	P	P	P
A	A	A	A	A
P	P	P	P	P
P	A	A	A	A
P	A	A	A	A

KLE TECH

KLE Technological University

Creating Value
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Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. ANANNYA HANJI

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. ATHEETH A NAIK

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. GREESHMA KATARKI

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. HARISH A VERNEKAR

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. JUSTIN AUGISTINE PINHEIRO

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. KAJAL JAIN

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. MANJUNATH H M

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Creating Value
Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. MEGHA KOUJAGERI

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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Leveraging Knowledge

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This is to certify that

Mr./Miss. NAMITA RAYANGOUDAR

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. NISHANTH B S

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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Mr./Miss. PRAJHOT R NAIK

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

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This is to certify that

Mr./Miss. PRIYANKA NABAPURE

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

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Controller of Examinations

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This is to certify that

Mr./Miss. RAJAT MEHTA

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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KLE Technological University

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. SAMARTH TIKARE

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. SHYAMSUNDAR AGARWAL

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

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KLE Technological University

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Leveraging Knowledge

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Certificate

This is to certify that

Mr./Miss. Suraj Vishwanath Reddy

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

KLE TECH

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Leveraging Knowledge

Centre for Technology Innovation & Entrepreneurship (CTIE)

Certificate

This is to certify that

Mr./Miss. SWATHI BASAVARAJ D

has successfully completed the Value Addition Training Course on

Innovation Tools and Methods

from 01-07-2018 *to* 31-10-2018

Course Instructor

Director - CTIE

Controller of Examinations

Value Added Training Program for *Product Development and Realization*

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KLE Technological Univesity, Hubli

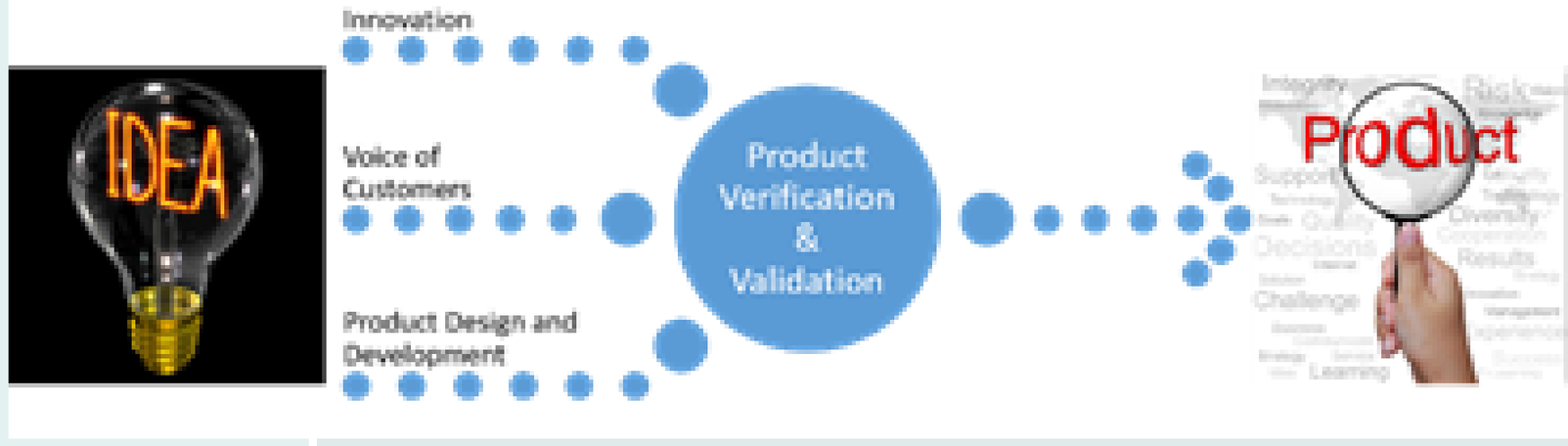
Center for Innovation and Product Development (CIPD)

School of Mechanical Engineeri

M16EPDC302, Summer VI

Jan 2019

3 Credits



Course Highlights:

Product Development Process
Part manufacturing processes, Design and functional review methods, Assembly process and virtual builds, Quality goals and control plans

Product Verification and Validation
Load goals and duty cycle definition, Reliability and durability goals, Virtual prototyping techniques, Accelerated product verification methods

Product family management
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.

Technology management
Technology management methods, Technology as a competitive tool, Critical Component Development Process, Technology Development 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: Dec 27, 2018
- Notification for Selected Students: Jan 04, 2019
- Registration Date: Jan 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
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 VI

Curriculum Content

Course Code: M16EPDC302	Course Title: Product Development and Realization	
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
Product Development Process Part manufacturing processes, Design and functional review methods, Assembly process and virtual builds, Quality goals and control plans	4 hours
Product Verification and Validation Load goals and duty cycle definition, Reliability and durability goals, Virtual prototyping techniques, Accelerated product verification methods	4 hours
Product family management 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
Technology management Technology management methods, Technology as a competitive tool, Critical Component Development Process, Technology Development Process	2 hours

References

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
John Deere Harvester Works, Silvis, IL, USA – Senior Engineer – '00 – '05
John Deere Technology Center, Pune, India - Head, Engineering '05 – '08
John Deere India – Head, Business Development and strategic planning '08 – '09
John Deere India – Head, Harvesters and Crop Solutions Business Unit '09 – '10
John Deere India – Head, India Program Management (NPI) '10 – 'Sept. 12
John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. '12 – April '16
KLE Technological University – Director – Center for Innovation and Product Development – Aug. '16 – till date

Key achievements:

TRW – Vehicle Safety Systems Washington, MI – Senior Consultant – '95 – '00

Simulation of seat belt and airbag systems using Finite Element software tools
Filed two vehicle safety related patents

John Deere Harvester Works, Silvis, IL – Senior Engineer – '00 – '05

Developed vehicle level design analysis methods for combine harvesters;
Introduced robust optimization methods for cost reduction and value improvement
Developed business proposal for John Deere's Technology Center India.

John Deere Technology Center, Pune, India - Head, Engineering '05 – '08

Lead the project team which developed plan and implemented the facility and operational unit for John Deere's Technology center in India.
Developed project management tools and standards for engineering work to provide engineering services to JD units worldwide from the John Deere's Technology Center India.
Deployment leader for Six sigma and Value Improvement for JDTCI
Championed ISO 9001 – 2000 implementation for JDTCI

John Deere India – Head, Business Development and strategic planning ’08 – ’09

John Deere India – Head, Harvesters and Crop Solutions Business Unit ’09 – ‘10

Responsible for developing the business plan and to establish a new organization (Crop Solutions) to introduce complete mechanization solutions to farmers in India. A plan was developed to integrate all value chain stakeholders to successfully introduce planting, crop care and harvesting and residue management equipment in India.

John Deere India – Head, India Program Management (NPI) ’10 – ‘Sept. 12

Responsible for providing program management support for multiple platforms and works closely with product line Program Managers.

Implementation and Execution of CCDP/TDP programs and Value Engineering and Value Improvement projects for JD Pune Works.

Established Program Management Office in India to ensure standard practices and support to be deployed to all programs in India.

John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. ’12 – March ‘16

Responsibility for Operations and P&L of three units manufacturing Harvesters, Water equipment and Electronic systems.

Ownership of John Deere’s New Crop Harvesting, Crop Care Product Programs and manufacturing strategy in India

KLE Technological University – Director – Center for Innovation and Product Development – Aug. ’16 – till date

Established a green field center within KLE Tech. University to develop products with social impact.

Introduced Minor degree program in Innovation and Product development.

Licensed one bio-mass processing product to a manufacturing partner for commercialization.

Two patents has been filed and approved.

KLE Technological University
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Value Added Training -7th sem odd

2018-19

Product Design and Development- 7th sem odd

Attendence list

Sl no	Name	DEPT	ID	C1	C2	T1	C3	C4	T2	C5	C6	T3	C7	C8	T4	C9	C10	T5	C11	C12	T6	C14	T7	C15	C16	T8	C17	C18	T9	C19	C20	T10	C21	C22	T11	C23	C24	# Abs	% PRESENT
1	MADAN S YARGATTI	A&R	01FE17BAR403	p	p	p	p	p	a	p	P	P	P	P	P	p	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
2	SIREESH RS MATHAD	A&R	01FE17BAR409	a	p	a	p	p	p	p	P	P	P	P	P	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
3	SHAMANTH G BIDARI	Mech	01FE16BME174	a	a	a	p	p	p	p	P	P	P	P	P	p	P	p	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
4	BORKAR.TEJAS PRASAD	E&E	01FE16BEE025	p	p	p	p	p	p	p	P	P	p	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
5	K.ABHISHEK	A&R	01FE17BAR402	p	p	p	a	p	p	a	P	P	p	p	p	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
6	NAYAN R SHIROLKAR	E&C	01FE17BEC423	p	p	p	p	p	p	a	P	P	p	p	a	a	P	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	5	85%
7	SUJAY RODDAM	A&R	01FE16BAR047	p	p	p	p	p	p	p	P	P	p	p	p	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	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
Product Development and Realization	M16EPDC302	SATURDAY	1st floor Athena Bldg	12:30:00

KLE TECH

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. K ABHISHEK

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. MADAN

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SAGAR

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SANKET

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. Shamanth

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SIREESH

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

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Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. Tejas Borkar

has successfully completed the Value Addition Training Course on

Product Development and Realization

from 1/7/2019 *to* 10/8/2019

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Advanced CNC Manufacturing

(2019-20)

KLE Technological University
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Value Added Training (VAT)

Experience Engineering @
School of Mechanical Engineering KLETECH
Engage | Explore | Excel | Evolve

Advanced Manufacturing Technology for Aerospace Applications – Advanced CNC Manufacturing

Course Outcome

- Understand basics of CNC lathes/VMC.
- To learn G & M codes for CNC programming.
- Develop process plan for manufacturing on CNC lathes and CNC milling.
- Develop how to machine a component using optimum parameters of tools.
- Write the programme in G and M codes for a given application.

Last Date to apply – 30th May 2019
Program Duration – June 2019 to July 2019
Coordinator – Mr U P Hosmani
uphosmani@kletech.ac.in
+91 9448108794

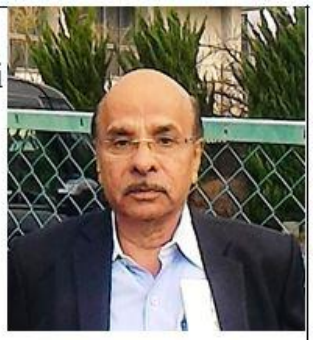
Advanced CNC Manufacturing: M17EASC301

Details	No of hrs.
Basics of CNC lathes and VMC-nomenclature, construction of 2 axes ,Basics of programming –G and M codes Programming using Canned cycles –G70,G71,G74,G75.G76.	2
Simple part programme on turning	2
Examples on CNC lathe programmes using Canned cycles.	2
Basics of VMC-axes nomenclature, construction of 3 axes VMC, basics of programming –G and M codes	2
Explanation of G and M codes in VMC	2
Tool nose radius compensation –G41,G42 &G40	1
Cutter radius compensation G41,G42 &G40	1
Simple part programme on milling	1
Explanation of VMC tool holders, thru tool coolant,	1
Further examples on Milling programmes using software.	8
Use of software to machine pocket milling, Drilling and tapping.	2
Total	24

Course Outcome

- Understand basics of CNC lathes/VMC.
- To learn G & M codes for CNC programming.
- Develop process plan for manufacturing on CNC lathes and CNC milling.
- Develop how to machine a component using optimum parameters of tools.
- Write the programme in G and M codes for a given application.

