



**P E S COLLEGE of Engineering**  
Mandya—571 401, Karnataka  
(An Autonomous Institution affiliated to VTU, Belagavi )  
**Grant in Aid Institution (Govt. of Karnataka),**  
**Accredited by NBA, Approved by AICTE, New Delhi**

**TEQIP-3**  
Technical Education Quality Improvement Programme

**Chairman-BoG: Dr. Ramalingaiah**

**Principal: Dr. V. Sridhar**

**Vice Principal & TEQIP Coordinator : Dr. H V Ravindra**

**Editor: Prof. B Dinesh Prabhu**

## TEQIP - NEWS LETTER



### **Vision:**

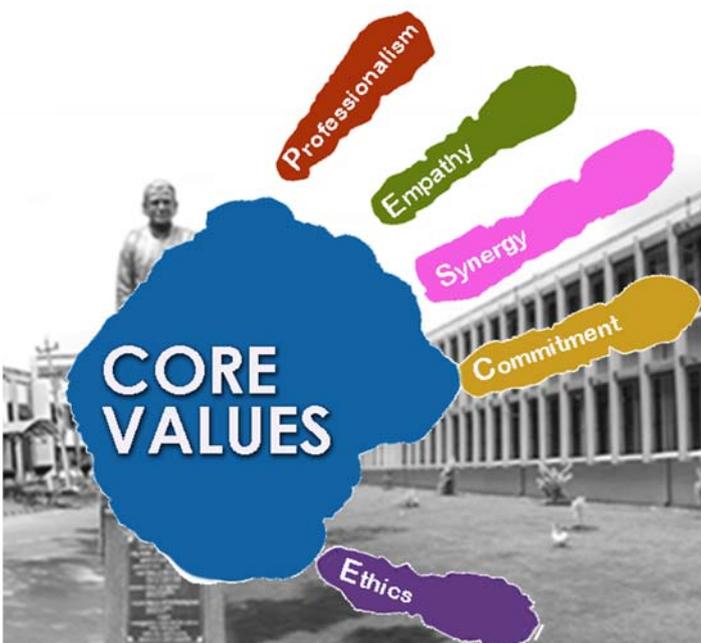
“P.E.S.C.E. shall be a leading institution imparting quality engineering and management education developing creative and socially responsible professionals”

### **Mission:**

- To provide state of the art infrastructure, motivate the faculty to be proficient in their field of specialization and adopt best teaching-learning practices.
- To impart engineering and managerial skills through competent and committed faculty, using outcome based educational curriculum.
- To inculcate professional ethics, leadership qualities and entrepreneurial skills to meet societal needs.
- To promote research, product development and industry-institution interaction.

### **Quality Policy**

Highly committed to provide quality, concurrent technical education and continuously strive to meet expectations of stake holders.



**P.E.S. College of Engineering Mandya– 571401**

- The Project, Third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions to improve their policy, academic and management practices.

### **Project Objectives:**

- Improving quality and equity in engineering institutions in focus states
- System-level initiatives to strengthen sector governance and performance which include widening the scope of Affiliating Technical Universities (ATUs) to improve their policy, academic and management practices towards affiliated institutions, and
- Twinning Arrangements to Build Capacity and Improve Performance of institutions and ATUs participating in focus

### **Project Scope:**

- Only the Government and Government aided AICTE approved Engineering institutions/ Engineering faculty/Engineering Teaching Department/Constituent Institutions of Universities/ Deemed to be Universities and new centrally funded institutions in SCS will be the part of the project.
- An estimated 200 Government and Government funded Engineering institutions including Affiliating Technical Universities (ATUs) will be selected under different sub-components in one or two cycles.

### **Project Strategy:**

- The project is implemented in alignment with the 12th Five Year Plan (2012- 17), based on faster, sustainable, and inclusive growth.

### **Project Design:**

- TEQIP seeks to enhance quality and equity in participating engineering education institutions and improve the efficiency of the engineering education system in focus states.

## 1. TEQIP-III Assignments

The TEQIP Team and Institution Academic Team members are assigned specific tasks related to the development of the Institution supported by TEQIP-3. This task may be a MoU with other related institution or TEQIP-III assignments or related to Twinning programme that shall be carried out under project for better execution of the TEQIP-3

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. V. Sridhar</b> Principal PESCE Mandya</li> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> </ul>
<b>Type of Academic Activity</b>	Visit to <b>Binghamton University</b> New York (SUNY School), USA
<b>Details of Academic Activity</b>	Signing the MoA
<b>Date &amp; Place</b>	23 May to 3 June 2017 -New York (SUNY School), USA

 **Binghamton University, USA** - A world-class institution established in the year 1946 and located in the high-tech heart of New York State of USA. Binghamton University (BU) is one of the premier public universities in the north east. BU offers students broad, interdisciplinary education with an international perspective and one of the most vibrant Master and Doctoral (research) programs. Ranked 10 among the elite public universities in the country, Binghamton challenges students academically, not financially, in its unique, best-of-both-worlds environment.

**P.E.S.C.E., Mandya** has signed a Memorandum of Agreement (MOA) with BU on 25<sup>th</sup> of May 2017, at 4400 Vestal Parkway East, Binghamton, NY 13902, USA. The collaboration aims to foster advancement in teaching, research, academic collaboration and cultural understanding and to create avenues for enhancing learner experience at both entities as well as strengthen both entities. P.E.S. College and Binghamton university will broadly explore avenues for cooperation in i) Student and faculty Exchange, ii) short courses, iii) Joint Research and Workshops, iv) Exchange and sharing of research and teaching ideas, v) Ph.D co-advising and vi) other Academic Exchanges.



 One day workshop on Registration and Expenditure booking and other relative matters supported by TEQIP-III programme were conducted on 03 August 2017 at Dr. APJ Abdul Kalam Technical University, Lucknow, Uttar Pradesh. Detailed presentation about twinning programme between mentor and mentee institutions, various avenues for overall development of mentor as well as mentee institutions, schedule of mentoring, financial dos and don'ts were elaborately discussed. Further, principal secretary of UP took a note of detailed process pertaining to mentoring by all the institutions who were present during the workshop. The Principal secretary Instructed all the mentor and mentee institutions to progress at faster rate and prepare a schedule to execute their twinning programme activities.

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Prof. B. Dinesh Prabhu</b> Nodal Officer - Academic</li> <li>• <b>Dr. N L. Murali Krishna</b> Nodal Officer- Procurement</li> <li>• <b>Mr. K Ravi</b> Assistant Nodal Officer Procurement</li> </ul>
<b>Type of Academic Activity</b>	TEQIP-III Meeting
<b>Details of Academic Activity</b>	Registration and Expenditure booking and other relative TEQIP-III
<b>Date &amp; Place</b>	03 August 2017, Dr. APJ Abdul Kalam Technical University, Lucknow, Uttar Pradesh

<b>Faculty / Staff</b>	<b>Dr. B S Shivakumara</b> Dean, III Cell
<b>Type of Academic Activity</b>	Sensitization Workshop
<b>Details of Academic Activity</b>	Induction Programme and Modalities
<b>Date &amp; Place</b>	23 to 24 August 2017, NPIU, New Delhi

 **Dr. B S Shivakumara**, Dean, III Cell, attended the “Sensitization Workshop on Induction Programme” on 24<sup>th</sup> August 2017 at New Delhi. The programme was sponsored by TEQIP phase –III. In the workshop, several Principals, Administrators of Mentor & Mentee colleges, TEQIP officials and experts attended. After the discussions interactions and Brainstorming sessions a Blue print was prepared for the conduction of an induction program at Mentee colleges. It was decided to give emphasis to human values in the Induction program. Approximate schedules of trainings, schedules of Induction program were chalked out.

<b>Faculty / Staff</b>	<b>Dr. V. Sridhar</b> Principal, PESCE Mandya
<b>Type of Academic Activity</b>	TEQIP-III Meeting on Twinning programme
<b>Details of Academic Activity</b>	1st Joint Review Mission (JRM) of World Bank & MHRD
<b>Date &amp; Place</b>	7 Nov 2017, New Delhi

1st Joint Review Mission (JRM) of World Bank & MHRD to assess the progress of Project Implementation under TEQIP-III was attended by Dr. V. Sridhar Principal, PESCE Mandya on 7th Nov 2017 at New Delhi. Institutional development is a key element in assessing overall development effectiveness. While there is evidence of positive impact of World Bank projects on client Institutions, it has been difficult, as yet, to determine how they affect institutional development in particular. Twinning is an instrument for building institutional capacity that has been used by many

international development aid organizations, including the World Bank, particularly by the World Bank Institute (WBI), which identifies twinning as an important business strategy at the local level in its client Institutions. Distinctive features of twinning arrangements are that they: (a) are an institution relationship, based on partnership between two organizations; (b) achieve sustainable organizational capacity building; (c) are based on long-term cooperation that Institutions after project completion; (d) are highly flexible and can change according to need; (e) use various modes of activity to ensure sustainability; and (f) carry a notion of learning. Key issues to consider when twinning is employed are: (a) the selection of appropriate partners; and (b) the design of the arrangement and relationship. Twinning is more likely to be successful when the following elements exist: (a) commitment of the Organizations; (b) a high level of competence and flexibility on behalf of the supplier; (c) feasibility of designated tasks; (d) periodic follow-ups after project completion; and (e) positive work relationships.

The National Project Implementation Unit (NPIU) associated with Stanford University, USA, conducted a Training on Student learning Assessment (SLA) to assess and compare college student skills within India and across other countries such as China, Russia, Korea, and the United States. Student Learning Assessment (SLA) module helps us to understand better in the following ways:

- How are the college students' academic skills and higher order thinking skills ("levels")?
- How much have these skills been developed since they were enrolled into the college ("gains")?
- Which factors have helped students develop these skills in the higher education system?

Online Test / Survey questionnaire for I & V Semester students of Computer Science & Engineering and Electrical & Electronics at our college were conducted from 27th to 29th Nov 2017 and the same was intimated to them for active participation.

<b>Faculty / Staff</b>	<b>Dr. Umesh D R</b> Deputy Dean (Academic)
<b>Type of Academic Activity</b>	TEQIP-III Meeting
<b>Details of Academic Activity</b>	Student Learning Assessment (SLA)
<b>Date &amp; Place</b>	11/11/2017, New Delhi

<b>Faculty / Staff</b>	<b>Dr. R Girisha</b> Training & Placement Officer
<b>Type of Academic Activity</b>	2 Days Summit
<b>Details of Academic Activity</b>	Start-UP Activities & preparation of action plan
<b>Date &amp; Place</b>	26 to 27 Dec 2017, AKYU Lucknow

Considering the emphasis on 'Start-up Mandate' and for its proper implementation in TEQIP institutions, NPIU in collaboration with AICTE organized 2 day workshop on 'Start-up activities & preparation of action plan' at 'AKTU, Lucknow' during 26 -27 Dec-2017.

The workshop conducted by lead resource person (s) from network of AICTE

- Importance of Entrepreneurship & Innovation for Economic Development
- Global Innovation Index and India

- Need of Entrepreneurship and Innovation in Higher Education System International Case of Denmark Education System.
- Indian Start-up Ecosystem
- Major Ecosystem Enablers in India & Various Policy and Programs
- Creating an Entrepreneurial Innovation Ecosystem at Institution level
- NPIU & TEQIP Institutions - Start-up Mandate in mentee Institutions
- AICTE Start-up Policy Implementation - Guidelines, Provisions, Actions and Initiatives.
- Policy Logic Development - Logical Framework Approach
- Setting Key Performance Indicators and Base Line Development
- Micro Action Plan Tools and Formats
- Micro Action Plan Exercise - Mentee & Mentor Institutions.

## 1. TEQIP-III Assignments...(Contd.)

<b>Faculty / Staff</b>	<b>Dr. Vinay S</b> Asst. Professor CS & Engg.
<b>Type of Academic</b>	TEQIP-III Meeting
<b>Details of Academic Activity</b>	TEQIP Phase - III Review Meeting
<b>Date &amp; Place</b>	15 to 17 Jan 2018, New Delhi

 TEQIP Phase - III Meeting was held on 16th January, 2018 to review twinning arrangements at NPIU, Delhi. Dr. Vinay S, attended this review meeting to present the progress on the twinning arrangements.

