



# K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109

## DEPARTMENT OF MECHANICAL ENGINEERING

### FDP: An Overview of Teaching Techniques in Strength of Materials/Mechanics of Materials

#### BROCHURE



## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

ವಿಶ್ವವಿದ್ಯಾಲಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405468  
Fax : (0831) 2405467  
Email : registrar@vtu.ac.in  
website : www.vtu.ac.in

Prof. A. S. Deshpande, B.E(Mech), M.Tech., Ph.D.  
Registrar

Ref. No.: VTU/PS/2019-20/ 3470

Date: 19 AUG 2019

#### CIRCULAR

Sub: Deputation of faculty for the AICTE – VTU joint Training Program for Teachers in AICTE approved & VTU Affiliated Colleges between 26<sup>th</sup>–30<sup>th</sup> August 2019 at VTU, Centre for Post Graduate Studies, Muddenahalli - reg.

Ref: VTU, Centre for Post Graduate Studies, Muddenahalli E-mail dt: 19.08.2019

With reference to the above cited subject, this is to inform you that, All India Council for Technical Education, New Delhi (AICTE) and Visvesvaraya Technological University, Belagavi are jointly organizing the Training Program for Teachers in AICTE approved and VTU Affiliated Colleges on "An Overview of Teaching Techniques in Strength of Materials / Mechanics of Materials" between 26<sup>th</sup> – 30<sup>th</sup> August 2019 at VTU Centre for Post Graduate Studies, Muddenahalli, Chickaballapur (Dist), Karnataka- 562 101.

The objective of the training programs is to prepare them for being successful in a knowledge society.

There will be no Registration Fee. Free accommodation & food will be provided and TA will be provided for outstation participants as per norms of the program.

**Eligibility:** The Faculty Members who are handling Strength of Materials in Civil Engineering and Mechanics of Materials in Mechanical Engineering, Aeronautical/Aerospace Engineering and Automobile Engineering at UG level are eligible for participating in the Training Program.

#### Contact Details:

Dr. Thirtha Prasada H P	Mob: 9448212726
Dr.Ashwin C. Gowda	Mob: 9481372504
Mr.Narayana Swamy G	Mob: 9611001258

You are hereby requested to bring the contents of this circular to the notice of all the concerned faculty of your college and encourage them to participate in this Training Program.

By Order,

19.8.2019  
REGISTRAR

To,  
All the Principals of Affiliated / Constituent Colleges

#### Copy to:

1. The Hon'ble Vice-Chancellor through his Secretary, VTU Belagavi.
2. The Finance Officer, VTU Belagavi.
3. The Regional Director (I/c), VTU, Regional Offices at Bangalore, Belagavi, Mysore & Gulbarga for information

ICTE-VTU Joint Training Programme for  
Teachers from AICTE Approved & VTU  
Affiliated Technical Institutions

**One Week Training Programme for Teachers**

**On**

**“An Overview of Teaching Techniques  
in  
Strength of Materials /  
Mechanics of Materials”**

*(A Training Programme for faculty Members of VTU  
Affiliated Institutions)*

**REGISTRATION FORM**

Name: \_\_\_\_\_

Department: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Mobile: \_\_\_\_\_

mail: \_\_\_\_\_

**Declaration by the Applicant**

I, selected, I agree to abide by the rules and regulations of  
the training programme of VTU-HRDC and shall attend all  
the sessions compulsorily.

Signature of the Applicant

Recommended and Forwarded

Signature of the Head of the Institution

**CHIEF PATRON**

**Dr. Karisiddappa**

Hon'ble Vice Chancellor, VTU, Belagavi

**PATRONS**

**Prof. Anand S. Deshpande**

Registrar, VTU, Belagavi

**Dr. Satish Annagiri**

Registrar(Evaluation), VTU, Belagavi

**Mrs. M. A. Sapna**

Finance Officer, VTU, Belagavi

**CONVENER**

**Dr. N Chikkanna**

Coordinator, VTU CPGS, Muddenahalli

**CO-CONVENERS**

**Dr. Thitha Prasada H.P.**

Associate Professor, Dept. of CAE

**Dr. Ashwin C. Gowda,**

Assistant Professor, Dept. of CAE

**Mr. Narayana Swamy G.,**

Assistant Professor, Dept. of CAE

**DEPARTMENT COORDINATORS**

**Dr.G.S.Venkatesh,** Prof. & Prog. Coordinator, Dept. of CAE

**Dr. Basawaraj,** Associate Professor, Dept. of APT

**Mr. Sanjeev G Palekar,** Asst. Professor, Dept. of APT

**ORGANISING COMMITTEE**

**Dr. Indumathi,** Professor & Prog. Coordinator, Dept. of DECS  
**Dr. Sarika Raga,** Assoc. Professor & Prog. Coordinator, Dept. of DECS  
**Dr. Dinesh Rangappa,** Professor & Prog. Coordinator, Dept. of NT  
**Dr. Shivamuthy G,** Asso. Prof. & Prog. Coordinator Dept. of CSE  
**Dr. H.H. Ramesha,** Associate Prof., Dept. of MBA  
**Dr. Pankajakshi R,** Assoc. Prof. & Prog. Coordinator, Dept. of MBA  
**Dr. Prassana D.S,** Asst. Professor, Dept. of NT  
**Dr. Lokesh S V,** Asst. Professor, Dept. of NT  
**Dr. Kanta D Devanagavi,** Asst. Professor, Dept. of MCA  
**Dr. Roopadharshini S,** Asst. Professor, Dept. of MBA  
**Mr. Purushotham C J,** Asst. Professor, Dept. of MBA  
**Mr. Lakshminayana K,** Asst. Professor, Dept. of MBA  
**Mrs. Niveditha M U,** Asst. Professor, Dept. of MBA  
**Mrs. Veenuarani K,** Asst. Professor, Dept. of MBA  
**Mrs. Renuka Malge,** Asst. Professor, Dept. of MCA  
**Mr. Vadhusaik B H,** Asst. Professor, Dept. of MCA  
**Mr. Vinod Kumar G,** Asst. VTU, Muddenahalli  
**Mr. Manjunath A.S. Jr,** Assistant, VTU, Muddenahalli

ICTE-VTU Joint Training Programme for  
Teachers from AICTE Approved & VTU  
Affiliated Technical Institutions

**One Week Training Programme for Teachers**

**On**

**“An Overview of Teaching Techniques  
in  
Strength of Materials /  
Mechanics of Materials”**

**26<sup>th</sup> - 30<sup>th</sup> AUGUST 2019**



**Organized by:**

VTU- Human Resource Development Cell (HRDC)  
Department of Computer Aided Engineering (CAE)  
& Aerospace Propulsion Technology (APT)  
Visvesvaraya Technological University  
Centre for Post Graduate Studies  
Bengaluru Region, Muddenahalli  
Chikkaballapur-562101

**Venue:**

VTU Centre for Post Graduate Studies  
Bengaluru Region, Muddenahalli  
Chikkaballapur-562101  
Seminar Hall



#### About the VTU

Visvesvaraya Technological University (VTU) named after Bharat Ratna Dr. Sir M. Visvesvaraya established on 1st April 1998, as per the VTU Act 1994 of the Government of Karnataka. University has been established by the Government of Karnataka in order to promote planned and sustainable development of technical education. VTU has its Head Office located in Belagavi in the state of Karnataka. Reckoning the fact that, University is a seat of confluence of knowledge and as a technological University, Visvesvaraya Technological University does not restrict itself only to curricular activities but emphasizes on the overall growth of knowledge in society and hence its campus in Belagavi is named aptly as "Jnana Sangama". The University has jurisdiction over the whole state of Karnataka. VTU has established four regional centers at Bengaluru, Mysuru, Kalaburagi and Belagavi for administrative convenience. VTU is one of the prestigious and largest technological Universities in the India having affiliation of 220 Engineering colleges and 20 Autonomous Colleges and one Constituent College.

VTU is imparting technical education to more than 4.5 lakh students under its 35 Undergraduate & 94 Postgraduate Programs. VTU is offering Doctoral programs in 865 departments in various affiliated Colleges which have been recognized as research centers. Around 5000 Research Scholars are perusing for Doctoral and M. Sc. (Engg.) programs. VTU has established full-pledged Centers for Post Graduate Studies at Muddenahalli, Kalburgi, Belagavi and Mysuru.

#### About AICTE, New Delhi

All India Council for Technical Education (AICTE) was set up in November 1945 as a national-level apex advisory body to conduct a survey on the facilities available for technical education and to promote development in the country in a coordinated and integrated manner. In order to ensure the same, as stipulated in the National Policy of Education (1986), AICTE was vested with:

- Statutory authority for planning, formulation, and maintenance of norms & standards
- Quality assurance through accreditation
- Funding in priority areas, monitoring, and evaluation
- Maintaining parity of certification & awards

#### About the VTU PG Centre, Muddenahalli

The Visvesvaraya Technological University, Post Graduate Center, Bengaluru Region, Muddenahalli has 200 acres campus located at Muddenahalli, Chikkaballapura (Dist). Muddenahalli is the birth place of great legend Bharata Ratna Sir M. Visvesvaraya. It has all necessary infrastructure required for imparting quality education through its well structured administrative and academic staff for overall development of student's personality. Center for PG Studies has five full time post graduate programs in M.Tech, MBA and MCA. All the departments have well qualified faculty.

##### About Computer Aided Engineering:

Department of Computer Aided Engineering (CAE) is established in the year 2011 with an intake of 25 students. Department has well experienced faculties to guide and motivate the young Engineers towards research in CAE to meet the present industrial demands.

##### About Aerospace Propulsion Technology:

M.Tech. in Aerospace Propulsion Technology (APT) is established in the year 2011 with an intake of 25 students. Department of APT provides a comprehensive background in the design and operation of different types of propulsion systems for aerospace applications. The course is designed for those seeking a career in the design, development, operation and maintenance of propulsion systems.

#### PROGRAMME OBJECTIVES:

The objective of the AICTE – VTU Training Programme is to conduct training for the faculty members to prepare them for being successful in a knowledge society and fulfill the following important Teaching Techniques in a subject.

- Understand the concepts of stress and strain at a point as well as the stress-strain relationships for homogenous, isotropic materials.
- To calculate the stresses and strains in axially-loaded members, circular torsion members, and members subject to flexural loadings.
- To calculate the stresses and strains associated with thin-wall spherical and cylindrical pressure vessels.
- To determine the stresses, strains and deflections produced in various members produced by applied loading.
- To provide training in a fundamental subject (mechanics and structural) necessary for careers mechanical, civil and aeronautical engineering fields.

#### PROGRAMME OUTCOME:

- Analyze and design structural members subjected to tension, compression, torsion, bending and combined stresses using the fundamental concepts of stress, strain and elastic behaviour of materials.
- Utilize appropriate materials in design considering engineering properties, sustainability, cost and weight.
- Perform engineering work in accordance with ethical and economic constraints related to the design of structures and machine parts.

#### Resource Persons:

Renowned Experts from reputed Institutions like IISc., Bengaluru, IIT's, NIT's and Senior Faculties of VTU.

**Eligibility:** Teachers from AICTE Approved and VTU Affiliated Technical Institutes are eligible to participate. Those who are handling Strength of Materials in Civil Engineering and Mechanics of Materials in Mechanical Engineering, Aeronautical/Aerospace Engineering and Automobile Engineering at UG level are eligible to participate.

**Registration Fee:** There is no Registration Fee

**Accommodation & Food:** For Outstation Participant's free accommodation and for all participants Food will be provided in institute hostels.

**TA will be provided to the outstation Participants as per the norms of the programme.**

#### How to Apply:

Interested and eligible candidates may apply by mailing the soft copy of the filled in registration format given in this brochure to vtucpgsb@gmail.com on or before **23<sup>rd</sup> August 2019.**

#### Selection of the Participants:

AICTE-VTU Training Programme will be of FIVE Days residential programme with minimum 40 participants. Selection will be on first cum first serve basis. Selected candidates will be intimated by e-mail on **24<sup>th</sup> August 2019.**

#### Contact for Information:

Dr. Thirtha Prasada H P	Mob: 9448212726
Dr. Ashwin C Gowda	Mob: 9481372504
Mr. Narayana Swamy G	Mob: 9611001258
Email: vtucpgsb@gmail.com	



# Visvesvaraya Technological University

Centre for Post Graduate Studies, Bangalore Region  
Visvesvaraya Institute of Advanced Technology,  
Muddenahalli, Chikkaballapur District -562 101

Dr. N.Chikkanna,  
Co-ordinator

E-mail id:vtucpgsb@gmail.com

Schedule of the AICTE-VTU Joint Training Programme for Teachers from AICTE  
Approved & VTU Affiliated Technical Institutions

On  
“An Overview of Teaching Techniques in  
Strength of Materials /Mechanics of Materials”  
From 26<sup>th</sup> – 30<sup>th</sup> Aug 2019

Organized by:  
VTU-HRDC at PG Center Muddenahalli, Chikkaballapur-562101

Day 1: 26/08/2019

Sl No.	Time	Topic/Event	Name of the speaker	Designation and Affiliation
1	9.00 AM -10.00 AM	Registration		
2	10.00 AM -11.00 AM	Inauguration		
	11.00 AM -11.15 AM	Tea Break		
3	11.15 AM - 12.00 PM	Stresses and Strains: Introduction, Properties of materials, Stress, Strain and Hooke's law, Stress strain diagram for brittle and ductile materials,	Dr. Shanmukha Nagaraj Phone 9845129398	Professor, department of Mechanical Engineering, RV College, Bangalore
4	12.15PM-1.15PM	True stress and strain, Calculation of stresses in straight, Stepped and tapered sections, Composite sections, Stresses due to temperature change,	Dr. Shanmukha Nagaraj	Professor, department of Mechanical Engineering, RV College, Bangalore
	1.15 PM -2.00 PM	Lunch Break		
5	2.00 PM -3.30 PM	Shear stress and strain, Lateral strain and Poisson's ratio,	Dr. Shanmukha Nagaraj	Professor, department of Mechanical Engineering, RV College, Bangalore
	3.30 PM -3.45 PM	Tea Break		
6	3.45 PM -5.00 PM	Elastic constants and relations between them	Dr. Shanmukha Nagaraj	Professor, department of Mechanical Engineering, RV College, Bangalore

**Day 2: 27/08/2019**

Sl No.	Time	Topic/Event	Name of the speaker	Designation and Affiliation
1	09.30 AM -11.30 AM	Deflection of Beams: Definition of slope, Deflection and curvature, Sign conventions, Derivation of momentcurvature equation.	Dr Satishchandra K T  Phone 9844128713	Former Professor Department of Civil Engineering, RVCE, Bangalore
	11.30 AM -11.45 AM	Tea Break		
2	11.45 AM – 1.15 PM	Double integration method and Macaulay's method: Slope and deflection for standard loading cases and for determinate prismatic beams subjected to point loads, UDL, UVL and couple.	Dr Satishchandra K T	Former Professor Department of Civil Engineering, RVCE, Bangalore
	1.15 PM -2.00 PM			
3	2.00 PM -3.30 PM	Analysis of Stress and Strain: Introduction to three dimensional state of stress, Stresses on inclined planes,	Dr Siddaramappa V Itti  Phone 9448157391	Principal and Professor Department of Civil Engineering, SGBIT Belagavi
	3.30-3.45 PM	Tea Break		
4	3.45 -5.00 PM	Principal stresses and maximum shear stress, Principal angles, Shear stresses on principal planes, Maximum shear tress, Mohr circle for plane stress conditions	Dr Siddaramappa V Itti	Principal and Professor Department of Civil Engineering, SGBIT Belagavi

**Day 3: 28/08/2019**

Sl. No.	Time	Topic/Event	Name of the speaker	Designation and Affiliation
1	09.30 AM -11.30 AM	Shear Force and Bending Moment: Type of beams, Loads and reactions, Relationship between loads.	Dr. P.L. Srinivasa Murthy  Phone 9886265443	Associate Prof. DME, RIT, Bangalore
	11.30 AM -11.45 AM	Tea Break		
2	11.45 AM – 1.15PM	shear forces and bending moments, Shear force and bending moments of cantilever beams,	Dr. P.L. Srinivasa Murthy	Associate Prof. DME, RIT, Bangalore
	1.15PM -2.00 PM	Lunch Break		
3	2.00 PM -3.30 PM	Pin support and roller supported	Dr. P.L. Srinivasa	Associate Prof. DME, RIT, Bangalore

		beams subjected to concentrated loads, uniformly distributed constant / varying loads.	Murthy	
	3.30 PM -3.45 PM	Tea Break		
4	3.45 PM -5.00 PM	Stress In Beams: Bending and shear stress distribution in rectangular, I and T section beams.	Dr. P.L. Srinivasa Murthy	Associate Prof. DME, RIT, Bangalore

