



## VISION & MISSION OF THE DEPARTMENT

### VISION

The department strives to enrich professionals of high competency in the arena of Instrumentation Engineering & mould them to adopt the crux of matter in the field of Automation

### MISSION

To prepare the students to envisage beyond the hypothetical thinking & belong to a new era of acquisition & application of Instrumentation Technology to meet the requisition of the changing world

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“Science can amuse and fascinate us all, but it is engineering that changes the world.”  
—Isaac Asimov

# METRON

VIMAL JYOTHI ENGINEERING COLLEGE  
ELECTRONICS & INSTRUMENTATION ENGINEERING DEPARTMENT

VOLUME 9 ISSUE 3

OCTOBER 2018

## Instrumentation Engineering Scope and Career Opportunities

### What is Instrumentation Engineering?

Instrumentation engineering is the branch of engineering that specialises on the principle and operation of measuring instruments that are used in fields of design, configuration of automated systems in electrical, pneumatic domains, etc.

### What does an Instrumentation Engineer do?

The required tasks are very domain dependent; instrumentation engineers typically work for industries with automated process with the goal of improving the productivity, reliability, safety, optimisation and stability. Instrumentation engineers are commonly responsible for integrating the sensors with the recorders, transmitters, displays or control systems. They may design or specify installation, wiring and signal conditioning. They may be responsible for calibration, testing and maintenance of the system.

### Popular Companies that hire Instrumentation Engineers:

- National Instruments
- ABB
- Larsen & Turbo
- Robert Bosch
- Invensys
- GE
- Suzlon
- Whirlybird
- ESSAR

## PTA Meeting

PTA Meeting of S1, S3 and S5 were conducted on 11<sup>th</sup>, 19<sup>th</sup> and 25<sup>th</sup> September 2018. Student toppers, based on their first internal examination marks, were honored with prizes. Parent - Faculty interactive session was also conducted.



## Workshops Conducted

- Ms Achala Prasad and Mr shinu M M Conducted Workshop on Fundamentals of Network Theory for S3 AEI students on 8/09/2018.

## Alumni Interactions

An interactive session with alumni Mr. Shone Jose was organized for all students of the department on 15/09/2018.



## Industry Visit by S5 Students

S5 students from the department visited the industry Fresh – N - Nice Foods at Goa from 19/9/2018 to 22/9/2018.



## Alumni Meet

The first phase of the placement oriented training program by Prolific Systems for the 2015-19 batch students was conducted from 09-07-2018 to 13-07-2018.



## Publications by Faculty

- Dr. G Glan Devdhas - "A Novel Design fro PV Integrated Buck Converter using MPPT and Sub MPPT" , Journal of Advanced Research in Dynamical and Control Systems - Scopus index.
- Dr. G Glan Devdhas - "Design of Fractional Order PI Controller with ABC and BBO Algorithm for pH Neutralization Process Using Multiple Tanks" , Journal of Advanced Research in Dynamical and Control Systems - Scopus index.

## Faculty Initiatives

- Dr. V Sampath Kumar applied and got approval for establishing MHRD innovation club in VJEC.
- Dr. V Sampath Kumar became Fellow Member in ISRD
- Dr. V Sampath Kumar with Six Students attended IEDC Workshop at Thaliparamba.
- Dr. V Sampath Kuamr applied for Swachh Campus Ranking
- Dr. V Sampath Kumar applied for funding from National Bio Entrepreneurship 2018.
- Dr. V Sampath Kumar submitted Proposal for Unnat Bharat Abhiyan
- Dr. V Sampath Kumar applied for funding from CERD of KTU for the Project Automatic Puttu Maker Machine
- Ms. Achala Prasad applied for funding from CERD of KTU for the project Piezoelectric Floor Mat.

# POs and PSOs of Department

## POs

**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering application to the solution of complex engineering problems.

**Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conditions using first principles of mathematics, natural sciences & engineering sciences.

**Design/ Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health & safety and the cultural, societal and environmental considerations.

**Conduct Investigations of Complex Problems:** Use research based knowledge and research methods including design of experiments, analysis & interpretation of data, and synthesis of the information to provide valid conclusions.

**Modern Tool Usage:** Create, select & apply appropriate techniques, resources & modern engineering & IT tools including prediction & modeling to complex engineering activities with an understanding of the limitations.

**The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal & cultural issues & the consequent responsibilities relevant to the professional engineering practice.

**Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal & environmental contexts and demonstrate the knowledge of and need for sustainable development.

**Ethics:** Apply ethical principles & commit to professional ethics and responsibilities and norms of the engineering practice.

**Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multi disciplinary settings.

**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

**Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one own work, as a member and leader in a team, to manage projects and in multi disciplinary environments.

**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PSOs

Students will have the ability to explore the design, installation & operation of the basic instrumentation systems used in industrial environments.

Students will have a strong foundation in mathematical, scientific & engineering fundamentals necessary to formulate, solve & analyze instrumentation problems related to industry & research.



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