He presented the activities undertaken along with planned activities for the period between Jan - June 2018. Prof. B B Tiwari, TEQIP Coordinator, UNSIET, Jaunpur of Mentee Institute was also present. The institute is required to prepare a detailed plan on the twinning arrangements and

submit it to NPIU before Jan 31st 2018, it is finalized. Planned Suggestive activity for Jan-Jun 2018 include, (a) Review of quarterly action plan and procurement plan, (b) Seminars, meetings, conferences and academic activities for faculty for training and academic development, (c) Qualification up gradation of faculty at mentor institution, (d) Faculty exchange for research and development purposes (e) Student exchange at the PhD, Masters and Undergraduate levels, (f) Departmental partnerships for joint research activities emphasizing applied research and technological development (g) Joint activities with industry for joint R&D internships and placement Activities, (h) Seminars and learning forums on improving governance practices (i) Improvement in NBA accreditation (including applied for cases), (j) Guidance/Support on other Academic activities.

 An Academic Summit on Good Governance was attended by TEQIP team at AICTE office, New Delhi, to discuss about Implementing Good Governance under TEQIP-III, to develop TEQIP institutions to be ambassadors for good governance and Indian Technical Education.

Good governance creates a sound, ethical and sustainable strategy, acceptable to the institution as a whole and to other key stakeholders. Good governance oversees the implementation of such strategy through well-considered processes in an open, transparent and honest manner. Board of Governors, by embracing good governance approaches accept, unequivocally, their own collective and individual responsibilities.

Good governance facilitates decision-making that is rational, informed and transparent which leads to organizational efficiency and effectiveness that supports and fosters the development of high quality education and research. There is a specific focus on institutions helping one another by willingly sharing their experiences, and engaging in regular self review, recognising the importance of identifying and supporting governance development needs, and most importantly implementing good governance.

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> <li>• <b>Prof. B. Dinesh Prabhu</b> Nodal Officer - Academic</li> </ul>
<b>Type of Academic Activity</b>	Academic Summit
<b>Details of Academic Activity</b>	Implementing Good Governance under TEQIP-III
<b>Date &amp; Place</b>	22 to 24 Jan 2018, New Delhi

<b>Faculty / Staff</b>	<b>Prof. V R Devadath</b> Asso. Prof. Dept. of ME Engg
<b>Type of Academic Activity</b>	Workshop on Outcome Based Education
<b>Details of Academic Activity</b>	Workshop on Outcome Based Education for UG Programme
<b>Date &amp; Place</b>	7 to 9 Feb 2018, New Delhi

 On 9<sup>th</sup> Feb 2018 relevance of academic audit to accreditation, its importance for an institute was discussed at NPIU, New Delhi, attended by Prof. V.R.Devadath. Later Assessment and attainment of Cosand POs was pointed out methodically with the help of case study. After lunch, mentor institute PES College of Engineering Mandya Karnataka and mentee institute Umanath singh Institute of Engineering and Technology, Jaunpur UP was assigned to group D. The representatives of mentee institute were asked fill up action plan in consultation with representative of mentor institute for uploading eSAR of their institute and the doubts were clarified by expert allocated

to group D. Completed action plan for uploading eSAR of the mentee institute have been submitted to AICTE. The NPIU Experts pointed out that, by accreditation, how a institute would benefit. Other resource persons elaborated the process of accreditation, procedure to be followed for NBA documentation and pre-qualifiers. After lunch break guidelines were demonstrated to write vision, mission and PEO of the institute. Design of programme curriculum and teaching learning processes (criteria-II) was also highlighted.

<b>Faculty / Staff</b>	<b>Dr. V. Sridhar</b> Principal PESCE Mandya	 A workshop on Skill Knowledge Provider (SKP) under NSQF at AICTE, New Delhi was attended by Dr.V.Sridhar. Details regarding, Procedure for processing online applications for seeking approval for introduction of Vocational Education programmes leading to Degree or Diploma in Vocational Education under National Skill Qualification Framework were discussed. It is said that, only AICTE approved Institutions are eligible to apply. Institution willing to run Vocational Education Courses should have AICTE approval in relevant area. In
<b>Type of Academic Activity</b>	Workshop	
<b>Details of Academic Activity</b>	Skill Knowledge Provider (SKP) under NSQF	
<b>Date &amp; Place</b>	20 to 23 Feb 2018, AICTE	

the AY 2018-19 institute can apply upto 100 seats from given specialization, with a division size of 25 each. Institute may choose one specialization with 04 division OR 04 specializations with 01 division of each specialization or any other similar combination.

It was mentioned that, the Institution shall publish in their brochure & website the details of this scheme and the specialization offered along with the approved intake. The institute shall also display the tuition and other fees charged by the institute for these specialization on their brochure & website. The Institution can invite applications by giving advertisement in newspapers and publishing the same in the Institution's website. These courses may be affiliated with existing University or any Skill University/ National University having jurisdiction for affiliation. The Procedure, Rules and Regulations for admission shall be as prescribed by the affiliating University or Board of Technical Education. The Institution shall display information regarding admitted candidates in their website for information to the students and other stakeholders. Admission of students to these seats shall be done on merit basis as per the State Reservation Policy. Admissions will be done as per the academic calendar prescribed by AICTE. Unfilled seats of reserve category may be converted to open category. Curriculum for such courses will be as prescribed by Board of Technical Education/ University of respective state. Model curriculum is given by AICTE. Education component will be taught by the institute and the skill component will be covered by SKP/ Training Provider approved by NSDC or Govt. Agency. The SKP must be located near the vicinity of college. The classes may be offered in flexi hours by the institute.

The assessment and certification regarding, it was said that, University/Board will conduct examination for Education Component. SKP/Training Provider will do assessment for skill competency. The Skill Knowledge Provider/Trainers (SKP) will submit the Necessary skill credits of the students to the institute where student is registered. Both these credits will be transferred to the Technical Board or the University as the case may be, which compiles the Vocational Skill credits and the formal education credits and if all such credits are available as required by the certification level, then the Technical Board or the University shall award the certification of that level. Credit calculation and certification will be as per framework notified by MHRD.

 26<sup>th</sup> meeting of selection committee on the scheme "Support for Entrepreneurial and Management Development of SMEs through incubators" was held on 26th and 27th Feb, 2018 at New Delhi.

Major highlights of the scheme are:

The Scheme provides opportunity to the innovators in developing and nurturing their new innovative ideas for the production of new innovative products which can be sent in to the market for commercialization.

Host Institutions (HI) are exploring the new innovative ideas from the Incubatee of various sectors that may be existing and prospective entrepreneurs. Even the students from the various streams are also participating in nurturing their new ideas through the Host Institutions as a part of their studies and career building.

- Govt financial assistance of 75 % to 85 % of the project cost up to the maximum of 8.00 Lakh. This fund is routed through the Business Incubator (BIs).

The Objectives are:

- To promote emerging technological and knowledge based innovative ventures that seek the nurturing of ideas from professionals.
- To promote and support untapped creativity of individual innovators and also to assist Individual innovators to become technology based entrepreneurs.
- To promote networking and forging of linkages with other constituents of the innovation chain for commercialization of their developments.

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. V. Sridhar</b> Principal PESCE Mandya</li> <li>• <b>Dr. Vinay S</b> Asst. Professor CS &amp; Engg.</li> </ul>
<b>Type of Academic Activity</b>	Selection Committee meeting
<b>Details of Academic Activity</b>	Support for Entrepreneurial and Management Development of SMEs through incubators
<b>Date &amp; Place</b>	26 to 27 Feb, 2018, MSME-Di,

## 2. Twinning Programme activities

A good Mentor, in Twinning Arrangements, is a 'critical friend' to an institution. Someone who is committed to supporting both the needs of those institutions to which they have been assigned, as well as the needs of the TEQIP project overall. Mentors are principal project representatives and 'agents of change' who keep up to date with initiatives and developments related to the institution and the project as a whole. Mentors listen, understand, guide and advise - principally to support and assist institutions to stay focused on the goals and targets set by the institution in their Institutional Development Proposal and any institution strategic plan. A good Mentor feeds back and explains to institutions what they find (good and bad practices) and bases their feedback on sound evidence. A good Mentor tries to leave an institution better than they found it. Some of the suggested activities under the scope of the project are, Improvement in Teaching, Learning and Research competence, Improve student learning, Student employability, Increasing faculty productivity and motivation. In total, Establishing a twinning system between Mentor and Mentee Institutes for overall academic interaction between the institutions.

Few Aspects under Twinning programme shall include, Implementation of curricular reforms, Exercise academic, administrative, financial and managerial autonomies and accountabilities, Improve student performance and evaluation, Obtaining accreditation of eligible undergraduate and postgraduate programmes.

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. V. Sridhar</b> Principal PESCE Mandya</li> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> <li>• <b>K Ravi</b> Assistant Nodal Officer Procurement</li> </ul>	
<b>Details of Academic Activity</b>	Twinning Programme - MOU with mentee Institute Uma Nath Singh Institute & Technology, Jaunpur, Uttar Pradesh	
<b>Date &amp; Place</b>	21 to 22 July 2017, NPIU Noida	

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> <li>• <b>Dr. K V Radhakrishna Rao</b> Prof. &amp; HoD Dept. of E&amp;C Engg</li> <li>• <b>Dr. S S Parthasarathy</b> Prof. &amp; HoD Dept. of E&amp;C Engg</li> <li>• <b>Dr. Vinay S</b> Asst. Prof Dept. of CS&amp;E Engg</li> </ul>
<b>Type of Academic Activity</b>	Twinning Programme
<b>Details of Academic Activity</b>	Mentoring Programme - Visit to Uma Nath Institute
<b>Date &amp; Place</b>	20 to 23 August 2017, Institute Uma Nath Singh IET, Jaunpur Varanasi

<b>Faculty / Staff</b> <i>Uma Nath Singh Institute &amp; Technology, Jaunpur, Varanasi, Uttar Pradesh</i>	<ul style="list-style-type: none"> <li>• <b>Prof. B.B Tiwari</b>, Dean, TEQIP Co-ordinator</li> <li>• <b>Prof. Rajnish Bhaskar</b>, Prof., Dept. of EEE Engg</li> <li>• <b>Prof. Sanjiv Gangwar</b> Prof., Dept. of Mech Engg</li> <li>• <b>Mr. M K Singh</b> Finance Officer</li> </ul>
<b>Details of Academic Activity</b>	Twinning Programme - Interaction of MENTEE institute with Mentor institute
<b>Date &amp; Place</b>	21st to 24th Sept 2017, PESCE Mandya, Karnataka

The team of Professors from UNSIET, Jaunpur visited PESCE, Mandya on 21st to 24th Sept 2017. The purpose of the visit was to have Interaction with Mentor institute and its programmes. Presentation about the Institutes (Mentee and Mentor) were made. Presentation about the respective programmes were made by respective Professor and HOD's of The Department. Departmental Visit, Interaction with Department faculty members, Deans and Placement Officer also carried out effectively. Various aspects were discussed and shared in length in academic interest. During Departmental Visit, Interaction with Technical staff members also carried out. Final meeting with HOD's to prepare documents and Exit meeting with the Director was held effectively.

<b>Department</b>	<b>E&amp;C Engineering</b>
<b>Type of Academic Activity</b>	Twinning Programme
<b>Details of Academic Activity</b>	Industrial oriented Hardware design workshop
<b>Date &amp; Place</b>	5 <sup>th</sup> to 12 <sup>th</sup> Jan 2018, PESCE Mandya



**Industrial oriented Hardware design workshop**

Outcome achieved (Both performance enhancement & Fund generation)

- Workshop has exposed students to the modern tool usage.
- Students were able to design and simulate analog circuits using EDA tools.
- Students were able to follow principles/steps involved in PCB design flow.
- Students were familiarized different communication interfaces and their working principles using simulation tool and practical experimentation.

• Training has motivated certain students to take up mini projects on embedded system Design.

The Objectives are:

- Enabling the students to use different EDA tool.
- Enhancing technical skills.
- Introducing the students with the working principles of basic interfaces used for communication in computers.
- Creating awareness among the students on PCB design flow.
- Able to realize the basic steps involved in the hardware design (Part selection and Bill of material).
- Endorse to design small analog circuits for industrial perspective. Encourage the students to do some mini project.

Challenges faced were:

- Identifying suitable trainer.
- Matching the time table of two institutes.
- Arranging back up supply.



