

Project Based Learning – PBL – Workshop

Invitation to IUCEE Consortium Institutions

WHAT AND WHO IS THE WORKSHOP FOR?

IUCEE will be conducting a workshop on integration of Project Based Learning – PBL – in Engineering Curricula. PBL is a pedagogical approach that actively engages students in real world, community based, and personally meaningful projects. This workshop is meant for faculty from engineering colleges and programs who would like to integrate PBL into their teaching approach, or who already have integrated PBL in their curricula but would like to expand their knowledge and understanding of how to develop, implement and assess effective PBL based approaches in their classes. The PBL workshop will be conducted on January 5th afternoon

WANT TO LEARN MORE?

The workshop will be led by Prof. John Tharakan from Howard University, Washington DC and Dr. Raviprakash R Salagame, from APTIV (Formerly known as Delphi), both of whom are part of the Advisory Council to IUCEE. All aspects of PBL will be covered in the workshop, from what essential components to include, the pedagogical approach to take, the teaching practices to employ and the impact of PBL. In addition, workshop participants will report on and discuss their PBL projects. The workshop will be interactive with opportunities ask questions and get clarifications. **Interested institutions are urged to sign up and attend this workshop.**

AGENDA FOR WORKSHOP

<u>ITEM</u>	<u>DETAILS</u>	<u>FACILITATOR</u>	<u>TIME</u>
INTRODUCTION to PBL	<ul style="list-style-type: none"> • What is PBL • Essential Components of PBL • Pedagogical Approach to PBL • Teaching Practices for PBL • Impact of PBL • Elements of Design Thinking in PBL 	John Tharakan	45 Minutes
Hands on Group Activity 1	<ul style="list-style-type: none"> • Form groups of 4-5 participants • In each group <ul style="list-style-type: none"> • Describe your current PBL process • Outline Essential Components • Identify gaps in your process • Learn best practice from other colleges in your group • Describe how you will implement CPBL or Improve • Top 3 things you will do to improve CPBL in your college 	John Tharakan, Ravi Salagame	45 Minutes group activity + 15 minutes to share with entire group
Break			15 min
INDUSTRY PRACTICES in Product Development	<ul style="list-style-type: none"> • New Product Development in Industry • Design Process and DFSS Practices • Tools and Methods Used 	Ravi Salagame	45 min
PROJECT EXAMPLES	<ul style="list-style-type: none"> • Colleges identify one best project from CPBL and show cases actual projects with photographs, findings and some physical examples – Share best practices to the group 	John Tharakan and Ravi Salagame	45 Minutes

QUESTIONS AND ANSWERS	<ul style="list-style-type: none">Participants ask questions / clarify doubts	All Participants	30 Minutes
ADJOURN			

WORKSHOP DETAILS and SIGNUP

WHEN: 5th January 2020, 2 PM

WHERE: Anurag Group of Institutions, Hyderabad

SIGNUP: mailto:Krishna_Vedula@uml.edu

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BIOS OF WORKSHOP FACILITATORS

John Tharakan is Professor of Engineering in the Department of Chemical Engineering, Howard University, College of Engineering and Architecture. He has served as Chair, Director of Graduate Studies and is founding Faculty Adviser, Engineers Without Borders, HU Chapter. He received his BS (chemical engineering) at Indian Institute of Technology, Madras, MS and PhD in Engineering Science (Biochemical Engineering) from the University of California, San Diego, with post-doctoral training at American Red Cross, Plasma Derivatives Laboratory and appointment as Research Scientist, prior to Howard. His research expertise is in environmental engineering and biotechnology, appropriate technology development, engineering education, sustainable development and ethics in science and engineering, with funding from US EPA, DOD and NSF. He was Fulbright Senior Scholar to India ('06-'07), researching biological methods of waste treatment. With Engineers Without Borders, he has worked on clean water, sanitation and renewable energy technology implementation in Senegal, Kenya and El Salvador. Dr. Tharakan Co-Chairs an on-going series of biennial International Conferences on Appropriate Technology held across Africa facilitating knowledge and technology transfer for social justice, and has served as Editor for published conference proceedings. He was Fulbright-Nehru Senior Scholar ('15-'16) at Cochin University of Science and Technology, India, researching social impact assessment of innovative technology implementation. Dr. Tharakan has authored over 50 peer-reviewed papers and book chapters. He teaches undergraduate and graduate engineering courses in chemical, environmental and bioprocess engineering, hazardous waste treatment, and appropriate technology.

Ravi Salagane [Need Bio / switch Photo

He is a core member of the Indo-Universal Consortium of Engineering Educators, based in Bangalore, India.

Dilip Waikar

Dilip is a member of the Global Industrial Advisory Forum (GIAF) of the Indo Universal Collaboration for Engineering Education (IUCEE). He facilitates the Outcomes Based Education (OBE) cluster of institutions engaged in OBE accreditation.