

Online Registration

Registration Form Link

<https://docs.google.com/forms/d/e/1FAIpQLSdSo6r5qHE4KT5LbE4ZxLM5->

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QR Code



Advisory Committee

- Patron** : Dr. R.Gnanadevan
Registrar (I/C)
Annamalai University
- Co-Patron** : Dr. A.Murugappan
Dean, Faculty of Engineering and Technology
Annamalai University
- Convener** : Dr. R.Dhanasekar
Professor & Head
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Annamalai University
- Coordinator** : Dr.R.Muthuvelayudham
Professor
- Co-coordinators**: Dr. M.Rajasimman
Professor
Dr.MG.Devanesan
Dr.B.Gopalakrishnan
Associate Professor
Dr.P.Manivannan
Assistant Professor
Department of Chemical Engineering
Annamalai University

Annamalai University

(Accredited with 'A' Grade by NAAC)

AICTE Sponsored Short Term Training Programme

on

Recent Advances in Soft Computing Techniques for Optimizing Industrial Process

MOSCHEM - II 2021

[Online Mode]

27.09.2021 to 02.10.2021



Coordinator

DR.R.MUTHUVELAYUDHAM
Professor

Organized by

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Note: All the correspondence will be through email only

AICTE Sponsored
Short Term Training Programme
on
Modeling and Simulation of Industrial Processes
(MOSCHEM 2021)
(Online Mode)

Annamalai University

In the early 1920s Rajah Sir S. R. M. Annamalai Chettiar founded Sri Minakshi College, Sri Minakshi Tamil College and Sri Minakshi Sanskrit College at Chidambaram. In 1928, Rajah Sir S. R. M. Annamalai Chettiar agreed with the local Government to handover the above said institution for establishing a University. Thus, on 01.01.1929 Annamalai University was established as per Annamalai University Act 1928 (Tamil Nadu Act 1 of 1929).

One of the most significant developments is the enactment of the Annamalai University Act, 2013 (Tamil Nadu Act 20 of 2013), which has come into force from September 25, 2013. Annamalai University is accredited with 'A' Grade by NAAC in 2014. "The NIRF-2020" by the Ministry of Human Resource Development (MHRD) has ranked the University in the band 101 - 150 in the overall category as well as the University Category. In the Pharmacy Category the ranking is 12th in India. In the Medical Category the ranking is 35th. "The Times Higher Education World University Ranking - 2021" has ranked Annamalai University in 1000+ for Overall category. In the Subject Category Ranking, 2021, the University is ranked 601+ for Clinical & Health Subjects, in the band of 801-1000 for Engineering, 801+ for Life Sciences and 1000+ in the Physical Sciences Subjects. "The QS World University Ranking - 2021" has ranked Annamalai University in the band of 301-350 in Asia Ranking, and 39 in India Ranking. "The CWTS Leiden Ranking 2019", on scientific impact of universities and on universities' involvement in scientific collaboration & scientific performance, has ranked the University at 23rd based on the number of publications and 7th based on the proportion of publications that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited. Among the top 212 ranked institutions for Higher Education in India the "SCImago Institutional Ranking (2019)" has ranked Annamalai University as 9th in Tamil Nadu and 29th in India.

Annamalai University is one of the largest unitary, teaching, and residential Universities in Southern Asia comprising of 10 Faculties and 49 departments of study. This University has played a pivotal role in providing access to higher education to thousands of youth cutting across the social spectrum, especially from economically and socially disadvantaged classes. In this respect, this University's service to the nation is tremendous

Department of Chemical Engineering

The Department of Chemical Engineering, a DST –FIST sponsored department, was started in the year 1945. It was the second college to offer an undergraduate programme in Chemical Engineering in Tamilnadu. The department is well equipped with most modern equipment. The department, apart from its Bachelor's and the Master's programme in Chemical Engineering, offers M.Tech programmes in Food Processing Technology, Industrial Biotechnology and Industrial Safety Engineering which attracts students from other disciplines of Engineering and Life Sciences. The department offers 12 programmes through Distance Education. Our department has produced 106 Ph.D so far. There are 48 teaching staff members in our department. Among the teaching staff, more than 40 Faculty members with Ph.D qualification having expertise on Process Control, Mass Transfer, Environmental Engineering, Biotechnology, Fermentation Technology, Kinetics & Modelling, Food Processing Technology and Safety Engineering. The department has received research grants worth of Rs.3.7 cores from various funding agencies like DST, UGC, AICTE, DBT, Ministry of Food Processing and Ministry of Environment and Forest etc.

About the Programme

At the beginning of the new millennium the market is characterized by globalization of trade and increasing competition in general, while the community strives for sustainable development of chemical and bio-chemical industries in particular. Process synthesis is for this reason a paramount importance in the integrated Process System Engineering (PSE). Because it deals with integration of process units, material and energy streams into chemical plants, and chemical plants into networks, it is concerned primarily with a part of the overall chemical supply chain on a large scale.

Process modeling clearly plays a central role in Process Systems Engineering as it provides a framework based on mathematical modeling for predicting and optimizing the performance of chemical process systems. The core tool that has emerged from this area is process simulation, a tool that is widely used in the chemical industry. The Sequential Modular Simulator is one of the most pervasive technologies in the chemical processing industries with commercial penetration over 90%. It has also become a standard tool in the undergraduate and graduate curricula of chemical engineering education. While the early work focused on steady-state calculations, more recently it has expanded to include the dynamic calculations as well as the capability of performing optimizations.

Objectives

To enrich the knowledge of faculties on optimization, modeling and simulation technique, through interaction with eminent personalities from industries and academics.

Outcomes

After attending the programme, the participants will be able to

- Acquire knowledge on basic concepts of chemical process optimization, modeling and simulation techniques.
- Handle the soft computing-based modeling softwares and design the process with an optimal backdrop
- Explain the modeling techniques to impart through knowledge on process optimization.

Course Content for Phase - II

- Introduction to Data Science and R
- Data Classification Methods
- Overview of Logistic Regression Models
- optimization Techniques
- Statistical Tools for optimization
- MATLAB programming

Benefits

The participants of the STTP will be provided with series of lectures and training on the above topics. The faculties will get lesson material (soft copy) related to the topics covered in the STTP. The lesson material will serve as a useful reference for their research and academics. The faculty members trained through this STTP will be able to enhance their knowledge and skills on modelling, simulation for chemical processes.

Resource Persons

Experienced faculties of Annamalai University and other premier institutions, experts from industries and R&D laboratories will handle the sessions.

Eligibility

Faculties belonging to all disciplines from Engineering / Polytechnic colleges and interested practicing engineers from industries are eligible to apply. Research scholars and PG Students are also eligible if this course would supplement their research. Admission will be offered subject to the availability based on the AICTE guidelines.

Registration

The aspirants/sponsored applicants can submit their duly filled online registration form. Selection will be based upon their experience in teaching, industry, practicing and research in the above mentioned fields.

Important Dates

Last date for submission of registration form: **September 25th 2021**
Acceptance Notice by e-mail: **September 25th 2021**