Resource Person (s) and Biodata



Mr. U. P. Hosmani
Associate Professor, KLE Technological University, Hubballi
Contact: uphosmani@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(BVB college of Engineering and Technology,
Hubballi - 580031 (1973)

Area of Interest:
Manufacturing
Design of Machine Tools
Hydraulics and Pneumatics
Experience-30 years of industrial experience in design and manufacturing of
machine tools.



Mr. Mantesh C. Choukimath
Assistant Professor,
K L E Technological University, Hubballi
Contact: mantesh@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(GSS Institute of Technology, Bangalore - 560060) (2009)
M. Tech in Manufacturing Science and Engineering
(M S Ramaiah Institute of Technology, Bangalore - 560054) (2011)

Area of Interest:
Manufacturing
Material Science - Composite Materials
Hydraulics and Pneumatics

Mr. Gurupadayya M. Hiremath
Assistant Professor,
K L E Technological University ,Hubballi
Contact: gurupadayya@kletech.ac.in



Academic Background

B.E in Mechanical Engineering
(SDMCET, Dharwad) (2009)
M. Tech in Computer Integrated Manufacturing
(S Ramaiah Institute of Technology, Bangalore - 560054) (2014)

Area of Interest:

CAD
Manufacturing
Metrology

TIME TABLE

Minor Programme in Advanced manufacturing for aerospace applications			
Induction & Training program			
TIME / DATE	10am to 1pm	1pm to 2pm	2pm to 5pm
6/10/2019	Inaugration and Introduction to Course		Demonstration of CNC Operations
6/11/2019	Basics of CNC lathes and VMC-nomenclature, construction of 2 axes ,Basics of programming –G and M codes		Programming using Canned cycles –G70,G71,G74,G75.G76. Simple part programme on turning
6/12/2019	Examples on CNC lathe programmes using Canned cycles.		Basics of VMC-axes nomenclature, construction of 3 axes VMC, basics of programming –G and M codes
6/13/2019	Explanation of G and M codes in VMC		Tool nose radius compensation –G41,G42 &G40
6/14/2019	Cutter radius compensation G41,G42 &G40 Simple part programme on milling		Explanation of VMC tool holders, thru tool coolant, Use of software to machine pocket milling, Drilling and tapping. Further examples on Milling programmes using software.

Attendance - Advanced CNC Manufacturing

Sl. No	Name	USN No	6/10/2019	6/11/2019	6/12/2019	6/13/2019	6/14/2019
1	Adarsh A Sadarjoshi	01FE16BME010	p	P	P	P	P
2	Adarsh M Amargol	01FE16BME011	p	P	P	P	P
3	Anish Desphande	01FE16BME026	p	P	P	P	P
4	Akshay Gadekar	01FE16BME020	p	P	P	P	P
5	Amir Munshi	01FE16BME021	p	P	P	P	P
6	Nikhil Anvekar	01FE16BME101	p	P	P	P	P
7	Rajat Kotagi	01FE16BME146	p	P	P	P	P
8	Shashank Shanbhag	01FE16BME178	p	P	P	P	A
9	Shreyas Patil	01FE16BME188	p	P	P	P	P
10	Swaroop Nandi	01FE16BME209	p	P	P	P	P
11	Tejas Lengade	01FE16BME211	p	P	P	P	P
12	Hrishikesh U	01FE16BME214	p	P	P	P	P
13	Vaibhav Divanaji	01FE16BME215	p	P	P	P	P
14	Varadaraj Tigadikar	01FE16BME217	A	P	P	P	P
15	Vinayak S Naik	01FE16BME223	p	P	P	P	P
16	Vishal Solanki	01FE16BME227	p	P	P	P	P
17	Yashwant Patil	01FE16BME231	p	P	P	P	P
18	Samiulla Mujawar	01FE16BME236	p	P	P	P	P
19	Sanketh.K	01FE16BME237	p	P	P	P	P
20	Tejashwini Sapare	01FE16BME240	p	P	P	P	P
21	Sathyam Naik	01FE16BME241	p	P	A	P	P
22	Adeep A Konnur	01FE17BME404	p	P	P	A	P
23	Karthik Hallakatti	01FE17BME420	p	P	P	P	P

Coordinator: U. P Hosmani

Head of the Department

HEAD
School of Mechanical Engineering
KLE Technological University, HUBBALLI-31.

CERTIFICATES



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This is to certify that

Mr./Miss. ADARSH A SADARJOSHI

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 to July 2019

Course Instructor | Head of School | Controller of Examinations



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Mr./Miss. ADARSH AMARGOL

has successfully completed the Value Addition Training Course on

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from June 2019 to July 2019

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This is to certify that

Mr./Miss. ADEEP A KONNUR

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019

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This is to certify that

Mr./Miss. AKSHAY RAMESH GADEKAR

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019

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KLE Technological University

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **AMIR FAZLU MUNSHI**

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **ANISH SUDHINDRA DESHPANDE**

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. KARTHIK SURESHKUMAR HALAKATTI

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

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Mr./Miss. RAJAT SHIVANAND KOTAGI

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Advanced CNC Manufacturing

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Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **SAMIULLA MUJAWAR**

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **SANKETH K**

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SATHYAM PARASHARAM NAIK

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019



Course Instructor



Head of School



Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SHASHANK GOPALKRISHNA SHANBHAG

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019



Course Instructor



Head of School



Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SHREYAS R PATIL

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

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KLE TECH

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SWAROOP R NANDI

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

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Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

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has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019

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Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

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Mr./Miss. VAIBHAV DIVANAJI

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from June 2019 *to* July 2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

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Advanced CNC Manufacturing

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Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VINAYAK S NAIK

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Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

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has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. YASHWANT MALLANAGOUDA PATIL

has successfully completed the Value Addition Training Course on

Advanced CNC Manufacturing

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

Value Added Training

Course: Process planning and Design of fixtures

(2019-20)

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @ School of Mechanical EngineeringKLETECH
Engage | Explore | Excel | Evolve

Advance Manufacturing Technology for Aerospace Applications –Process Planning and design of Fixtures.

Course Outcome

- To establish a detailed process plan for a given application.
- To design a fixture for each phase of a process with principles of SMED.

Last Date to apply – 30th May 2019
Program Duration – June 2019 to July 2019
Coordinator – Mr U P Hosmani

uphosmani@kletech.ac.in
+91 9448108794

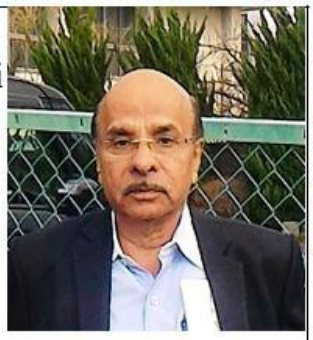
Process planning and design of fixtures: M17EASP301

Details	No of contact hrs.
This is a project assignment in process planning and design . Having given an input and output component the students have to carry out the following activities	Contact hrs. is 160 hrs.,
1) Establish a detailed process on either a VMC or CNC lathe	
2) To draw a step wise operation sheet with input and output drawings at each stage. The input and output drawings at each stage should be fully dimensioned.	
3) At each stage or setup a list of cutting tools to be listed.	
4) To design fixtures at each stage in 3D models to take care of easy dismantling and loading, using principles of design of fixtures, SMED, disposal of chips, weight considerations for loading and unloading of fixture stand to check for interference with cutting tools.	
5) A detailed report is to be made showing all the details .3Dsoftware is to be used to represent the fixtures along with the component at each stage.	
6) The students in a batch of 2 have to continuously interact with the faculty till it is approved by coordinator	
Total	160 hrs.

Course Outcome

- To establish a detailed process plan for a given application.
- To design a fixture for each phase of a process with principles of SMED.

Resource Person (s) and Biodata



Mr. U. P. Hosmani
Associate Professor, KLE Technological University, Hubballi
Contact: uphosmani@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(BVB college of Engineering and Technology,
Hubballi - 580031 (1973)

Area of Interest:
Manufacturing
Design of Machine Tools
Hydraulics and Pneumatics
Experience-30 years of industrial experience in design and manufacturing of
machine tools.



Mr. Mantesh C. Choukimath
Assistant Professor,
K L E Technological University, Hubballi
Contact: mantesh@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(GSS Institute of Technology, Bangalore - 560060) (2009)
M. Tech in Manufacturing Science and Engineering
(M S Ramaiah Institute of Technology, Bangalore - 560054) (2011)

Area of Interest:
Manufacturing
Material Science - Composite Materials
Hydraulics and Pneumatics

Mr. Gurupadayya M. Hiremath
Assistant Professor,
K L E Technological University ,Hubballi
Contact: gurupadayya@kletech.ac.in



Academic Background

B.E in Mechanical Engineering
(SDMCET, Dharwad) (2009)
M. Tech in Computer Integrated Manufacturing
(S Ramaiah Institute of Technology, Bangalore - 560054) (2014)

Area of Interest:

CAD
Manufacturing
Metrology

TIME TABLE

Minor Programme in Advanced manufacturing for aerospace applications			
Tool Engineering			
TIME DATE	10am to 1pm	1pm to 2pm	2pm to 5pm
		Lunch Break	
7/8/2019	Establish a detailed process on either a VMC or CNC lathe		Establish a detailed process on either a VMC or CNC lathe
7/9/2019	To draw a step wise operation sheet with input and output drawings at each stage.		The input and output drawings at each stage should be fully dimensioned.
7/10/2019	To design fixtures at each stage in 3D models to take care of easy dismantling and loading, using principles of design of fixtures.		SMED,disposal of chips, weight considerations for loading and unloading of fixturesand to check for interference with cutting tools.
7/11/2019	A detailed report is to be made showing all the details.		3D software is to be used to represent the fixtures along with the component at each stage.
7/13/2019	3Dsoftware is to be used to represent the fixtures along with the component at each stage.		3Dsoftware is to be used to represent the fixtures along with the component at each stage.
7/15/2019	3Dsoftware is to be used to represent the fixtures along with the component at each stage.		3Dsoftware is to be used to represent the fixtures along with the component at each stage.
7/16/2019	3Dsoftware is to be used to represent the fixtures along with the component at each stage.		3Dsoftware is to be used to represent the fixtures along with the component at each stage.
7/17/2019	Presentation and Report Correction		Presentation and Report Correction
7/18/2019	Final presentation and Report submission		Final presentation and Report submission

