

Innovations by the Faculty in Teaching and Learning

In the Department of Computer Science and Engineering, much importance is given for incorporating innovative techniques in teaching. During the beginning of every semester, a refresher program is conducted to share the innovative practices followed by other faculties pertaining to a new/enriched course offered in the semester.

Such brainstorming sessions help transfer the best practices amongst faculties in the department. Pedagogies, Innovative Assessments, Assignments, Content beyond the Syllabus are typically discussed in the sessions. A snip of one of the meetings conducted for one of the courses “Problem Solving using Computer Programming” is depicted in fig. Faculty members use the LCD Projectors for their presentations. The faculty members use these aids to take the teaching learning process to the next level. Lectures are presented by faculty members using a variety of teaching tools such as chalk and board, PowerPoint presentation, video lectures, models, charts, animation, and other teaching techniques such as lecture, group discussion, seminar, tutorials, guest lectures, and demonstration. Apart from this, the following are the various innovative practices followed at CSE department to enhance Teaching.

1. Virtual lab & Skill Development

The Powerful forces of the economic growth and development of country are Skill and Knowledge. Skill development is a crucial requirement for any economy to stay globally competitive and provide a good quality of life to its residents. However, despite the understanding that skill development is necessary for the sustenance and growth of any country, there is a considerable lack of quality training and resources in India to develop the skills of its workforce.

In fast growing economies with a huge and increasing population, there is a severe shortage of highly-trained, quality skilled resources, while on the other; large sections of the population possess little or no job skills. We need to produce dynamic and enterprising youngsters for facing technical challenges using Skill Development Training. So the industry is ready to recruit only skilled candidates who can contribute immediately to the well being of the company.

Student Can Enhance Using

- Virtual Labs (<http://vlab.co.in/>)
- NPTEL (<https://nptel.ac.in/>)
- SWAYAM (<https://swayam.gov.in/>)
- Cisco Network Academy



Statement of Achievement

Presented To:

VEMULA SIVA NAGARAJU

Name

During the Cisco Networking Academy® self-paced course, the student has studied the following Skills:

- the universal concepts of computer programming (i.e. variables, flow control, data structures, algorithms, conditional execution, loops, functions, etc.)
- developer tools and the runtime environment;
- the syntax and semantics of the Python language;
- the fundamentals of object-oriented programming and the way they are adopted in Python;
- the means by which to resolve typical implementation problems;
- the writing of Python programs using standard language infrastructure;
- fundamental programming techniques, best practices, customs and vocabulary, including the most common library function in Python 3;


Maciej Wichary
VP, OpenEDG Python Institute

9 Jul 2021

Date

By completing the course, the student is now ready to attempt the qualification PCAP-Certified Associate in Python Programming certification, from the OpenEDG Python Institute.

www.netacad.com | www.pythoninstitute.org

2. Think-Pair-Share

A collaborative learning strategy is used where students work together to solve a problem or answer a question about an assigned task for a specific topic from the course. Various groups are created in the class and each group forms a specific set of questions based on concepts covered in the class sessions. Each group then solves the questions formed by other groups. This tests the understanding of concepts by the students as for forming questions thorough understanding of concepts is required.

3. Flipped Learning

Flipped Learning aims to increase student engagement and learning by having students complete the necessary readings at home and work on live problem-solving during class time. With a flipped classroom, students watch online lectures, collaborate in online discussions, or carry out research at home, while actively engaging concepts in the classroom, with the course teacher's guidance.



The above Fig is an example screenshot of implementation of the flipped learning strategy. The videos from reputed online sites or own recordings will be shared to the students through the Google Classroom/ Drive/ other common communication mediums.