<b>Department</b>	<b>E&amp;E Engineering</b>
<b>Type of Academic-</b>	Twinning Programme
<b>Details of Academic Activity</b>	Application of MATLAB & PLC in Electrical and Electronics Engineering
<b>Date &amp; Place</b>	6 <sup>th</sup> to 10 <sup>th</sup> Jan 2018, PESCE Mandya



**“Applications of MATLAB & PLC on Electrical & Electronics Engineering ”**

under TEQIP, Phase-III was held at the Department of Electrical & Electronics Engineering of PES COLLEGE OF ENGINEERING, Mandya, from 06th January to 10th January,2018.The FDP aims to provide opportunities to UMA NATH SINGH INSTITUTE OF ENGINEERING & TECHNOLOGY, Uttar Pradesh and to our college faculty members to enrich their teaching skill and research in the field of MATLAB, SIMULINK, Programmable Logic Controllers and SCADA (Supervisory Control and Data

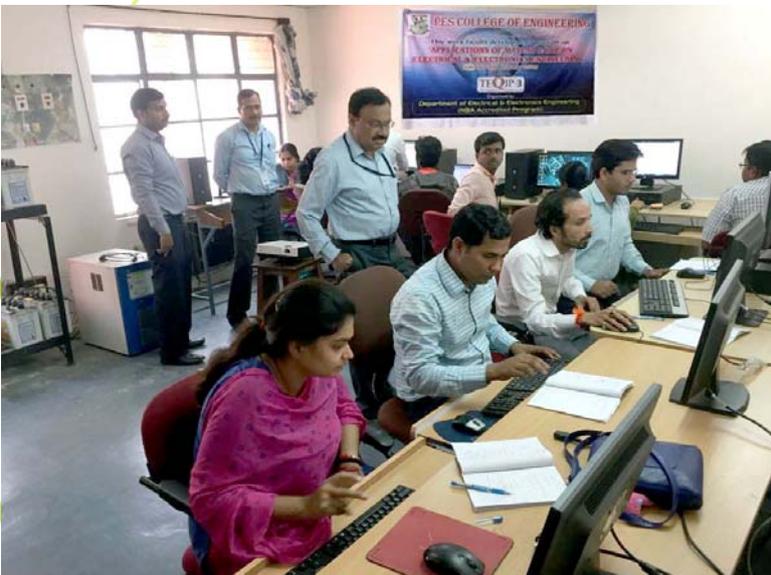
Acquisition). The Programme also intends to develop the knowledge of participants for simulation with matlab & plc ladder software’s in the relevant field for inculcating learning values in students and guiding and monitoring their progress. The FDP include Participation by 28 participants from faculty members of which four faculties from UMA NATH SINGH INSTITUTE OF ENGINEERING & TECHNOLOGY, Uttar Pradesh, twelve faculties from host Department and twelve from other Departments (ECE, CSE,IS).

The Objectives of FDP are :

- To familiarize the faculty in introducing and exploring MATLAB & PLC
- To enable the faculty on how to approach for Solving Engineering problems using simulation tools.
- To provide a foundation in use of this software’s for real time applications.

The Outcome of the FDP are:

- Ability to express programming & simulation for engineering problems.
- Ability to find importance of this software for Lab Experimentation.
- Ability to write basic Mathematical, Electrical, Electronic Problems in MATLAB.
- Ability to impart PLC logic ladder diagram related to Electrical Engineering



## 2. Twinning Programme...(Contd.)

<b>Department</b>	<b>Computer Science Engg</b>
<b>Type of Academic Activity</b>	Twinning Programme
<b>Details of Academic Activity</b>	Internet of Things using NodeMCU and Raspberry-Pi
<b>Date &amp; Place</b>	27 <sup>th</sup> to 31 <sup>th</sup> Jan 2018, PESCE Mandya

Department of Computer Science and Engineering conducted 5 day workshop on "Internet of Things using NodeMCU and Raspberry-Pi" from Jan 27<sup>th</sup> – Jan 31<sup>st</sup> 2018. Internet of Things is a network of networks embedded with computer programs, electronic system and sensors which make sense of data within machines. It is a computing concept in which everyday objects have network connectivity. Every ordinary device can communicate with each other. IOT is an industry which predicts more than 50 billion of devices Connected over internet with multi- trillion dollar of revenue generation.

The objectives of the workshop are:

- Give students the confidence to build their own products
- Provide introduction to Internet of Things (IoT)
- Enable students to convert their product idea into a working prototype
- The participants will get hands on exposure to development boards Raspberry Pi and NodeMCU.

The Outcomes of FDP are:

- Basic setup, installations and connection of Raspberry Pi and NodeMCU
- Interfacing components with the GPIOs
- Reading sensor values into and controlling things from Raspberry Pi and NodeMCU
- Usage of various tools and software required for programming NodeMCU and Raspberry Pi.



The TEQIP-III sponsored one week workshop on Computer Aided Engineering Drawing (CAED) was conducted in the department of mechanical engineering, PES College of Engineering, Mandya from 6<sup>th</sup> to 10<sup>th</sup> Jan. 2018. The workshop was conducted for the teaching staff of the Department of Mechanical Engineering, Uma Nath Singh Institute of Engineering and Technology, Jaunpur, UP as a part of twinning program. Totally 30 teaching and technical staff members, 4 faculty members from UNSIET and 18 teaching staff and 8 technical staff members from Mechanical Engineering Department of PESCE, attended the workshop.

<b>Department</b>	<b>Mechanical Engineering</b>
<b>Type of Aca-</b>	Twinning Programme
<b>Details of Aca-</b>	Computer Aided Engineering
<b>Date &amp; Place</b>	6 <sup>th</sup> to 10 <sup>th</sup> Jan 2018, PESCE Mandya

The inauguration of the workshop followed by the registration of the candidates was held on 06.01.2018 at 9.30 AM to 11.00 AM. Dr. T. Nagaraju, HOD and Program Coordinator presided over the function and Prof. B. Dinesh Prabu, Nodal Officer (Academic), TEQIP-III was the chief guest and Dr. S L Ajit Prasad, Dean Research and Rudresh Addamani, Workshop Superintendent were the distinguished guests of the program.

After the inauguration of the workshop, the various sessions were conducted by the expertise of the department. Dr. T. Nagaraju, head and coordinator of workshop delivered the lecture on introduction to Solidedge CAD software by simultaneously providing hands on training about the various commands of Solidedge software. Mr. Devaraju,

Asst. Instructor was accompanied for the hands on training. Hands on training on projection of points using Solidedge software was provided after theory session of orthographic projection of points. Similarly, lab sessions for the hands on trainings were conducted after theory sessions of each topics related to CAED. The participants gained both theoretical and computer knowledge of the CAED. The participants were also exposed to the assembly drawing of various mechanical parts using both Solidedge and solidworks software.



<b>Department</b>	<ul style="list-style-type: none"> <li>• <b>Dr. V. Sridhar</b> Principal PESCE Mandya</li> <li>• <b>Dr. S L Ajit Prasad</b> Vice Principal PESCE Mandya</li> <li>• <b>Dr. Puttaswamy. P S</b> Dean (Academic)</li> <li>• <b>Dr. R Girisha</b> Training &amp; Placement Officer</li> </ul>
<b>Type of Academic Activity</b>	Twinning Programme
<b>Details of Academic Activity</b>	Induction Program for 1Year Students of UNSIET Varanasi, UP
<b>Date &amp; Place</b>	16 to 19 Jan 2018, UNSIET Varanasi, UP

Induction Program for First Year Students of UNSIET Varanasi, UP was organized from 16th to 19th Jan 2018, UNSIET at Varanasi, UP, When new students enter an institution, they come with diverse thoughts, backgrounds and preparations. It is important to help them adjust to the new environment and inculcate in them the ethos of the institution with a sense of larger purpose. Precious little is done by most of the institutions, except for an orientation program lasting a couple of days. Three-days long induction program was carried for first year UG students under the co-ordinatorship of Dr.V.Sridhar, Principal, PESCE, Mandya and his team.. The purpose is to make the students feel comfortable in their new environment, open them up, set a healthy daily routine, create bonding in the batch as well as between faculty and students, develop awareness, sensitivity and understanding of the self, people around them, society at large, and nature. The time during the Induction Program was also used to rectify some critical lacunas, for example, English background-for those students who have deficiency in it, clarity and prospectus about various programmes etc..

The **Work Shop on OBE & NBA-Accreditation** is a fragment of Twinning Programme. The Programme was well organized, series of meetings with faculty members during the workshop was carried out.

During the visit, in addition to steering out the Work Shop on OBE & NBA-Accreditation, Prof. Dr. H. V. Ravindra, Vice Principal & TEQIP Coordinator of PESCE, Mandya, had meetings with the Vice Chancellor of VBSPU, OSD of SPIU (UP) representative Ms. Shweta Bhatnagar, faculty members and Deans. All the members of Mentee institute were genuinely supportive of the pursuit of Work Shop on OBE and NBA-accreditation.



Issues addressed during this visit focused on the -

- ◇ Concerns outlined for preparations aimed at applying for NBA-Accreditation which include Pre qualifier and preparation to Submit the Self-Assessment Report (SAR).
- ◇ Meetings with the Vice chancellor of VBSPU, OSD of SPIU (UP) representative Ms. Shweta Bhatnagar, faculty members and Deans, Interaction with the TEQIP coordinator and concerned workforces regarding Procurement of various paraphernalia under TEQIP-3.
- ◇ Knowledge about –1) Overview of NBA-accreditation, 2) Washington accord, 3) Bloom’s Taxonomy, 4) Outcome Based Education (OBE), 5) Formulation of the course syllabus as per OBE format for each programe- through hands on training.

<b>Department</b>	<ul style="list-style-type: none"> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> <li>• <b>Prof. B. Dinesh Prabhu</b> Nodal Officer - Academic</li> <li>• <b>Dr. N L. Murali Krishna</b> Nodal Officer- Procurement</li> <li>• <b>Prof. V R Devadath</b> Asst. Prof. Dept. of ME Engg</li> <li>• <b>Mr. K Ravi</b> Assistant Nodal Officer Procurement</li> </ul>
<b>Type of Aca-</b>	Twinning Programme
<b>Details of Academic Activity</b>	Outcome Based Education and NBA Workshop at mentee Institute Uma Nath Singh Institute & Technology, Jaunpur, Uttar Pradesh
<b>Date &amp; Place</b>	10 to 13 March 2018, UNIT, Jaunpur,



### 3. Training Programme Workshop, STTP, FDP.....

The Professional Skills and Technical Training Program is responsible for the design, development, and delivery of competency-based courses to meet critical skill development needs. In addition to conduction of Training Programme Workshop, STTP and FDP, the Professional Skills and Technical Training Program provide a variety of ancillary support to academic organizations. FDP cover areas such as technical education policy, new concepts, methods and techniques, theory and skills development and up gradation of pedagogy educational technology, motivation, communication skills, management and other relevant issues to keep pace with the changing scenario in Technical Education. Training Programs designed to enhance the teaching and other skills of the faculty. And to make them aware about modern teaching tools and methodologies. It provide an opportunity to acquire knowledge about current technological developments in relevant fields. It will not only promote the professional practices relevant to technical education but also motivates the faculty to achieve competitive teaching and learning environment, thus channelizing development with respect to academic qualifications and personal matters.

#### 3 (a) Programmes Conducted for Teaching, Technical Faculty & Students

##### Surface modeling using Solidworks

 I&P Engineering students have laboratory in the 5<sup>th</sup> semester, called Computer Aided Geometric Modeling (P15IPL57) in which students learn about the solid modeling and surface modeling using Solidworks 2015- a CAD software. In order to give more in-depth training in surface modeling, an expertise training from the supplier of the software M/s Corecad technologies Pvt Ltd, Bengaluru, was organized on 18<sup>th</sup>& 19<sup>th</sup> November, 2017.

Solid modeling is the state of the art technology in manufacturing fields in particular, mechanical and automobile industries. Solid modeling tools give an insight into key factors of quality and performance early in the product development phase. Digital prototyping, combined with digital analysis and simulation, allows product development teams to virtually create and analyze a mechanical product in its operating environment.

Surface Modeling using Solidworks 2015 enable the creation of any type of surfaces practically all mechanical engineering processes. They address the specific requirements of a wide range of industries and processes, covering for example plastic injection and molding operations and composites part design and manufacturing. Main area of usage of surface modeling are Automobiles body panels, Vehicles in marine, Consumers products, Structural members of aircrafts and more.

The topics covered in the training:

- Introduction to Surface modeling: Concepts; Basic Surfacing; use of icons
- Extruded Surface, Introducing: Planar Surface, Trim Surface,
- Surface Bodies, Knit Surface, Closed Surface, Delete Face,
- Revolved Surface, Swept Surface, Filleting, Cut with Surface
- Basic Surface Modeling.