Attendance - Process planning and Design of fixtures

Sl. No	Name	USN No	8/7/2019	9/7/2019	10/7/2019	11/7/2019	13/7/2019	15/7/2019	16/7/2019	17/7/2019	18/7/2019
1	Adarsh A Sadarjoshi	01FE16BME010	P	P	P	P	P	P	P	P	P
2	Adarsh M Amargol	01FE16BME011	P	P	P	P	P	P	P	P	A
3	Anish Desphande	01FE16BME026	P	P	A	A	P	A	P	P	P
4	Akshay Gadekar	01FE16BME020	P	P	P	A	A	p	P	P	P
5	Amir Munshi	01FE16BME021	P	P	P	P	P	p	P	P	P
6	Nikhil Anvekar	01FE16BME101	P	P	P	A	P	A	A	A	A
7	Rajat Kotagi	01FE16BME146	P	P	P	P	P	P	P	P	P
8	Shashank Shanbhag	01FE16BME178	P	P	P	P	P	P	P	P	P
9	Shreyas Patil	01FE16BME188	P	P	P	A	P	P	P	P	P
10	Swaroop Nandi	01FE16BME209	P	P	A	A	P	P	P	P	P
11	Tejas Lengade	01FE16BME211	P	P	P	P	P	A	P	A	P
12	Hrishikesh U	01FE16BME214	A	P	P	P	P	P	P	P	P
13	Vaibhav Divanaji	01FE16BME215	P	P	P	P	P	P	P	P	P
14	Varadaraj Tigadikar	01FE16BME217	P	P	P	P	P	P	P	P	P
15	Vinayak S	01FE16BME223	P	P	P	P	P	P	P	P	P

	Naik										
16	Vishal Solanki	01FE16BME227	P	P	A	A	P	P	P	P	P
17	Yashwant Patil	01FE16BME231	P	P	P	P	P	P	P	P	P
18	Samiulla Mujawar	01FE16BME236	A	P	A	A	P	P	P	P	P
19	Sanketh.K	01FE16BME237	P	P	P	P	P	A	P	P	A
20	Tejashwini Sapare	01FE16BME240	P	P	P	P	P	P	P	P	P
21	Sathyam Naik	01FE16BME241	A	A	P	P	P	P	P	A	A
22	Adeep A Konnur	01FE17BME404	P	P	P	P	P	A	A	A	P
23	Karthik Hallakatti	01FE17BME420	P	P	P	P	P	P	P	P	P

Coordinator: U. P Hosmani

Head of the Departmen

HEAD
School of Mechanical Engineering
KLE Technological University, HUBBALLI-31.

CERTIFICATES

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. ADARSH A SADARJOSHI

has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

from June 2019 *to* July 2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. ADARSH AMARGOL

has successfully completed the Value Addition Training Course on

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School of Mechanical Engineering

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This is to certify that

Mr./Miss. ADEEP A KONNUR

has successfully completed the Value Addition Training Course on

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Creating Value Leveraging Knowledge

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This is to certify that

Mr./Miss. AKSHAY RAMESH GADEKAR

has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

from June 2019 *to* July 2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **AMIR FAZLU MUNSHI**

has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

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KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SANKETH K

has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

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KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

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Mr./Miss. SATHYAM PARASHARAM NAIK

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Creating Value Leveraging Knowledge

School of Mechanical Engineering

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Mr./Miss. VARADARAJ TIGADIKAR

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School of Mechanical Engineering

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Mr./Miss. VISHAL S SOLANKI

has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

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KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

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has successfully completed the Value Addition Training Course on

Process planning and Design of fixtures

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

Value Added Training

Course: Tool Engineering

(2019-20)

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @ School of Mechanical EngineeringKLETECH
Engage | Explore | Excel | Evolve

Advanced Manufacturing Technology for Aerospace applications – Tool Engineering

Course Outcome

- Develop knowledge of various tools and holders used in CNC Turning and Milling.
- Develop a road map as to how teams arrived at the problem through design thinking.
- Develop knowledge of how to set the tools in a CNC lathe.
- Understand what is SMED and how it is applied on a CNC milling machine.

Last Date to apply – 30th May 2019
Program Duration – June 2019 to July 2019
Coordinator – **Mr U P Hosmani**
uphosmani@kletech.ac.in
+91 9448108794

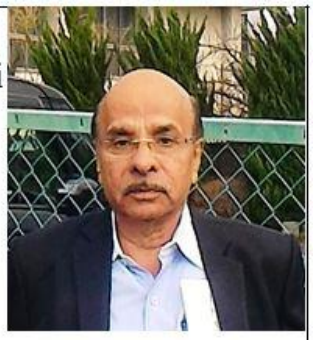
Tool Engineering:M17EASC302

Details	No of hrs.
Basic nomenclature for turning inserts and tool holders, types of inserts Different inserts and tools for drilling ,reaming-types of reamers, coated drills with through tool coolant.	7
Basic type of milling cutters-face mill, side and face cutters, end milling, slot cutters, spiral flue end mills. Calculation of milling feeds in milling-mm/min and feed per tooth.	7
Different types of tool holders in VMC –ISO,BT, HSK ,CAT. Advantages /disadvantages of different tool holders, Advantages and disadvantages.	4
Different types of tools mounting on tool holders- shrink fit, collets and hydraulic collets- applications and accuracies of each.	4
Up milling and down milling – how to identify the same, advantages of down milling. Over up milling.	2
Rigid tapping and thread milling operations in VMC.	2
SMED-single minute exchange of dies-Basic definitions, how is it used by means of Schunk modules.-Vero s quick change pallet systems.-various types and advantages. –zero point clamping with Pneumatic systems. Advantages over conventional clamping on VMCs.	2
Use of Vacuum chuck clamping system for aluminium flat components in aero space manufacturing-demo at AEUS 3-2-1 principle of fixture design	2
Points to be noted when using end mills and milling cutters like entry and exit of cutters, how much length of flute to be used in milling, ratio of depth of cut in radial and axial in end mills, Optimum L/D ratio ,type of cycles to be used for pocket milling either circular or straight cuts etc.	4
Total	34

Course Outcome

- Develop knowledge of various tools and holders used in CNC Turning and Milling.
- Develop a road map as to how teams arrived at the problem through design thinking.
- Develop knowledge of how to set the tools in a CNC lathe.
- Understand what is SMED and how it is applied on a CNC milling machine.

Resource Person (s) and Biodata



Mr. U. P. Hosmani
Associate Professor, KLE Technological University, Hubballi
Contact: uphosmani@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(BVB college of Engineering and Technology,
Hubballi - 580031 (1973)

Area of Interest:
Manufacturing
Design of Machine Tools
Hydraulics and Pneumatics
Experience-30 years of industrial experience in design and manufacturing of
machine tools.



Mr. Mantesh C. Choukimath
Assistant Professor,
K L E Technological University, Hubballi
Contact: mantesh@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(GSS Institute of Technology, Bangalore - 560060) (2009)
M. Tech in Manufacturing Science and Engineering
(M S Ramaiah Institute of Technology, Bangalore - 560054) (2011)

Area of Interest:
Manufacturing
Material Science - Composite Materials
Hydraulics and Pneumatics

Mr. Gurupadayya M. Hiremath
Assistant Professor,
K L E Technological University ,Hubballi
Contact: gurupadayya@kletech.ac.in



Academic Background

B.E in Mechanical Engineering
(SDMCET, Dharwad) (2009)
M. Tech in Computer Integrated Manufacturing
(S Ramaiah Institute of Technology, Bangalore - 560054) (2014)

Area of Interest:

CAD
Manufacturing
Metrology

TIME TABLE

Minor Programme in Advanced manufacturing for aerospace applications			
Tool Engineering			
TIME DATE	10am to 1pm	1pm to 2pm	2pm to 5pm
		Lunch Break	
6/21/2019	Basic nomenclature for turning inserts and tool holders, types of inserts Different inserts and tools for drilling ,reaming-types of reamers, coateddrills with through tool coolant.		Basic type of milling cutters-face mill, side and face cutters, endmilling, slotcutters, spiral flue end mills. Calculation of milling feeds in milling-mm/min and feed per tooth.
6/22/2019	Different types of tool holders in VMC –ISO,BT, HSK ,CAT.Advantages /disadvantages of different tool holders, Advantages and disadvantages. Different types of tools mounting on tool holders- shrink fit, collets and hydraulic collets- applications and accuracies of each.		Up milling and down milling – how to identify the same, advantages of down milling. Over up milling.
6/24/2019	Rigid tapping and thread milling operations in VMC. SMED-single minute exchange of dies-Basic definitions,how is it used by means of Schunk modules.-		Vero s quick change pallet systems.-various types and advantages. –zero point clamping with Pneumatic systems. Advantages over conventional clamping on VMCs.
6/25/2019	Use of Vacuum chuck clamping system for aluminium flat components in aero space manufacturing-demo at AEUS 3-2-1 principle of fixture design		Points to be noted when using end mills and milling cutters like entry and exit of cutters, how much length of flute to be used in milling, ratio of depth of cut in radial and axial in end mills, Optimum L/D ratio ,type of cycles to be used for pocket milling either circular or straight cuts etc.

Attendance - Tool Engineering

Sl. No	Name	USN No	21/6/19	22/6/19	24/6/19	25/6/19
1	Adarsh A Sadarjoshi	01FE16BME010	P	P	P	P
2	Adarsh M Amargol	01FE16BME011	P	P	P	P
3	Anish Desphande	01FE16BME026	P	P	P	A
4	Akshay Gadekar	01FE16BME020	P	P	P	P
5	Amir Munshi	01FE16BME021	P	P	P	P
6	Nikhil Anvekar	01FE16BME101	P	P	P	P
7	Rajat Kotagi	01FE16BME146	P	P	P	P
8	Shashank Shanbhag	01FE16BME178	P	P	P	P
9	Shreyas Patil	01FE16BME188	P	P	P	P
10	Swaroop Nandi	01FE16BME209	P	P	P	P
11	Tejas Lengade	01FE16BME211	P	A	P	P
12	Hrishikesh U	01FE16BME214	P	P	P	P
13	Vaibhav Divanaji	01FE16BME215	P	P	P	P
14	Varadaraj Tigadikar	01FE16BME217	P	P	P	P
15	Vinayak S Naik	01FE16BME223	P	P	P	P
16	Vishal Solanki	01FE16BME227	P	P	P	P
17	Yashwant Patil	01FE16BME231	P	P	P	P
18	Samiulla Mujawar	01FE16BME236	P	P	P	P
19	Sanketh.K	01FE16BME237	P	P	P	P
20	Tejashwini Sapare	01FE16BME240	P	P	P	P
21	Sathyam Naik	01FE16BME241	P	P	A	P
22	Adeep A Konnur	01FE17BME404	P	P	P	P
23	Karthik Hallakatti	01FE17BME420	P	P	P	P

Coordinator: U. P Hosmani

Head of the Department

HEAD
School of Mechanical Engineering
KLE Technological University, HUBBALLI-31.

