

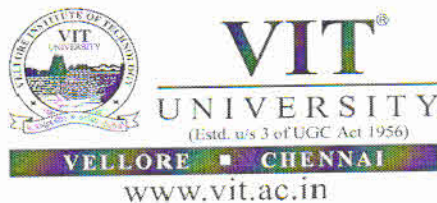
# **ANNUAL REPORT**

## **(2014-2015)**

**Academic Staff College**



**VIT University, Vellore**



## 1. Introduction

Academic Staff College (ASC) plays a pivotal role in training the faculty on the current trends in teaching learning pedagogy. It has organized **252** programs during the year 2014-15. **4746** participants have attended and benefitted from the faculty development programs. (FDPs).

Based on the inputs from experts in the Academia, the FDPs were categorized under the following domains. This broad spectrum of training programs conducted ensure that holistic development takes place in a 360<sup>0</sup> manner.

The domains:

Alternative Teaching Methods	ATM
Communication Skills for Teachers	CST
Educational Theories	EDT
Managerial Skills for teachers	MST
Psychology for teachers	PFT
Quality assessment in instruction	QAI
Resourceful instruction of engineering	RIE
Research and content writing	RCW
Technical tools for teachers	TTT
Technology for teachers	TFT

## 2. Faculty Orientation Program

- This year, faculty orientation program - FOP was conducted from 4<sup>th</sup> June 2015 to 24<sup>th</sup> June 2015 for **26** faculty. **44** titles of significance, one movie for edutainment and a day at the HR office summed up the FOP.

Some titles that were deliberated during the session were:

- You are the message: dealt with communication skills and how to nurture the important skill, saying the right thing to the right person at the right time.
- Technical Tools like LaTeX, MATLAB for engineering system modelling and simulation, Mendeley, Big Blue Button, Edmodo and choice of usage of apps in the classroom enthused the participants.
- On the academic front, titles like “Learning: an outcome based academic process”, brought to light the various aspects that will enhance the scholastic experience. Innovation in teaching, Instructional Technologies, Integrated Learning, Activity based language learning, effective

session plan writing and kick starting a course in a great way were introduced to add flair to the academic dimension.

- To understand the students better, titles like Motivating millennials, Be a People person were also deliberated. The FDP on Industry Institute Interaction paved way for the faculty to understand the industry needs from the students, so that the student employability ratio can go up. Gen Y Learning by Ms Jenila enthused the participants.
- Dr. Edamana Prasad from IIT Madras conducted a session on Learning Outcome Based Academic Process.
- To inspire research: FDPs on Effective paper for journal publications, library resources and future trends in technology were conducted.

### **3. Five – Day Faculty Development Program**

#### **3.1- FDP on Effective Communication:**

Effective communication is the essential thread in any community, more so for an institution with different stakeholders. 16 participants attended the FDP from 1-5 July 2014.

Communication processes take many forms, including newsletters, meetings, office hours, blogs, and tweets. These techniques build positive engagement, collaboration, and productivity. It also fosters dialogue.

A team of Professors teamed up to facilitate different titles:

How to engage the audience lively?

How not to be influenced by emotions and dialogue effectively?

How to drive passion inherently among the team members?

How to foster team dynamics?

How to build resource and management capacities to handle students who are millennials?

The fun packed activity had a deeper meaning and immersion on the audience. This helped better bonding amongst the faculty and opened up new avenues of communication.

#### **3.2 - FDP on MATLAB for Mechanical Engineers**

This FDP was conducted from 1st to 5th July 2014 and 19 professors benefitted from the program. The resource person was Dr. T.Srinivas, CO2 Research and Green Tech Centre, VIT, Vellore.

MATLAB is a high-performance language for technical computing. It integrates computation, visualization, and programming in an easy-to-use environment where problems and solutions are expressed in familiar mathematical notation. Typical uses include: Application development, including Graphical User Interface building.

The objectives of the FDP were as follows:

To impart advanced knowledge on Project development, Teaching and Research.

To solve thermodynamic problems under more complicated situations.

To develop MATLAB coding for regular classroom solutions to improve quality of teaching.

To enable participants to integrate computation analysis and visualizations in easy environment.

The Professors were trained on techniques necessary for implementation of MATLAB for classrooms.

### 3.3- FDP on Computational Fluid Dynamics

The faculty development program titled, “Computational Fluid Dynamics” was conducted from 7th to 11th October 2014, by Dr. Thundil karuppa Raj, Dr.Sathish,Dr.Padmanathan, VIT, Vellore.