##### Student Learning Assessment (SLA)

 The National Project Implementation Unit (NPIU) associated with Stanford University conducted a Training on Student learning Assessment (SLA) on 27<sup>th</sup> to 29<sup>th</sup> November 2017 assess and compare college student skills within India and across other countries such as China, Russia, Korea, and the United States. Student Learning Assessment (SLA) module helps us to understand better in the following ways:

- How are the college students' academic skills and higher order thinking skills ("levels")?
- How much have these skills been developed since they were enrolled into the college ("gains")?
- Which factors have helped students develop these skills in the higher education system?

Good assessment techniques both assess and teach; the time spent doing these assignments helps students learn more effectively and efficiently. When students are encouraged to take the time to gauge what they know and how well developed their learning and academic skills are, they begin to recognize the importance of learning how to learn, as well as the importance of course content.

- Survey software
- All of the student data collection (tests and questionnaires) will be administered electronically via software and it has been designed specifically for this research program.
- The survey software will be run over the computer lab internet. After logging in, the software will automatically and randomly assign each student to a particular package of tests and questionnaires based on their Department and Year information they enter at the beginning of the survey.
- While a student takes the tests/questionnaires, the student responses will be uploaded to a remote server; nothing will be saved on the individual computers.

## E-Box learning and assessment platform for C Programming Lab & Data



*Programme on Implementation of E-Box Learning and Assessment Platform for C Programming Lab and Data Structures Lab, organized by Dept. of Computer Science & Engg. during Oct –Nov 2017 supported by TEQIP-III*

E-Box is a Technology Enabled Active Learning and Assessment platform for technology and engineering domains. Apart from the basic LMS components like quizzes, assignments, lesson components, resource components etc, it has numerous activity components pertaining to technology and engineering concepts that could be used for design and analysis oriented learning. These components are also used for assessing the design and analysis skills of candidates, apart from the regular knowledge level testing.

### Need of Training

Problem solving ability of students in the field of Information Technology plays an important role in hiring of students by various IT companies. There is a need for the academia to understand the requirements of industry and train the students to be industry ready by the time they graduate. This would need a good platform to bridge the gap between industry and academia which will help students to enhance their employability quotient in terms of problem solving ability on graduation.

### E-Box Feature Highlights

- E-Box is an Indian LMS
- Auto Evaluation of most TEL activities
- Design and analysis oriented learning
- Multi Skill Training – Knowledge, Design Skill, Analytical Skills and Testing Skills
- Interactive Reports facilitating Skill gap Analysis and Skill Improvement
- Live Monitoring of Learners
- Auto generation of questions

E-Box is a platform created by us for revolutionizing education & training using techniques of 'Technology Enabled Active Learning' across different spheres of education, learning & technology training. E-Box can also be used as an assessment and recruitment platform.

## Internal Quality Assurance Cell (IQAC)

A meeting of IQAC was held on 9th march 2018 at the chambers of the Principal in the presence of Principal, Vice Principal, All HoDs, Dean (Academic) and Expert Dr.K.V.Balaji, Professor, SJCE, Mysore.

The Primary aim of the IQAC is to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution.

*IQAC shall evolve mechanisms and procedures for:*

- a. Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks
- b. The relevance and quality of academic and research programmes
- c. Equitable access to and affordability of academic programmes for various sections of society
- d. Optimization and integration of modern methods of teaching and learning
- e. The credibility of evaluation procedures
- f. Ensuring the adequacy, maintenance and functioning of the support structure and services
- g. Research sharing and networking with other institutions in India and abroad.

*Some of the functions expected of the IQAC are:*

- a. Development and application of quality benchmarks/parameters for the various academic and administrative activities of the institution
- b. Dissemination of information on the various quality parameters of higher education
- c. Organization of workshops, seminars on quality related themes and promotion of quality circles
- d. Documentation of the various programmes / activities leading to quality improvement
- e. Acting as a nodal agency of the institution for quality-related activities

*IQAC will facilitate / contribute:*

- a. To a heightened level of clarity and focus in institutional functioning towards quality enhancement and facilitate internalization of the quality culture
- b. To the enhancement and integration among the various activities of the institution and institutionalize many good practices
- c. To provide a sound basis for decision making to improve institutional functioning
- d. To act as a change agent in the institution
- e. To better internal communication.

Quality assurance is a by-product of ongoing efforts to define the objectives of an institution, to have a work plan to achieve them and to specify the checks and balances to evaluate the degree to which each of the tasks is fulfilled.

## 3.(a) Programmes Conducted by Teaching and Technical Faculty (Contd.)

Training Programme on  
Data Analytics (Elective Course)

The Binghamton University in MoU with PES College of Engineering, Mandya offered an Elective course - Data Analytics for final year B.E. – CS/IS/EC/EE students. In this connection, Prof. Sang Won Yoon, State University of New York at Binghamton University delivered a lecture from 29<sup>th</sup> January 2018 – 2<sup>nd</sup> February 2018. Around 50+ students participated in the course and obtained participation certificate.

**Profile of Prof. Sang Won Yoon:**

Sang Won Yoon obtained his Ph.D. in Purdue University's School of Industrial Engineering, and he is currently an Associate Professor in the Systems Science and Industrial Engineering department at SUNY Binghamton. So far, he has secured more than \$4 million over 50 research projects from a variety of sponsors including Analog Devices, Innovation Associates, Montefiore Medical Center, Raymond, Samsung, Toyota, Xerox, United Health Services, etc. His research team has been studying a variety of emerging research domains including distributed decision making, coordination protocol design and collaborative control theory, large-scale data analytics and predictive modeling, healthcare systems optimization, production & manufacturing systems optimization, and warehouse management and transportation. Also, he has co-authored more than 100 internationally renowned journals and peer-reviewed conference proceedings. **Prof. Sang Won Yoon** has covered the following syllabus in the data analytics course.

**Introduction to data analytics**

- 1.Data and analytics framework: tools and techniques,
- 2.Data Analytics applications

**Review of probability and statistics**

- 1.Naïve Bayes, 2. Hypothesis test
- 3 .Goodness of fit test

*Dr.Sang Won Yoon, Prof. Binghamton University New York, USA, Dr. V Sridhar, Principal, Dr. H V Ravindra, Vice Principal & TEQIP Coordinator, Faculty members and Student participants of PESCE, Mandya, during One Week Training Course, for Students of 7th Semester B.E. Programme on Data Analytics, organized by TEQIP-III*

## Complete Vehicular Systems



*Pre final year students of automobile Engineering at Bosch training centre, Bengaluru, during Training (8 to 19 Jan 2018)*

Bosch Pvt.ltd founded by "Robert Bosch" - this foundation is the world's largest automotive parts company, it is a leading manufacturers of Fuel injection system , Electrical braking system , Home appliances etc. which is present in more than 150 countries. It came to India in 1920's and started its manufacturing plant in 1995.

In the theoretical part of the training, the participants first get to know the functionality and components of the Bosch systems. Typical mistakes and wear patterns as well as diagnostic and replacement options are also explained. The theoretical session is then followed by practical training involving work on the systems and vehicle. The participants can bring their own roadworthy retro and classic cars to this session and these can be integrated into the practical diagnostic work. To ensure that all participants can take part in the practical training, the sessions are limited to 14 people.

The training sessions take place at Bosch Service Centers that form part of the classic service network of Automotive Tradition. These centers have years of experience and specialist knowledge when it comes to classic car repairs. Alongside the technical training courses, the classic division of Bosch offers an extensive range of services for retro and classic car enthusiasts including professional parts and supply, the online shop Partbob.com and a comprehensive knowledge database.

At Bosch, basic and advanced automotive training provides in-depth instruction on all standard systems available for all sorts of motor vehicle functions.

The subject matter of the training sessions is specially geared to everyday workshop requirements so there is a course to suit every target group.

The range includes courses lasting one or more days on the following topics:

- Motor vehicle electrical systems
- Motor vehicle electronics.
- Diagnosis
- Gasoline injection
- Alternative drive systems
- Diesel injection
- Mechanical & Control systems etc.



## Finishing School

In India, the education system largely doesn't provide a candidate/student performance level assessment and understanding of his/her skill competence which will help the candidate to prepare for his or her career choices. What this results into is a largely frustrated human capital due to repeated rejection in job interviews, over-expenditure on sourcing of 'right-skilled' candidates for the required job and a misbalance in 'knowledge-driven' marketplace. Finishing School is the career training division short-term, and industry-oriented training programs designed to boost employability. The division also identifies and trains candidates in their areas of strength. A regular trend that was observed in the previous years was that students who do not get placed in the college attend training programs after college that leads to a wastage of time, and unnecessary expenditure for students. Keeping this in mind, the Placement and Training Centre organised this training program so that students can be trained while they are in college, and can be placed into companies before they finish college.

Structured Query Language sessions were conducted by Mr. Sachin from J-Spiders. It went on for a period of 5 days starting from 9 January 2018. Various concepts related to the topic were covered in detail. The next topic that was covered was Core Java. It was conducted by Mr. Madhu who is also the co-founder of J-Spiders. Some of the important concepts covered under Core Java were: Basic Concepts, Flow Control Statements, Loops, Object Oriented Program Systems (OOPS) among others.

The next topic that was covered was Manual Software Testing. The topics covered were: Basic Concepts, need for Software testing, software development life cycle, models of software testing among others. It was conducted by Mr. Vijay from J-Spiders. The training was attended by around 70 students from branches such as Mechanical, Automobile, Industrial and Production, Electronics and Communication, Computer Science, Electrical and Electronics, and Information Science. It proved to be an effective program to impart knowledge about the mentioned topics to students.



## Workshop on 3D Printing



*Demonstration of 3D printing of a component. Principal Dr.V.Sridhar, Dr.J.Venkatesh, HoD of Automobile Engineering, Prof. B.Dinesh prabhu, Coordinator, Faculty members and Students witnessed the Demonstration*

A One day workshop on 3D printing was arranged on 8<sup>th</sup> March 2018 at Automobile Engineering Department Seminar Hall from 10.30am to 5.30pm, the workshop was carried out in 2 sessions that is from 10.30 am to 01.30 pm in the morning (presentation about 3D printing) and 02.00 pm to 5.30 pm afternoon (Hands on Training).

The workshop was started by welcoming the Resource persons Mr. Anil M P, who is an alumnus of our Automobile Engineering and his team, the students and faculty participants from different engineering stream by the programme coordinator Prof. B Dinesh prabhu at 10.30am. The Faculty and students of Automobile, I&P, Mechanical and electrical engineering streams were participated in the workshop. Mr.Thejas.M. (8<sup>th</sup> Sem Automobile engg. student ) gave brief introduction about the resource persons Mr. Anil M P Managing Director, ASP Design Centre Pvt.Ltd.Mysuru and Mr.Amaldeep Designer, ASP Design Centre Pvt.Ltd.Mysuru. The first session started at 10.45 am with introduction to 3D printing, different types, methods applications by Mr. Anil M P for about 3 hours in the Morning session after the lunch break the 3D demonstration was carried out about, how to develop the prototype of screw jack. As the time required was more to develop the complete model (a typical example - Screwjack), the resource persons have developed the Body, screw and spindle before the session of hands on training and the washer & Cup development through 3D printing m/c was demonstrated. Further, the assembly of same was demonstrated. The 3D printed ScrewJack was bestowed to the department. 3D printing is an additive manufacturing technique that creates a physical object from a virtual 3D cad Model By Depositing Successive layers of Material. 3D Printing and rapid Prototyping, in General, are Widely claimed to have revolutionized not only the Manufacturing industry but also many other walks of life like medicine, aerospace and automotive industry. This Program on 3D printing helps the participants understand the design, functioning and operation of a basic 3D printer.

## 3.(a) Programmes Conducted by Teaching and Technical Faculty (Contd.)

## Women's Day - 2018



<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Srikanth Gowda</b> Asot. Prof. Dept. of AU Engg</li> <li>• <b>D V Guruprasad</b> Instructor Dept. of AU Engg</li> </ul>
<b>Type of Academic Activity</b>	Workshop
<b>Details of Academic Activity</b>	Industrial Training Programme
<b>Date &amp; Place</b>	8 to 19 Jan 2018, BOSCH Ltd., Bengaluru

International Women's Day honors the women who have paved the path towards our progress and struggled to take 'womanhood' to a level where it is now. This special day, dedicated to women around the world, is a celebration of the great success of women across all spheres of life as well as shaping the future.

The objective of Women's Day is to express love and gratitude towards women's contribution to our lives and society. It honours the power and struggles of women who have broken all barriers and reached the pinnacle of success in every sphere of life. Today, women across the globe actively participate in politics, education, social work, corporate, sports, IT, research & development, innovation and diverse fields, and have left their footprints.