**Day 4: 29/08/2019**

Sl No.	Time	Topic/Event	Name of the speaker	Designation and Affiliation
1	09.30AM-11.30 AM	Torsion: Circular solid and hollow shafts, Torsional moment of resistance,	Dr. T krishna Rao Phone 9743711190	Professor and Head, Mechanical Engineering, Global Academy of Technology, Bangalore
	11.30AM-11.45 AM	Tea Break		
2	11.45 AM – 1.15 PM	Power transmission of straight and stepped shafts, Twist in shaft sections, Thin tubular sections, Thin walled sections  Compound Stresses: Introduction, state of stress at a point,.	Dr. T krishna Rao	Professor and Head, Mechanical Engineering, Global Academy of Technology, Bangalore
	1.15PM-2.00 PM	Lunch Break		
3	2.00PM-3.30 PM	Columns and Struts: Introduction, short and long columns. Euler's theory; Assumptions	Dr. T krishna Rao	Professor and Head, Mechanical Engineering, Global Academy of Technology, Bangalore
	3.30PM-3.45 PM	Tea Break		
4	3.45PM -5.00 PM	Derivation for Euler's Buckling load for different end conditions, Limitations of Euler's theory. Rankine-Gordon's formula for colum	Dr. T krishna Rao	Professor and Head, Mechanical Engineering, Global Academy of Technology, Bangalore

**Day 5: 30/07/2017**

Sl No.	Time	Topic/Event	Name of the speaker	Designation and Affiliation
1	09.00AM-10.30 AM	Human Values and Professional Ethics	Dr KB Prakash Phone 9448267374	Principal Govt Engg college haveri
	10.30AM-10.45 AM	Tea Break		
	10.30AM-1.30 PM	Cylinders: Thin cylinder: Hoop's stress, maximum shear stress, circumferential and longitudinal strains,	Dr Sarnabasappa C Sajjan Phone 9611021801	Professor Department of Mechanical Engineering, KLE Hubli

		Thick cylinders: Lames equations.		
	1.30 PM -2.00 PM	Lunch Break		
	2.00-3.30 PM	Strain Energy: Strain energy due to axial, shear, bending, torsion and impact load. Castigliano's theorem I and II and their applications	Dr Sarnabasappa C Sajjan	Professor Department of Mechanical Engineering, KLE Hubli
3	3.30-4.30 PM	Human Values and Professional Ethics  And TEST	Dr KB Prakash	
	4.30-5.00 PM	Valedictory		
4	5.00 PM	High Tea		

## **Report**

**Program Title:** An Overview of Teaching Techniques in Strength of Materials / Mechanics of Materials

**Duration:** 26th – 30th August 2019

**Conducted by:** Visvesvaraya Technological University (VTU) - Human Resource Development Cell (HRDC)

**Convener, Training Programme, VTU, CGPS, Muddenahalli:** Dr. N. Chikkanna

**Registrar:** Dr. A S Deshpande

**Program Venue:** Centre for Post-Graduation Studies, Muddenahalli, VTU

**Participant:** Mr. Ranganath N. from KSIT, Bangalore

**Program Synopsis:** The FDP was a collaborative effort by VTU and AICTE to enhance the pedagogical skills of faculty members in engineering disciplines, focusing on the Strength of Materials and Mechanics of Materials. The program was meticulously designed to incorporate contemporary teaching methodologies tailored to these specialized subjects.

### **Objectives:**

- To introduce innovative teaching techniques tailored for engineering materials.
- To improve educational strategies for delivering complex material concepts.
- To facilitate the exchange of teaching experiences among peers.

**Outcomes:** Participants were equipped with advanced teaching tools, interactive learning methods, and up-to-date knowledge on material sciences.

### **Program Content:**

- Lectures by distinguished professors and industry experts.
- Interactive sessions with hands-on activities to encourage active learning.
- Discussions on challenges and best practices in teaching materials engineering.

**Assessment:** The attendees were evaluated based on participation, engagement in activities, and understanding of the workshop content.

**Certification:** The successful completion of the FDP by participants was commemorated with a certificate, duly signed by the program convener and VTU registrar.

**Conclusion:** The FDP has significantly contributed to the upskilling of faculty members in engineering disciplines, ensuring that they are well-prepared to train the next generation of engineers with an enhanced approach to teaching materials science.

SUBMITTED BY:

RANGANATH.N

Ranganath.N

 **AICTE – VTU Joint Training Programme for Teachers**  
**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**  
VTU HUMAN RESOURCE DEVELOPMENT CELL (VTU - HRDC)  
Centre for Post-Graduation Studies Muddenahalli, Chikkaballapur (Dist.) - 562101

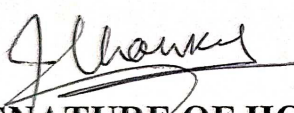



**One Week Training Programme for Teachers**  
**On**  
**“An Overview of Teaching Techniques in Strength of Materials / Mechanics of Materials”**  
**26<sup>th</sup> – 30<sup>th</sup> August 2019**  
**Certificate**

This is to certify that ☒ Mr. /Mrs. /Dr. /Prof. Ranganath. N. of  
K.S.I.T., Bangalore has Participated and Successfully completed  
**One Week AICTE – VTU Joint Training programme for Teachers on “An Overview of Teaching Techniques  
in Strength of Materials / Mechanics of Materials” on 26th to 30th August 2019 Organized by VTU Human Resource  
Development Centre (VTU - HRDC), Centre for PG Studies, Muddenahalli, Chikkaballapur (Dist.)- 562101**

  
**Dr. N. Chikkanna**  
Convener, Training Programme  
VTU, CPGS, Muddenahalli

  
**Prof. A. S. Deshpande**  
Registrar  
VTU, Belagavi

  
**SIGNATURE OF HOD**  
Head of the Department  
Dept. of Mechanical Engg.  
K.S. Institute of Technology  
Bengaluru - 560 109

  
**SIGNATURE OF PRINCIPAL**  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109





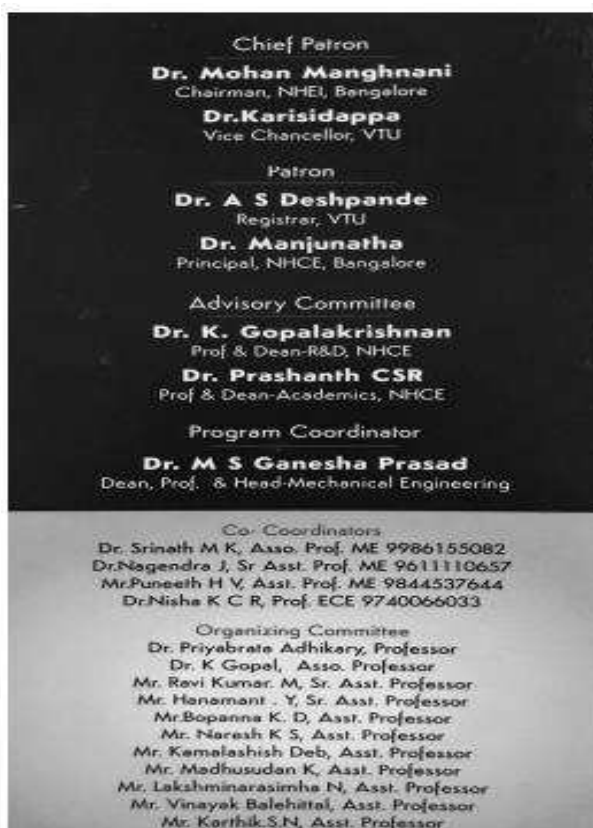
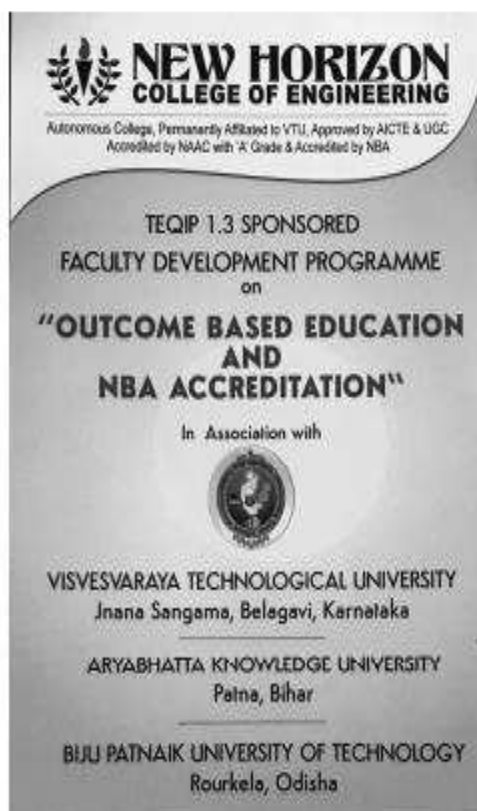
# K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

#14, Raghuvaranahalli, Kanakapura Main Road, Bengaluru-5600109

## DEPARTMENT OF MECHANICAL ENGINEERING

### REPORT OF FDP: "OUTCOME BASED EDUCATION AND NBA ACCREDITATION"

#### Broucher



#### Report

#### Faculty Development Program (FDP) Report

**Title :** "OUTCOME BASED EDUCATION AND NBA ACCREDITATION"

**Date:** 28th January 2020 to 1st February 2020

**Organized by:** NEW HORIZON COLLEGE OF ENGINEERING, Visvesvaraya Technological University,

**Participant:** BHARAT KUMAR of KSIT, PARASHURAM.B.K of KSIT,

#### SUMMARY

About the Workshop Outcome – Based Education is being practiced at global level to ensure the quality of education in institutions of higher learning at the tertiary level. OBE is an educational philosophy where in student-centric learning approaches are used to

measure student's performance based on predetermined set of expected outcomes. In this context, outcomes are defined as a set of values or attributes that a student should acquire through the educational process. OBE is based on developing an educational system around goals. Outcomes-based education has a number of advantages for instructors, educational developers, administrator

#### Objectives

- Providing a strategic way to enhance the quality of teaching and learning;
- Helping to ensure the approval and accreditation of new and existing programs;
- Providing a mechanism for ensuring accountability and quality assurance;
- Helping students to take responsibility for their own learning;
- Providing a means for students to articulate the knowledge, skills and experience acquired during their program.
- Providing a framework for collaborative curriculum planning

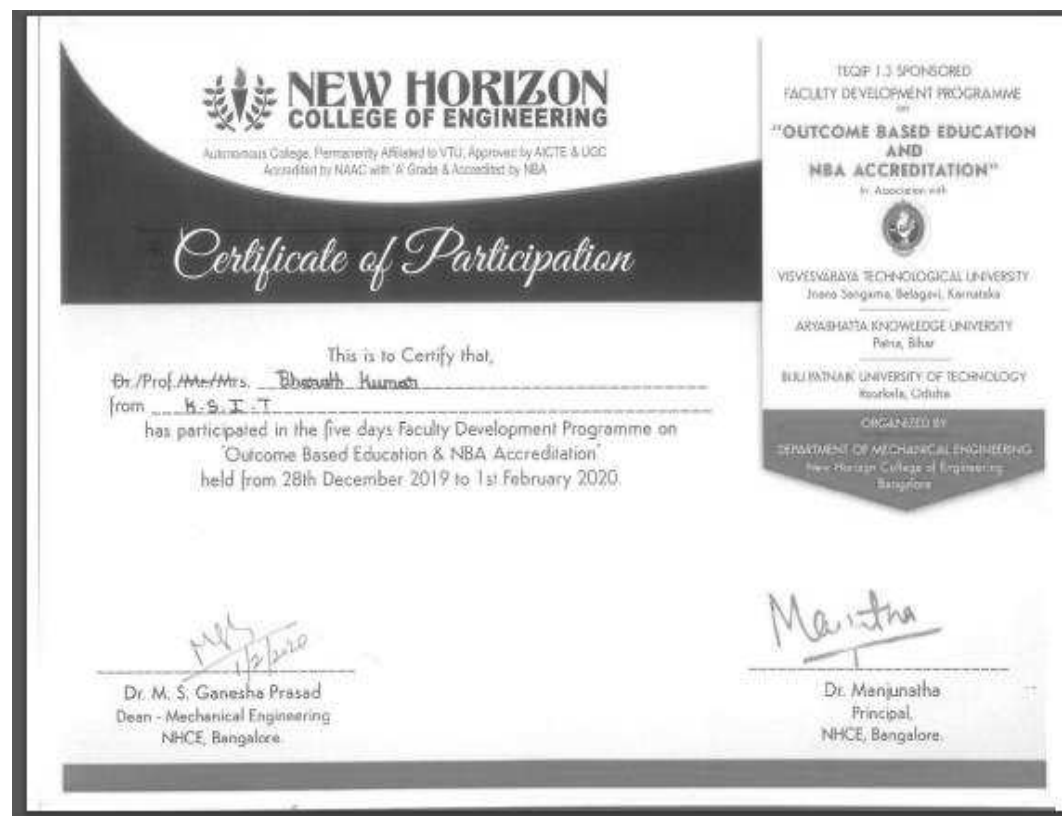
#### Topics to be covered:

- Overview of OBE, Vision, Mission and PEO's
- Framing Quality CO's
- CO - PO Mapping
- CO - PO Computation & Attainment • Assessment Methods
- Course Files and documentation • Continuous Improvement
- Professional Activities
- Use of Modern Tools in Teaching Learning Process
- Best Practices in Teaching Learning Process

#### SUBMITTED BY:

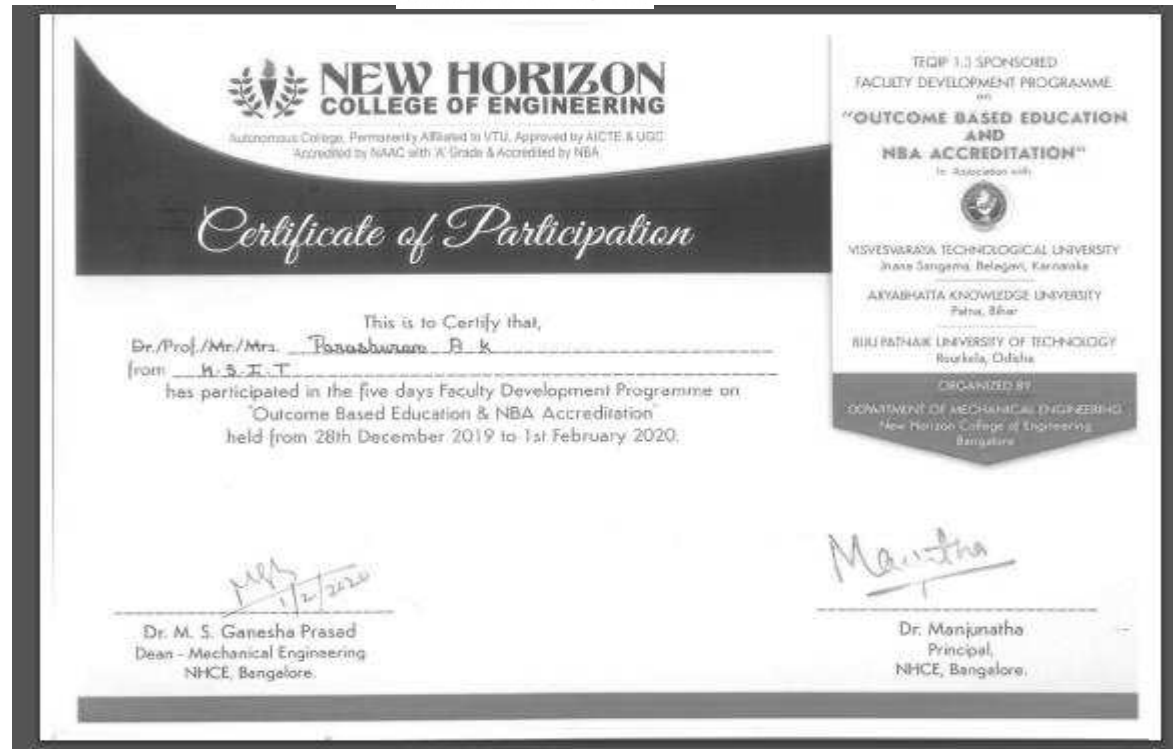
BHARAT KUMAR

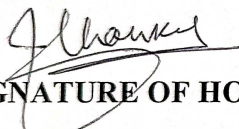
*Bharath Kumar*




PARASHURAM.B.K

Parashuram



  
**SIGNATURE OF HOD**  
Head of the Department  
Dept. of Mechanical Engg.  
K.S. Institute of Technology  
Bengaluru - 560 109