CERTIFICATES

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **ADARSH A SADARJOSHI**

has successfully completed the Value Addition Training Course on

Tool Engineering

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

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KLE Technological University

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School of Mechanical Engineering

Certificate

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Tool Engineering

from **June 2019** *to* **July 2019**

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VINAYAK S NAIK

has successfully completed the Value Addition Training Course on

Tool Engineering

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

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KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VISHAL S SOLANKI

has successfully completed the Value Addition Training Course on

Tool Engineering

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. YASHWANT MALLANAGOUDA PATIL

has successfully completed the Value Addition Training Course on

Tool Engineering

from June 2019 *to* July 2019

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Course: Aerospace QMS

(2019-20)

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @ School of Mechanical EngineeringKLETECH

Advanced Manufacturing Technology for Aerospace Applications- QMS(Quality Management Systems)

Course Outcome

- Understanding QMS system as applied to aerospace component manufacturing systems.
- Clause wise interpretation of ISO9001,ISO9001 REV D- application to manufacturing industries.
- Understanding PDCA cycle, Counterfeit parts as applied to aerospace components.
- Understand Risk based thinking, stake holders, Interested parties.
- Develop knowledge of understanding stated and implied needs of a customer.
- JIT Manufacturing and bottle neck in production and how to eliminate it.

Last Date to apply – 30th May 2019
Program Duration – June 2019 to July 2019
Coordinator – **Mr U P Hosmani**
uphosmani@kletech.ac.in
+91 9448108794

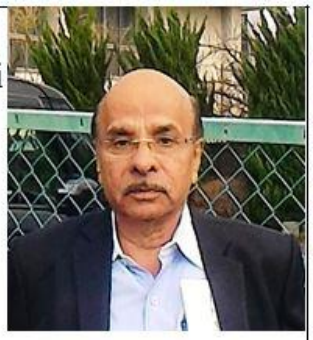
Aerospace QMS : M17EASC303

Details	No of hrs
1)Introduction to QMS in Aerospace industries	2
2)What is ISO9001-2015-explnation of clauses ,application to industries	2
3) AS9100-RevD as applied to aerospace industries. Aerospace industries certification.	2
4)Clauses related to AS9100 –Rev D-explanation	2
5) PDCA cycle –its application and relation to clauses in AS9100	2
6) Counterfeit parts Actions to control the same. terms obsoeselence monitering,tracebility to original manufactuerers .clauses related to samr	2
7)Risk based thinking, stake holders .Interested parties explanation.	2
8)Scope of the clause 7.1.6 Organisational knowledge-what steps are taken to retain the same.	2
9) Stated and impied requirements of a customer. Importance to know implied requirements and how to identify and address the same,	2
10) What is bottle neck in a production process? Identification and steps taken to address the same. How this helps in JIT manufacturing.	2
11) Relation between ISO 9001 -2015 and AS9100 REV D. What are the advantages in following QMS particularly with relation to Aerospace industries.	2
Total	22

Course Outcome

- Understanding QMS system as applied to aerospace component manufacturing systems.
- Clause wise interpretation of ISO9001,ISO9001 REV D- application to manufacturing industries.
- Understanding PDCA cycle, Counterfeit parts as applied to aerospace components.
- Understand Risk based thinking, stake holders, Interested parties.
- Develop knowledge of understanding stated and implied needs of a customer.
- JIT Manufacturing and bottle neck in production and how to eliminate it.

Resource Person (s) and Biodata



Mr. U. P. Hosmani
Associate Professor, KLE Technological University, Hubballi
Contact: uphosmani@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(BVB college of Engineering and Technology,
Hubballi - 580031 (1973)

Area of Interest:
Manufacturing
Design of Machine Tools
Hydraulics and Pneumatics
Experience-30 years of industrial experience in design and manufacturing of
machine tools.



Mr. Mantesh C. Choukimath
Assistant Professor,
K L E Technological University, Hubballi
Contact: mantesh@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(GSS Institute of Technology, Bangalore - 560060) (2009)
M. Tech in Manufacturing Science and Engineering
(M S Ramaiah Institute of Technology, Bangalore - 560054) (2011)

Area of Interest:
Manufacturing
Material Science - Composite Materials
Hydraulics and Pneumatics

Mr. Gurupadayya M. Hiremath
Assistant Professor,
K L E Technological University ,Hubballi
Contact: gurupadayya@kletech.ac.in



Academic Background

B.E in Mechanical Engineering
(SDMCET, Dharwad) (2009)
M. Tech in Computer Integrated Manufacturing
(S Ramaiah Institute of Technology, Bangalore - 560054) (2014)

Area of Interest:

CAD
Manufacturing
Metrology

TIME TABLE

Minor Programme in Advanced manufacturing for aerospace applications			
Tool Engineering			
TIME DATE	10am to 1pm	1pm to 2pm	2pm to 5pm
		Lunch Break	
6/26/2019	Introduction to QMS in Aerospace industries, What is ISO9001-2015-explnation of clauses, application to industries		AS9100-RevD as applied to aerospace industries. Aerospace industries certification.
6/27/2019	Clauses related to AS9100 –Rev D-explanation , PDCA cycle –its application and relation to clauses in AS9100		Counterfeit parts Actions to control the same. terms obsoeselence monitering,tracebility to original manufactuerers. clauses related to same
6/28/2019	Risk based thinking, stake holders .Interested parties explanation. Scope of the clause 7.1.6 Organisationalknowledge-what steps are taken to retain the same.		Stated and impied requirements of a customer. Importance to know implied requirements and how to identify and address the same,
6/29/2019	What is bottle neck in a production process? Identification and steps taken to address the same. How this helps in JIT manufacturing.		Relation between ISO 9001 -2015 and AS9100 REV D.What are the advantages in following QMS particularly with relation to Aerospace industries.

Attendance - Aerospace QMS

Sl. No	Name	USN No	26/6/19	27/6/19	28/6/19	29/6/19
1	Adarsh A Sadarjoshi	01FE16BME010	P	P	P	P
2	Adarsh M Amargol	01FE16BME011	P	P	A	P
3	Anish Desphande	01FE16BME026	P	P	A	P
4	Akshay Gadekar	01FE16BME020	P	P	A	P
5	Amir Munshi	01FE16BME021	P	P	P	P
6	Nikhil Anvekar	01FE16BME101	P	P	P	A
7	Rajat Kotagi	01FE16BME146	P	P	P	P
8	Shashank Shanbhag	01FE16BME178	P	P	P	P
9	Shreyas Patil	01FE16BME188	P	P	P	A
10	Swaroop Nandi	01FE16BME209	P	P	P	P
11	Tejas Lengade	01FE16BME211	P	P	P	A
12	Hrishikesh U	01FE16BME214	P	P	A	A
13	Vaibhav Divanaji	01FE16BME215	P	P	P	P
14	Varadaraj Tigadikar	01FE16BME217	P	P	P	P
15	Vinayak S Naik	01FE16BME223	P	P	P	A
16	Vishal Solanki	01FE16BME227	P	P	A	P
17	Yashwant Patil	01FE16BME231	P	P	P	A
18	Samiulla Mujawar	01FE16BME236	P	P	P	P
19	Sanketh.K	01FE16BME237	P	P	P	P
20	Tejashwini Sapare	01FE16BME240	P	P	P	P
21	Sathyam Naik	01FE16BME241	P	A	P	P
22	Adeep A Konnur	01FE17BME404	P	P	A	P
23	Karthik Hallakatti	01FE17BME420	P	P	P	P

Coordinator: U. P Hosmani

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CERTIFICATES

KLE TECH

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Creating Value Leveraging Knowledge

School of Mechanical Engineering

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Aerospace QMS

from June 2019 *to* July 2019

Course Instructor | Head of School | Controller of Examinations

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Mr./Miss. YASHWANT MALLANAGOUDA PATIL

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Aerospace QMS

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

Value Added Training

Course: CNC Lab

(2019-20)

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @ School of Mechanical Engineering KLETECH

Advanced manufacturing Technology for Aerospace applications - CNC lab

Course Outcome

- Apply programming language in machining a part.
- Develop a road map as to how teams arrived at the problem through design thinking.
- Achieve practical knowledge by applying the programming language on a CNC machine .
- Experience limitations of a CNC machine.
- Develop skills in selecting most appropriate cutting tool.

Last Date to apply – 30th May 2019
Program Duration – June 2019 to July 2019
Coordinator - Mr U P Hosmani
uphosmani@kletech.ac.in
+91 9448108794

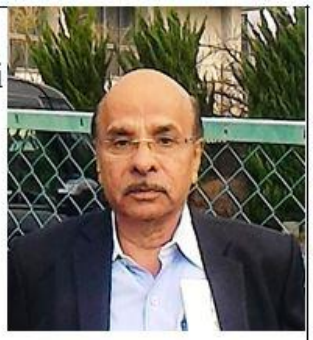
CNC Lab : M17EASL301

Details	No of hrs.
Introduction to CNC lathe- hands on training –manual modes of operation x and z axis, MPG, taking tool offsets and entering in CNC controls, selection of tools, Optional stop, block skip, dwell ,single and continuous operation ,control of speeds and feeds during cutting, Use of constant surface feeds etc. Circular interpolation G02 and G03.	16
Ex 1:-Simple facing and turning on CNC lathe	8
Ex2:- Exercise of turning using G02 and G03-Radius turning	8
Ex3:-Exercise using Canned cycle G70 and G71	8
Ex4:-Exercise using Peck drilling(G74) and grooving (G75)	
Introduction to VMC-hands on training on manual operation, programme insertion in controls, taking tool offsets, entering tool length compensation,	16
EX5-exercise on step milling	8
Ex6- exercise on pocket milling with drilling at centre.	8
Ex7-Exercise in counter milling with circular i	8
Total	80

Course Outcome

- Apply programming language in machining a part.
- Develop a road map as to how teams arrived at the problem through design thinking.
- Achieve practical knowledge by applying the programming language on a CNC machine .
- Experience limitations of a CNC machine.
- Develop skills in selecting most appropriate cutting tool.

Resource Person (s) and Biodata



Mr. U. P. Hosmani
Associate Professor, KLE Technological University, Hubballi
Contact: uphosmani@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(BVB college of Engineering and Technology,
Hubballi - 580031 (1973)

Area of Interest:
Manufacturing
Design of Machine Tools
Hydraulics and Pneumatics
Experience-30 years of industrial experience in design and manufacturing of
machine tools.