On the occasion of International Women's day, Women's day and Panel Discussion" was organized by IEEE PESCE on 10th Jan 2018. It started with the invocation followed by words of our Principal Dr. V Sridhar. The guests for the day were,

Anupama P Patil – IEEE WIE Bangalore section chair  
Roopa Satish- Program head ,Tech Mahindra  
SudeendraKoushik - IEEE Bangalore section chair  
Pragya Dixit- Co-founder PRASU  
Padmaja Rao – Senior Actress

Guests introduction was done by our Branch Counselor K A Radhakrishnan Rao and student Vice Chair. The main part of the day was Panel discussion on Women Empowerment by our guests as the Panel members and Mrs. Suman as a Moderator.

After a Panel Discussion of over an hour and interacting session with audience, the felicitation program began.

Followed by felicitation there was a prize distribution for the winners of the pre-events conducted on the occasion of Women's day.

At the end of the formal part of the program, the video made by our WIE team was played in the hall. The informal part of the program includes a Ramp walk by students from IEEE PESCE depicting the culture of various parts of India.

Also there were singing and dance performances by ORITUS, the cultural group of IEEE PESCE. The whole program was a great success with a lot of learning in a graceful environment.

Bosch Pvt. Ltd founded by "Robert Bosch", this foundation is the world's largest automotive parts company, it is a leading manufacturers of Fuel injection system, Electrical braking system, Home appliances etc. which is present in more than 150 countries. It came to India in 1920's and started its manufacturing plant in 1995.

Bosch Ltd is an India-based auto component manufacturer company. The company has their presence in three business sectors, such as Automotive Technology, Industrial Technology and Consumer Goods and Building Technology. They manufacture and trade products as diverse as diesel and gasoline fuel injection systems, automotive aftermarket products, auto electricals, special purpose machines, packaging machines, electric power tools and security systems.

In the theoretical part of the training, the participants first get to know the functionality and components of the Bosch systems. The training sessions take place at Bosch Service Centers that form part of the classic service network of Automotive Tradition. These centers have years of experience and specialist knowledge when it comes to classic car repairs. Alongside the technical training courses, the classic division of Bosch offers an extensive range of services for retro and classic car enthusiasts including professional parts and supply, the online shop Partbob.com and a comprehensive knowledge database. At Bosch, basic and advanced automotive training provides in-depth instruction on all standard systems available for all sorts of motor vehicle functions.

The subject matter of the training sessions is specially geared to everyday workshop requirements so there is a course to suit every target group.

The range includes courses lasting one or more days on the following topics:

- Motor vehicle electrical systems
- Motor vehicle electronics.
- Diagnosis
- Gasoline injection
- Alternative drive systems
- Diesel injection
- Mechanical systems/ZF Services
- Brakes etc.

## 3 (a) Programmes Participated by Teaching and Technical Faculty (Contd.)

<b>Faculty / Staff</b>	<b>Dr. Vinay S</b> Asst. Professor CS & Engg.
<b>Type of Academic Activity</b>	NPIU
<b>Details of Academic Activity</b>	Induction Program for First year Students
<b>Date &amp; Place</b>	27 Nov to 02 Dec 2017, College of Engineering Pune

One will have to work closely with the newly joined students in making them feel comfortable, allow them to explore their academic interests and activities, reduce competition and make them work for, excellence, promote bonding within them, build relations between teachers and students, give a broader view of life, and build character.

The graduating student must have values as a human being, and knowledge and meta- skills related to his/her profession as an engineer and as a citizen.

Most students, who get de-motivated to study engineering or their branch, also lose interest in learning. The Induction Program is designed to make the newly joined students feel comfortable, sensitize them towards exploring their academic interests and activities, reducing competition and making them work for excellence, promote bonding within them, build relations between teachers and students, give a broader view of life, and building of character.

Engineering colleges were established to train graduates well in the branch/department of admission, have a holistic outlook, and have a desire to work for national needs and beyond. The graduating student must have knowledge and skills in the area of his study. However, he must also have broad understanding of society and relationships. Character needs to be nurtured as an essential quality by which he would understand and fulfill his responsibility as an engineer, a citizen and a human being. Besides the above, several meta-skills and underlying values are needed. There is a mad rush for engineering today, without the student determining for himself his interests and his goals. This is a major factor in the current state of demotivation towards studies that exists among UG students. The success of gaining admission into a desired institution but failure in getting the desired branch, with peer pressure generating its own problems, leads to a peer environment that is demotivating and corrosive. Start of hostel life without close parental supervision at the same time, further worsens it with also a poor daily routine. To come out of this situation, a multi-pronged approach is needed. One will have to work closely with the newly joined students in making them feel comfortable, allow them to explore their academic interests and activities, reduce competition and make them work for excellence, promote bonding within them, build relations between teachers and students, give a broader view of life, and build character.

**Winter School in Software Engineering (WSSE)** aims to encourage to delve into **Software Engineering Research** by providing them with a forum to get a first hand experience of the field. Renowned speakers from regional and international research communities discuss on a range of topics in software engineering that uncover state-of-the-art research, on-going explorations and open problems in the field, together with providing hands-on experience for the participants.

Also, experts from the industry provide their perspective on software engineering in practice as well as give prototype tool demonstrations.

WSSE present an excellent forum to network with top academicians, industry researchers and fellow students, discuss advances in the area and learn from a rich lineup of talks.

Two killer applications for this technology include data wrangling (an activity where data scientists today spend 80% time) and code refactoring (an activity where developers spend up to 40% in a typical application migration scenario). Principles behind designing useful DSLs for program synthesis were discussed. The various concepts were illustrated using Flash Fill, Flash Extract and FlashRelate-PBE technologies for data manipulation domains. Pointer analysis provides information to disambiguate indirect reads and writes of data through pointers and indirect control flow through function pointers or virtual functions. Its precision influences the precision and scalability of client program analyses significantly. Computationally intensive analyses such as model checking are noted as being ineffective on programs containing pointers, partly because of imprecision of pointer analyses. Thus pointer analysis is a key enabler of precision and efficiency in any analysis. Following topics were covered.

<b>Faculty / Staff</b>	<b>Dr. Vinay S</b> Asst. Professor CS & Engg.
<b>Type of Academic Activity</b>	Workshop
<b>Details of Academic Activity</b>	Winter School in Software Engineering (WSSE) on Program Analysis
<b>Date &amp; Place</b>	11 to 16 Dec 2017, TCS Re-

## 3 (a) Programmes Participated by Teaching and Technical Faculty (Contd.)

<b>Faculty / Staff</b>	<b>Deepika</b> Asst, Prof. CS Engg
<b>Type of Academic Activity</b>	Workshop
<b>Details of Academic Activity</b>	IOT Application Development
<b>Date &amp; Place</b>	16 to 20 Jan 2018, Excellence RVCE Bangalore

 **Workshop on IOT Application Development**, The Center of Excellence for Internet of Things is, a joint initiative by RVCE and CISCO.

One week hands-on training program on IoT Application Development during 16th - 20th January 2018. All Participants will get a 'CISCO Certified' Certificates.

This training program aims to provide opportunities for the participants to enrich their knowledge and skill in fundamental IoT paradigms, hardware and software oriented solutions for various domains using IoT. The training program will be suitable for beginners (Students / Faculties/

Industry Professional ) who are interested in IoT application development. Minimum 25 experiments will be done during the training program with Arduino. raspberry pi and nodemcu Minimum 5 projects will be introduced and more ideas will be provided and necessary hardware for the participants to explore Faculty of R V College of Engineering from Department of Master of Computer Applications , Department of Information Science and Engineering and Department of Bio Technology.

 The Conference on Library Technology Conclave consisted of keynote talks, invited sessions and workshops on the applications of library technologies which includes library automation, RFID, remote access, plagiarism detection tools, MOOCs, discovery tools and usage analytics. Leading experts at global level delivered their technical talks on the subjects covered in the conclave. Interactions and discussions made with the experts instilled me good amount of knowledge to know about the advanced library technologies. Conclave facilitated me the interaction with the original software developer Chris Cormack to deliberate about technical issues and also

<b>Faculty / Staff</b>	<b>Kodandaram</b> Library
<b>Type of Academic Activity</b>	Workshop
<b>Details of Academic Activity</b>	Library Technology Conclave
<b>Date &amp; Place</b>	22 to 25 Jan 2018, Goa University, Goa

one could make suggestions to incorporate the few new features in the coming version of Koha. Several case studies of technologies empowered libraries were presented at the conference which helped me to know the different technologies adopted at libraries to improve the services. Conclave also had two award to be distributed one is for best Koha implemented library and another one was for best technology empowered library. This award has motivated me to improve the technology oriented services in our library and inspired to participate in the competition by submitting nomination next year for the award as we have Koha implemented and other technologies available at library.

<b>Faculty / Staff</b>	<b>Dr. Umesh D R</b> Deputy Dean (Academic)
<b>Type of Conference</b>	Workshop
<b>Topic of the Paper</b>	Artificial Intelligence & Data Science
<b>Date &amp; Place</b>	17 March, 2018, Microsoft Office, Embassy Golf links, Bangalore

 Artificial Intelligence & Data Science was held on 17 March, 2018, Microsoft Office, Embassy Golf links, Bangalore. The speaker explains, simply and in general terms, the process of analyzing data. The speaker have extensive experience both managing data analysts and conducting their own data analyses, and have carefully observed what produces coherent results and what fails to produce useful insights into data. This event is a distillation of their experience in a format that is applicable to both practitioners and managers in data science. which offers one of the easier ways to use face detection API (Application Program Interface) endpoints. No

need to install complex libraries (take that Xcode!) or to mess with your path files. MCS Face API returns a detailed JSON file with information about face detection, bounding box coordinates, age, gender and more. The session was also managed through face detection projects demos. Knowledge: Map complex information and data in order to solve tasks such as intelligent recommendations and semantic search. Search: Add Bing Search APIs to your apps and harness the ability to comb billions of webpages, images, videos and news with a single API call. Language: Allow your apps to process natural language with pre-built scripts, evaluate sentiment and learn how to recognize what users want.

## 3 (b) Programmes Participated by Teaching and Technical Faculty

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>M. Manjesh</b> Asst. Librarian</li> <li>• <b>H C Pradeep</b> Asst. Librarian</li> </ul>
<b>Type of</b>	International Conference
<b>Topic of the Paper</b>	E Resources and utilities in engineering college libraries
<b>Date &amp;</b>	15th to 17th Nov 2017, Platinum jubilee Auditorium Bangalore

International Conference on Management of Modern Libraries (NACML) - Transformation of Libraries for Tomorrow is organised by The health sciences library department of library and information science MAHE, Manipal. during 9-10 February 2018 Provided an opportunity to listen to the various lectures delivered on advanced trends and technologies for library management by eminent library professionals. Lectures in Conference highlighted the role of Transformation of Libraries for Tomorrow and the ways to adopt new technologies for the library was also addressed. The conference was a useful event for us to exchange our ideas, views, with other library professionals and we were delighted to discuss the current issues and recent development of library.

We also learnt Knowledge management, metadata, open sources and open access, digital libraries, digitization and digital preservation, web based library services, and social media.

A group of 10 technical staff of Mechanical, I&P and Automobile engineering departments have been completed the technical training program at GIT ACADEMY Hubli from 23/01/2018 to 27/01/2018 on CNC programming and operation. During the training period the following topics are covered.

Computer Numerical Control (CNC) refers to a process of controlling an automated machine or tool using a programmable computer. Using CNC, a machine can be operated with supervision of an accredited operator, increasing productivity and minimizing the possibility for human errors on a project. Since its introduction, CNC has gained widespread acceptances among manufacturers and undergone major technology revolution in the early 2000s; today, CNC is adopted worldwide by manufacturers in a variety of industries. Introduction to CNC, Features of CNC, Classification, Advantages and limitations of CNC Machine, Coordinate system, machine home, Classifications of machine tools.

- Reading the machining sketches, Different geometrical tolerance symbols, reading dimensional tolerances, understanding the views, concept of first angle and third angle projection.

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• Tharakeshwara K</li> <li>• Ramesh J</li> <li>• Madegowda H</li> <li>• Puttaswamy G C</li> <li>• Raju A M</li> <li>• Nagaraju C</li> <li>• Mallesh R N</li> <li>• Varadaraju S S Dept. of ME Engg.</li> <li>• Santhosh C, Dept. of I&amp;P Engg</li> <li>• Rudresh Gowda, Dept. of AU Engg</li> </ul>
<b>Type of Conference</b>	Workshop
<b>Topic of the Paper</b>	Industrial Training Programme
<b>Date &amp;</b>	22 to 26 Jan 2018, GIT IT Academy, Hubli

- Features of CNC machining center, CNC machining centers, concept of numerical control, The machine control unit (MCU) for CNC, Absolute and incremental positioning, G codes and M codes, Block number, Programming with codes.