  
**SIGNATURE OF PRINCIPAL**  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109



# K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

#14, Raghuvaranahalli, Kanakapura Main Road, Bengaluru-5600109


## DEPARTMENT OF MECHANICAL ENGINEERING

### REPORT OF FDP: TEN DAYS WORKSHOP On RESEARCH METHODOLOGY

#### Broucher

TEN DAYS WORKSHOP		
On		
RESEARCH METHODOLOGY		
17 <sup>th</sup> to 26 <sup>th</sup> January 2020		
<i>(A Workshop on Research Methodology for Research Scholars of VTU Affiliated/Autonomous/Constituent Institutions)</i>		
<b>REGISTRATION FORM</b>		
Name: _____		
Qualification: _____		
Department: _____		
Organization: _____		
No. of years of Teaching Experience: _____		
Address for Correspondence: _____		
Mobile: _____		
Email: _____		
Amount: Rs 8000/- Online Payment Receipt No: _____		
Date: _____		
Accommodation Required (✓): Yes No		
<b>Declaration by the Applicant</b>		
If selected, I agree to abide by the rules and regulations of the workshop of VTU-HRDC and shall attend all the sessions compulsorily.		
Date: _____	Signature of the Applicant	
	Recommended and Forwarded	
Signature of the Head of the Institution		

CHIEF PATRON
<b>Dr. Karisiddappa</b> Hon'ble Vice Chancellor, VTU, Belagavi
PATRONS
<b>Dr. Anand S Deshpande</b> , Registrar, VTU, Belagavi
<b>Dr. Satish Annigeri</b> Registrar (Evaluation), VTU, Belagavi
<b>Mrs. Sapna M A</b> Finance Officer, VTU, Belagavi
CONVENER
<b>Dr. N Chikkanna</b> Coordinator, VTU CPQS, Muddenahalli
Co-CONVENERS
<b>Dr. G S Venkatesh</b> , Professor & Prog. Coordinator, Dept. of CAE. <b>Dr. Ramrath H.H.</b> , Associate Professor, Dept. of MBA <b>Dr. Shivamurthy</b> , Associate Professor & Prog. Coordinator, Dept. of CSI
ORGANISING COMMITTEE
<b>Dr. Indumathi T.S.</b> , Professor, Dept. of DECS <b>Dr. Dinesh Rangappa</b> , Professor & Prog. Coordinator, Dept. of NT <b>Dr. Sarika Raga</b> , Assoc. Professor & Prog. Coordinator, Dept. of DECS <b>Dr. Shivamurthy G.</b> , Assoc. Professor & Prog. Coordinator, Dept. of CSE <b>Dr. Pratikshakshi R.</b> , Assoc. Professor & Prog. Coordinator, Dept. of CMBA <b>Dr. Thiritha Prasad H P</b> , Associate Professor, Dept. of CAE <b>Dr. Basawaraj</b> , Associate Prof. Dept. of APT <b>Dr. Ashwin C Gowda</b> , Asst. Professor, Dept. of CAE <b>Dr. Prasanna D S</b> , Asst. Professor, Dept. of NT <b>Dr. Laksh S V</b> , Asst. Professor, Dept. of NT <b>Dr. Kanta D Devanagavi</b> , Asst. Professor, Dept. of MCA <b>Dr. Ranganatharajini S</b> , Asst. Professor, Dept. of MBA <b>Mr. Narayanaswamy G</b> , Asst. Professor, Dept. of CAE <b>Mr. Sanjeev G Palekar</b> , Asst. Professor, Dept. of APT <b>Mrs. Reshma M</b> , Asst. Professor, Dept. of DECS <b>Mr. Purushotham C J</b> , Asst. Professor, Dept. of MBA <b>Mr. Lakshminarayana K</b> , Asst. Professor, Dept. of MBA <b>Mrs. Niveditha M U</b> , Asst. Professor, Dept. of MBA <b>Mrs. Venkatesh K</b> , Asst. Professor, Dept. of MBA <b>Mrs. Renuka Malge</b> , Asst. Professor, Dept. of MCA <b>Mr. Yashwanth B H</b> , Asst. Professor, Dept. of MCA <b>Mr. Vinod Kumar G. Sr. Asst.</b> , VTU/Muddenahalli

TEN DAYS WORKSHOP
On
RESEARCH METHODOLOGY
17 <sup>th</sup> to 26 <sup>th</sup> January 2020

<i>Organized By:</i>
<b>VTU- Human Resource Development Cell (HRDC)</b> <b>Visvesvaraya Technological University</b> <b>Centre for Post Graduate Studies</b> <b>Bengaluru Region, Muddenahalli</b> <b>Chikkaballapur-562101</b>
<i>Venue:</i>
<b>VTU Centre for Post Graduate Studies</b> <b>Bengaluru Region, Muddenahalli</b> <b>Chikkaballapur-562101</b> <b>Seminar Hall</b>

#### About the VTU

Visvesvaraya Technological University (VTU) named after Bharat Ratna Dr. Sir M. Visvesvaraya established on 1<sup>st</sup> April 1998, as per the VTU Act 1994 of the Government of Karnataka. University has been established by the Government of Karnataka in order to promote planned and sustainable development of technical education.

VTU has its Head Office located in Belagavi in the state of Karnataka. Reckoning the fact that, University is a seat of confluence of knowledge and as a Technological University, Visvesvaraya Technological University does not restrict itself only to curricular activities but emphasizes on the overall growth of knowledge in society and hence its campus in Belagavi is named aptly as "Jnana Sangama". The University has jurisdiction over the whole state of Karnataka. For administrative convenience University has four Regional Offices established at Bengaluru, Mysuru, Kalaburgi and Belagavi.

VTU is one of the prestigious and largest Technological Universities in the India having affiliation of 220 Engineering colleges and 20 Autonomous Colleges and one Constituent College. VTU is imparting technical education to more than 4.5 lakh students under its 35 Undergraduate & 94 Postgraduate Programs. VTU is offering Doctoral programs in 865 departments in various affiliated Colleges which have been recognized as research centers. Around 5000 Research Scholars are pursuing for Doctoral and M. Sc. (Engg.) programmes. Every year, VTU is conferring Under Graduate degrees to over 60,000 Engineering students, Post-Graduate degrees to over 25,000 students and also awarding Ph.D./M. Sc. (Engg.) degrees to over 200 students. VTU is in the forefront to transform itself from a teaching centre University into a teaching, research and knowledge centre University.

#### About the VTU CPGS, Muddenahalli

The Visvesvaraya Technological University, Post Graduate Center, Bengaluru Region, Muddenahalli has 200 acres campus located at Muddenahalli, Chikkahallapuri (Dist). Muddenahalli is the birth place of great legend Bharata Ratna Sir M. Visvesvaraya. It has all necessary infrastructure required for imparting quality education through its well structured administrative and academic staff for overall development of student's personality.

Center for PG Studies has five full time post graduate programmes in M.Tech., MCA and MBA. All the departments have well qualified faculty at all level and are involved in research and development.

#### Objectives of the Workshop:

- ❖ To enable the participants to motivate and exposure to Quality Research
- ❖ To provide the process and methodology of Quality Research
- ❖ To enable them to identify and formulate Research Problems
- ❖ To analyze the data and interpret the data
- ❖ To enable them understand IPR and Plagiarism
- ❖ To expose the participants to LATEX document Processing Tools

#### Topics to be covered:

- ❖ Foundation of Research
- ❖ Problem Identification and Formulation
- ❖ Research Design and Methods
- ❖ Sampling Design and Statistical Approach
- ❖ Testing of Hypothesis
- ❖ Data Analysis
- ❖ Data Interpretation
- ❖ Report Writing and Publication
- ❖ LATEX
- ❖ IPR and Plagiarism
- ❖ Copy Rights and Trade Marks

#### Resource Persons:

Prof. Anindya Deb, Professor, CPDM, IISc, Bangalore  
Dr. Shridhar S.N, Director, AMITY University, Gurgaon, Haryana  
Dr. Vijayalakshmi Akella, Professor and HOD, Dept. of Civil Engg., KJSSM, Bangalore  
Dr. Ramakrishna T, Professor, National Law School of India, Nagabhavi, Bengaluru  
Dr. Manjunath, Professor & Head, Dept. of ECE, JNNCE, Shreeya  
Sri Shivanam, Senior Technical officer, CSIR-NAL, Bangalore  
Dr. C. G. Srinivas, Assoc. Professor, Department of Mechanical Engineering, UBDT, Davangere  
Dr. Nataraj, Dean & Director Research, Donbosco Institute of Technology, Bangalore  
Dr. B.K. Narasimha, Principal, BGSIT, Bellur Cross, Bellur  
Dr. C.S. Ramesh, Dean, Research & Innovations, PRESIDENCY UNIVERSITY, Bangalore  
Dr. Prabhu Dev, Faculty, Gov. Polytechnic, Karatagi.

#### Eligibility:

Research Scholars registered under VTU (Engineering, MCA, Management Studies and Science & Humanities)

#### Registration Fee:

Registration Fee is Rs 8000/- (Including Food and Accommodation)

#### Accommodation & Boarding:

Outstation participants will be provided accommodation and boarding in institute hostels.

#### How to Apply:

Research Scholars may apply by submitting the hard copy of the filled in registration form along with the online fees paid receipt for Rs 8000/- to The Coordinator, VTU Centre for PG Studies, Muddenahalli, Chikkahallapur (Dist)-562101, and also by sending the scanned copy of the filled in registration form and online fee paid receipt by e-mail to [rmvtucpgsb@gmail.com](mailto:rmvtucpgsb@gmail.com) on or before 14<sup>th</sup> January 2020

#### Selection of the Participants:

The batch size of the workshop will be limited to about 60. Selection will be on first come first served basis. All the candidates will be accommodated based on the selection criteria.

#### Contact for Information:

Dr. Shivamurthy G Mob: 9845603236  
Dr. Ramesha H.H Mob: 9902063321  
Dr. G.S.Venkatesh Mob: 7760011955  
Email: [rmvtucpgsb@gmail.com](mailto:rmvtucpgsb@gmail.com)

## Report

### Faculty Development Program (FDP) Report

**Title: : TEN DAYS WORKSHOP On RESEARCH METHODOLOGY**

**Date:** 17th to 26th January 2020

**Organized by:** Visvesvaraya Technological University, Centre for Post-Graduation Studies, VIAT, Muddenahalli, in association with AICTE.

**Program Coordinator:** Dr. Thippeswamy K

**VTU Coordinator, Professor & Chairman:** Dr. N. Chikkanna

**Registrar:** Dr. Anand S Deshpande, Registrar, VTU, Belagavi

**Participant:** HARISH.U of KSIT

### Summary

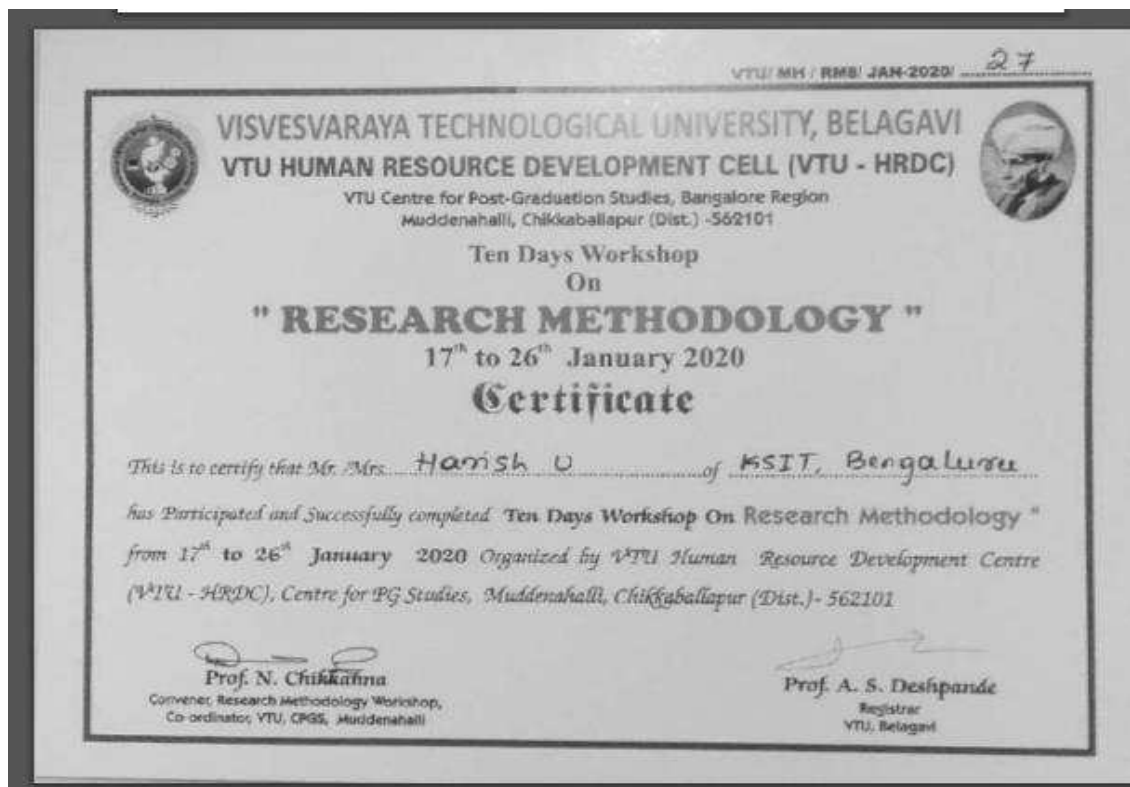
☐ To enable the participants to motivate and exposure to Quality Research  
☐ To provide the process and methodology of Quality Research  
☐ ☐ To enable them to identify and formulate Research Problems  
☐ To analyze the data and interpret the data  
☐ To enable them understand IPR and Plagiarism  
☐ To expose the participants to LATEX document Processing Tools of specializations; and to ensure development of these capabilities among the learners. In addition, the module aim sat enabling the teachers to undertake research to improve the relevance, efficiency and effectiveness of various sub-components of technical education system.

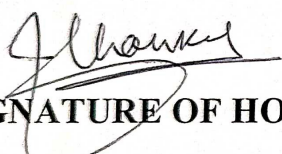
**Topics to be covered:**


- ☐ Foundation of Research
- ☐ Problem Identification and Formulation
- ☐ Research Design and Methods
- ☐ Sampling Design and Statistical Approach
- ☐ Testing of Hypothesis
- ☐ Data Analysis
- ☐ Data Interpretation
- ☐ Report Writing and Publication
- ☐ LATEX
- ☐ IPR and Plagiarism
- ☐ Copy Rights and Trade Marks

**SUBMITTED BY:**

**HARISH .U**



  
**SIGNATURE OF HOD**  
Head of the Department  
Dept. of Mechanical Engg.  
K.S. Institute of Technology  
Bengaluru - 560 109

  
**SIGNATURE OF PRINCIPAL**  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109





# K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

#14, Raghuvaranahalli, Kanakapura Main Road, Bengaluru-5600109

## DEPARTMENT OF MECHANICAL ENGINEERING

### REPORT OF FDP: "OUTCOME BASED EDUCATION AND NBA ACCREDITATION"

#### Broucher

**FIVE DAY TRAINING PROGRAM ON  
"OUTCOME BASED EDUCATION (OBE)  
AND NBA ACCREDITATION"**

  
**RRCE**  
**20-24 JANUARY, 2020**

NAME: \_\_\_\_\_  
DESIGNATION: \_\_\_\_\_  
ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
  
E-MAIL ID: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_  
ACCOMMODATION REQUIRED: YES/NO \_\_\_\_\_  
  
DATE: \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
  
**SIGNATURE OF SPONSORING  
AUTHORITY  
(WITH SEAL)**  
  
Submit the scanned copy of filled  
registration form to the e-mail  
rrcecse@gmail.com before 15.01.2020.

