Professional Practice and Industrial Problem Based Innovative Methods for Enhancing Teaching and Learning of New Chemical Engineering Courses

Dr. Lixin Cheng, Dr. Bipro Dubey and Dr. Mark Thompson ACES, Department of Engineering and Mathematics

Hallam University

Sheffield





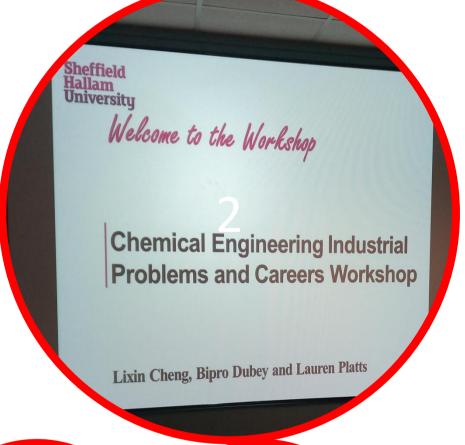
Introduction

- To collaborate with chemical industry, IChemE, and our peers in the development chemical engineering programme
- To develop innovative methods focusing on excellent student learning experience through professional practice and industrial problem solving
- To address the critical issues of the industrial practice and needs in chemical engineering
- To apply innovative learning methods

Industrial Problem Based Methods

- Ability /skills to learn independently
- Critical thinking and problem solving skills
- Ability to learn collaboratively in a team
- Using real industrial cases: automation, bio chemical engineering and chemical engineering safety issues
- Industrial experience and problem solving skills through brainstorm and interacting with invited engineers







Guardian Glass UK

Mondelēz

Lab Practice

Workshop

Conclusions

- Collaboration with IChemE and industry for the development chemical engineering programme
- Enhancement of students' learning experience using innovative methods
- The innovative approach and ideas may be applied to all other engineering courses and further to any other courses at the university