- Program structure, Part program, and different operations of milling, plain milling, Slot milling, pocket milling, Job setting, selecting speed feed & depth of cut.
- Machining practice on CNC milling machine.

These Centers harness the potential of large pool and train them to become skilled CNC machine operators. This move helps the youngsters to get into mainstream of life through gainful employment and enhance their quality of life.



## 3 (c) Training Programmes Participated by Students

<b>Students Name</b>	<ul style="list-style-type: none"> <li>• Akhil Poduval</li> <li>• Pooja D T</li> <li>• Anushree Pai</li> <li>• Poornima M Gowda</li> <li>• Manasa M R</li> <li>• Subhash Rao</li> </ul> 8th Sem Students PESCE Mandya
<b>Type of Conference</b>	Attending the Workshop
<b>Topic of the Paper</b>	Entrepreneurship Meet at Deshpande Foundation
<b>Date &amp; Place</b>	3 to 4 Feb 2018, Hubli

The 8<sup>th</sup> Yuva Summit of Deshpande Foundation was organised for two days viz. 3 February 2018 and 4 February 2018, at Deshpande Foundation Skill Development Centre situated in Hubballi district of Karnataka. The Deshpande Foundation Skill Development Centre is situated in a large sprawling campus which can accommodate close to 2000 students at a time, and has facilities for multifarious activities within. Furthermore, it is situated right next to the Infosys Campus in Hubballi. Students, teachers, professors, entrepreneurs, industry leaders, and Deshpande foundation members were among the 5000 participants of the summit. The presence of people from various walks of life made it all the more a pleasant experience. The following report contains the details of the various events and programmes that were organised as a part of the summit. The Summit began with a colourful dance performance by students of DNA Academy. The Lead Head, Ajay Shukla then welcomed all the participants

to the summit and formally set the ball rolling.

The first leg of the programme was **Lead Talk**. Here, various members of the Lead Team of Deshpande Foundation were given an opportunity to talk about their experiences as Lead Team members, and the various initiatives that they had taken in that capacity. She pioneered women empowerment in villages, particularly in sanitary issues, and has 15 initiative programs under her leadership through which she has pioneered the construction of around 900 toilets and 200 animal shelters.

<b>Faculty/Staff</b>	PESCE Mandya
<b>Type of Conference</b>	E-mpact E-Week 2018
<b>Topic of the Paper</b>	Social Entrepreneurship and School outreach
<b>Date &amp; Place</b>	10 February 2018 to 16 February 2018

National Entrepreneurship Network (NEN) which works under Wadhvani Foundation is responsible for setting up Entrepreneurship Cells (E-Cells) in different colleges across various streams of education. **E-mpact PESCE** is the official **E-Cell** of PES College of Engineering, Mandya. As a part of initiatives to promote college entrepreneurs, various events, competitions, mentoring sessions, training programs, student run facilitating etc. are organised at E-Cells in every academic year. A prominent set of events among them is the E-Week. A week of various events and activities are organised as a part of the E-Week. In

this academic year, it was scheduled between 10 February 2018 to 16 February 2018. The E-Week was organised under **TEQIP-III Start-up Cell** by the E-Cell. **Social Entrepreneurship and School outreach** was organised on 10 February 2018 at Carmel Convent, Mandya. The session was started by interacting with the children and getting to know their areas of interest. To make them understand the importance of team work and strategic planning, two games were conducted. A drawing competition was conducted to bring out the creativity in them, and all the children were given complimentary participation prizes. A **Design Thinking Workshop** was organised on 12 February 2018 in order to make the students understand the importance of the design thinking process. The speaker, Mr. **Rakesh Babu** is the Director and Co-Founder of the innovation firm based in Bangalore called Innomantra.

A **Hackathon** was organised on 15 February 2018. It is a coding event where designers, developers and project managers in a team generally build or work on a project based on any of the themes specified according to the need. The themes selected for the Hackathon were Education Innovation, Security, Health Monitoring and Smart village. The Hackathon was conducted in a collaboration with **J-Spiders**. Faculties from various departments visited the room and guided the participants on the way in which their project can be completed. The projects were sent to experts to obtain their judgement. **LAN gaming event** was hosted on 16 February 2018. This event was a free for everyone event and as part of it, Counter Strike GO (Global Offense) was hosted to play, teams of 3 to 4 students competed against each other with the sole objective to fight for their team and win the round.



## 4. Teaching Faculty Participation and Paper Presentation in Conference (within India)

<b>Faculty/Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. T Nagaraju</b>, Prof. Dept. of ME Engg.</li> <li>• <b>Mohammedrafi H Kerur</b> Asst. Prof. Dept. of ME Engg.</li> </ul>
<b>Type of Conference</b>	9 <sup>th</sup> International conference on Industrial Tribology (ICIT 2017)
<b>Topic of the Paper</b>	Performance analysis of porous journal bearing with surface roughness and thermal effects
<b>Date &amp; Place</b>	06 to 09 Dec 2017, Kolkata

The Conference on Industrial Tribology (ICIT 2017) organized by Balmer Lawrie & Co. Ltd. under the aegis of Tribology Society of India focused on the theme "Tribology-A Key Enabler for Industrial Growth." The Conference brings together the recent knowledge, tools and techniques of tribology domain in which researchers and practitioners using for the industrial growth through reduction of losses due to wear and friction. Further, The Conference highlighted how Tribology fundamentals and applied studies can supply an essential support to obtain significant savings in materials and energy consumption and minimize the environmental impact. In addition to the above plenary sessions and oral presentations, the conference has also provided a large platform to

the exhibitors to demonstrate their test equipment.

International conference on Advances in Applicable Mathematics (ICAAM 2017) held on 07 to 08 Dec 2017, at Bharathiar University, Coimbatore, Tamil Nadu. A paper on "Total Transversal Domination in Graphs" was presented during this conference. Differential Models for Tumor-Immune system with Immuno-Chemotherapy and Optimal Control. It was started with talk on Intuitionistic Fuzzy set theory The second day of the conference began with Invited talk by Mohammad Babul Hasan and then by Dr. R. Balakrishna. One of the Professor from Pandichery central University, Pondichery spoke on Fuzzy set theory which was very interesting and very much useful for our research area. After lunch, we had paper presentation session where I present the article "Total Transversal Domination in Graphs". Two of the speakers raised few questions on some of the results and it was answered successfully. With a high tea break and a nice valedictory function, the conference was concluded. It was very good experience and I got many ideas in the conference, which would accelerate our research work.

<b>Faculty/Staff</b>	• <b>Nayaka S R</b> Asso. Prof. Dept. of Math's
<b>Type of Conference</b>	International conference on Advances in Applicable Mathematics (ICAAM 2017)
<b>Topic of the Paper</b>	Total Transversal Domination in Graphs
<b>Date &amp; Place</b>	07 to 08 Dec 2017, Bharathiar University, Coimbatore, Tamil

<b>Faculty/Staff</b>	<b>Dr. Chandrashekar</b> Asst. Prof., Dept. of Chemistry
<b>Type of Conference</b>	National Conference
<b>Topic of the Paper</b>	Recent Advances in Chemical Biology and Material Science for Industry and Society (RACBMS-2018)
<b>Date &amp; Place</b>	09 to 10 Feb 2018, Kuvempu University, Shivamogga

National Conference was held on 09 to 10 Feb 2018, at Kuvempu University, Shivamogga. Recent Advances in Chemical Biology and Material Science for Industry and Society (RACBMS-2018) paper was presented during the conference. About the paper to mention, Kinetics of oxidation of Nicotinamide by sodium-N-bromo benzene sulphonamide (BAB) has been studied at 303K in HCl medium catalysed by Ru (III) ion. The reaction rate shows first order w.r.t [BAB] and [Ru(III)], inverse fractional order on [H<sup>+</sup>] and fractional order on [Nicotinamide]. The addition of halide ion and the reaction product benzene sulphonamide and dielectric constant of the medium, have no significant effect on the rate. The variation of ionic strength of the medium did not affect the rate, indicating that non-ionic species are involved in the rate determining step.

The reaction was studied at different temperatures and the activation parameters have been deduced, oxidation products were characterized. Test for the radicals was found to be negative, the derived rate law based on the proposed mechanism is in complete agreement with the observed kinetic data.

## 4. Teaching Faculty Participation and Paper Presentation in Conference (within India) ....(Contd.)

<b>Faculty / Staff</b>	<ul style="list-style-type: none"> <li>• <b>Dr. H V Ravindra</b> Vice Principal PESCE Mandya</li> <li>• <b>Mr. T.M. Deve Gowda</b> Asst. Prof. ME Dept. Engg</li> <li>• <b>Mr. K J Mahendra Babu</b> Asst. Prof. ME Dept. Engg</li> <li>• <b>Mr. Rudresh Addamani</b> Asst. Prof. ME Dept. Engg</li> <li>• <b>Mr. Gurupavan H R</b></li> </ul>	 The International Conference on Advances in Manufacturing, Materials & Energy Engineering ( <b>Icon MMEE - 2018</b> ) has been organized by Department of Mechanical Engineering, Mangalore Institute of Technology & Engineering. It has been conducted from 2 <sup>nd</sup> & 3 <sup>rd</sup> March 2018 at MITE Campus at Moodbidri, D.K., India. The conference was focused on practical solutions for emerging sustainability issues in Mechanical Engineering, through renewable and alternative energy systems, novel concepts in manufacturing & maintenance engineering, nanotechnology, design engineering etc. This Conference provides a unique forum for engineers and scientists from academic/ research laboratories/ institutions/industries to meet and share the technical information on new developments in the field of Mechanical Engineering. It is a premier and appropriate forum for the presentation, exchanging and sharing of the new advancements, approaches and research results in the most relevant areas which will enhance and benefit the society at large. The conference included the most relevant topics for the present day technology which is more essential for industrial growth.
<b>Type of Aca-</b>	International conference	
<b>Details of Academic Activity</b>	Advances in Manufacturing, Materials & Energy Engineering (Icon- MMEE 2018)	
<b>Date &amp; Place</b>	2 to 03 March 2018, MITE, Modda-bidri, DK	

The important topics covered in this conference included:

(a) Mechanical Design and Manufacturing, (b) Sustainability and Energy Conservation, (c) Advanced Manufacturing Technology using CAD/CAM/CIM, (d) Modelling, analysis, & simulation of manufacturing processes, (e) Manufacturing Planning and Management, (f) Maintenance Engineering (g) Industrial Materials & Processes (h) Composite materials, (i) Solar Power & Bio-Fuel Technology, (j) Nano-Materials and Manufacturing, (j) Wind, Wave, Hybrid Energy System, (k) Optimization Techniques, (l) Automation and Robotics, (m) Mechanics of Materials for Technology, (n) Aircraft Structures & Propulsion, (o) Aerodynamics & Avionics.

Around 100 delegates were attended the conference and around 100 oral presentations have been presented in different topics. In addition to the above the conference has also provided a large platform to the exhibitors to demonstrate their test equipment.