**Chief Patron:**  
**Dr. Karisiddappa**  
Vice-Chancellor, VTU, Belagavi  
**Dr. Deshpande**  
Registrar, VTU, Belagavi

**Dr. Satish Annigeri**  
Registrar (Evaluation), VTU, Belagavi  
**Dr. A. C. Shanmugham**  
Chairman, RRG  
**Sri. A. C. S. Arun Kumar**  
Vice-Chairman, RRG

**Patrons:**  
**Dr. S. Vijayanand**  
Executive Director, RRG  
**Sri C.N. Seetharam IAS (Retd)**  
Chief Executive officer, RRG  
**Dr. S. Jeyabalan**  
Special Officer, RRG


**Co-Patrons:**  
**Dr. T R Gopalakrishnan Nair**  
Rector, RRG  
**Dr. R Balakrishna**  
Dean, RRCE


**Chair Person:**  
**Dr. T Chandrashekar**  
Principal, RRCE




**Program Coordinators:**  
**Dr Usha S**  
Professor & Head, Dean Research  
Dept. of CSE, RRCE, Bengaluru  
**Dr. L. Rangaiah**  
Professor & Head,  
Dept. of ECE, RRCE, Bengaluru  
**Dr Sheba Selvam**  
Associate Professor  
Dept. of CSE, RRCE, Bengaluru

**Organizing Coordinators:**  
All the Teaching faculties of CSE & ECE  
department.

**RAJARAJESWARI COLLEGE  
OF ENGINEERING**  
(Affiliated to VTU, Belagavi and  
Approved by AICTE, New Delhi)  
Accredited by HLAET, Texas, USA and NBA  
(CSE, ECE, EEE, ME)  
NAAC with 'A' Grade, 2018-23

  
**RRCE**

  
**TEQIP 1.3 SPONSORED**  
Five Day Training Program on  
  
"OUTCOME BASED  
EDUCATION (OBE) AND NBA  
ACCREDITATION"  
20-24 January, 2020  
  
In association with  
Visvesvaraya Technological University  
Belagavi  
Aryabhatta Knowledge University, Patna  
Biju Patnaik University of Technology,  
Rourkela



INTRODUCTION	ABOUT RRCE	RESOURCE PERSONS
<p>NBA helps to assess and accredits the technical education programs and evolves standards and parameters for assessment and accreditation in line with the parameters laid down by the appropriate statutory regulatory authority for co-ordination, determination and regulation of standards in the concerned field of technical education.</p> <p>Outcome Based Education (OBE) focuses on the performance of students concentrating on skills and results achieved by the student. OBE encourages the use of assessments, opportunities and classroom experiences for students to achieve their goals.</p>	<p>RajaRajeswari College of Engineering (RRCE) was started in the year 2006 and is managed by Moogambigai Charitable and Education Trust (MCET), Bengaluru. The College is approved by All India Council for Technical Education (AICTE), New Delhi, Govt. of Karnataka and is affiliated to Visvesvaraya Technological University (VTU) Belagavi.</p> <p>The Institute offers 6 UG courses (Civil, Electronics, Computer Science &amp; Engineering, Information Science &amp; Engineering, Mechanical, &amp; Electrical Engineering) and 5 PG courses Master of Business Administration, Master of Computer Applications, M.Tech in ECE, M.Tech in CSE and M.Tech in Mechanical and also 7 VTU affiliated R&amp;D centers. All the Departments have well qualified staff and well-equipped laboratories, library, central computing and sports facilities along with other amenities.</p>	<ol style="list-style-type: none"> <li>1. DR. RAJANIKANTH, RETD. PRINCIPAL, MSRIT, BENGALURU</li> <li>2. DR. SENTHIL KUMARAN, PROFESSOR, ACSCE, BENGALURU</li> <li>3. DR. SURESH RAMASWAMYREDDY, BMSCE, BENGALURU</li> <li>4. DR. NAGESWARA GUPTHA, VICE PRINCIPAL, SVCE, BENGALURU</li> <li>5. DR. SADASIVAPPA, PROFESSOR, RVCE, BENGALURU</li> <li>6. DR. PRATAP REDDY L, PROFESSOR, JNTUH</li> <li>7. DR. SATYA PRASAD L, PRINCIPAL, STANLEY COLLEGE OF ENGG. &amp; TECH FOR WOMEN, HYDERABAD</li> <li>8. DR. T SRINIVAS, PROFESSOR, IISc, BENGALURU</li> <li>9. MR. VINAY HAVALAD, SR. PRODUCT SPECIALIST(OBE), IONIDEA, BENGALURU</li> </ol>
<p><b>CONTACT DETAILS</b></p> <p><b>Prof. Shashidhar V</b>  <b>Dr. R Gangadhar Reddy</b>  <b>Phone: 9538231393/9492993588</b>  <b>E-mail: rrccece@gmail.com</b></p>	<p><b>WORKSHOP CONTENTS:</b></p> <ul style="list-style-type: none"> <li>• Need and Importance of Accreditation</li> <li>• Process of NBA Accreditation, Vision, Mission and PEOs</li> <li>• Goals of Vision, Mission and Institution</li> <li>• Process of PSOs and Pos</li> <li>• SWOT Analysis</li> <li>• Identification of Curriculum gap and Content Beyond Syllabus</li> <li>• Use of Teaching methods</li> <li>• Outcome based Assessment</li> <li>• Faculty Performance Appraisal System</li> <li>• Experience sharing on Documentation for NBA</li> </ul>	<p><b>ACCOMMODATION</b></p> <p>Shared Accommodation will be provided for Outstation Participants on prior request.</p> <p><b>REGISTRATION FEE</b></p> <p>There is No Charges/Registration Fee for Participating in the Workshop, limited to 50 participants on first come first serve basis. The Working Lunch, Tea and Snacks will be provided during the Program.</p> <p>For more information about the Training Program visit <a href="https://www.rrce.org">https://www.rrce.org</a></p>

## Report

### Faculty Development Program (FDP) Report

**Title :** "OUTCOME BASED EDUCATION AND NBA ACCREDITATION"

**Date:** 20-01-2020 to 24-01-2020

**Organized by:** INSTITUTE OF TECHNOLOGY ,Visvesvaraya Technological University,

**Participant:** Mr PRASAD.K of KSIT, GIRISH.T.R of KSIT

### SUMMARY

This five-day Faculty Development Program comprises 10 Lecture Sessions, for the participants to understand key components of Outcome-Based Education (OBE) and Accreditation – Vision, Mission, Program Outcomes, Program Educational Objectives (PEO), Program Specific Outcomes (PSO) and Graduate Attributes (GA). The participants will be equipped to prepare Self-Assessment Report (SAR) of the Program of their College and documents related to OBE and to set up a process for continuous improvement

### Objectives

To understand the relevance of Outcome-Based Education, usefulness of Accreditation and processes associated with Accreditations.

### Topics to be covered:

Understand the Importance of Outcome-Based Education and Accreditation

Ø Gather the Pre qualifier for Accreditation

Ø Assimilate the Formulation of Vision and Mission of the College and Department

Ø Understand Revised Bloom Taxonomy and implementation in Teaching-Learning process

- Ø Understand Course outcomes, Program Outcomes, Program Educational Objectives, Program Specific Outcomes and Graduate Attributes
- Ø Establish the correlation between COs and Pos and PSOs
- Ø Calculate the attainment of COs, POs, PSOs, PEOs
- Ø Understand the Calculation of success rate of students Ø Perceive Curricular gaps, attainment gaps, and conceive plan to bridge the gap for continuous improvement.
- Ø Prepare Self Assessment Report and Documents for Accreditation

**SUBMITTED BY:**

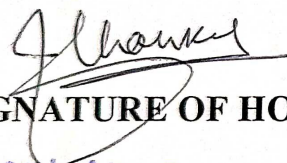
**Mr PRASAD.K**




GIRISH.T.R

Gü



  
**SIGNATURE OF HOD**  
Head of the Department  
Dept. of Mechanical Engg.  
K.S. Institute of Technology  
Bengaluru - 560 109

  
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PRINCIPAL  
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# K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

#14, Raghuvaranahalli, Kanakapura Main Road, Bengaluru-5600109

## DEPARTMENT OF MECHANICAL ENGINEERING

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#### Broucher

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**RRCE**  
**20-24 JANUARY, 2020**

NAME: \_\_\_\_\_  
DESIGNATION: \_\_\_\_\_  
ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
  
E-MAIL ID: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_  
ACCOMMODATION REQUIRED: YES/NO \_\_\_\_\_  
  
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**Dr. Deshpande**  
Registrar, VTU, Belagavi

**Dr. Satish Annigeri**  
Registrar (Evaluation), VTU, Belagavi  
**Dr. A. C. Shanmugham**  
Chairman, RRG  
**Sri. A. C. S. Arun Kumar**  
Vice-Chairman, RRG

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Rector, RRG  
**Dr. R Balakrishna**  
Dean, RRCE


**Chair Person:**  
**Dr. T Chandrashekar**  
Principal, RRCE




**Program Coordinators:**  
**Dr Usha S**  
Professor & Head, Dean Research  
Dept. of CSE, RRCE, Bengaluru  
**Dr. L. Rangaiah**  
Professor & Head,  
Dept. of ECE, RRCE, Bengaluru  
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Associate Professor  
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**Date:** 20-01-2020 to 24-01-2020

**Organized by:**, RAJARAJESWARI COLLEGE OF ENGINEERING ,Visvesvaraya Technological University,

**Participant:** Mr ANIL KUMAR.A of KSIT,

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**SUBMITTED BY:**

**Mr ANIL KUMAR.A**



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 Head of the Department  
 Dept. of Mechanical Engg.  
 K.S. Institute of Technology  
 Bengaluru - 560 109

**SIGNATURE OF PRINCIPAL**  
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 BENGALURU - 560 109





**KSIT**  
K.S. INSTITUTE OF TECHNOLOGY

**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109

**DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES**

## **REPORT OF FDP:**

**“LaTeX”**

### **Brochure:**



### **Gopalan College of Engineering and Management**

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi and ISO 9001:2015)

The GCEM under the aegis of IQAC organizing online development programme for faculty members on **LaTeX** in association with IITB-ST during the lockdown period.

***Two Weeks  
Faculty  
Development  
Program  
(FDP)  
on  
LaTeX***

*In Association with  
IIT Bombay  
(Remote Learning  
through IIT  
Bombay-Spoken  
Tutorial)*

**Last date for Registration is  
15<sup>th</sup> April, 2020.**

**17<sup>th</sup> April - 30<sup>th</sup> April, 2020**

**Dr.J.Somasekar**  
Convenor

**Dr.N.Sengottaiyan**  
Principal

<https://www.gopalancolleges.com/gcem/>

For further details Contact [jsomasekar@gmail.com](mailto:jsomasekar@gmail.com)



## **Report**

### **Faculty Development Program (FDP) Report**

**Title:** LaTeX

**Date:** 17<sup>th</sup> April 2020 to 30<sup>th</sup> April 2020, Gopalan College of Engineering & Management, Bangalore.

**Participants:** 1) Mrs. Lakshmi C

### **Summary:**

The Faculty Development Program (FDP) on LaTeX offers participants an opportunity to gain proficiency in one of the most powerful typesetting systems widely used for academic and technical documents.

The Faculty Development Program on LaTeX introduces participants to the versatile typesetting system renowned for its precision, professionalism, and versatility in producing high-quality documents. LaTeX is particularly popular in academia and technical fields for its ability to handle complex mathematical equations, bibliographies, and formatting requirements with ease.

### **Objectives of the FDP**

The objective of the Faculty Development Program on LaTeX is to equip participants with the knowledge, skills, and confidence to effectively utilize LaTeX as a typesetting system for creating professional-quality documents, such as research papers, theses, reports, and presentations. Through hands-on training and practical exercises, this program aims to enhance participants' proficiency in LaTeX, enabling them to produce documents with precision, clarity, and efficiency, thereby enhancing their scholarly output and professional communication in academia and technical fields.



**Submitted by**



**GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT**

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi and ISO 9001:2015 Certified)  
181/1, 182/1, Sonnenahalli, Hoodi, K.R. Puram, Whitefield, Bangalore, Karnataka - 048

**FACULTY DEVELOPMENT PROGRAMME**

ON

**LaTeX**

**CERTIFICATE OF PARTICIPATION AND COMPLETION**

This is to certify that Mr./Ms./Dr./Prof. Lakshmi C of K.S. INSTITUTE OF TECHNOLOGY, BENGALURU, has actively participated in Two Weeks Faculty Development Programme (FDP) on LaTeX from 17.04.2020 to 30.04.2020 organised by Department of CSE, Gopalan College of Engineering and Management in association with IIT Bombay-Spoken Tutorial and successfully cleared LaTeX exam.



**Dr. J. Somasekar**

Convenor

**Ms. Priyanka Shroff**

IITB-ST Training Manager

**Dr. N. Sengottaiyan**

Principal, GCEM

**Mrs. Lakshmi C**

**SIGNATURE OF HOD**

Head of the Department  
Dept. of Science and Humanities  
K.S. Institute of Technology  
Bangalore - 560 109

**SIGNATURE OF PRINCIPAL**

**PRINCIPAL**  
**K.S. INSTITUTE OF TECHNOLOGY**  
**BENGALURU - 560 109.**





# K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FDP REPORT

ON

Machine Learning and Research Opportunities

**Sapthagiri College of Engineering**  
(Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi.)  
An ISO 9001:2015 and 14001:2015 Certified Institution  
#14/5, Hesarghatta Main Road, Chikkasandra, Jalahalli West, Bengaluru, Karnataka 560057

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**MACHINE LEARNING AND RESEARCH OPPORTUNITIES**

**15-06-2020**      **Time: 10:00 am**      **Venue: LH 108, SCE**

Presided by      Guest of Honor  
**Sri. G Dayanand**      **Sri. G D Manoj**  
Chairman & Managing Director, SCE      Executive Director, SCE

Honorable Presence  
**Dr. H Ramakrishna**

**You are cordially invited by**

**Suriya Prakash J, Madhushree & Nanda.M.B**      **Dr. Kamalakshi Naganna,**  
Coordinators      Prof & HOD  
Faculty and staff, Department of Computer Science and Engineering, SCE

Venue: Sapthagiri College of Engineering

Date: 15-06-2020 to 19-06-2020

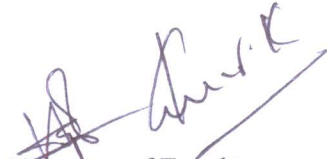
I, Mr. Kumar K, Assistant Professor, Mr. Prashanth H S, Assistant Professor, Department of CSE, KSIT, attended a Five Days Faculty Development Programme on "Machine Learning and Research Opportunities" at Sapthagiri College of Engineering from 15<sup>th</sup> to 19<sup>th</sup> 2020.


## About FDP

National Level online Five Days Faculty Development Programme on "Machine Learning and Research Opportunities" in collaboration with External Resource persons was organized at Sapthagiri College of Engineering, Bangalore from 15- 19 June, 2020. This programme was a combination of theoretical Talks & Hands-On experiments. This FDP aims to provide opportunities to faculty members to enrich their technical knowledge in the field of Machine Learning.

The Programme also intends to develop the knowledge of participants for ML Program Design & Development in the relevant field for inculcating learning values in students. The Programme also intends to develop the culture in participants for motivation the relevant field for inculcating learning values in students and guiding and monitoring their progress.

The FDP was attended by faculty members of Computer Science and Engineering, Information Science and Engineering, Electronics & Communication Engineering, Electrical Engineering, Mechanical Engineering & Physics.

  
Signature of Faculty

  
HOD  
Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru -560 109

  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109  
Principal



## SAPTHAGIRI COLLEGE OF ENGINEERING BENGALURU-57

(AFFILIATED TO VTU, BELAGAVI & APPROVED BY AICTE, NEW DELHI)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NATIONAL LEVEL ONLINE 5 DAYS FDP ON "MACHINE LEARNING AND RESEARCH OPPORTUNITIES"


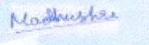
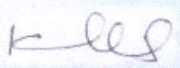

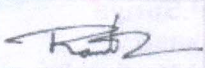
### CERTIFICATE OF PARTICIPATION

This is to certify that Dr/Mr/Ms/Mrs. **KUMAR K**  
from **K S INSTITUTE OF TECHNOLOGY**  
has participated in **NATIONAL LEVEL ONLINE 5 DAYS FDP ON**  
**"MACHINE LEARNING AND RESEARCH OPPORTUNITIES"**  
from **15-06-2020 to 19-06-2020.**

Prof.Suriya Prakash.J

Prof.Madhushree

Prof.Nanda M B  
COORDINATORS

  
  
  
Dr. Kamalakshi Naganna  
HOD,CSE  
Dr. H RamaKrishna  
PRINCIPAL





## SAPTHAGIRI COLLEGE OF ENGINEERING BENGALURU-57

(AFFILIATED TO VTU, BELAGAVI & APPROVED BY AICTE, NEW DELHI)


DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

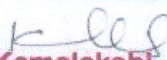
NATIONAL LEVEL ONLINE 5 DAYS FDP ON "MACHINE LEARNING AND RESEARCH OPPORTUNITIES"

### CERTIFICATE OF PARTICIPATION

This is to certify that Dr/Mr/Ms/Mrs. **PRASHANTH H S**  
from **K S INSTITUTE OF TECHNOLOGY**  
has participated in NATIONAL LEVEL ONLINE 5 DAYS FDP ON  
"MACHINE LEARNING AND RESEARCH OPPORTUNITIES"  
from 15-06-2020 to 19-06-2020.

Prof.Suriya  
Prakash.J  
Prof.Madhushree  
Prof.Nanda M B  
COORDINATORS

  
Madhushree  
Nanda

  
Dr. Kamalakshi  
Naganna  
HOD,CSE

  
Dr. H RamaKrishna  
PRINCIPAL



# K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FDP REPORT

ON

Internet of Things

Date: 15-04-2020 to 19-04-2020



**National Institute of  
Technical Teachers Training and Research  
Chandigarh**

MINISTRY OF HUMAN RESOURCE DEVELOPMENT, GOVERNMENT OF INDIA

## **NATIONAL WORKSHOP ON "INTERNET OF THINGS (IoT)"**

**Ms.Ranjitha K N , Professor & HOD,** Department of CSE, KSIT, attended a Five Days Faculty Development Programme on "**Internet of Things**" National Institute of Technical Teachers Training and Research from 15-04-2020 to 19-04-2020.

### **About FDP**


The aim of this programme is to introduce the participants to the amazing world of IoT and its fascinating applications.

IoT is the idea of making devices and objects smarter by linking them to the internet. This technology frontier(IoT) with immense engineering applications is the need for today's industry and academia.