Mr. Mantesh C. Choukimath
Assistant Professor,
K L E Technological University, Hubballi
Contact: mantesh@kletech.ac.in
Academic Background
B.E in Mechanical Engineering
(GSS Institute of Technology, Bangalore - 560060) (2009)
M. Tech in Manufacturing Science and Engineering
(M S Ramaiah Institute of Technology, Bangalore - 560054) (2011)

Area of Interest:
Manufacturing
Material Science - Composite Materials
Hydraulics and Pneumatics

Mr. Gurupadayya M. Hiremath
Assistant Professor,
K L E Technological University ,Hubballi
Contact: gurupadayya@kletech.ac.in



Academic Background

B.E in Mechanical Engineering
(SDMCET, Dharwad) (2009)
M. Tech in Computer Integrated Manufacturing
(S Ramaiah Institute of Technology, Bangalore - 560054) (2014)

Area of Interest:

CAD
Manufacturing
Metrology

TIME TABLE

Minor Programme in Advanced manufacturing for aerospace applications

CNC Lab			
TIME / **DATE**	**10am to 1pm**	**1pm to 2pm**	**2pm to 5pm**
06/15/2019	Introduction to CNC lathe- hands on training – manual modes of operation x and z axis, MPG, taking tool offsets and entering in CNC controls, selection of tools,	**Lunch Break**	Optional stop, block skip, dwell ,single and continuous operation ,control of speeds and feeds during cutting, Use of constant surface feeds etc. Circular interpolation G02 and G03.
06/17/2019	Ex 1:-Simple facing and turning on CNC lathe Ex2:- Exercise of turning using G02 and G03- Radius turning		Ex3:-Exercise using Canned cycle G70 and G71 Ex4:-Exercise using Peck drilling(G74) and grooving (G75)
06/18/2019	Introduction to VMC-hands on training on manual operation, programme		Insertion in controls, taking tool offsets , entering tool length compensation
06/19/2019	EX5-exercise on step milling		Ex6- exercise on pocket milling with drilling at centre.
06/20/2019	Ex7-Exercise in counter milling with circular interpolation		Review and Presentation of Exercises

Attendance - CNC Lab

Sl. No	Name	USN No	6/15/2019	6/17/2019	6/18/2019	6/19/2019	6/20/2019
1	Adarsh A Sadarjoshi	01FE16BME010	P	P	P	P	P
2	Adarsh M Amargol	01FE16BME011	P	P	P	P	P
3	Anish Desphande	01FE16BME026	P	P	P	A	P
4	Akshay Gadekar	01FE16BME020	P	P	P	P	P
5	Amir Munshi	01FE16BME021	P	P	P	P	P
6	Nikhil Anvekar	01FE16BME101	P	P	A	P	P
7	Rajat Kotagi	01FE16BME146	P	P	P	P	P
8	Shashank Shanbhag	01FE16BME178	P	P	P	P	P
9	Shreyas Patil	01FE16BME188	P	P	P	P	P
10	Swaroop Nandi	01FE16BME209	P	P	P	P	P
11	Tejas Lengade	01FE16BME211	P	P	P	P	P
12	Hrishikesh U	01FE16BME214	P	P	P	P	P
13	Vaibhav Divanaji	01FE16BME215	P	P	P	P	P
14	Varadaraj Tigadikar	01FE16BME217	A	P	P	P	P
15	Vinayak S Naik	01FE16BME223	P	P	P	P	P
16	Vishal Solanki	01FE16BME227	P	P	P	P	P
17	Yashwant Patil	01FE16BME231	P	P	P	P	P
18	Samiulla Mujawar	01FE16BME236	P	P	P	A	P
19	Sanketh.K	01FE16BME237	P	P	P	P	P
20	Tejashwini Sapare	01FE16BME240	P	P	P	P	P
21	Sathyam Naik	01FE16BME241	P	P	P	P	P
22	Adeep A Konnur	01FE17BME404	P	P	P	A	A
23	Karthik Hallakatti	01FE17BME420	P	P	P	P	P

Coordinator: U. P Hosmani

Head of the Department

HEAD
School of Mechanical Engineering
KLE Technological University, HUBBALLI-31.

CERTIFICATES

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. ADARSH A SADARJOSHI

has successfully completed the Value Addition Training Course on

CNC Lab

from June 2019 *to* July 2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

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This is to certify that

Mr./Miss. ADARSH AMARGOL

has successfully completed the Value Addition Training Course on

CNC Lab

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Course Instructor | Head of School | Controller of Examinations

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Mr./Miss. ADEEP A KONNUR

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CNC Lab

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Mr./Miss. AKSHAY RAMESH GADEKAR

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CNC Lab

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This is to certify that

Mr./Miss. AMIR FAZLU MUNSHI

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CNC Lab

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This is to certify that

Mr./Miss. ANISH SUDHINDRA DESHPANDE

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Mr./Miss. RAJAT SHIVANAND KOTAGI

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Mr./Miss. VARADARAJ TIGADIKAR

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This is to certify that

Mr./Miss. VINAYAK S NAIK

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School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VISHAL S SOLANKI

has successfully completed the Value Addition Training Course on

CNC Lab

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. YASHWANT MALLANAGOUDA PATIL

has successfully completed the Value Addition Training Course on

CNC Lab

from **June 2019** *to* **July 2019**

Course Instructor | Head of School | Controller of Examinations

Value Added Training Program for

Organizational Behavior and Business Analytics for Product Development

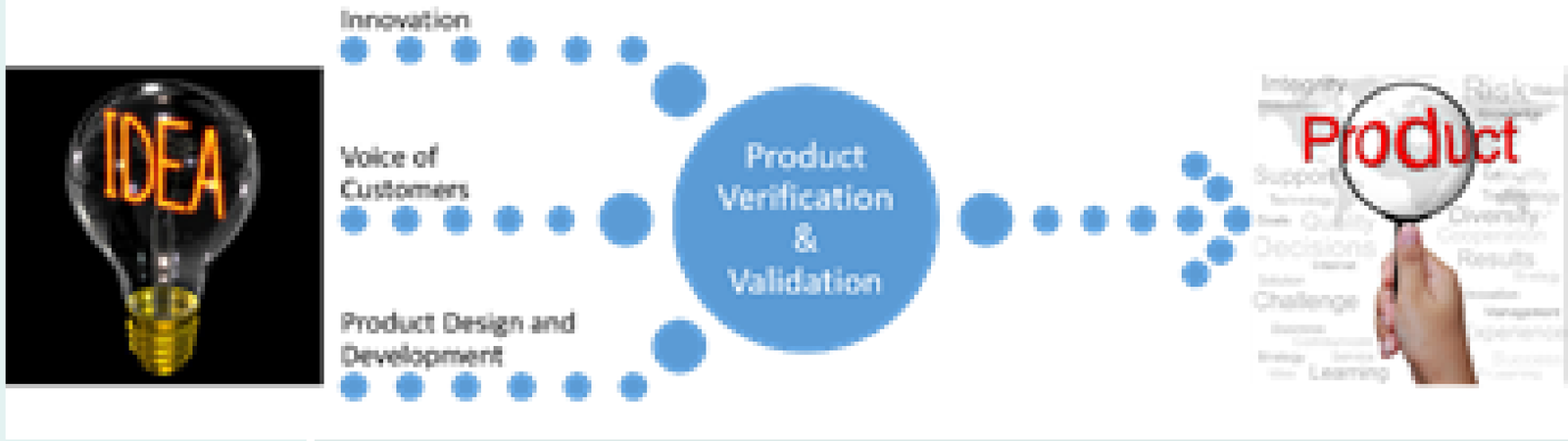
KLE Technological University
Creating Value Leveraging Knowledge

KLE Technological Univesity, Hubli
Center for Innovation and Product Development (CIPD)
School of Mechanical Engineeri

M16EPDC301, Summer V

Aug 2018

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, 2018
- Notification for Selected Students: Aug 04, 2018
- Registration Date: Aug 14, 2018

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
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

Course Code: M16EPDC301	Course Title: Organizational Behavior and Business Analytics for Product Development	
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
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	6 hours
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,	4 hours
Project and Program Management (Stage-gate process)	2 hours
References The Standard for Program Management – PMI Finance Basics by Harvard Business Review	

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
John Deere Harvester Works, Silvis, IL, USA – Senior Engineer – '00 – '05
John Deere Technology Center, Pune, India - Head, Engineering '05 – '08
John Deere India – Head, Business Development and strategic planning '08 – '09
John Deere India – Head, Harvesters and Crop Solutions Business Unit '09 – '10
John Deere India – Head, India Program Management (NPI) '10 – 'Sept. 12
John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. '12 – April '16
KLE Technological University – Director – Center for Innovation and Product Development – Aug. '16 – till date

Key achievements:

TRW – Vehicle Safety Systems Washington, MI – Senior Consultant – '95 – '00

Simulation of seat belt and airbag systems using Finite Element software tools
Filed two vehicle safety related patents

John Deere Harvester Works, Silvis, IL – Senior Engineer – '00 – '05

Developed vehicle level design analysis methods for combine harvesters;
Introduced robust optimization methods for cost reduction and value improvement
Developed business proposal for John Deere's Technology Center India.

John Deere Technology Center, Pune, India - Head, Engineering '05 – '08

Lead the project team which developed plan and implemented the facility and operational unit for John Deere's Technology center in India.
Developed project management tools and standards for engineering work to provide engineering services to JD units worldwide from the John Deere's Technology Center India.
Deployment leader for Six sigma and Value Improvement for JDTCI
Championed ISO 9001 – 2000 implementation for JDTCI

John Deere India – Head, Business Development and strategic planning ’08 – ’09

John Deere India – Head, Harvesters and Crop Solutions Business Unit ’09 – ‘10

Responsible for developing the business plan and to establish a new organization (Crop Solutions) to introduce complete mechanization solutions to farmers in India. A plan was developed to integrate all value chain stakeholders to successfully introduce planting, crop care and harvesting and residue management equipment in India.

John Deere India – Head, India Program Management (NPI) ’10 – ‘Sept. 12

Responsible for providing program management support for multiple platforms and works closely with product line Program Managers.

Implementation and Execution of CCDP/TDP programs and Value Engineering and Value Improvement projects for JD Pune Works.

Established Program Management Office in India to ensure standard practices and support to be deployed to all programs in India.

John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. ’12 – March ‘16

Responsibility for Operations and P&L of three units manufacturing Harvesters, Water equipment and Electronic systems.

Ownership of John Deere’s New Crop Harvesting, Crop Care Product Programs and manufacturing strategy in India

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Established a green field center within KLE Tech. University to develop products with social impact.

Introduced Minor degree program in Innovation and Product development.

Licensed one bio-mass processing product to a manufacturing partner for commercialization.

Two patents has been filed and approved.