## 5. Papers Published Teaching Faculty in International Conference & Journals

SL No	NAME OF THE FACULTY	JOURNAL NAME	ISSN NO	TITLE OF THE PAPER	YEAR OF PUBLICATION
1	Dr. H.V.Ravindra	International Conference on Advanced Materials and Application (ICAME-2016)	2985-2993	Estimation and Comparison of Welding Performance using MRA and GMDH in P-GMA W for ASTM 106 Material	Proceedings-5 2018
2		International Conference on Advanced Materials and Application (ICAME-2016)	2877-2883	Optimization of Process Parameters for SS304 in Wire Electrical Discharge Machin-	Pro-52018
3		International Conference on Advanced Materials and Application (ICAME-2016)	3084-3092	Estimation of Machining Performance using MRA and GMDH in Wire EDM of	Pro-5-2018
4		International Conference on Advanced Materials and Application (ICAME-2016)	2985-2993	Estimation and Comparison of Welding Performance using MRA and GMDH in P-GMA W	Pro-5, 2018

## 5. Papers Published Teaching Faculty in International Conference & Journals ....(Contd.)

SL. No.	NAME OF THE FACULTY	JOURNAL NAME	ISSN NO	TITLE OF THE PAPER	YEAR OF PUBLICATION
5	Dr. S Ghanaraja	Science Direct Material today Proceedings 5 2018	Proceedings 5 2018	Synthesis and Study of Micro-structure Mechanical Properties of Cast Al1100 (Mg) - SiC Com-	pp. 2765-2772, 2018
6	Devadath V R	International Journal of Current Research in Life Sciences	2319-9490	A study of the effects of extrusion honing on Hastelloy C22 using SiC Abrasive of different mesh sizes	Vol. 07, No. 02, pp.1029-1035, February, 2018
7	Dr. Ajit Prasad S L	International Conference on Advanced Materials and Application (ICAME-2016)	3044-3051	Experimental Investigations on Mechanical and Tribological Properties of Extruded Aluminium A356-AL2O3 Stir Cast MMC	Proceedings-5 2018
8	Dr. H.V.Ravindra	International Journal of Research in Management, Social Sciences & Technology	320-2939	Make in India and skill India – A hand in glove schemes of GOI designed to transform India Economy	Vol. 20, No. 20, Oct-2017
9		International Journal of Engineering Research in Mechanical and civil Engineering (IJERMCE)	2456-190	Optimization of PGMAW Welding Parameters using Taguchi Technique	ICAMES- April. 2017
10		International Journal of Research in aeronautical and mechanical Engineering	231-301	Multi Response Optimization of Pulsed current metal inert gas welding Parameters for ss3041 pipes using grey relational analysis	ETME-2017 27&28 December -2017
11		5th International Conference on Materials Processing and Characterization (ICMPC-2016)	2214-7853	Prediction of Machining Characteristics using Artificial Neural Network in Wire EDM of A1707 based In-situ Composite	pp. 203-212, Pro-4, 2017
12		ICEMS 2016	2214-7853	Estimation of Machining Performances in WEDM of Aluminium based Metal Matrix Composite	Pro-4, 2017, Pp. 10035-10038
13		ICEMS 2016	2214-7853	Study of Surface Roughness and AE Signals while Machining Titanium Grade-2 Material using ANN in WEDM	Pro-4, 2017 pp.9557-9560
14		Dr. C J Ganhara Gowda	International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE)	2456-1290	Development of Single Wheeled Electric Bike
15	Devadath V R	International Journal of Engineering Research in Mechanical and civil Engineering (IJERMCE)	2456-1290	Analysis of Additive Manufactured Tibial Spacer used in total Knee Replacement Implant	Vol. 02, Issue. 4, April-2017 (IFERP)

## 5. Papers Published Teaching Faculty in International Conference & Journals ...(Contd.)

SL. No.	NAME OF THE FACULTY	JOURNAL NAME	ISSN NO	TITLE OF THE PAPER	YEAR OF PUBLICATION
16	Dr. S Ghanaraja	Seierce Direct Materials today Proceedings 4	2214-7853	Mechanical Properties of Al <sub>2</sub> O <sub>2</sub> Reinforced Al based Metal Matrix Composites	Published online:2017 pp.2771-2776
17		Seierce Direct Materials today Proceedings 4	2214-7853	Studies on Dry Sliding Wear Behaviour of Al <sub>2</sub> O <sub>3</sub> Refinforced Al Based Metal Matrix Composites	Published online:2017 pp.10043-10048
18		International Journal of Research in aeronautical and mechanical Engineering	2121-3051	Synthesis and characterization of Tribologibal Properties of Aluminium Alloy Reinforced with Zirconium Dioxide Composite	pp.179-190, Dec-2017
19		International Journal of Engineering Research in mechanical and civil Engineering	2456-1290	Production and characterization of Rice Husk Ash-Silicon Carbide Reinforced Al1100 Aluminium Alloy Hybrid Composites	Vol.2, Issue. 4, April. 2017
20	Dr. M C Padma	International of Engineering and Technology (IJET)	2319-8613	Kannada Text Normalization in Source Analysis Phase of Machine Translation System	Vol.9, pp. 585-589, Issue:3, July 2017
21		International Journal of Computational Linguistics Research	2455-3778	Shallow Parser for Kannada Sentences using Machine Learning Approach	Vol. 8, pp. 158-170, Issue.4, Dec 2017
22	Dr. Nagarathna	International Journal of Innovative Research in Computer & Communication Engineering (IJIRCCE)	2320-9798	Design and Implementation of Vehicle Emission Testing System using MQ-5 and MQ-7 Sensors	Vol. 5, Issue. 5, May 2017
23		International Journal of Innovative Research in Computer & Communication Engineering (IJIRCCE)	2320-9798	Design and Implementation of Driverless Car to Recognize Traffic Light	Vol. 5, Issue. 5, May 2017
24	Uma S K	International Journal of Innovative Research in Computer and Communication Engineering	2320-9801	Off-Street Parking Space reservation using smart phone application	Vol.5, Issue.5, May 2017
25		International Journal of Innovative Research in Computer and Communication Engineering	2320-9801	A Cost -Effective home security for detection of motion	Vol.5, Issue.5, May 2017
26	Snajay H M	International Journal of Science progress and Research (IJSPR)	2349-4689	A Consensus Algorithmic Approach to identifi multiple target nodes in Cloud Environment using Navigational Feedback	Vol. 5, Issue.4, May 2017
27	Deepika	International Journal of Innovative Research in Computer and Communication Engineering	2320-9801	Trusted Dynamic Source Routing in MANETs	Vol. 05, Issue. 4, April. 2017

## 5. Papers Published Teaching Faculty in International Conference & Journals ...(Contd.)

SL. No.	NAME OF THE FACULTY	JOURNAL NAME	ISSN NO	TITLE OF THE PAPER	YEAR OF PUBLICATION
28	Mahendra Babu K J	International Journal Engineering Research in Mechanical and Civil Engineering (IJERMCE)	2456-1290	Discharge Coefficient Prediction for Multi Hole Orifice Place in a Turbulent Flow Through Pipe Experimental and Numerical Investigation	ICAMES-2017, April.2017
29	Suraj B S	International Journal of Engineering Research & Technology	2278-0181	Invigilator System using Internet of Things in Precision Cultivation	Vol. 05, Issue 22, July-2017
30	Shwetha M K	International Journal of Innovative Research in Computer & Communication Engineering	2320-9801	IOT Based smart agricultural warehouse	Vol. 05, Issue. 4, April. 2017
31	Chethan Kumar V	International Journal for Modern Trends in Science and Technology	2455-3778	Predicting Privacy Policy Automatically to the User Uploaded Image on Content Sharing Sites	Vol.2, Issue. 5, May 2016
32		International Journal of Innovative Research in Computer and Communi-	2320-9801	Student Course Recommendation System Using Fuzzy C Means and Clessification Algo-	Vol.5, Issue. 4, April 2017
33	Prasanna P	International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)	2023-9801	Automated Agribusiness Furrowing Seeding and Grass Cutting Utilizing Android Smartphone	Vol.5, lusse 4, April 2017
34		International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)	2023-9801	Development Smart Approach for ATM Crime Detection and Avoidance with GSM and Voice Command	Vol.5, Issue. 4, April 2017
35	C Chethana	International Research Journal of Engineering and Technology (IRJET)	2395-0056	Examination of road accidents in perspective of insightful and particular data minig	Vol. 04, Issue 05, May 2017
36	Pavan K N	International Journal of Research in Aeronautical and Mechanical Engineering	2321-3051	Numerical Prediction for Fluid Flow and Heat Transfer in Ducts Using Twisted Tape Turbulators	IJRAME-Dece-2017
37		International Journal of Engineering Science and Computing		Heat Transfer Enhancement in Heat Exchanger with Rotating Twisted Tape Insert Using Wa-	IJESC Nov-2017
38	Dr. K M Jagadeesha	International Journal of Research in Aeronautical and Mechanical Engineering	2321-3051	Study of Influential Factors on Coefficient of Friction Between tyre and Road inter ACE	pg. 205-210, Dec-2017
39		International Journal of Research in Aeronautical and Mechanical Engineering	2321-3051	Study of Indian single Track (100CC) Vehicles for their Acceleration Performance	pg. 191-204, Dec-2017

## 6. Industry Institute Interaction Cell activities

<b>Purpose</b>	Industrial Visit
<b>Title of the III Cell</b>	Industry Institute Interaction Program
<b>Date and</b>	16 to 17 Octo-2017, Mangalore
<b>Name of the Resource</b>	<ul style="list-style-type: none"> <li>Venu Gopal Asst. Prof. Dept. of I&amp;P Engg</li> </ul>

A complete report based on an Industrial visit organized by P.E.S College of Engineering especially for the B.E students (Industrial and Production Department) in order to enhance their practical stimulation and to let them having an overview on the activities related to “PRODUCTION” and “DOCUMENTATIONS” carried out by companies Gurucharan Industry and Kalbavi Cashews.

P.E.S College of Engineering had organized an Industrial visit on 16th October and 17th October 2017 to “Gurucharan Industries” and “Kalbavi Cashews” located in Industrial Sector of BAIKAMPADY 15kms from Mangaluru for the students of B.E

(Industrial and Production Department). They are specialized in manufacturing, supplying and exporting an extensive range of Single Screw Extrusion Plants. Fabricated using superior quality raw material, their range finds usage in various kinds of extrusion processes. Their range is available in various dimensions, and can be customized as per the specifications stated by the clients. In addition to above mentioned plants, they are also engaged in offering Twin Die & Four Die Blown Film Plants in HM HDPE/LDPE/LLDPE Blown Film Plants and Twin Die in PP Blown Film Plants.

Following are the striking features of their range, it was mentioned

a) Robust construction, (b) Efficient performance, (c) Low power consumption, (d) Easy to operate (e) Corrosion resistance, (e) Durable

## 7. R&D Projects

The aim of research and development (R&D) is to improve the current technologies offered or to develop innovations that strengthen in the current academic scenario. The academic sector includes many programmes that are dedicated research and development that focus on particular fields or areas of work.

Trends and developments in engineering R&D address the pace of technology development in the global scenario. Key drivers for research and development are typically based on academic gain and growth.

Working in R&D is very stimulating – that tend to work on many different projects across a variety of sectors and spotting the similarities can often lead to invention. Most engineers and scientists will work in on-site R&D facilities, but may have opportunities to learn through creativity and invention.

From past one year, three projects were being carried out by mechanical engineering programme, Electronics engineering programme and information science and engineering programme.

Sl. No	Title of the Project	Funding Agency	Year	Amount Sanctioned in Rs.	Status of the project	Coordinator
1	Vibration and Noise Analysis of Parallel Shaft Gear Drive Systems	AICTE	2017-20	10,00,000/-	In Progress	Dr. S L Ajit Prasad
2	A Heuristic Approach for Design and Develop a Prototype Electronics Nose to Detect Spoilage	VGST (SMYSR)	2017-19	5,00,000/-	In Progress	M J Anand
3	Setting up of network Forensic lab.	VGST K-FIST LEVEL (1)	2017-19	20,00,000/-	In Progress	Dr. Minavathi

## 8. Ph.D Awardees

P.E.S. Research center Encourages Faculty Members Pertaining to different disciplines to take up research work under the able guidance of Professors Registered as guides under VTU Belagavi and other Universities. Our research center has ample number of research supervisors who could cater to the need of the research center. Faculty members from various disciplines, pursued research under P.E.S. research center and have been awarded Ph.D degree for Basic Sciences & Engineering disciplines.



**C. Poornima.**, Dept of Mathematics, PES College of Engineering Mandya, was awarded with the degree of Doctor of philosophy on the thesis “**Numerical Studies of Unsteady Incompressible Boundary Layer Flows**” under the guidance of **Dr. A.T.Eswara.**, Professor Dept of Mathematics Research Scholar P.E.T Research Foundation, P.E.S College of Engineering Mandya.

**Abstract:** In the present research work, we have undertaken the system of partial differential equations governing laminar, incompressible boundary layer flow and heat transfer problems. The typical problems in the area of science and engineering with technological applications have been identified. Numerical computations have been done in order to obtain the solutions for the above problems using finite-difference method. Further, effects of unsteadiness, suction, injection, magnetic field, stratification and localized wall heating (cooling) have been included in the present study to explore their significance on the skin friction and heat transfer rate.

**G. Ashwini.**, Assistant Professor Department of Mathematics Govt. College for Women, Mandya. was awarded with the degree of Doctor of philosophy on the thesis “**A Numerical Study of Unsteady Laminar Boundary Layer Flow Problems**” **Dr.A.T.Eswara.**, Professor Dept of Mathematics P.E.S College of Engineering Mandya.