The snippets of the program is summarized below:

Computational fluid dynamics (CFD) is a branch of fluid mechanics that uses numerical analysis and data structures to analyze and solve problems that involve fluid flows. Computers are used to perform the calculations required to simulate the free-stream flow of the fluid, and the interaction of the fluid (liquids and gases) with surfaces defined by boundary conditions. With high-speed supercomputers, better solutions can be achieved, and are often required to solve the largest and most complex problems. Ongoing research yields software that improves the accuracy and speed of complex simulation scenarios such as transonic or turbulent flows. Initial validation of such software is typically performed using experimental apparatus such as wind tunnels. In addition, previously performed analytical or empirical analysis of a particular problem can be used for comparison. A final validation is often performed using full-scale testing, such as flight tests. 14 faculty attended and benefitted from the program.

### 3.4 FDP on Basis of Ubuntu

The Faculty Development Program is titled as “Hands on workshop on Basis of Ubuntu” was conducted from 2-6 March 2015 and 21 participants attended the same. Prof Antoniraj A, VIT,Vellore was the resource person.

Ubuntu is an open source Debian-based Linux distribution and is considered a good distribution for beginners. The operating system was intended primarily for personal computers (PCs) but it can also be used on servers.

The training objectives are as follows:

- i. Perform Ubuntu Installations
- ii. Discover Ubuntu terminals and shell
- iii. Developing C, C++, Java, PHP and Python Applications
- iv. Practice Ubuntu file system and config files
- v. Practice with open applications.

The session ended on a high

## **4. Regular Faculty Development Program**

### **4.1 - FDP on Usage of Apps for Classroom Learning**

The concept of the teaching learning process is always dynamic. Educators across the globe with special reference to VIT, must be adapting the change to keep pace and also to establish good connect with the students of the new generation.

The objectives of this FDP were as follows:

- i. Usage of online tools and soft-wares in T-L process
- ii. Creating course websites
- iii. Usage of social media for discussion
- iv. Online T/L process
- v. Effective audio/video/visuals for classroom engagement.

Through this FDP, the faculty were trained on making the right choice of apps for Classroom learning, creating course websites, use social media as a discussion forum and create a repository of effective audio/video/visuals for classroom engagement.

### **4.2 - FDP on The Making of Video Lectures**

The FDP focused to help the faculty record their own lectures. The intense workshop offered hands-on training for the faculty members to create customized videos for their own classes to enrich their classroom practices. The workshop helped in creating quality video repository for the university.

### **4.3- FDP on Mendeley**

The FDP on Mendeley was conducted on 11th December 2014 by Dr. Anthoniraj Amalanathan, VIT, Vellore. 49 participants benefitted from the program.

Mendeley is a desktop and web program created by Elsevier. It is used to manage and share research papers, discovering research data and collaborating online. It combines Mendeley Desktop, a PDF and reference management available for Windows, macOS and Linux. It also provides Mendeley for Android and iOS, with Mendeley Web, an online social network for researchers.

The software requires the user to store all basic citation data on its servers—storing copies of documents is at the user's discretion. Upon registration, Mendeley provides the user with 2 GB of free web storage space, which is upgradeable at a cost.

The resource person created an account for all the participants. The participants were asked to try out for one course and were assured that support will be available around the clock till they master the tool.

#### 4.4 - FDP on High impact teaching HIT

This faculty development program is of special importance because it is so close to the hearts of the faculty. Dr. Sandeep Shastri with his rich experience played a major role in impacting the audience. The program was conducted on the 8th August 2014 and 35 faculty attended the session.

High Impact Teaching Strategies is the hot topic of the day. Teachers can plan and adjust their practice in response to one or more of the HITS and monitor the impact on student engagement and learning outcomes.

The resource person summarized HIT under 5 strategies:

1. Explicit teaching is when educators provide instruction that demonstrates concepts and helps to build student knowledge and skills. It's essentially showing students what to do and how they should do it. Teachers are explicit about their goals, and they demonstrate how they should achieve them by modeling and giving students examples.
2. Collaborative learning takes place when students work together to complete a task. Different approaches are all designed so that all students actively participate with one another. Groups are carefully designed according to the overall purpose and goals of the lesson, and so that student collaboration is necessary in order to complete the task.
3. Multiple exposures teaching strategies provide students with various opportunities to engage with new knowledge and skills. This means that the teacher uses a variety of different activities to reach students and give them new interactions with this new knowledge, or it may mean simply spacing out the practice over several days or weeks.
4. Diversity pays: Diverse team both in terms of faculty and students actually is an advantage.
5. Differentiated Teaching strategy ensures all students experience the appropriate challenge by teaching to each individual student's learning profile, interests, and readiness. Teachers plan lessons that incorporate adjustments so that it can reach each individual learner, regardless of where they are in their learning and learning style.