FDP serves as a platform to train and educate the research scholars, faculty, and people from industry to interact on cutting edge technologies in this emerging area..

Signature of Faculty

  
HOD  
Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru -560 109

  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109  
Principal



Certificate No: ICT-1845/20

**National Institute of  
Technical Teachers Training and Research  
Chandigarh**

MINISTRY OF HUMAN RESOURCE DEVELOPMENT, GOVERNMENT OF INDIA

**Certificate**

*This is to certify that*

**RANJITHA K N**

**K.S. INSTITUTE OF TECHNOLOGY, BENGALURU  
KARNATAKA**

*Participated in the AICTE Recognized Faculty Development Programme*

*on*

**Internet of Things**

*Conducted by*

**Computer Science and Engineering Department**

*from*

**15/04/2020 to 19/04/2020 (One Week)**

*at*

**NITTTR, Chandigarh**



*[Signature]*  
**Coordinator**

*[Signature]*  
**Director**



# K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## FDP REPORT

ON

Cyber Security



AICTE Training And Learning (ATAL) Academy  
Sponsored Five-days Online  
Faculty Development Programme (FDP)  
on  
Cyber Security and Digital Forensics  
(Advanced)



Convener :

Prof. R. Mariappan

Sponsored By

AICTE Training and Learning (ATAL)

Organized By

Department of Electronics & Communication Engineering  
V.R. Siddhartha Engineering College (Autonomous)

Vijayawada, Andhra Pradesh-520 007

Website: [www.vrsiddhartha.ac.in](http://www.vrsiddhartha.ac.in)

Email: [mariappan@vrsiddhartha.ac.in](mailto:mariappan@vrsiddhartha.ac.in)

Ph. +91 886 2582333

**Venue:** V.R. Siddhartha Engineering College

**Date:** 23-05-2020 to 27-05-2020

**Ms. Vijayalakshmi Mekali**, Assistant Professor, Department of CSE, KSIT, attended a Five Days Faculty Development Programme on “**Cyber Security**” at V.R. Siddhartha Engineering College from 23-05-2020 to 27-05-2020.


## About FDP

With increase in usage of the Internet, there has been an exponential increase in cyber-attacks. Cybercriminals use new and clever tricks to bypass security solutions. Cyber Security and Digital Forensics are integral part of the organization's security services. The aim of this FDP is to promote research in Cyber Security and Digital Forensics which includes topics like data collection tools, data scanning techniques for threat intelligence, data analytics, forensics tools for memory, mobile phones, network, Internet of things (IoT), social engineering, etc.

This online FDP is aimed to discuss the state-of-the-art research and development in Cyber Security Intelligence and Digital Forensics. The indicative pool of topics to be covered is as follows but is not limited to:

- Introduction to Cyber Threat Intelligence
- Cyber Threat Data Collection Techniques
- Information Security Risk Assessment and Management.
- Intrusion Analysis and Dissemination
- Penetration Testing
- Malware Analysis
- Memory, Network, Application, Hardware and Cloud Forensics Tools and Techniques
- Cyber Laws and Ethics
- Digital Forensics
- Adaptive Cyber Defence and Immunity.

  
Signature of Faculty

  
HOD  
Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru -560 109

  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109  
Principal



**VELAGAPUDI RAMAKRISHNA SIDDHARTHA ENGINEERING COLLEGE**

An Autonomous institute approved by NBA, AICTE, New Delhi  
Affiliated to JNTUK, Kakinada



**DEPARTMENT OF INFORMATION TECHNOLOGY**



**Certificate of Participation**

**This is to certify that**

**Dr./Mr./Mrs. VIJAYALAXMI MEKALI**

of **KAMMAVARI SANGHAM INSTITUTE OF TECHNOLOGY, BANGALORE** has participated in the Five Day Faculty Development Programme (FDP) on "Cyber Security", Conducted by the Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College in association with Supraja Technologies & Computer Society of India Vijayawada Chapter, from 23-05-2020 to 27-05-2020.

**Prof. Rajesh Jampala**

Chairman of CSI  
Computer Society of India  
Vijayawada Chapter

*Ch S S Santosh*

**Mr. Santosh Chaturvedi**

CEO, Supraja Technologies

**Dr. M. Suneetha**

Coordinator & Head of the Department  
Information Technology  
VRSEC

**Dr. A. V. Ratna Prasad**

Principal, VRSEC



# K.S.INSTITUTE OF TECHNOLOGY


#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## FDP REPORT

ON

Trends in Data Science

**RAMAIAH**  
Institute of Technology

All India Ranking **59**  
**1st** Among Engg. Colleges  
affiliated to VTU, Belagi

### Online Faculty Development Programme

ON

## Trends in Data Science

13<sup>th</sup> July to 17<sup>th</sup> July 2020

Organized By  
Department of Master of Computer Applications  
Department of Computer Science and Engineering  
Department of Information Science and Engineering

**Topics to be Covered:**

- Data Science and Its Applications
- Introduction to Docker and containers
- Hands-on session on Docker and Containers
- Cyber security impact & measures - Post COVID 19
- Cloud computing
- Natural Language Processing
- HPE- AI/ML solutions
- Agile Methodology
- Big Data Analytics

**Resource Person:**

- Technical Experts from AWS, HPE, Microfocus Pvt. Ltd, C-DAC, Cognizant etc.,

**Online registration:**

[CLICK HERE TO REGISTER](https://tinyurl.com/yd8fave6)  
<https://tinyurl.com/yd8fave6>

**No Registration Fee**  
Limited seats. Seats will be filled on First Come First Serve basis

**E-Certificate will be provided to all participants**

**Coordinator :** Dr. Niranjanamurthy M, Dr. S. Jagannatha, Dr. Monica R Mundada,  
Meenadevi A K, Vandana Sardar, Chandrika Prasad, Pushpalatha M H

**Address for Communication :**

Meenadevi A K, Vandana Sardar, Chandrika Prasad  
953534471, 8660336144, 9844413643



**Ramaiah Institute of Technology**



**Venue: Online**

**Date: 13-07-2020 to 17-07-2020**

**Mr.Raghavendrachar, Assistant Professor, Department of CSE, KSIT, attended a Five Days Faculty Development Programme on “Trends in Data Science” at MSRIT from 13<sup>th</sup> to 17<sup>th</sup> July 2020.**

**About FDP**

Aims to equip with the skills, knowledge, and ethical framework necessary to navigate the evolving landscape of data-driven technologies and contribute meaningfully to society and industry.

The main objective of the workshop was to provide a forum for researchers, subject experts, and practitioners dealing with trending topics with hands-on sessions with resource persons from AWS, HPE, Microfocus Pvt. Ltd, C-DAC, Cognizant etc.



Signature of Faculty



HOD

Head of the Department  
Dept. of Computer Science & Engg.  
K.S. Institute of Technology  
Bengaluru -560 109



Principal

PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109



**RAMAIAH**  
Institute of Technology

**M S Ramaiah Institute of Technology**

(Autonomous Institute, Affiliated to VTU)

M.S.R. Nagar, Bangalore-560054

### **E-CERTIFICATE OF PARTICIPATION**

This is to certify that Mr. RAGHAVENDRACHAR S of  
KSIT, Bengaluru has

participated in Online Faculty Development Programme on "Trends in Data Science", organized by the Department of Master of Computer Applications, Department of Computer Science and Engineering & Department of Information Science and Engineering from 13<sup>th</sup> July to 17<sup>th</sup> July 2020 under IQAC-MSRIT.

Dr. Yogish H K  
Professor and Head  
Department of MCA

Dr. Anita Kanavalli  
Professor and Head  
Department of CSE

Dr. Vijaya Kumar B P  
Professor and Head  
Department of ISE

Dr. N V R Naidu  
Principal, RIT





# K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## FDP REPORT

ON

Outcome Based Education



FDP on Outcome Based Education

On

13-01-2020 to 18-01-2020

Venue: Jyothy Institute of Technology

Date: 13-01-2020 to 18-01-2020

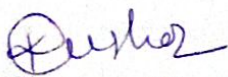
Mr.Kushal Kumar B N, Assistant Professor, Department of CSE, KSIT, attended a Five Days Faculty Development Programme on "Outcome Based Education" at Jyothy Institute of Technology from 13<sup>th</sup> to 18<sup>th</sup> January 2020.

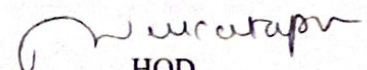
### About FDP

Outcome-Based Education FDP aims to enhance the quality, relevance, and effectiveness of educational programs, ultimately improving student learning outcomes and preparing graduates for success in a rapidly changing world.

Outcome-Based Education (OBE) focuses on defining specific learning outcomes and designing educational programs to achieve those outcomes.

Define clear and measurable learning outcomes that specify what students should know, understand, and be able to do by the end of a course or program.

  
Signature of Faculty

  
HOD  
Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru -560 109

  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
Bengaluru - 560 109





**JYOTHY INSTITUTE OF TECHNOLOGY**

off Kanakapura Road, Thataguni, Bengaluru - 560082



## **CERTIFICATE**

This is to certify that

Dr./Mr./Ms. Kushal Kumar B N has participated in VTU-TEQIP 1.3  
sponsored five days national workshop on Outcome Based Education and NBA accreditation  
From : 13.01.2020 to 18.01.2020

Coordinator

Principal



# K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

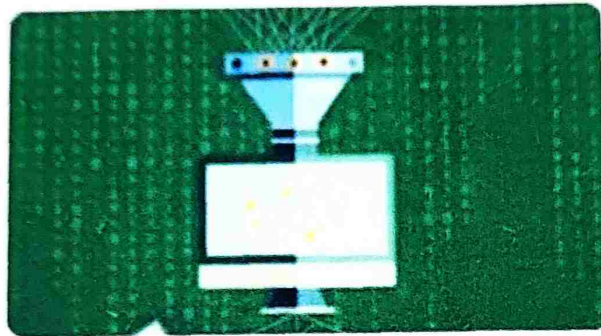
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## FDP REPORT

ON

Introduction to Machine Learning

Date: 25-07-2020



Duke University

### Introduction to Machine Learning

**Skills you'll gain:** Artificial Neural Networks, Machine Learning, Natural Language Processing, Python Programming,...

**Ms. Deepa S R , Assistant Professor , Department of CSE, KSIT, attended a Five Days Faculty Development Programme on “Introduction to Machine Learning” by Courseera.**

### About FDP

This course will provide you a foundational understanding of machine learning models (logistic regression, multilayer perceptrons, convolutional neural networks, natural language processing, etc.) as well as demonstrate how these models can solve complex problems in a variety of industries, from medical diagnostics to image recognition to text prediction. In addition, we have designed practice exercises that will give you hands-on experience implementing these data science models on data sets. These practice exercises will teach you

how to implement machine learning algorithms with PyTorch, open source libraries used by leading tech companies in the machine learning field (e.g., Google, NVIDIA, CocaCola, eBay, Snapchat, Uber and many more).

*Deepa*

Signature of Faculty

*M. S. Murugan*

HOD

Head of the Department  
Dept. of Computer Science & Engg  
K. S. Institute of Technology  
Bengaluru - 560 109

*[Signature]*

Principal  
CHIEF EXECUTIVE OFFICER  
Member Secretary  
Academic Advisory Board  
K.S. Group of Institutions

**Duke**  
UNIVERSITY

on 14/05/2021

**Deepa S R**

has successfully completed

**Introduction to Machine Learning**

an online non-credit course authorized by Duke University and offered through  
Coursera

*[Signature]*  
**LARRY CARIN**

Professor M. S. Murugan  
Head of the Department  
Department of Computer Science & Engg

**COURSE  
CERTIFICATE**



Verify at [coursera.org/verify/0Z93EU45AXU](https://coursera.org/verify/0Z93EU45AXU)

Coursera has confirmed the identity of this individual and  
their participation in the course.





# K.S.INSTITUTE OF TECHNOLOGY

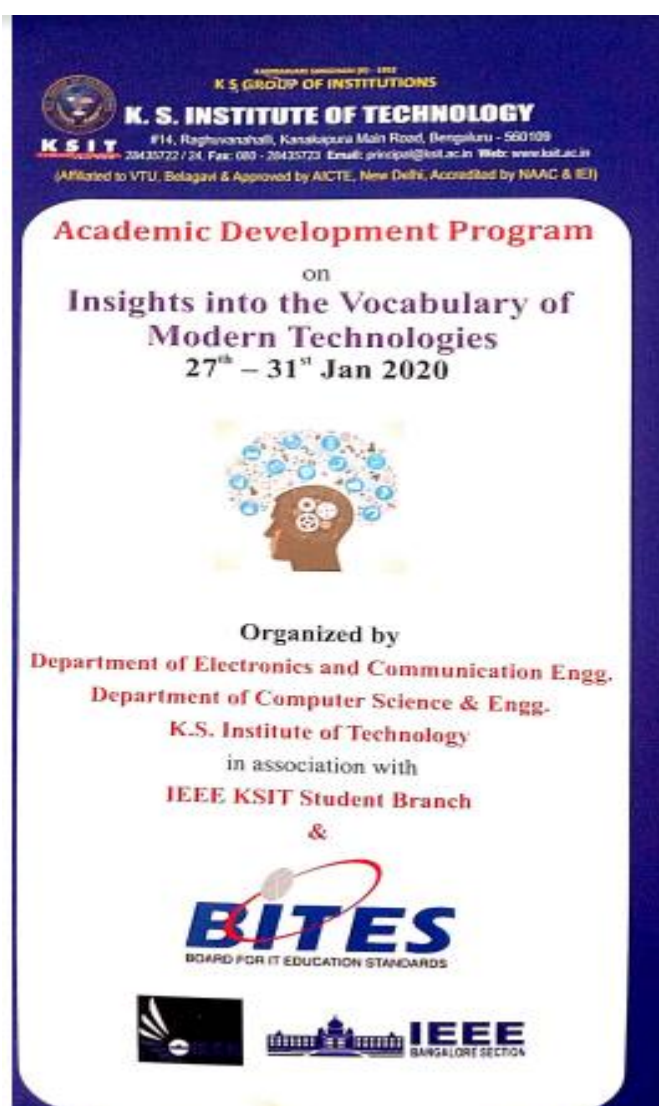
#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## FDP REPORT

ON

Insights into the Vocabulary of Modern Technologies



Venue: K.S. Institute of Technology

Date: 27-01-2020 to 31-01-2020





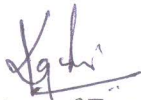
## About FDP

The main objective is to improve digital literacy by training using various software applications, online learning management systems, and digital communication tools.

FDPs focus on integrating modern technologies into teaching methodologies to enhance the learning experience for students. This includes incorporating multimedia content, interactive simulations, virtual labs, and online collaboration tools into course curricula.

FDPs emphasize the adoption of blended learning approaches, which combine traditional face-to-face instruction with online learning activities. Faculty members are trained to design and deliver hybrid courses that leverage both physical classroom interactions and digital learning resources.

FDPs explore innovative pedagogical strategies that leverage technology to promote active learning, collaboration, critical thinking, and problem-solving skills among students.