**Abstract:** In our research work, a numerical study of partial differential equations arising in the laminar boundary layer theory is undertaken. The mathematical modeling of the problems of industrial and technological applications is being done systematically so that they are amenable for numerical treatment. Further, implicit finite difference scheme which are unconditionally stable have been used to obtain non-similar, semi-similar and self-similar solutions. Also the variation of flow rate and heat transfer coefficients along with flow and thermal fields are analyzed under the influence of relevant physical parameters. The results of the problems considered are certainly favorable to the scientific and technological fields.



**Mahesh Gowda N M**, Asst.Professor, Dept. of E&C Engg., PESCE, Mandya. was awarded with the degree of Doctor of philosophy on the thesis “**Optimal Design of Controlling DC-DC Switching Power Converter**” **Dr. S. S. Parthasarathy**, Professor, Dept. of EEE, PESCE, Mandya.

**Abstract:** The research presents a high-efficiency non-isolated bidirectional synchronous DC-DC switching power converter with different mode and feed-back control method. The converter is made to operate in Forced Continuous Current Mode (FCCM) /Synchronous Discontinuous Current Mode (SDCM) of operation, where the inductor current goes from positive to negative direction and then changes back to positive direction, to minimize the inductor value, size, cost and weight of the converter. The turn off loss of the switch induced by SDCM of operation is minimized by connecting snubber capacitor across the transistor switch. For zero turn-on loss the energy stored in the capacitor need to be discharged before the switch is turned ON. The discharged energy is stored in the inductor. Thus the Zero Voltage Resonant Transition (ZVRT) of transistor switch is realized. A complementary gate signal control scheme is used to turn ON and OFF the transistor switch. Anti-paralleled diode of the transistor switch helps to discharge the capacitor. FCCM of operation due to complementary gate signal control scheme, minimum turn-on loss and low diode reverse recovery loss are achieved and also removes the parasitic ringing in inductor current. This work proposes an inductor and snubber capacitor optimization. A serial of MATLAB scripts are executed to find the optimum value of snubber capacitor and inductor based on the minimal overall device and switch conduction loss condition for maximum efficiency. In this research work, a general purpose power stage circuit is considered based on complementary gate signal control scheme and by using state space average technique; control duty cycle to inductor current transfer function model is derived. The model features a third order system and sets up a basic for the unified controller concept and optimization. Using the derived transfer function model, PID controller is tuned using PID tuner software available in MATLAB simulink control design block.

## 8. Ph.D Awardees (Contd...)



**Bindu N.S.**, Assistant Professor Dept of E& C Engg, VVCE, Mysore, was awarded with the degree of Doctor of philosophy on the thesis **“Investigation and Modification of stereo algorithm for Moving Object detection and Tracking”** Dr.H.S.Sheshadri, Professor Dept of E & C Engg PESCE, Mandya.

**Abstract:** Video surveillance for single and multiple objects is a very challenging research area in the field of computer vision. This surveillance system consist of two components that are correlated to each other namely object detection and the object tracking. These two components are the key requirements for varieties of applications namely automated surveillance, event detection, recognition of abnormal activities that are taking place,

advanced driver assistant, robot navigation, etc. Object detection, as the name itself defines that it identifies the neighborhood or the position in the given cene whereas the object tracking aims at associating the objects that have been detected over a string of frames. This research work has investigated most of the existing methods and developed an efficient object detection and tracking system for moving objects using 3D stereo vision techniques.

**C. Jeyanthi**, Asst Professor, Teresian College, Siddartha Nagar, Mysore. was awarded with the degree of Doctor of philosophy on the thesis **“A Study of fixed point theory, Dynamic Programming and Neural Network”** Dr. Giniswamy, Associate Prof. and Head, Department of Mathematics, P E S College of Science, Arts and Commerce, Mandya.

**Abstract:** Thesis is divided into seven chapters which are further divided into subsections depending upon the concerned topics. First chapter contains an overview of generalization of contraction conditions and development of fixed point theorems on metric spaces and ultra-metric spaces. The first section of chapter two is a brief introduction about weak compatible maps and the basic concepts and in section two some results are obtained using the R-weak compatible maps and in section three, using the concept of f-compatible, g-compatible and compatible of type (P) maps some results are obtained and illustrated with suitable examples. In chapter three, using the concept of weak reciprocal continuity some results are obtained for four self maps which satisfy various types of compatibility in a complete metric space. In chapter four defined a new ‘Ciri’c type F- contraction and Hardy-Roger type F-contraction for two pairs of self maps, which are more general contraction. We establish the existence of coincidence and common fixed point of six self maps in non complete metric space satisfying F-contraction. Chapter five is on ultra-metric space and consists of three sections. Using the F-contraction for a single-valued map, some coincidence point theorems are presented for a pair of single valued maps and for single-valued map with multi-valued maps in an ultra-metric space under F-contraction. Chapter six deals with occasionally coincidentally idempotent hybrid maps and some fixed point theorems for two pairs of maps which satisfy ‘Ciri’c type and Hardy-Roger type F-contraction. The thesis closes in Chapter seven which focuses on applications of fixed point theorems, for a class of functional equations arising in dynamic programming and neural network.



**Chandrika Sudhendra**, Scientist ‘G’ Group Director Aeronautical Development Establishment, Ministry of Defence, Defence Research Development Organization, New Thip-sasandra post, Bengaluru. was awarded with the degree of Doctor of philosophy on the thesis **“Design and Development of Novel Wide Band Radar Absorbers for Aircraft Stealth Applications”** Dr. K.A.Radhakrishna Rao, Professor and Head, Dept of E&C PESCE Mandya.

**Abstract:** Aircraft stealth primarily involves reduction of electromagnetic signature, quantified in terms of its radar cross section (RCS), for evading detection by the enemy radar. RCS reduction (RCSR) by design involves external shaping and mandatory application of radar absorbers (RA) two types of novel, ultra wide band (UWB) multi layer dielectric RA design and development is described. The first RA design comprises a novel Jaumann radar absorber for realizing RCSR of 15 dBsm (minimum) from 2 GHz. to 18 GHz. The second design comprises a circuit analog dielectric RA for realizing UWB RCSR performance from 1.7 GHz. to 25 GHz. Electromagnetic modeling is carried out for both the designs and design curves for Jaumann radar absorber are given. Full wave analysis with parametric analysis is carried out using the HFSS 2014 3D EM simulation software. Novel ‘embedded passives (EP) resistors technology is adopted for realizing the resistive Frequency Selective Surfaces (FSS). Thousands of resistors are realized as integral to the spacecloth Printed circuit board (PCB) layer(s), which has resulted in quantum improvement in reliability. The PCBs are integrated with the other layers of RA by using low dielectric constant foam spacers. Thus assembled UWB RAs are evaluated for their RCSR performance by carrying out monostatic RCS measurements in microwave anechoic chamber, thereby verifying both design and simulation. Measured RCSR of 15 dBsm has been realized over the desired ultra wide frequency bandwidths and has culminated in successful completion of slated objectives of applied research reported in the thesis.



**Sharmila G V**, Professor Dept of Civil Engg, S J C I T, Chickballapur was awarded with the degree of Doctor of philosophy on the thesis “Assessment and A Role of Precipitation on Groundwater Quality” Dr. G P Shivashankara, Professor Dept of Civil Engg, P E S C E, Mandya **Abstract:** Precipitation is a form of manifestations of water on Earth’s atmospheric system and it is the face of meteorological processes at the ground surface. The purpose of the present work is to identify the source of groundwater recharge in urban, semi urban and forest region by studying stable isotopes of Oxygen ( $\delta^{18}\text{O}$ ) and Deuterium ( $\delta^2\text{H}$ ) and to assess the precipitation, soil and groundwater composition to establish the statistical relationship between the various parameters to study the role of precipitation on groundwater quality. The stable isotopes study proves that precipitation is one of the recharge sources for groundwater

replenishment in urban, semi urban forest region. The urban North received the acid rain with VWM pH 4.54. The semi urban and forest region received alkaline precipitation with mean pH 6.11 and 6.39 respectively. In bulk precipitation of urban region, the positive significant correlation between  $\text{H}^+$  with  $\text{SO}_4^{2-}$  &  $\text{NO}_3^-$  shows the formation of strong acidic acids of  $\text{H}_2\text{SO}_4$  and  $\text{HNO}_3$  and the sources of  $\text{SO}_4^{2-}$  and  $\text{NO}_3^-$  are from industries and automobile emissions. At semi urban and forest region,  $\text{Ca}^{2+}$  showed good positive correlation with  $\text{SO}_4^{2-}$  indicating  $\text{Ca}^{2+}$  is in the form of  $\text{CaSO}_4$  as an important compound in bulk precipitation.  $\text{H}^+$  showed poor correlation with  $\text{SO}_4^{2-}$  and  $\text{NO}_3^-$ , which means complete neutralization of acidity in both semi urban and forest region and these regions received alkaline precipitation. The CEC of soil samples at study region has been observed in the order urban < semi urban < forest region and CEC of soil has increased from rainy season to post monsoon season in urban, semi urban and forest region and it may be due to more exchangeable sites availability in soil. The concentration of ions ( $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{SO}_4^{2-}$  and  $\text{Cl}^-$ ) in groundwater are slightly enhanced from pre monsoon to post monsoon season due to which hardness is imparted to groundwater. Chadha diagram construction shows that the overall distribution of sampling point exhibits temporary hardness in groundwater during pre monsoon season and permanent hardness in post monsoon season. Factor analysis revealed likely sources in the urban area, first includes  $\text{SO}_4^{2-}$  and  $\text{NO}_3^-$  which are the contribution of anthropogenic sources ( $\text{H}_2\text{SO}_4$  and  $\text{HNO}_3$ ) where  $\text{Ca}^{2+}$  contributed by hydrogeochemical processes.

**Lalithamma.G.A**, Associate professor SJBIT, Bangalore, was awarded with the degree of Doctor of philosophy on the thesis “**Design & Development of Pid Controller To Control Ac Servo Motor Using Multi Layer Artificial Neural Network**” Dr **Puttaswamy P S**, Professor and Head, Dept of E&E Engg, PESCE, Mandya.

**Abstract:** For many industrial and commercial applications proportional integral derivative (PID) controllers play a significant role. The applications of PID controller are wide spread from small technology to high technology industry. The industries like aerospace, refineries and ship building are industrially automated works with PID controller. The PID controller can be designed easily for low order system and it is challenging to design for high order system. The solution for this is to use artificial neural network. Soft computing technique, Fuzzy logic system etc., the recent trends shows that tuning of a PID controller could be accomplished with help of neural network adopting either by a single layer or multi layers.. The PID controller turning to achieve high stability is very important. There is a need to optimize the controller to have better performance.. In order to achieve the best overall control of PID control for the entire operating envelopes to assist the engineers requires development of intelligent tools. The further development incorporates. In order to achieve better performance than and to overcome the limitations of single layer neural network it has been planned to use multilayered neural network and further studies revealed that there are some options through which the control system can be further optimized.



**Keerthi Gowda B S**, Assistant Professor, Dept of Structural Engg, Centre for Post Graduate Studies, VTU - Mysuru. was awarded with the degree of Doctor of philosophy on the thesis “**Study of Natural Fiber Reinforced Polymer Composite as an Alternative Building Material**” Dr. G L Easwara Prasad, Principal, MITE, Moodabidri, (Formerly Professor & Head Dept. of Civil Engineering, PESCE, Mandya)



**Abstract:** In the present research study an effort is made to study the mechanical properties of coir/sisal fiber reinforced composite materials. Here, randomly oriented coir/sisal fiber reinforced polyester matrix composite specimens of thicknesses 2 mm, 3 mm, 4 mm, 5 mm and 6 mm were fabricated by using hot compression moulding technique. Treated/untreated fibers of length 10 mm is used as reinforcement for casting the composite specimens. A mixture of polyester resin, methyl ethyl ketone peroxide and cobalt naphthenate of ratio 50:1:1 is used as matrix solution for the fabrication. Each composite panels of fiber volume fraction 10 %, 15 %, 20 %, 25 % and 30 % were tested for its tensile strength, flexural strength and Impact strength as per ASTM D- 3039, ASTM D-7264 and ASTM D-256 norms respectively. A soft computing technique is adopted by developing an artificial neural network to predict the mechanical properties of composite materials, which reduced the manual involvement and its related errors and difficulties to explore the properties of composites. Finally, probabilistic study of mechanical properties of composites are done, by which probable range of properties of composites are achieved. By using all the derived results of the present investigation, a case study is performed to analyze the adoptability of coir/sisal composite panels as alternative building materials (non load bearing wall panels).

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