For beginning teachers, the HITS are a bank of reliable instructional practices they can use with confidence. For experienced teachers, our guide can add to their understanding of the HITS they are already using, and suggest new ways to use them in the classroom. By using the HITS to build their pool of knowledge, professional learning communities can anchor their interventions in evidence-based practices and so increase the likelihood of interventions being effective. The faculty development program was a real takeaway amongst the faculty.

#### 4.5-Miscellaneous Titles

FDPs on the following titles were also deliberated:

Effective Presentation and Content Sharing (Blog creation)

Photoshop for Engineers

Effective Presentation Using Power point

Collaborative Research between Bio-Sciences and Mechanical Engineering

Binghamton University's Online Delivery & Flipped Classroom, Developing Funded Research Project – Opportunities and Options for Starters”

A debate on “Teaching Challenges and 21st Century Solutions helped open up the Pandora’s box. This necessitated FDPs on micro-teaching, Effective Content Sharing Through Blogger and ways to reduce stress and enhance self-esteem. “Be a Global Professor”, “Green Buildings”, “Visuals for Maximizing Learning”, “Writing for Readability” and “Tension of Tenses” were few other FDPs.

- To understand the students better, titles like Motivating millennials, Be a People person were also deliberated. The FDP on Industry Institute Interaction paved way for the faculty to understand the industry needs from the students, so that the student employability ratio can go up.
- To inspire research: FDPs on Effective paper for journal publications, library resources and future trends in technology were conducted.

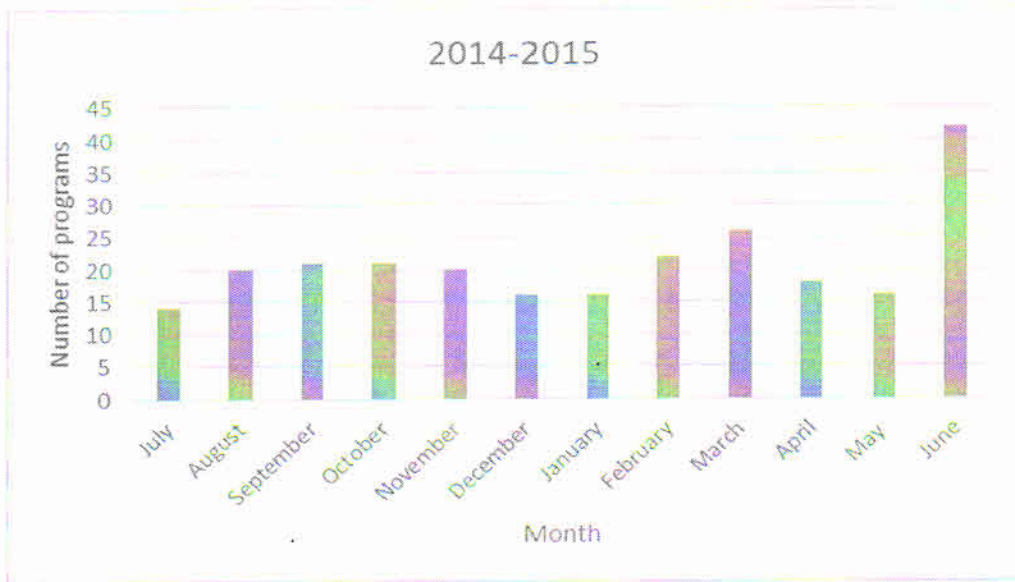
ASC creates a conducive ecosystem to foster team work, collaborative networking and progressive research. Translating the training to the workplace and getting the students to benefit from the trained faculty is the success of any program conducted through ASC.

This year was experiential and focused on the needs of the faculty, so that they create a better learning ecosystem.

The statistics of the number of participants and the month-wise program list is given below.

**Year wise data: 2014-2015**

**Number of Programs conducted : 252**  
**Number of Participants : 4746**  
**Budget in INR (Lakhs) : 40.79**



**Dr. GUNDABATTINI EDISON**  
Deputy Director - ASC