Signature of Faculty



HOD

Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru - 560 109



PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109

Principal



**KSIT**  
K.S. INSTITUTE OF TECHNOLOGY

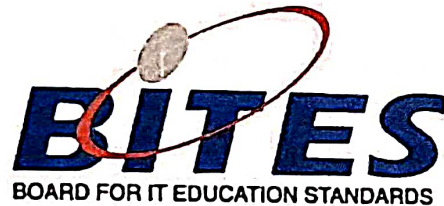
Kammavari Sangham (R) - 1952  
**K.S.INSTITUTE OF TECHNOLOGY**

(Affiliated to VTU, Belagavi & Approved by AICTE, New Delhi, Accredited by NAAC & IEI)

No.14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109

Tel : +91-80-28435722 / 24 Fax : +91-80-28435723 Email : principal.ksit@gmail.com Website : www.ksit.ac.in

# *Certificate of Participation*



This is to certify that Mr./Ms. Dr. REKHA. B. VENKATAPUR  
of K.S.I.T Institution has participated in the Academic development program on  
"Insights into the Vocabulary of Modern Technologies" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication  
Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P Rustagi/ Dr. P Joy Prabhakaran  
CONVENERS

Dr.T.V.Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B Murthy  
CHAIRMAN, BITES

 <b>KSIT</b> K.S. INSTITUTE OF TECHNOLOGY	<p>Kammavari Sangham (R) - 1952</p> <p><b>K.S.INSTITUTE OF TECHNOLOGY</b></p> <p>(Affiliated to VTU, Belagavi &amp; Approved by AICTE, New Delhi, Accredited by NAAC &amp; IEI)</p> <p>No.14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109</p> <p>Tel : +91-80-28435722 / 24 Fax : +91-80-28435723 Email : principal.ksit@gmail.com Website : www.ksit.ac.in</p>
--	--

## Certificate of Participation

  
**BITES**  
BOARD FOR IT EDUCATION STANDARDS



  
**IEEE**  
BANGALORE SECTION

This is to certify that Mr./Ms. DR. P.N. SUDHA

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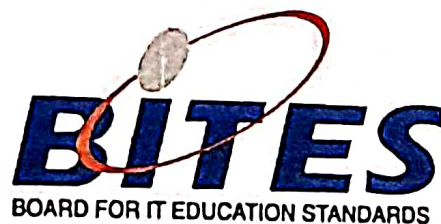


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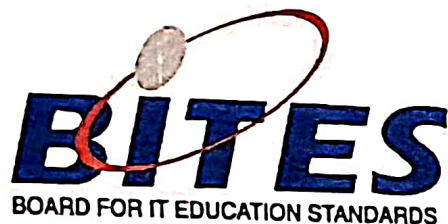
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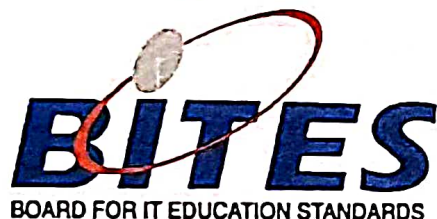
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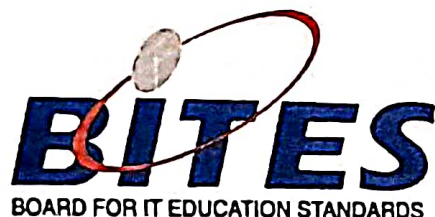
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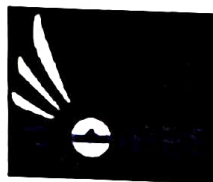
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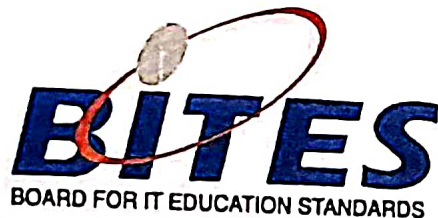
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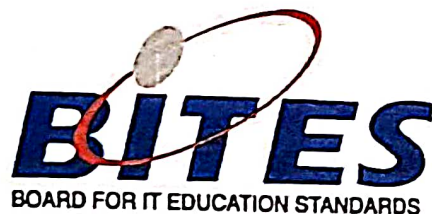
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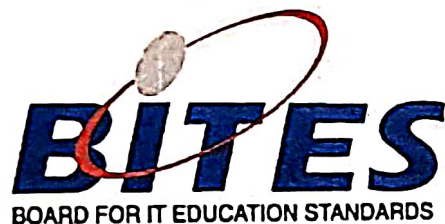
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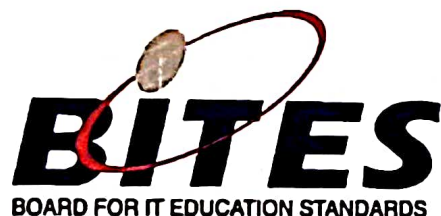
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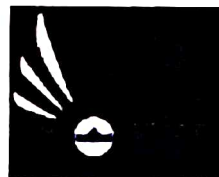
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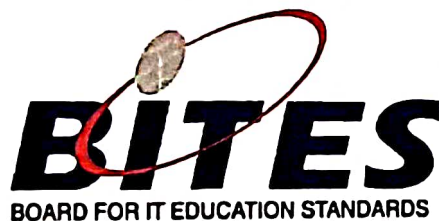
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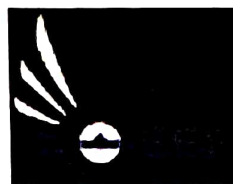
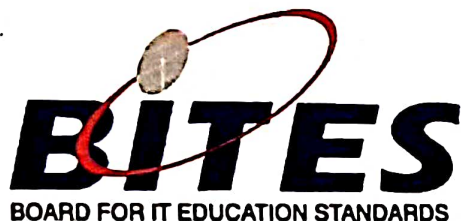
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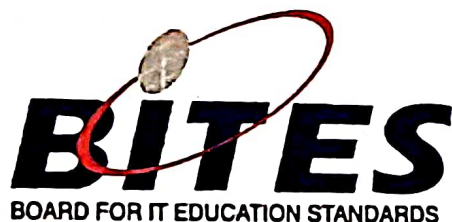
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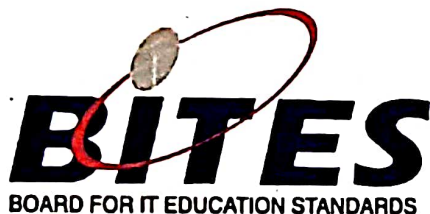
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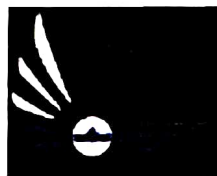
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Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P Rustagi/ Dr. P Joy Prabhakaran  
CONVENERS

Dr. T.V. Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B. Murthy  
CHAIRMAN, BITES





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**K.S.INSTITUTE OF TECHNOLOGY**

(Affiliated to VTU, Belagavi & Approved by AICTE, New Delhi, Accredited by NAAC & IEI)

No.14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109

Tel : +91-80-28435722 / 24 Fax : +91-80-28435723 Email : principal.ksit@gmail.com Website : www.ksit.ac.in

# Certificate of Participation



This is to certify that Mr./Ms. PRIYADARSHINI. J. PATIL  
of K.S.I.T Institution has participated in the Academic development program on  
"Insights into the Vocabulary of Modern Technologies" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication  
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Dr. Ram P Rustagi/ Dr. P Joy Prabhakaran  
CONVENERS

Dr.T.V.Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B Murthy  
CHAIRMAN, BITES





**KSIT**  
K.S. INSTITUTE OF TECHNOLOGY

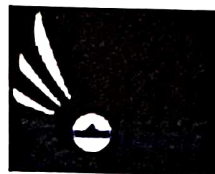
Kammavari Sangham (R) - 1952  
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# *Certificate of Participation*



This is to certify that Mr./Ms. B.R. SANTHOSH KUMAR  
of K.S.I.T. Institution has participated in the Academic development program on  
"Insights into the Vocabulary of Modern Technologies" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication  
Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P Rustagi/ Dr. P Joy Prabhakaran  
CONVENERS

Dr. T.V. Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B Murthy  
CHAIRMAN, BITES



Kannavan Sangham (R) - 1952

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No. 14, Raghavannahalli, Kannakapura Main Road, Bengaluru - 560109

Tel: +91 80 29433722-24 Fax: +91 80 29433723 Email: principal@ksit@gmail.com Website: www.ksit.ac.in

## *Certificate of Participation*



This is to certify that Mr./Ms. DR. DAYANANDA R. B  
of KSIT Institution has participated in the Academic development program on

"*Insights into the Vocabulary of Modern Technologies*" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication

Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P. Bhatnagar/ Dr. P. Jay Prabhakaran  
CONVENERS

Dr. V.V. Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B. Murthy  
CHAIRMAN, BITES





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Tel: +91-80-28435722/24 Fax: +91-80-28435723 Email: principal.ksit@gmail.com Website: www.ksit.ac.in

# Certificate of Participation



This is to certify that Mr./Ms. KRISHNA GUDI  
of KSIT Institution has participated in the Academic development program on  
"Insights into the Vocabulary of Modern Technologies" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication  
Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P. Rastogi/ Dr. P. Jay Prabhakaran  
CONVENERS

Dr. T.V. Govindaraju  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.B. Murthy  
CHAIRMAN, BITES



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**K.S.INSTITUTE OF TECHNOLOGY**

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No. 14, Raghunathahalli, Kanakapura Main Road, Bangalore - 560109  
Tel : +91-80-28435722 / 24 Fax : +91-80-28435723 Email : principal.kan@ksit.ac.in Website : www.ksit.ac.in

# Certificate of Participation



This is to certify that Mr./Ms. SHYLAJA K.R.  
of KSIT Institution has participated in the Academic development program on  
"Insight into the Vocabulary of Modern Technologies" 27<sup>th</sup> - 31<sup>st</sup> Jan 2020 Organized by Department of Electronics and Communication  
Department of Computer Science & Engineering K.S. Institute of Technology in association with IEEE KSIT Student Branch & BITES.

Dr. Ram P. Hasmagi / Dr. P. Jay Prakasharan  
CONVENERS

Dr. N. Govindaraja  
PRINCIPAL/DIRECTOR, KSIT

Dr. K.N.R. Murthy  
CHAIRMAN, BITES



**K. S. INSTITUTE OF TECHNOLOGY**  
#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

Date: 21.1.2020


**Report on OBE workshop**

Attended six days national workshop on Outcome Based Education and NBA accreditation from 13.01.2020 to 18.01.2020. This workshop was organized by Jyothi Institute of Technology in collaboration with VTU.

The resource persons delivered necessary lectures covering the aspects of Outcome Based Education so that professors in engineering colleges can deliver the knowledge from OBE perspective.

Following were the outcomes of the workshop:

- Defining clear outcomes for each and every course of the curriculum.
- Defining mapping of the Course outcomes with program outcomes and program specific outcomes.
- Finding out the gaps in the syllabus of the course in addressing the program outcomes.
- Including Content beyond syllabus for course to bridge the gaps.
- Defining the process for course attainment and program attainment calculation.
- Setting the targets for PO's.
- Identifying which courses have not attained the target attainment values and actions to be taken to improve the same at course level.

  
Dr. B Sudarshan

Professor, ECE Department, KSIT, Bangalore

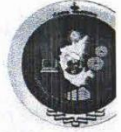






**JYOTHY INSTITUTE OF TECHNOLOGY**

off Kanakapura Road, Thataguni. Bengaluru - 560082



## **CERTIFICATE**

This is to certify that

Dr./Mr./Ms. B Sudarshan has participated in VTU-TEQIP  
sponsored five days national workshop on Outcome Based Education and NBA accreditation  
From : 13.01.2020 to 18.01.2020

Coordinator

Principal



**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mr. Sampath Kumar**

**FDP Title: Applications of Optimization Techniques and Number Theory in Engineering science**

**Organized by: Department of ECE and EEE, Dayananda Sagar Academy of technology and Management**

**Duration: 16<sup>th</sup> Jan to 20<sup>th</sup> Jan 2020**

**About FDP:**

FDP focusing on the applications of optimization techniques serve as invaluable platforms for educators to deepen their understanding and proficiency in this critical area of study. These programs are designed to equip faculty members with the knowledge, skills, and practical insights necessary to integrate optimization methodologies into various academic disciplines and professional domains. Through interactive workshops, seminars, and hands-on training sessions, participants gain a comprehensive understanding of optimization algorithms, modeling techniques, and software tools essential for tackling complex real-world problems effectively. Moreover, FDPs facilitate collaboration and knowledge sharing among educators, researchers, and industry practitioners, fostering interdisciplinary approaches to address contemporary challenges across sectors such as engineering, finance, healthcare, logistics, and beyond. By empowering faculty members to incorporate optimization techniques into their teaching, research, and consultancy activities, these programs not only enhance academic excellence but also contribute to the development of innovative solutions that drive positive societal impact.

  
**Signature of Faculty**

  
**HOD ECE**





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Institute of Technology

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Gokula Education Foundation

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Vice-Chairman  
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Gokula Education Foundation  
(Engg.)

Sri. G. RAMACHANDRA  
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Dept. of Mathematics, RIT

Dr. VIJAYA KUMAR  
Assistant Professor

Coordinators

Dr. SURESH BABU R  
Assistant Professor

Dr. M. S. BASAVARAJ  
Assistant Professor

Certificate of Participation

*This is to certify that*

SAMPATH KUMAR S

of ..... KSIT, BENGALURU

*has participated in the*

*One Week Faculty Development Program*

*on*

**Applications of Optimization  
Techniques & Number Theory in  
Engineering Sciences**

*organized by*

**Department of Mathematics**  
**Ramaiah Institute of Technology, Bangalore- 54**  
*held during 16 -21 January 2020.*

Dr. N. L. Ramesh  
HoD, Mathematics

Dr. N. V. R. Naidu  
Principal





**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mr. Praveen A**

**FDP Title: Cyber Security**

**Organized by: Dayananda Sagar Academy of technology and Management**

**Duration: 2<sup>nd</sup> Dec to 06<sup>th</sup> Dec 2019**

**About FDP:**

Faculty Development Program on cybersecurity is a vital initiative aimed at equipping educators with the knowledge and skills necessary to educate the next generation about the intricacies of cybersecurity. In an era where digital threats are increasingly sophisticated and pervasive, such programs play a pivotal role in empowering faculty members to impart relevant and up-to-date information to students. Through workshops, seminars, and hands-on training sessions, FDPs foster a deeper understanding of cybersecurity fundamentals, emerging trends, risk mitigation strategies, and best practices in teaching cybersecurity concepts effectively. By enhancing educators' proficiency in this field, FDPs contribute not only to the academic excellence of institutions but also to the broader goal of fostering a cyber-resilient society.

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

**Signature of Faculty**

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

**HOD ECE**



राष्ट्रीय विद्युत प्रशिक्षण प्रतिष्ठान  
NATIONAL POWER TRAINING INSTITUTE  
(Under Ministry of Power, Govt. of India)

सक्रिय लाईन प्रशिक्षण केन्द्र

HOT LINE TRAINING CENTRE

26<sup>th</sup> Km., Kanakapura Road, Bangalore - 560 116.

प्रमाण - पत्र CERTIFICATE

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

ATAL ACADEMY

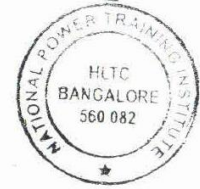
NPTI/HLTC/ATVR0108/2019/011



*This is to certify that Mr./Mrs./Miss/Dr. Praveen A., Asst. Professor of KSIT, Bangalore had participated in 5 Days Training Program on "Cyber Security" conducted by this institute from 02-12-2019 to 06-12-2019 at DSATM, Bangalore.*

  
(Dr.K.S.S.RAVIKUMAR)  
Program Director

Date: 06.12.2019





**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mr. Saleem Tevaramani**

**FDP Title: Python for Data science**

**Organized by: Department of CSE, Raghu Engineering college**

**Duration: 01<sup>st</sup> Jun to 5<sup>th</sup> Jun 2020**

**About FDP:**

Faculty Development Programs focused on Python for data science are instrumental in equipping educators with the necessary skills to teach and integrate this powerful programming language into academic curricula. Python's versatility and rich ecosystem of libraries make it a preferred choice for data analysis, machine learning, and artificial intelligence applications. These FDPs typically include hands-on workshops, lectures, and practical assignments tailored to help faculty members gain proficiency in Python programming, data manipulation, visualization, and machine learning techniques. By mastering Python for data science, educators can enhance their teaching methodologies, introduce students to modern data analysis tools, and facilitate experiential learning opportunities. Additionally, FDPs often encourage collaboration and knowledge exchange among participants, fostering a vibrant community of educators committed to advancing data science education. Ultimately, these programs play a vital role in preparing faculty members to meet the growing demand for data-driven skills in academia and industry, thus empowering the next generation of data scientists and analysts.

  
**Signature of Faculty**



**HOD ECE**





# RAGHU ENGINEERING COLLEGE

(AUTONOMOUS)

Approved by AICTE, Affiliated to JNTU-Kakinada

Dakamarri (V), Bheemili (M), Visakhapatnam, Andhra Pradesh, India – 531162



## Five-Day Online Faculty Development Program on *Python for Data Science*

Organized by Department of Computer Science & Engineering

In association with CSI Student Chapter

### Certificate of Participation

This is to certify that SALEEM S TEVARAMANI from KSIT has participated in Five-Day Online FDP on “*Python for Data Science*” Organized by Department of CSE, Raghu Engineering College (A), Visakhapatnam, In association with CSI Student Chapter, from 1<sup>st</sup> June – 5<sup>th</sup> June 2020.

Convener

(Dr. G Jose Moses)

CSI SBC

(Mrs. B Meena)

HoD-CSE

(Mr. S Srinadh Raju)

RVP Region-V CSI

(Prof. M S Prasad Babu)

Principal

(Dr. R Kameswara Rao)



**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mrs. Pragathi P**

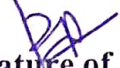
**FDP Title: Recent IT Technologies, writing Papers and Funding Proposals**

**Organized by: Computer Science and Information Technology, RIT**

**Duration: 20<sup>th</sup> Jun to 24<sup>th</sup> Jun 2020**

**About FDP:**

Faculty Development Programs (FDPs) centered on recent IT technologies and paper writing are pivotal in keeping educators abreast of the latest advancements in the ever-evolving field of information technology (IT) while honing their academic writing skills. These programs typically offer a multifaceted approach, incorporating seminars, workshops, and interactive sessions to delve into emerging IT trends such as cloud computing, Internet of Things (IoT), artificial intelligence (AI), blockchain, and cybersecurity, among others. Participants are guided through hands-on experiences, case studies, and discussions to deepen their understanding of these technologies and their applications across various industries. Moreover, FDPs place significant emphasis on enhancing participants' research and academic writing capabilities, providing guidance on crafting high-quality research papers, technical reports, and scholarly articles. Through workshops on literature review, research methodology, data analysis techniques, and effective communication, educators learn how to articulate their ideas coherently and contribute meaningfully to the academic discourse in their respective fields. Furthermore, FDPs often provide mentorship and peer feedback opportunities, enabling participants to refine their writing skills and prepare manuscripts for publication in reputable journals or conference proceedings. By combining insights into recent IT innovations with comprehensive training in paper writing, these FDPs empower educators to stay at the forefront of technology-driven advancements while effectively disseminating their research findings to the broader academic community. Such initiatives not only foster professional development but also catalyze knowledge creation and dissemination, ultimately benefiting both academia and industry.

