

## Online Registration

### Registration Form Link

<https://docs.google.com>

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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  
Department of Chemical Engineering,  
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

### Optimization Modeling and Simulation for Process Industries

MOSCHEM - III 2021

[Online Mode]

04<sup>th</sup> to 09<sup>th</sup> October 2021



### Address for Correspondence

Dr.R.Muthuvelayudham

Dr. M.Rajasimman

Professor of Chemical Engineering

Dr.MG.Devanesan

Dr.B.Gopalakrishnan

Associate Professor in Chemical Engineering

Dr.P.Manivannan

Assistant Professor

Annamalai University

Annamalainagar-608002

Chidambaram

Tamil Nadu.

Mobile: 9578798020,9345646600,9842439783

Email : moschem2021@gmail.com

### Coordinator

**DR.R.MUTHUVELAYUDHAM**

Professor

### Organized by

**Department of Chemical Engineering  
Faculty of Engineering and Technology  
Annamalai University  
Annamalainagar - 608 002  
Tamil Nadu, India**

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 - III**

- Industry 4.0: The Fourth Industrial Revolution
- Component of Industry 4.0
- Industry 4.0 Smart Factory
- Industry 4.0 Supply Chain
- Some Industry 4.0 Technologies
- Soon Everything Will Be Smart
- Connected Devices Projection
- Smart Buildings
- Smart Manufacturing
- Smart Farming
- The opportunities in Industry 4.0

**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: **October 02<sup>nd</sup> 2021**  
Acceptance Notice by e-mail: **October 02<sup>nd</sup> 2021**