KLE Technological University
Creating Value
Leveraging Knowledge

Value Added Training -6th sem Summer

2018-19

Organizational Behaviour and Failure Analysis- 6th sem Summer

Attendence list

Sl no	Name	DEPT	ID	C1	C2	T1	C3	C4	T2	C5	C6	T3	C7	C8	T4	C9	C10	T5	C11	C12	T6	C14	T7	C15	C16	T8	C17	C18	T9	C19	C20	T10	C21	C22	T11	C23	C24	# Abs	% PRESENT
1	MADAN S YARGATTI	A&R	01FE17BAR403	a	p	a	p	p	P	P	P	P	a	P	P	P	P	P	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
2	SIREESH RS MATHAD	A&R	01FE17BAR409	p	p	p	a	p	P	p	p	a	p	P	P	p	p	a	p	P	p	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
3	SHAMANTH G BIDARI	Mech	01FE16BME174	a	a	a	p	p	P	P	P	P	p	P	P	P	P	P	p	P	p	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%
4	BORKAR.TEJAS PRASAD	E&E	01FE16BEE025	p	p	a	a	p	P	a	p	p	a	P	P	a	p	p	a	P	p	p	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
5	K.ABHISHEK	A&R	01FE17BAR402	p	p	p	p	p	P	p	p	p	p	P	P	p	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	0	100%
6	NAYAN R SHIROLKAR	E&C	01FE17BEC423	p	p	p	a	p	P	p	p	p	a	P	P	p	p	p	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
7	SUJAY RODDAM	A&R	01FE16BAR047	p	p	p	p	p	P	p	p	a	a	P	P	p	p	a	a	P	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%

Time Table Schedule for VAT Courses:

VAT Name: Organizational Behavior and Business Analytics for Product Development

Organizational Behavior and Business Analytics for Product Development	M16EPDC301	WEDNESDAY	1st floor Athena Bldg	17:00:00
Organizational Behavior and Business Analytics for Product Development	M16EPDC301	FRIDAY	1st floor Athena Bldg	17:00:00
Organizational Behavior and Business Analytics for Product Development	M16EPDC301	SATURDAY	1st floor Athena Bldg	12:30:00

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. K ABHISHEK

has successfully completed the Value Addition Training Course on

Organizational Behavior and Business Analytics for Product Development

from 8/24/2018 *to* 12/15/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. MADAN

has successfully completed the Value Addition Training Course on

Organizational Behavior and Business Analytics for Product Development

from 8/24/2018 *to* 12/15/2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

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Mr./Miss. SAGAR

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Course Instructor

Head of School

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KLE TECH

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Creating Value
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Course Instructor

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KLE TECH

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Creating Value
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This is to certify that

Mr./Miss. Shamanth

has successfully completed the Value Addition Training Course on

Organizational Behavior and Business Analytics for Product Development

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Course Instructor

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KLE TECH

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This is to certify that

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Course Instructor

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KLE TECH

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Creating Value
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Certificate

This is to certify that

Mr./Miss. Tejas Borkar

has successfully completed the Value Addition Training Course on

Organizational Behavior and Business Analytics for Product Development

from 8/24/2018 *to* 12/15/2018

Course Instructor

Head of School

Controller of Examinations

Value Added Training Program for

New Product Innovation–1

KLE TECH

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Creating Value
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KLE Technological Univesity, Hubli

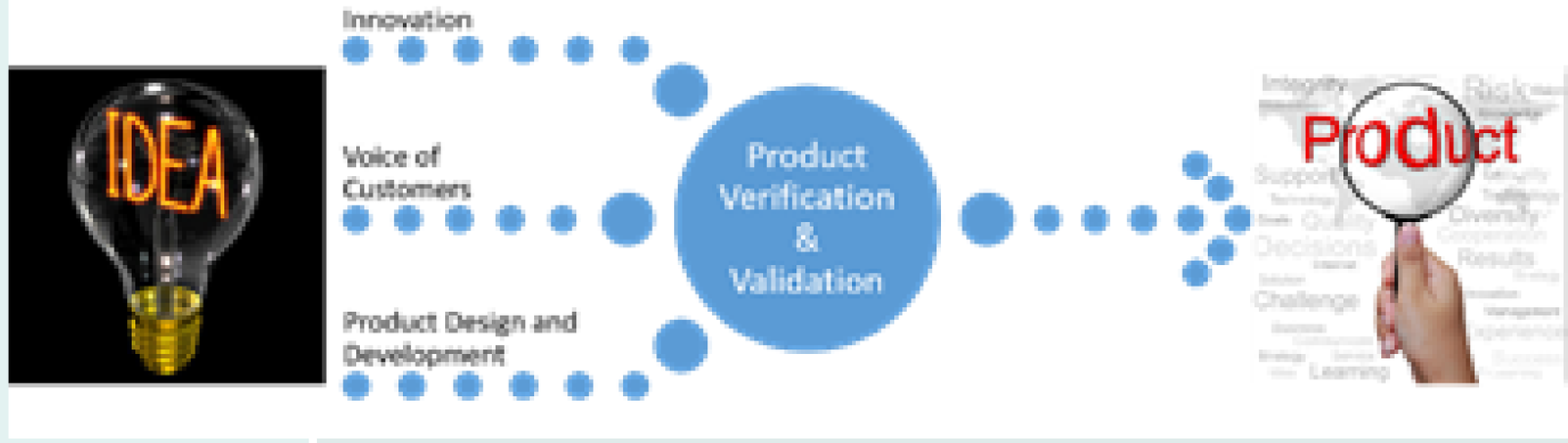
Center for Innovation and Product Development (CIPD)

School of Mechanical Engineeri

M16EPDC201, 4th Sem

Jan 2019

3 Credits



Course Highlights:

Technological Innovation
Introduction, Sources of Innovation, Types and Patterns of Innovation, Standards Battles and Design dominance, Timing of entry

Innovation Opportunity
Fore-sighting, S-curve for technology and consumer, Time/Janus cone and contextual maps; Market and business potential, customer analysis for an idea

Innovation Process and Methods
TRIZ – Theory of innovative problem solving, ToC – Theory of Constraints, 8 Steps of Innovation

Guidelines

- Intake: Maximum of 20 students
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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
Filled-in applications are to be submitted to the Coordinator of Minor Programmes
Dr. Anil S Badiger, Professor, School of Mechanical Engineering, KLE Tech.,

IV Semester

Curriculum Content

Course Code: M16EPDC201	Course Title: New Product Introduction -1	
L-T-P: 1-1-1	Credits: 3	Contact Hrs: 5
ISA Marks: 60	ESA Marks: 40	Total Marks: 100
Teaching Hrs: 12	Tutorial + Project Hrs: 48	Exam Duration: Continuous evaluation

Course Outcomes

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

1. Analyze why and how innovations happen
2. Enumerate future trends in technologies and products based on fore-sighting tools
3. **Map customer needs, market potential and prioritize ideas to develop into innovation**
4. Develop an idea into an innovation using innovation processes and tools
5. Manage innovations by prioritization and allocating resources
6. Understand IP protection methods

Topics	Lecture
Technological Innovation Introduction, Sources of Innovation, Types and Patterns of Innovation, Standards Battles and Design dominance, Timing of entry	3 hours
Innovation Opportunity Fore-sighting, S-curve for technology and consumer, Time/Janus cone and contextual maps; Market and business potential, customer analysis for an idea	4 hours
Innovation Process and Methods TRIZ – Theory of innovative problem solving, ToC – Theory of Constraints, 8 Steps of Innovation	5 hours

References

Playbook for strategic foresight and Innovation – Stanford University

8 Steps of Innovation – R. T. Krishnan and V. Dabholkar

TRIZ and ToC – Handouts

A Unified Innovation Process Model for Engineering Designers and Managers (In Design Thinking) Skogstad, P., Leifer, L.edited by Meinel, C., Leifer, L., Plattner, H. Springer Berlin Heidelberg. 2011: 19–43

Dr. Ravi Guttal

Education:
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KLE Technological University
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Value Added Training -5th sem odd

2018-19

Product innovation 1

Attendence list

Sl no	Name	DEPT	ID	C1	C2	T1	C3	C4	T2	C5	C6	T3	C7	C8	T4	C9	C10	T5	C11	C12	T6	C14	T7	C15	C16	T8	C17	C18	T9	C19	C20	T10	C21	C22	T11	C23	C24	# Abs	% PRESENT
1	RACHANA MAHINDRAKAR	BT	01FE17BBT035-M	p	p	p	p	p	a	p	P	P	P	P	P	p	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
2	RAVEENA PATIL	BT	01FE17BBT038-M	a	p	a	p	p	p	p	P	P	P	P	P	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%
3	DARSHAN BANGERA ALIKE	CS	01FE17BCS066-M	a	a	a	p	p	p	p	P	P	P	P	P	p	P	p	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
4	SEEMA HUSSAINBADASHAH MANGALORE	CS	01FE17BCS179-M	p	p	p	p	p	p	p	P	P	p	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	7	79%
5	SHREYA MELAMALAGI	E&E	01FE17BEE094-M	p	p	p	a	p	p	a	P	P	p	p	p	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	3	91%
6	VINUTHAN	E&E	01FE17BEE108-M	p	p	p	p	p	p	a	P	P	p	p	a	a	P	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%
7	BHATKOORSE	ME	01FE17BME012-M	p	p	p	p	p	p	p	P	P	p	p	p	a	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	6	82%

Time Table Schedule for VAT Courses:

VAT Name: Product Innovation - 1

Product Innovation - 1	M16EPDC201	WEDNESDAY	1st floor Athena Bldg	17:00:00
Product Innovation - 1	M16EPDC201	FRIDAY	1st floor Athena Bldg	17:00:00
Product Innovation - 1	M16EPDC201	SATURDAY	1st floor Athena Bldg	12:30:00

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. AKSHAY GANAPATI BHATKOORSE

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from 08-08-2018 *to* 20-10-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **DARSHAN BANGERA ALIKE**

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from **08-08-2018** *to* **20-10-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. RACHANA MAHINDRAKAR

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from **08-08-2018** *to* **20-10-2018**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. RAVEENA PATIL

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from 08-08-2018 *to* 20-10-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SEEMA HUSSAINBADASHAH MANGALORE

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from 08-08-2018 *to* 20-10-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SHREYA MELAMALAGI

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from 08-08-2018 *to* 20-10-2018

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VANKADARU VENKAT SAAI VINUTHAN

has successfully completed the Value Addition Training Course on

Product Innovation - 1

from 08-08-2018 *to* 20-10-2018

Course Instructor

Head of School

Controller of Examinations

Value Added Training Program for

New Product Innovation-2

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

KLE Technological Univesity, Hubli

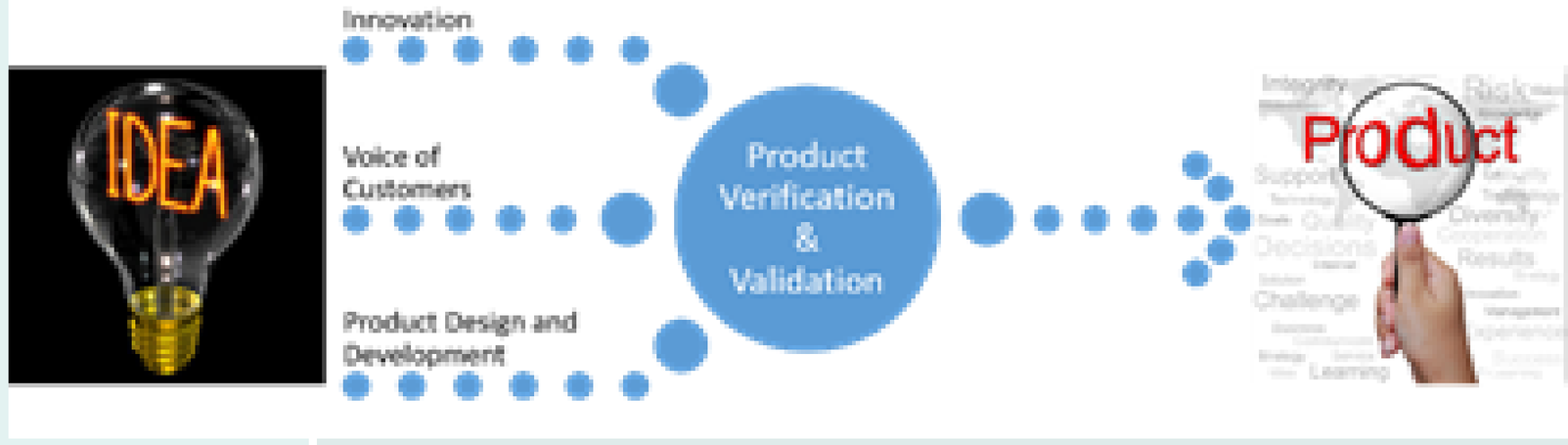
Center for Innovation and Product Development (CIPD)

School of Mechanical Engineeri

M16EPDC202, Summer 1

June 2019

3 Credits



Course Highlights:

Customer and Market Analysis
VoC – Voice of Customer gathering techniques
Prioritization Methods
AHP – Analytic Hierarchic Process
Needs, Wants and WOWs
Conjoint Analysis
Market opportunity and potential evaluation, Market and Customer segmentation

Competitive Analysis
Identifying competitor, substitutes, Benchmarking – Product, Technology and Business, Competition value chain analysis, Competitive strategies for products

VoC to Product Specifications
QFD methods to develop product specification from VoC
Concept development methods, Concept selection methods (Pugh Matrix, Customer Focus Groups, Delphi method), Gap analysis, Rapid prototyping techniques, First Order analysis of concepts.

