

FDP (IUCEE) on “Numerical Methods”

July 04-08, 2011

A Brief Report of the Faculty Development Programme

A five day workshop on “Numerical Methods” was organized by the department of Chemical Engineering, JUET Guna. This was the third such workshop hosted by JUET Guna in collaboration with the Indo-United States Consortium for Engineering Education (IUCEE) Faculty Leadership initiative (FLI) in the year 2011. The workshop was conducted by Dr. Srinivas Palanki, Professor and Head, Department of Chemical & Biomolecular Engineering, University of South Alabama, USA.

A total of 33 participants from various departments such as Chemical Engineering, Civil Engineering, Mechanical Engineering, Computer Science & Engineering, Electronics & Communications Engineering and Mathematics participated in the program. The workshop was targeted at faculty teaching undergraduate / post-graduate courses in Science and Engineering. The topics covered in the workshop were:

- Mathematical modeling of physico-chemical problems in Engineering.
- Numerical methods to solve systems of linear equations, ordinary differential and partial differential equations.
- Use of simulation softwares to solve Engineering problems.

Special focus was given to the use of the popular software MATLAB to develop programs for the numerical solution of various types of problems. A session to demonstrate the use of popular process simulation softwares namely, CHEMCAD, in solution of typical problems in chemical engineering was conducted. A mini-project was also given to all the participants and the participants were encouraged to explore the use of MATLAB in solving the mini-project. In the concluding session, Prof. Krishna Vedula of IUCEE 2011 conducted a webinar on the challenges of Engineering education in the coming decades. It is hoped that the workshop will benefit the faculty and encourage them to introduce the use of computational softwares in their respective subjects so as to strengthen the basic fundamentals of the subject.

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