  
**Signature of Faculty**

  
**HOD ECE**



Kasegaon Education Society's  
**RAJARAMBAPU INSTITUTE OF TECHNOLOGY, RAJARAMNAGAR**  
(An Autonomous Institute)  
Department of Computer Science & Information Technology




## CERTIFICATE OF COMPLETION

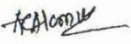
This is awarded to

Mrs. P Pragati  
of  
K S Institute of Technology

for successfully completed the one week online FDP on "**Recent IT Technologies, Writing Papers and Funding Proposals**", organized by Dept. of Computer Science & Information Technology at RIT, under RIT-Center for Teaching and Learning in association with CSI and IEEE Bombay Section from 20 June to 24 June, 2020.



  
**Prof. M. A. Patil**  
Coordinator,  
Department of CS & IT

  
**Dr. A. C. Adamuthe**  
Head,  
Department of CS & IT

  
**Dr. S. K. Patil**  
Dean, Academics  
RIT, Rajaramnagar

  
**Dr. Mrs. S. S. Kulkarni**  
Director,  
RIT, Rajaramnagar







**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mrs. Aruna Rao B P**

**FDP Title: Online Learning and assessment system**

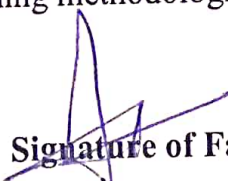
**Organized by: Kalaburagi Local center**

**Duration: 18<sup>th</sup> Jun to 22<sup>nd</sup> Jun 2020**

**About FDP:**

Online learning and assessment systems are crucial in equipping educators with the necessary tools and strategies to navigate the rapidly evolving landscape of digital education. These programs offer a comprehensive exploration of online learning platforms, instructional design principles, assessment methods, and best practices for delivering engaging and effective online courses. Participants learn how to leverage various technologies and tools to create interactive learning experiences, facilitate student engagement, and promote collaborative learning in virtual environments.

Furthermore, FDPs on online learning and assessment systems provide educators with insights into developing robust assessment strategies tailored to online settings. They cover topics such as designing authentic assessments, utilizing formative and summative assessment techniques, leveraging learning analytics, and ensuring academic integrity in online assessments. Through hands-on workshops, case studies, and discussions, participants gain practical experience in designing, implementing, and evaluating online assessments that align with learning objectives and promote student success. By engaging in FDPs on online learning and assessment systems, educators are better equipped to harness the potential of digital technologies to enhance teaching and learning outcomes in both traditional and online educational contexts. These programs empower faculty members to adapt to the demands of modern education, embrace innovative teaching methodologies, and foster student-centered learning experiences in the digital age.

  
**Signature of Faculty**

  
**HOD ECE**



# Institution of Engineers (India)

Kalaburagi Local Centre, Kalaburagi



## Certificate

This certificate is Presented to

Mr./Mrs **Aruna Rao B P**

of

KSIT Bengaluru , Bengaluru

For successfully completing Online one week Faculty Development Program (FDP) on

### Online Learning and Assessment System

Organized by IE(I) Kalaburagi Local Centre, Kalaburagi from 18.06.2020 to 22.06.2020

Er. B. S. More

**Chairman**

IEI, Local Centre, Kalaburagi

Dr Prabhudev M S

**Coordinator**

EC Member , IEI Local Centre, Kalaburagi

Dr. Baburao Sherikar

**Hon. Secretary.**

IEI, Local Centre, Kalaburagi

**K S Institute of Technology Bangalore – 109**  
**Department of Electronics and communication Engineering**



**Report on Five Days FDP On**  
**"Engineering Statistics and Linear Algebra"**  
**Organized by BMSIT, Bangalore**

**Date:** 31/12/2019 - 4/1/2020

**Venue:** BMSIT, Bangalore

**Scope and Objectives:**

- The main objective of the programme was to train the faculty members of VTU affiliated colleges for the course "Engineering Statistics and Linear Algebra" which is a core course in 4th semester of ECE and TE.

**Topic coverage (Day and Schedule wise):**

**On 31/12/2019, Tuesday**

**Inauguration by Dr. A Srinivas Murthy and Dr. Narayana Iyer**

**Session I: Introduction to Probability by Dr. A Srinivas Murthy, Professor, UVCE, Bangalore**

**Session II: Introduction and basics of Linear Algebra by Dr. Narayana Iyer, Former Professor at IIT Kharagpur.**

**On 1/1/2020, Wednesday**

**Session I and II: Definition and calculation of Probability Density Function, Cumulative Density Function and Probability Mass Function of continuous and discrete random variables.**

**Session III and IV: Vector Spaces and interpretation of 2D and 3D vector spaces.**

**On 2/1/2020, Thursday**

**Session I and II: Properties of Random variables like mean, variance and standard deviation and its application on binomial, gaussian, poisson, exponential random variables.**

**Session III and IV: Principle of Orthogonality and how to determine basis functions.**



On 3/1/2020, Friday

Session I and II: Problems on Conditional probabilities and introduction to multiple random variables followed by some numericals.

Session III and IV: Introduction to Eigen values and Eigen vectors and the procedure to determine the same.

On 4/1/2020, Saturday

Session I : Applications of Engineering Statistics and Linear Algebra in the field of Electronics and Communication by Dr. S Ravishankar, Professor, RVCE.

Valedictory


PO Mapping

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Engineering Statistics and Linear Algebra	2	3	-	3	-	-	-	1	-	1	-	2

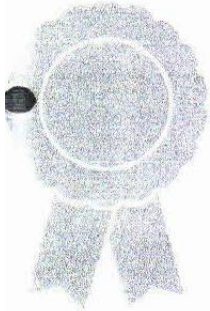
Enclosure: Attendance Certificate of Workshop

Report Submitted By:

Mrs. Bhargavi Ananth

  
HOD  
9/01/2020

# Certificate of Participation



This is to certify that Mrs. Bhargavi Ananth, Asst. Professor  
of KSIT, B'lore has participated in Five days National level Faculty Development  
Programme on "Engineering Statistics and Linear Algebra" organised by the Department of Electronics  
and Communication Engineering, BMS Institute of Technology and Management from 31st December 2019  
4th January 2020.

Mr. Ravindra Asundi  
Chief Coordinator

Dr. Ambika R  
HOD

Dr. Mohan Babu G N  
Principal



**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Mrs. Veda B and Mrs. Mohanambika K M**

**FDP Title: 5G Communication networks and its Future**

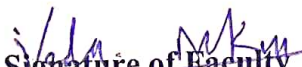
**Organized by: Department of ECE and ETE, RIT**

**Duration: 06<sup>th</sup> Jan to 11<sup>th</sup> Jan 2020**

**About FDP:**

This FDP program provides a comprehensive understanding of 5G networks, including their architecture, key technologies, deployment scenarios, and emerging applications. Participants in FDPs on 5G communication networks explore the fundamental principles underlying 5G technology, such as millimeter-wave communication, massive MIMO (Multiple Input Multiple Output), beamforming, network slicing, and software-defined networking (SDN). Through lectures, hands-on demonstrations, and case studies, educators gain insights into the technical intricacies of 5G networks and learn how to integrate these concepts into their teaching curriculum effectively.

By engaging in FDPs on 5G communication networks and their future, educators enhance their expertise in this cutting-edge technology domain and equip themselves with the knowledge and resources to deliver high-quality instruction, mentor students, and conduct research in wireless communication. These programs play a crucial role in fostering a skilled workforce capable of harnessing the full potential of 5G technology and driving advancements in communication networks for years to come.

  
Signature of Faculty

  
HOD ECE



This is to certify that Mr / Ms / Mrs VEDA B of

KSIT

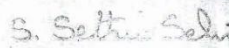
has attended One Week Workshop on  
“5G Communication Networks and its Future Perspective”  
held at Ramaiah Institute of Technology, Bengaluru  
from 06<sup>th</sup> to 11<sup>th</sup> January, 2020

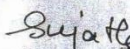
Organized by  
Department of Electronics & Communication Engineering  
Department of Electronics & Telecommunication Engineering  
Ramaiah Institute of Technology


 **IEEE ComSoc™**  
IEEE Communications Society

 **IEEE**  
RAMAIAH

 **IEEE**  
Signal Processing Society

  
Dr. S Sethu Selvi  
Professor & HoD, Dept. of ECE

  
Dr. B K Sujatha  
Professor & HoD, Dept. of ETE

  
Dr. N V R Naid  
Principal



**RAMAIAH**  
Institute of Technology



This is to certify that Mr / Ms / Mrs MOHANAMBICA K M of KSIT

has attended One Week Workshop on  
**"5G Communication Networks and its Future Perspective"**  
held at Ramaiah Institute of Technology, Bengaluru  
from 06<sup>th</sup> to 11<sup>th</sup> January, 2020

Organized by  
Department of Electronics & Communication Engineering  
Department of Electronics & Telecommunication Engineering  
Ramaiah Institute of Technology



*S. Sethu Selvi*  
Dr. S. Sethu Selvi  
Professor & HoD, Dept. of ECE

*P. K. Sujatha*  
Dr. P. K. Sujatha  
Professor & HoD, Dept. of ETE

*N. V. R. Naidu*  
Dr. N. V. R. Naidu  
Principal





**K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Faculty Name: Dr. Surekha B**

**FDP Title: Recent IT Technologies writing papers and Funding**


**Organized by: Computer Science and Information Technology, RIT**

**Duration: 20<sup>th</sup> June to 24<sup>th</sup> June 2019**

**About FDP:**

Faculty Development Program focused on recent IT technologies, writing papers, and securing funding are integral for educators aiming to navigate the dynamic landscape of information technology (IT) research, publication, and grant acquisition. These programs offer a multifaceted approach, combining insights into cutting-edge IT innovations with comprehensive training in academic writing and grant proposal development. Participants in FDPs on recent IT technologies explore emerging trends such as artificial intelligence (AI), machine learning, blockchain, cloud computing, cybersecurity, and Internet of Things (IoT). Through seminars, workshops, and hands-on sessions, educators gain a deep understanding of these technologies, their applications across various sectors, and the research challenges and opportunities they present.

In parallel, FDPs provide guidance on academic writing, helping educators refine their skills in crafting research papers, technical reports, and scholarly articles. Topics covered may include literature review techniques, research methodology, data analysis, writing style, and effective communication of research findings. Participants receive feedback and support to enhance the quality and impact of their scholarly publications.

  
**Signature of Faculty**

  
**HOD ECE**



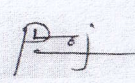


# CERTIFICATE OF COMPLETION

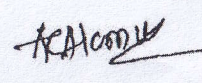
This is awarded to

Dr. Dr Surekha Borra  
of  
K. S. INSTITUTE OF TECHNOLOGY

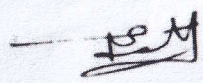
for successfully completed the one week online FDP on "**Recent IT Technologies, Writing Papers and Funding Proposals**", organized by Dept. of Computer Science & Information Technology at RIT, under RIT-Center for Teaching and Learning in association with CSI and IEEE Bombay Section from 20 June to 24 June, 2020.



**Prof. M. A. Patil**  
Coordinator,  
Department of CS & IT



**Dr. A. C. Adamuthe**  
Head,  
Department of CS & IT



**Dr. S. K. Patil**  
Dean, Academics  
RIT, Rajaramnagar



**Dr. Mrs. S. S. Kulkarni**  
Director,  
RIT, Rajaramnagar







**K S Institute of Technology, Bengaluru- 109**

**KSIT Department of Telecommunication Engineering**

**Report on FDP "State of the art RF and Wireless Communication Design"**

**Dates of FDP: 29/07/2019 to 02/08/2019**

**Venue: BMSCE, Bengaluru**

**Organized by:** Department of Electronics and Communication, BMSCE, Bengaluru in Association FET,M.J.P Rohilkhand University.

**Day-1:**

**Speaker-1: Dr. Navin Kumar, Chair, IEEE ComSoc Bengaluru Chapter & Associate Professor, Dept of ECE, Amirta School of Engineering, Bengaluru**

Guest Arrived at 10.00 am, delivered a talk on Evolution of Wireless Communication: Opportunities and challenges towards 5G and Beyond.

**Speaker-2: Mr. Narayan Prasad, Technology Consultant.**

The session started at 11.30 am. The talk was on "Automotive Radar: Technology and applications"

**Speaker-3: Dr. Chandrika Sudheendra, Group director, Aeronautical Development Establishment (ADE), DRDO, Bengaluru.**

The session started at 2 pm after lunch break. Detailed talk was delivered on the aeronautical development in DRDO.

## **Day-2:**

**Speaker-1: Dr. K R Sudheendra, Associate Professor, Dept of ECE, BMSCE**

The session started at 9.30 am. The talk was on RF planning and optimization. Antenna design was explained in detail.

**Speaker-2: Mr. Diptiman Biswas, Scientist F (FTTT division) ADE, DRDO, Bengaluru**

The session started at 11.30am after a tea break. The explanation of Advanced RF & wireless systems for unmanned aerial vehicles was done.

**Speaker-3: Dr. Sambasiva Rao, Director, Center for Research in Space science and technology, PES University**

The session started at 2.15 pm after lunch. The talk was on RF/Microwave wireless technology in Satellite communication.

## **Day-3:**

**Speaker-1: Dr. Ratna G N, Principal Research Scientist, Dept of Electrical Engineering, IISc.**

The talk started at 9.30 am by Professor on Cognitive Adaptive Array Processing.

**Session 2 & 3 were on Technilab instruments**






**Day-4: Hands on session on ADS (ADVANCED DESIGN SYSTEM).**

**Day-5: Hands on session on HFSS(HIGH FREQUENCY STRUCTURAL SIMULATOR).**

**Report Submitted By**

**Mrs. Devika B**

  
14/8/19  
**Staff Signature with date**

  
14/8/19  
**HOD**

  
14.8.19  
**Principal**



**BMS COLLEGE OF ENGINEERING, BENGALURU-19**

(Autonomous Institution under VTU, Accredited by NBA & NAAC with A++ Grade)

**TEQIP-III Sponsored One Week Faculty Development Program**

**on**

**“State of the Art in RF and Wireless Communication Design”**

**29<sup>th</sup> July to 2<sup>nd</sup> August 2019**

**CERTIFICATE**

*This is to certify that Mr./Ms./Dr. DEVIKA. B. has Participated and successfully completed TEQIP-III Sponsored One Week Faculty Development Program on “State of the Art in RF and Wireless Communication Design” organized by the Department of Electronics & Communication Engineering, B.M.S.College of Engineering, Bengaluru in Association with M.J.P. Rohilkhand University, Bareilly, U.P.*

**Dr. Arathi R Shankar**

Head, Dept. of ECE

B. M. S. College of Engineering

**Dr. B.V. Ravishankar**

Principal

B. M. S. College of Engineering





**K S Institute of Technology, Bengaluru – 109**

**Department of Telecommunication Engineering**

## **Report on Ten Days Workshop Titled “Research Methodology”**

**Dates of Conference:** 26/07/2019 to 04/08/2019

**Venue:** Seminar Hall, VTU HRDC, Muddenahalli, Chickballapur

**Organized by:** Visvesvaraya Technological University, VTU-HRDC, CPGS, Muddenahalli, Chickballapur.

### **Scope and Objectives:**

To Pursue Quality Research in PhD Programme with Human Values.

### **Day-1:**

Inauguration started at 10.15AM. Dr. Chikkanna, PG Co-ordinator welcomed the esteemed guests on to the Stage. Dr. B G Satyaprasad and Dr. K V Prakash were the chief guests for the inaugural function. Function started with invocation song.

**Speaker-1: Dr. B.G. Satyaprasad, Professor and Director, G T Institute of Management Studies, Bengaluru-560072**

Speaker started with necessity of research in current days. He informed that in almost all areas like agriculture, industries, academics, service sectors and regulatory bodies to control economy we need research. Research is walk of life. He also informed that, 30% of the national income will be allocated to research in US and UK. He informed the necessity of quality research. He informed the necessities to complete PhD process such as mental strength, physical strength and financial motivation. He informed us to have a dream and chase that dream every day. Dream should be supported by Hardwork. He informed us to do SWOT analysis of ourselves and identify the strengths of each participants. He also informed us to admire already existing technologies.