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: April 27, 2019
- Notification for Selected Students: May 04, 2019
- Registration Date: May 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

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

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

Curriculum Content

Course Code: M16EPDC202	Course Title: New Product Introduction-2	
L-T-P: 1-1-2	Credits: 3	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. Analyze customer needs/pains and evaluate market opportunity
2. Comprehend how to convert a product market opportunity into product solution
3. Develop product specifications using QFD and other tools from VoC
4. Evaluate different product concepts using quantitative and qualitative methods

Topics	Lecture
Customer and Market Analysis VoC – Voice of Customer gathering techniques Prioritization Methods AHP – Analytic Hierarchic Process Needs, Wants and WOWs Conjoint Analysis Market opportunity and potential evaluation, Market and Customer segmentation	4 hours
Competitive Analysis Identifying competitor, substitutes, Benchmarking – Product, Technology and Business, Competition value chain analysis, Competitive strategies for products	2 hours
VoC to Product Specifications QFD methods to develop product specification from VoC Concept development methods, Concept selection methods (Pugh Matrix, Customer Focus Groups, Delphi method), Gap analysis, Rapid prototyping techniques, First Order analysis of concepts.	6 hour
References: Product Management by Donald Lehmann, and Russell	

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
John Deere Harvester Works, Silvis, IL, USA – Senior Engineer – '00 – '05
John Deere Technology Center, Pune, India - Head, Engineering '05 – '08
John Deere India – Head, Business Development and strategic planning '08 – '09
John Deere India – Head, Harvesters and Crop Solutions Business Unit '09 – '10
John Deere India – Head, India Program Management (NPI) '10 – 'Sept. 12
John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. '12 – April '16
KLE Technological University – Director – Center for Innovation and Product Development – Aug. '16 – till date

Key achievements:

TRW – Vehicle Safety Systems Washington, MI – Senior Consultant – '95 – '00

Simulation of seat belt and airbag systems using Finite Element software tools
Filed two vehicle safety related patents

John Deere Harvester Works, Silvis, IL – Senior Engineer – '00 – '05

Developed vehicle level design analysis methods for combine harvesters;
Introduced robust optimization methods for cost reduction and value improvement
Developed business proposal for John Deere's Technology Center India.

John Deere Technology Center, Pune, India - Head, Engineering '05 – '08

Lead the project team which developed plan and implemented the facility and operational unit for John Deere's Technology center in India.
Developed project management tools and standards for engineering work to provide engineering services to JD units worldwide from the John Deere's Technology Center India.
Deployment leader for Six sigma and Value Improvement for JDTCI
Championed ISO 9001 – 2000 implementation for JDTCI

John Deere India – Head, Business Development and strategic planning ’08 – ’09

John Deere India – Head, Harvesters and Crop Solutions Business Unit ’09 – ‘10

Responsible for developing the business plan and to establish a new organization (Crop Solutions) to introduce complete mechanization solutions to farmers in India. A plan was developed to integrate all value chain stakeholders to successfully introduce planting, crop care and harvesting and residue management equipment in India.

John Deere India – Head, India Program Management (NPI) ’10 – ‘Sept. 12

Responsible for providing program management support for multiple platforms and works closely with product line Program Managers.

Implementation and Execution of CCDP/TDP programs and Value Engineering and Value Improvement projects for JD Pune Works.

Established Program Management Office in India to ensure standard practices and support to be deployed to all programs in India.

John Deere India – VP and Director – Operations, Programs and Manufacturing Strategy – Sept. ’12 – March ‘16

Responsibility for Operations and P&L of three units manufacturing Harvesters, Water equipment and Electronic systems.

Ownership of John Deere’s New Crop Harvesting, Crop Care Product Programs and manufacturing strategy in India

KLE Technological University – Director – Center for Innovation and Product Development – Aug. ’16 – till date

Established a green field center within KLE Tech. University to develop products with social impact.

Introduced Minor degree program in Innovation and Product development.

Licensed one bio-mass processing product to a manufacturing partner for commercialization.

Two patents has been filed and approved.

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training -6th sem Even

2018-19

Product innovation 2

Attendence list

Sl no	Name	DEPT	ID	C1	C2	T1	C3	C4	T2	C5	C6	T3	C7	C8	T4	C9	C10	T5	C11	C12	T6	C14	T7	C15	C16	T8	C17	C18	T9	C19	C20	T10	C21	C22	T11	C23	C24	# Abs	% PRESENT
1	RACHANA MAHINDRAKAR	BT	01FE17BBT035-M	p	p	p	p	p	p	a	P	P	p	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	5	85%
2	RAVEENA PATIL	BT	01FE17BBT038-M	p	a	p	a	p	a	p	P	P	p	a	a	a	A	a	a	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	6	82%
3	DARSHAN BANGERA ALIKE	CS	01FE17BCS066-M	p	p	a	p	p	p	p	P	P	p	a	a	p	P	a	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%
4	SEEMA HUSSAINBADASHAH MANGALORE	CS	01FE17BCS179-M	p	p	p	p	p	p	p	P	P	p	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%
5	SHREYA MELAMALAGI	E&E	01FE17BEE094-M	p	p	p	p	p	p	p	P	P	p	p	a	p	P	a	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	1	97%
6	VANKADARU VENKAT SAAI VINUTHAN	E&E	01FE17BEE108-M	p	p	p	p	p	p	p	P	P	a	p	a	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	4	88%
7	AKSHAY GANAPATI BHATKOORSE	ME	01FE17BME012-M	p	p	p	p	p	p	a	P	P	p	a	a	p	P	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	2	94%

Time Table Schedule for VAT Courses:

VAT Name: Product Innovation - 2

Product Innovation – 2	M16EPDC202	WEDNESDAY	1st floor Athena Bldg	17:00:00
Product Innovation – 2	M16EPDC202	FRIDAY	1st floor Athena Bldg	17:00:00
Product Innovation - 2	M16EPDC202	SATURDAY	1st floor Athena Bldg	12:30:00

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. AKSHAY GANAPATI BHATKOORSE

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. **DARSHAN BANGERA ALIKE**

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from **08-02-2019** *to* **15-04-2019**

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

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Mr./Miss. RACHANA MAHINDRAKAR

has successfully completed the Value Addition Training Course on

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from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

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Mr./Miss. RAVEENA PATIL

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SEEMA HUSSAINBADASHAH MANGALORE

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SHREYA MELAMALAGI

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VANKADARU VENKAT SAAI VINUTHAN

has successfully completed the Value Addition Training Course on

Product Innovation - 2

from 08-02-2019 *to* 15-04-2019

Course Instructor

Head of School

Controller of Examinations

Value Added Training

Automotive Electrical & Electronics

(2018-19)

KLE Technological University
Creating Value
Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @
School of Mechanical Engineering KLETECH
Engage | Explore | Excel | Evolve

Automotive Electrical & Electronics

Course Outcome

- Identify the architecture and hardware necessary for a vehicle
- Analyse the role of electronics in improving vehicle performance
- Develop fundamentals of data acquisition
- Interpret results obtained from on-board electrical and electronic systems

Last Date to apply – 15th Nov 2018
Program Duration – Dec 2018 to Jan 2019
Coordinator – Mr. Aditya Deshpande
aditya@kletech.ac.in
+91 9482037988

Course Details	No. of hours
Batteries, Charging System and Starting System Batteries: Vehicle batteries, types, construction, maintenance and charging, Charging System: Requirements of the charging system, Charging system principles, alternators and charging units, Starting System: Requirements of the starting system, starter motors, construction and circuits.	4 hours
Automotive Sensors Temperature sensor, gas sensor, knock sensor, pressure sensor, flow sensor, torque sensor, crash sensor, Speed sensor and acceleration sensor, operation, types, characteristics, advantages and their applications.	5 hours
Ignition Systems Ignition fundamentals, requirements of ignition system, Electronic ignition, Programmed ignition, Distributor less ignition, Direct ignition, spark plugs, Diagnosing ignition system faults, advanced ignition technology.	5 hours
Fuel Injection Systems Introduction, fuel system components, electronic fuel system, fuel injection types throttle body-port injection-direct injection, electronic control for fuel injection, operation, different types, fuel injectors, idle speed control, high pressure diesel fuel injection MPFI system.	5 hours
Chassis Electrical Systems Anti-lock brakes, KERS, active suspension, traction control, automatic transmission, advanced chassis system technology, Tyre pressure warning, adaptive noise control, obstacle avoidance radar.	5 hours
Total	**24**

Course Outcome

- Identify the architecture and hardware necessary for a vehicle
- Analyse the role of electronics in improving vehicle performance
- Develop fundamentals of data acquisition
- Interpret results obtained from on-board electrical and electronic systems

Resource Person(s) and Biodata

Aditya Deshpande

Assistant Professor, KLE Technological University, Hubballi

Contact: aditya@kletech.ac.in



Academic Background:

B.E. in Automobile Engineering

MSc in Motorsport & Vehicle Dynamics

Areas of Interest: Vehicle Design and Analysis, Vehicle Testing and Motorsports

Time Table

Day	Time	Description
Monday	5pm to 7pm	Theory Class
Tuesday	-------	-------
Wednesday	5pm to 7pm	Theory Class
Thursday	-------	-------
Friday	5pm to 7pm	Theory Class
Saturday	-------	-------

Attendance

Sl. No	Student Name	USN	Week 1	Week 2	Week 3	Week 4
1	Prasann Patil	01FE17BME439	P,P,P	P,P,P	P,P,P	P,P,P
2	Prajwal Deshpande	01FE16BME122	P,P,P	P,P,P	P,P,P	P,P,P
3	Sayyed Ahmed Zuhair	01FE16BME173	P,P,P	P,P,P	P,P,P	P,P,P
4	Chetan P	01FE16BEC051	P,P,P	P,P,P	P,P,P	P,P,P
5	Srivatsa S Joshi	01FE16BME203	P,P,P	P,P,P	P,A,P	P,P,P
6	Shrinidhi Srinivas Jahagirdar	01FE16BME191	P,P,P	P,P,P	P,P,P	P,P,P
7	Gadigeppa Kulkarni	01FE17BME412	P,P,P	P,P,A	P,P,P	P,P,P
8	Vinay Hiremath	01FE16BME222	P,P,P	P,P,P	P,P,P	P,P,P
9	SAMARTH B M	01FE16BME164	P,P,P	P,P,P	P,P,P	P,P,P
10	Sanket Gouri	01FE16BME445	P,P,P	P,P,P	P,P,P	P,P,P

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. CHETAN P

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. GADIGEPPA KULKARNI

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. PRAJWAL DESHPANDE

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. PRASANN PATIL

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SAMARTH B M

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SANKET GOURI

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SAYYED AHMED ZUHAIR

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SHRINIDHI SRINIVAS JAHAGIRDAR

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. SRIVATSA S JOSHI

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

School of Mechanical Engineering

Certificate

This is to certify that

Mr./Miss. VINAY M HIREMATH

has successfully completed the Value Addition Training Course on

Automotive Electrical and Electronics

from 02-09-2018 *to* 10-01-2019

Course Instructor | Head of School | Controller of Examinations

Value Added Training

Advanced Powertrain & Drivetrain Systems (2018-19)

KLE Technological University
Creating Value Leveraging Knowledge

Value Added Training (VAT)

Experience Engineering @ School of Mechanical Engineering KLETECH
Engage | Explore | Excel | Evolve

Advanced Powertrain & Drivetrain Systems

Course Outcome

- Consider the various parameters that have an impact on preliminary engine design for sizing and speed, like engine speed, piston speed, stroke bore ratio
- Analyze the power requirement for vehicle propulsion accounting/considering the various resistances offered for motion and stability of vehicle on different road conditions
- Consider and analyze the different loads to be encountered in the design and analysis of connecting rod and crankshaft for IC engine (petrol and diesel engines) applications.

Last Date to apply – 10th Jan 2019
Program Duration – Jan 2019 to Feb 2019
Coordinator – Mr. Aditya Deshpande
aditya@kletech.ac.in
+91 9482037988

Course Details	No. of hours
Intake System Function, types, components, design requirements, air flow, fuel flow, air-fuel mixture flow, in-cylinder flow.	4 hours
Exhaust Systems Function, types, components, design requirements, air flow-exhaust valves and port, flow through pipes, catalytic converters and exhaust acoustics.	5 hours
Engine Tuning Cylinder head, fuel & compression ratio, ignition system, cooling and lubrication.	5 hours
Electric and Hybrid Drives Introduction, types, energy source, design requirements,	5 hours
Drivetrain systems Drive shafts- types, construction, Transmission- manual, automatic, DCT, sequential, paddle shift, impact of final ratio and wheel size on vehicle performance.	5 hours
Total	**24**

Course Outcome

- Consider the various parameters that have an impact on preliminary engine design for sizing and speed, like engine speed, piston speed, stroke bore ratio
- Analyze the power requirement for vehicle propulsion accounting/considering the various resistances offered for motion and stability of vehicle on different road conditions.
- Consider and analyze the different loads to be encountered in the design and analysis of connecting rod and crankshaft for IC engine (petrol and diesel engines) applications.

Resource Person(s) and Biodata

Aditya Deshpande

Assistant Professor, KLE Technological University, Hubballi

Contact: aditya@kletech.ac.in



Academic Background:

B.E. in Automobile Engineering

MSc in Motorsport & Vehicle Dynamics

Areas of Interest: Vehicle Design and Analysis, Vehicle Testing and Motorsports

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Wednesday	5pm to 7pm	Theory Class
Thursday	-------	-------
Friday	5pm to 7pm	Theory Class
Saturday	-------	-------

Attendance

Sl. No	Student Name	USN	Week 1	Week 2	Week 3	Week 4
1	Prasann Patil	01FE17BME439	P,P,P	P,A,P	P,P,P	P,P,P
2	Prajwal Deshpande	01FE16BME122	P,P,P	P,P,P	P,P,P	P,P,P
3	Sayyed Ahmed Zuhair	01FE16BME173	P,P,P	P,A,P	P,P,P	P,P,P
4	Chetan P	01FE16BEC051	P,P,P	P,P,P	P,P,P	P,P,P
5	Srivatsa S Joshi	01FE16BME203	A,P,P	P,P,P	P,P,P	P,P,P
6	Shrinidhi Srinivas Jahagirdar	01FE16BME191	P,P,P	P,P,P	P,P,P	P,P,P
7	Gadigeppa Kulkarni	01FE17BME412	P,P,P	P,P,A	P,P,P	P,P,P
8	Vinay Hiremath	01FE16BME222	P,P,P	P,P,P	P,P,P	P,P,P
9	SAMARTH B M	01FE16BME164	P,P,P	P,P,P	P,P,P	P,P,P
10	Sanket Gouri	01FE16BME445	P,P,P	P,P,P	P,P,P	P,P,P

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from 15-01-2019 *to* 20-02-2019

Course Instructor | Head of School | Controller of Examinations

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Value Added Training

Vehicle Dynamics

(2018-19)

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Value Added Training (VAT)

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Vehicle Dynamics

Course Outcome

- Identify the forces acting on a vehicle in static and dynamic conditions
- Analyse the effects of chassis sub-systems on dynamics of the vehicle
- Develop an understanding for stability and control
- Understand the effects of chassis sub-systems on dynamics of the vehicle

Last Date to apply – 15th Aug 2018
Program Duration – Sep 2018 to Oct 2018
Coordinator – Mr. Aditya Deshpande
aditya@kletech.ac.in
+91 9482037988

Course Details	No. of hours
Introduction: Forces Acting on a Vehicle Vehicle Axis System, Cornering forces, Forces on tyres, Wheel loads, Aerodynamic forces and applied systems.	3 hours
Vehicle Stability & Control Equations of motion, Mechanics of Neutral steer, oversteer and understeer and corresponding vehicle response, Spring mass damper system applied to a vehicle, Significant speeds and control.	3 hours
Suspension & Ride Mechanics of different suspension, Ride & Roll rates, Different springs and their calculations, Dampers.	3 hours
Steering Systems Steering geometry, application of Ackerman geometry, effects of Ride and Roll rates, Alignment.	4 hours
Driving and Braking Effects of front, rear and four wheel drive, differentials and brake systems.	4 hours
Vehicle Set-up Constraints and specifications, Design process, Chassis set-up.	4 hours
Testing and Development Driver-Vehicle relation, Vehicle characteristics, Fundamentals of testing and program set-up, Methodology and Development.	3 hours
Total	**24**

Course Outcome

- Identify the forces acting on a vehicle in static and dynamic conditions
- Analyse the effects of chassis sub-systems on dynamics of the vehicle
- Develop an understanding for stability and control
- Understand the effects of chassis sub-systems on dynamics of the vehicle

Resource Person(s) and Biodata

Aditya Deshpande

Assistant Professor, KLE Technological University, Hubballi

Contact: aditya@kletech.ac.in



Academic Background:

B.E. in Automobile Engineering

MSc in Motorsport & Vehicle Dynamics

Areas of Interest:

Vehicle Design and Analysis, Vehicle Testing and Motorsports

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2	Vishal Hanamant Pawar	01FE16BME226	P,P,P	P,P,P	P,P,P	P,P,P
3	Puneet B Gani	01FE16BME132	P,P,P	P,P,P	P,P,P	P,P,P
4	Prajwal Deshpande	01FE16BME122	P,P,P	P,P,P	P,P,P	P,P,P
5	Sayyed Ahmed Zuhair	01FE16BME173	P,P,P	P,P,P	P,P,P	P,P,P
6	Chetan P	01FE16BEC051	P,P,P	P,P,P	P,P,P	P,P,P
7	Abhay B Palrecha	01FE16BME001	P,P,P	P,P,P	P,P,P	P,P,P
8	Srivatsa S Joshi	01FE16BME203	P,P,P	P,P,P	P,A,P	P,P,P
9	Sharanbasappa	01FE16BME176	P,P,P	P,P,P	P,P,P	P,P,P
10	Shrinidhi Srinivas Jahagirdar	01FE16BME191	P,P,P	P,P,P	P,P,P	P,P,P
11	Gadigeppa Kulkarni	01FE17BME412	P,P,P	P,P,A	P,P,P	P,P,P
12	Vijay Nijagunashivayogi Patil	01FE17BME454	P,P,P	P,P,P	P,P,P	P,P,P
13	Ramakrishna Gandoli	01FE17BME443	P,P,P	P,P,P	P,P,P	P,P,P

14	Vinay Hiremath	01FE16BME222	P,P,P	P,P,P	P,P,P	P,P,P
15	Darshan D. B.	01FE16BME045	P,P,P	P,P,P	P,P,P	P,P,P
16	Shilpashree J. Kalawad	01FE16BME238	P,P,P	P,P,P	P,P,P	P,P,P
17	Siddharth B. Kshatri	01FE16BME193	P,P,P	P,P,P	P,P,P	P,P,P
18	Sharanabasava K	01FE16BME450	P,P,P	P,P,P	P,P,P	P,P,P
19	SAMARTH B M	01FE16BME164	P,P,P	P,P,P	P,P,P	P,P,P
20	Sanket Gouri	01FE16BME445	P,P,P	P,P,P	P,P,P	P,P,P



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Certificate

This is to certify that

Mr./Miss. ABHAY B PALRECHA

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Vehicle Dynamics

from 30-09-2018 *to* 20-10-2018

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Course Instructor

Head of School

Controller of Examinations

Value Added Training

Vehicle Testing & Validation

(2018-19)

Value Added Training (VAT)

Vehicle Testing & Validation

Course Outcome

- Describe the different test necessary to validate a vehicle
- Explain the importance of testing
- Analyse the test data to validate design

Last Date to apply – 15th Feb 2019
Program Duration –Mar 2019 to Apr 2019
Coordinator – Mr. Aditya Deshpande
aditya@kletech.ac.in
+91 9482037988

Course Details	No. of hours
Introduction Outline of testing methodology for different vehicles, maintaining log book entries, benchmarking competition, identification of areas for development.	5 hours
Testing Design of Track, Types of test, design of tests, conduct of test with focus on safety, Data acquisition, set-up changes and result logs.	5 hours
Validation & Development Interpretation of testing results, comparison and correlation of results with theoretical/simulation results, modification to design, repeat of testing-validation-development cycle.	5 hours
Reports Presenting data obtained from testing and validation.	5 hours
Total	**20**

Course Outcome

- Describe the different test necessary to validate a vehicle
- Explain the importance of testing
- Analyse the test data to validate design

Resource Person(s) and Biodata

Aditya Deshpande

Assistant Professor, KLE Technological University, Hubballi

Contact: aditya@kletech.ac.in



Academic Background:

B.E. in Automobile Engineering

MSc in Motorsport & Vehicle Dynamics

Areas of Interest: Vehicle Design and Analysis, Vehicle Testing and Motorsports

Time Table

Day	Time	Description
Monday	5pm to 7pm	Theory Class
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