He suggested to improve the strengths by continuously doing hard work. He asked us to dedicate some time for research every day. Formulation of research title is most difficult in PhD process. He also asked us to go through all the recent 2 years papers, research project reports from M.Tech, M.Phil, B.E and National/International Journals on our topic. He informed about research design. It is a plan/blueprint through which we move till end of our research. He informed us about how to write an effective report. He informed the flow of chapter names and its description. They are: introduction, problem statement, scope of study, operational definition of concept, literature survey, objective, reference period, sample technique adopted, sources of data, tools required, analysis and interpretation, limitations, conclusions, future scope and bibliography.

**Speaker-2: Dr. K V Prakash, Principal, Govt. Engineering College, Haveri**

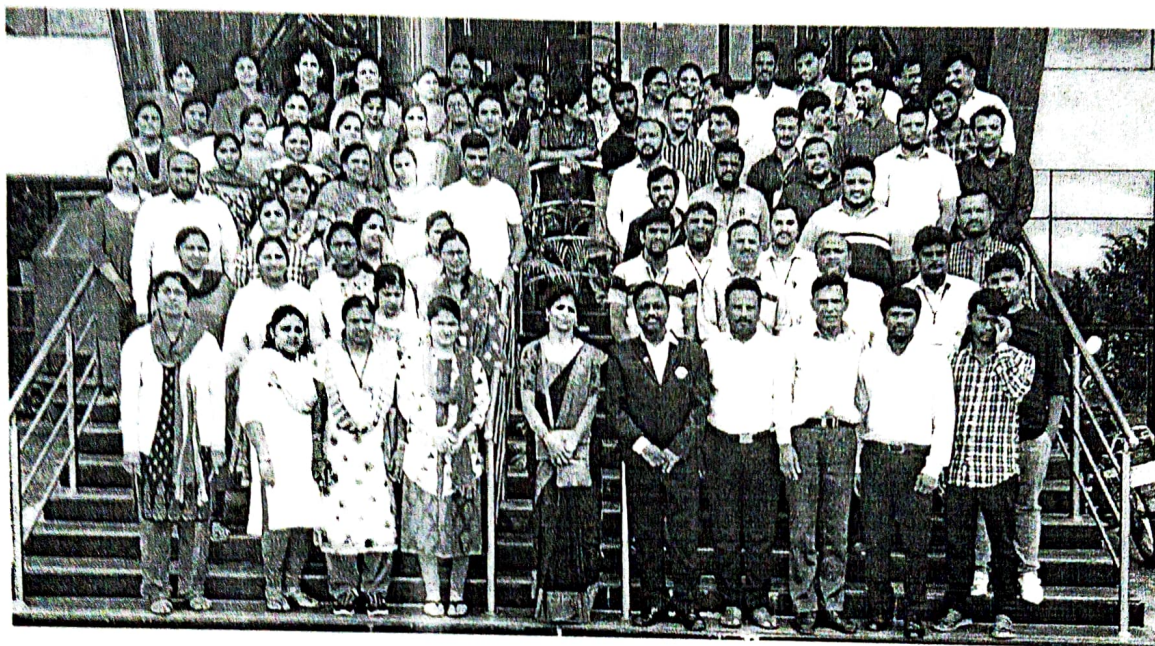
Speaker talked about basic concepts of research and human values. He motivated us to pursue research by passion. According to him, the qualities of researcher are passion, positive energy, performance, perseverance, original thinking and self confidence. In his talk, he informed about how passion builds your career towards success. He spoke about how to control a mind to do qualitative research. Success occurs twice in life. Once in your mind and once in reality. He suggested us to have faith in our work. Do not give up, the beginning is always hardest. Do not create barriers in your mind. If we control our mind, anything is possible. Have goals in life. He informed about sustained sincerity and faith in life.

**Day-2: Dr. S N Sridhara, Professor and Director, Amity University, Hariyana**

Speaker illustrated about problem identification and formulation. He spoke about scope of research and few definitions pertaining to research. Research is systematic investigation into and study of materials and sources in order to establish facts and reach to new conclusions. Research may lead to design/method or product. He also spoke about research outcomes, money management, necessity of patents and identifying quality journals.



Speaker spoke about research design as it's a framework to methodically define the research questions and seek answers. He spoke about facilities required to do research. He mentioned about sources of data, sample designs in research, major steps in research. He spoke about research design methods and literature review. He mentioned about primary and secondary sources where we get information.



**Fig-1: Photograph of Research scholars with Speaker Dr. S N Sridhara**

He spoke about importance of paper publication in good journals with high impact factors. He suggested us to refer peer review papers, text books, research reviews, scholarly articles, news papers for contents. He told many suggestions regarding, how to carry review of literature and how to cite it in reference. He also spoke about few reference techniques.

He suggested to be focused and have monthly targets. He also suggested to spare atleast 1 hour or 2 hours time for our project. He also suggested to avoid poor literature review technique of annotations. He also spoke about how to summarize the results and write it in discussions chapter. He mentioned various software's which help in doing bibliography.



**Day-3: Dr. Lancy D'Souza, Professor and Head, Department of Psychology,  
Mysore University**

Speaker spoke about Data Analysis and Interpretation. He also mentioned about hypothesis formulation and testing. He mentioned about importance of statistics. Four important processes in statistics are collection of data, compilation, analysis and interpretation. He mentioned about nominal and ordinal measurement in his speech. He informed about interval and ratio scale as advanced level measurement. He also mentioned about normality check importance and Shapiro wilk test. He mentioned about the difference between parametric and non parametric measurement. He also told the importance of creative system link research. He mentioned about what is hypothesis and its types.

He explained about null, alternative and directional hypothesis. Null hypothesis does not have difference and relationship. He mentioned about two group difference comparison as paired sample and t test. He taught Anova (Analysis of Variance) and Ancova (Analysis of Co-variance).

He mentioned about various types of anova. Univariate and multivariate anova are the different types of anova. Repeated measure anova was the additional thing in anova. Several independent and dependent variable has to be used in all the types of anova and it should be applied for only parametric raw data. He also mentioned about post hoc test, duncuns multiple hop test, schaffe HSD, Tukeys method and bonferroni method. He also mentioned about parametric relationship methods as correlation and regression.

He mentioned about non parametric methods of measurement. He mentioned about single and multiple regression. He illustrated type-1 and type-2 errors in measurement. He suggested to use SPSS tools for verifying parametric and non parametric difference methods. He taught about various significance levels and its interpretation to the given problem statements.



**Day-4: Dr. K R Jayakumar, Professor and Head, Department of Science and Humanities, KSIT, Bengaluru**

Speaker informed about sampling design, statistical methods and Latex. He also mentioned about evaluation procedure of research methodology. He taught the significance of mean, median, mode, standard deviation and covariance in statistics with an example each in cricket. He mentioned about what is sampling and why we need sampling. He mentioned the different types of sampling techniques and its uses in statistics.

He mentioned about non probability and probability samples in statistical methods. He taught random sampling, systematic and clustered sampling techniques in statistical methods.

He talked about Chi-Square Distribution which talks about the significance of calculated and tabulated value in statistical methods. He solved 2 problems which can be asked in research methodology course work. He gave a brief insight in syllabus of research methodology course work by VTU.

He mentioned about degrees of freedom and goodness fit in statistical methods. He suggested to use Latex for thesis writing and technical paper publication. He taught basics of latex commands. He mentioned about various journals in which latex is a must.

**Day-5:**

**Speaker: Dr. Mahesh, Professor and Head, Department of MBA, Bangalore Institute of Technology, Bengaluru**

Speaker informed about importance of Hypothesis and its usage. He suggested few softwares like SPSS (Statistical Package of Social Sciences) and Jamovi powered by R. He clearly mentioned about many hypothesis types and its practical implementation. He spoke about different types of data samples such as parametric and non parametric raw data or information. He spoke about null

hypothesis as if there is no evidence to reject the hypothesis then it is called null hypothesis. He informed about alternative hypothesis and its formula to compute the significance levels.

He took three problems and discussed about null and alternative hypothesis. He suggested few important topics such as anova, ancova. Regression and correlation coefficient. In null hypothesis, there is no statistically significant differences with references to corresponding perceptions will have impact on consumer buying behavior. In alternative hypothesis, there is statistically significant differences with references to corresponding perceptions will have impact on consumer buying behavior. He mentioned the importance of P value and alpha. He suggested a software called "Raosoft" for calculation of sample size.

**Day-6:**

**Speaker: Dr. Binoy Mathew, Associate Professor & Director, Centralized Placement Cell, Visvesvaraya Technological University, Belagavi**

Speaker informed about literature review and writing bibliography. He started with defining what is success as far as researcher is concerned. We have to redefine success everytime. He mentioned about shiv khara book of how to win. He showed one motivational video. He mentioned about the differences between Scope, boundaries of study and limitation of research. He told importance of having Mendeley tool for bibliography.

He mentioned the differences between bibliography and references. He showed APA and IEEE format of bibliography. He told about life time assets of research. He told about importance of base paper. He mentioned the importance of selecting good journals, papers, books and online materials for research. Importance of literature review is we can clearly understand what has been done and what can be done in future. Identifying research gap can be biggest concern in finding a research problem. A complete research statement is half solved. He mentioned about chapter wise references.



## **Day-7:**

**Speaker-1: Dr. Nagesha N, Professor, Department of Industrial and Production Engineering, UBDT engineering college, Davanagere**

Speaker mentioned about "A review on research process and Data Analysis". He clearly mentioned about what is research and what is not research. He told that research should be well planned and managed. We should possess great concentration and commitment towards our work. What has to be done for every 6 months, should be defined initially itself. He mentioned the differences between basic and applied research.

He told the importance of variables and its different types. He talked about importance of dependent and independent variables. Literature review pattern should be according to IEEE or APA format. He told the importance of sampling and explained about different types in sampling. He mentioned about univariate, Bi-variate and multi-variate data analysis and importance in any kind of research paper. He mentioned about measurement of dispersion range, quartile deviation, median, mode, covariance, standard deviation and P-value.

He mentioned about the importance of regression analysis in any kinds of research paper or thesis. He talked about stochastic and non-stochastic analysis in statistical methods. He mentioned the relevance of interpretation or comparison of our results with the existed paper results. He mentioned about how to find out regression co-efficient. He mentioned about adjusted R-square value and residuals. He talked about importance of normal probability plot in any kind of research.

**Session-2: Mr. Shivaram, Senior Technical Manager, CSIR-NAL, Bengaluru**

Speaker told about tools which will help researcher in his literature survey and thesis writing. He mentioned about different stages of research and tools which helps in retrieving better contents from websites. He mentioned about different searching techniques and quoted with examples. He also talked about Different document types in scholarly information. He mentioned the importance of various

bibliographical databases. He talked about aggregators and different kinds of publications.

He also talked about open access journals and Scopus indexed journals. He explained about how to decrease plagiarism in our research thesis report. He talked about social networking sites which will help in our research. He told about patents and importance of copy right form when we publish our articles in journals. He mentioned about different online tools used for bibliography writing in our research thesis report.

#### **Day-8:**

**Speaker-1: Dr. Sreenivasa, Associate Professor, Department of Mechanical Engineering, UBDT Engineering College, Davanagere**

Speaker told about "Research Skills" which is required for any researcher. He informed about various questions usually people asks in terms of pursuing research. He told history of research in all over the world. He mentioned research importance in recent days. He mentioned how to start research initially. He mentioned about sources of research problems. He also discussed about benefits of both smart work and hard work. He discussed about types of research technical papers.

He mentioned about various national and international journals in which researcher is going to publish their work. He discussed about impact factor and referencing techniques. He discussed about how to understand various journal papers. He mentioned about reference management software. He mentioned about plagiarism and its importance in current years.

**Speaker-2: Dr. Nataraj K R, Professor, Department of ECE, SJB Institute of Technology, Bengaluru**

Speaker told about "How to write a technical paper". He mentioned about mistakes which can be done by recent researchers while publishing their work. He



mentioned about review process in many journals. He mentioned about importance of literature survey in our research work. He discussed about thesis compilation in university. He mentioned about managing our working hours inspite of busy schedule.

He also spoke about managing time and publishing effective papers in various national and international journals. He mentioned about importance international conferences in publishing our research work. He told about exam process and thesis submission process in Visvesvaraya technological university. He told us refer as many papers as possible and study atleast two papers every day. He spoke about various aspects in selecting Doctoral committee and Examination Review Committee. He mentioned about size of abstract and its importance in thesis as well as in technical paper. He mentioned about open source journals and how to access those journals by sitting in front of computer. He concluded by informing Funding opportunities in India.

#### **Day-9:**

**Speaker: Dr. T Ramakrishna, Professor, National Law School of India, Nagarbhavi, Bengaluru**

Speaker informed about "Intellectual Property Rights and its overview". He mentioned the importance of patents and copyrights in recent day research. He discussed about patent search website prior art search. He told about trademarks, copyright protection rules, industrial designs, design act of 2000, traditional knowledge, trade secrets, geographical indicators, patents, layout designs for integrated chips in semiconductor history and plant varieties.

He defined patents as exclusive rights given to inventor for limited period, when clear disclosure of his/her invention. He discussed about necessity factors for patents. Process and products can be patented. Discovery of new metal/ principles can not be patented. Newtons laws can not be patented. According to Section 3D of patent act surgical method will not be patented.

**Day-10:**

**Speaker: Dr. M K Purushotham, Professor and Head, Department of Commerce and Management Studies, Vivekananda College and Research Center, Bengaluru**

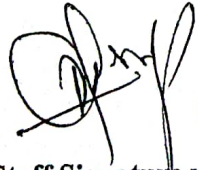
Speaker informed about "General overview of Academia and Research". He talked about importance of research. He told many suggestions regarding, how to carry review of literature and how to cite it in reference. He also spoke about few reference techniques. He told about life time assets of research. He told about importance of base paper. He mentioned the importance of selecting good journals, papers, books and online materials for research.

He also talked about open access journals and Scopus indexed journals. He explained about how to decrease plagiarism in our research thesis report. He talked about social networking sites which will help in our research. He told about patents and importance of copy right form when we publish our articles in journals. He mentioned about different online tools used for bibliography writing in our research thesis report. In his talk, he informed about how passion builds your career towards success. He spoke about how to control a mind to do qualitative research.

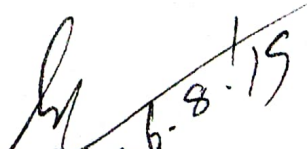
**Report Submitted By**

**DILEEP J**

**Asst. Prof., Dept. of TCE**

  
4/8/19  
**Staff Signature with date**

  
5/8/19.  
**HOD**

  
6-8-19  
**Principal**



# ONE WEEK WORKSHOP

On

## RESEARCH METHODOLOGY

(A Workshop on Research Methodology for Research Scholars of VTU Affiliated/Autonomous/Constituent Institutions)


### REGISTRATION FORM

Name: DILEEP. J  
Qualification: M.Tech  
Department: TCE, KSIT  
Organization: K.S. INSTITUTE OF TECHNOLOGY  
No. of years of Teaching Experience: 4  
Address for Correspondence:  
#183, 6TH CROSS, 1ST MAIN, NAIDU LAYOUT,  
BSK III STAGE, NEAR ABBAIAH NAIDU STUDIO,  
BENGALURU - 560061  
Mobile: 8867781213  
Email: dileepj@ksit.edu.in / dileep1721991@gmail.com  
Amount: Rs 6000/- Online Payment Receipt No: DUB6651728  
Date: 16/7/19  
Accommodation Required (✓): Yes No

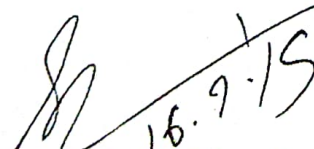
### Declaration by the Applicant

If selected, I agree to abide by the rules and regulations of the workshop of VTU HRDC and shall attend all the sessions compulsorily.

Date: 16/7/19

 16/7/19  
Signature of the Applicant

 16/7/19  
Recommended and Forwarded

 16.9.19  
Signature of the Head of the Institution

PRINCIPAL

K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109



# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

## VTU HUMAN RESOURCE DEVELOPMENT CENTRE (VTU-HRDC)

VTU Centre for Post Graduate Studies, Bangalore Region  
Muddenahalli, Chikkaballapur (Dist) - 562101

Ten Days Workshop

On

“ RESEARCH METHODOLOGY ”

26<sup>th</sup> July - 4<sup>th</sup> August 2019

*Certificate*

*This to certify that Mr/Ms.....Dileep J.....of.....KSTIT, Bengaluru.....  
has participated and Successfully completed Ten Days Workshop On “Research Methodology”  
from 26<sup>th</sup> July - 4<sup>th</sup> August 2019 Organized by VTU Human Resource Development Centre  
(VTU-HRDC), Centre for PG Studies, Muddenahalli, Chickaballapur (Dist).*

Prof. N. Chikkanna

Convener, Research Methodology Workshop  
Co-ordinator, VTU CPGS, Muddenahalli

Prof. A. S. Deshpande

Registrar  
VTU, Belagavi