AICTE Training & Learning (ATAL) Academy

Sponsored
Faculty Development Program
On

"Computer Science & Biology"

(Applications of Computational Techniques in Chemical Engineering and Biotechnology)

(18th January to 22th January, 2021)

Organized by

Chemical Engineering Department,
Padmabhooshan Vasantraodada Patil Institute of Technology, Sangli - Tasgoan Road,
Post Budhgaon -416304, Sangli, Maharashtra
www.pvpitsangli.edu.in

CHIEF PATRON:

Hon. Shri. Vishal Prakashrao Patil
Chairman, Dr. Vasantraodada Patil Shetkari Shikshan Mandal, Sangli (MH).

PATRONS:

Hon. Shri. Amit Vijayrao Patil
Trustee, Dr.VPSSM
Hon. Shri. Pratapsing L. Rajput
Chairman, Governing Council, Dr.VPSSM
Hon. Shri. Adinath B. Magdum
Secretary, Dr.VPSSM

ADVISOR:

Dr. Dinkar V. Ghewade
Principal, PVPIT, Sangli

COORDINATOR:

Unmesh S. Patil
Associate Professor and Head,
Chemical Engineering Department, PVPIT, Sangli.
Ph: 9850994794 email: hod.chem@pvpitsangli.edu.in

CO-COORDINATOR:

Prashant B. Dhanke
Assistant Professor,
Chemical Engineering Department, PVPIT, Sangli.
Ph: 9226012686
email: prashantdhanke.chem@pvpitsangli.edu.in

About The Institute:

PadmabhooshanVasantraodada Patil Institute of Technology, Sangli was established in the year 1983 by great visionary Padmabhooshan Dr. Vasantraodada Patil, initially with five under graduate programs with sole objective of rural development through technical education. The institute is approved by AICTE New Delhi, recognized by DTE Maharashtra and affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad. Currently the institute is offering eight programs in U.G. and five programs in P.G. The institute is accredited by NAAC and reputed in the region for its high academic standards, well maintained discipline and excellent infrastructural facilities. The institute is located on Sangli-Tasgaon road, at Budhgaon, which is about 7 kms away from Sangli.

About The Department

The department of Chemical Engineering was established in the year 1983 and offering UG program in Chemical Engineering with intake capacity of 60. The department has well qualified, experienced faculty and is strongly backed by alumni who are successful entrepreneurs, consultants, managers, scientist and engineers working in reputed industries / institutes across India and abroad. The UG program in Chemical Engineering is accredited by NBA and the department has signed MOU with many reputed industries for various activities benefiting students.

Department Organizing Committee:

Dr. S.L. Bhagat
Prof. N.V. Ghasghase
Prof. A.D. Patil
Prof.Miss. P.C. Kale
Prof. B. S. Satvekar
Prof. S. Y. Pawar
Prof. V.S. Kore
Prof.Miss. A.P.Patil
Prof. S. S. Patil

About FDP:

Today professionals in Chemical Engineering and Biotechnology field have to deal with complex problems which cannot be solved easily. Most of the processes are characterized by a set of non-linear equations which are difficult to solve. Modern computing tools are available to solve problems related to design, optimization and control of processes to get better productivity with minimum energy costs and prevent wastage of material which can be a serious environmental issue. Computation techniques can help to develop efficient process and reduce production costs for Industries. In the above context the FDP aims at providing insight into application of computations methods to analyze and solve problems related to chemical engineering and biotechnology for better yield and productivity.

Objectives of FDP:

1. To refresh basic concepts of numerical methods and computing in engineering applications.
2. To demonstrate use of computing applications for solving chemical engineering problems.
3. To explore opportunities in the field of computational biology and bioinformatics.
4. To exemplify modeling and simulation of chemical and biochemical processes.

Expected Outcomes:

After completion of the FDP, participants will be able:

1. To use numerical and computing methods.
2. To apply computation techniques to address chemical engineering problems.
3. To identify potential applications of computational biology and bioinformatics.
4. To model chemical and biochemical processes.

Proposed Course Contents:

1. Numerical methods and Computing
2. Thermodynamic Calculations.
3. Modeling and Simulation of Vapor-Liquid equilibrium
4. Modeling of Reactive Distillation.
5. Computational Biology and Bioinformatics
6. Biochemical Processes and Biotechnology.
7. Process Simulation using Aspen Plus.

The entire FDP will be conducted online through a suitable platform.

Resource Persons:

Online sessions will be conducted by eminent professors, researchers and experts from ICT Mumbai, NIT, DBATU Lonere, NCL Pune and Industries.

Targeted Participants:

The faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/ Technicians/ Participants from Industry etc.) and staff of host institutions.

Test and Certificate:

A test will be conducted by coordinator at the end of the program. The certificates will be mailed to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test.

Important Dates:

Last date for registration is **17th January 2021.**

Registration:

For registration follow the link below:
https://atalacademy.aicte-india.org/signup
There is **no registration fee** for this online FDP.

For Registration Help Contact:

Abhijeet D. Patil
Assistant Professor,
Chemical Engineering Department, PVPIT, Sangli
Ph: 9511786987
Email: abhijeetpatil.chem@pvpitsangli.edu.in

Dr. V.P.S.S.M.'s

Padmabhooshan Vasantraodada Patil Institute of Technology, Budhgaon, Sangli

(Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere)

Department of Chemical Engineering

(NBA accredited)

Organizing

AICTE Training & Learning (ATAL) Academy Sponsored
Faculty Development Program

On

"Computer Science & Biology"

(Applications of Computational Techniques in Chemical Engineering and Biotechnology)

Schedule

(18 – 22 January 2021)

Day	Sessions	Topic	Name of the resource person
18/01/2021 - Inauguration (9.45 – 10.15 am)			
Day 1 (18/01/2021) (Monday)	**Session 1 (10.15 – 12.15 pm)**		**Dr. Sanjay Mahajani** (Professor, Department of Chemical Engineering, IIT Bombay)
	Session 2 (1 – 3 pm)	**Modeling in Reactive Distillation**	**Dr. Y. S. Mahajan** (Professor, Department of Chemical Engineering, DBATU, Lonere, Maharashtra)
	Session 3 (3.15 – 5.15 pm)	**Modeling of Distillation Sequences for Azeotrpic System**	**Dr. N. A. Mali** (Scientist, CSIR-National Chemical Laboratory, Pune)
Day 2 (19/01/2021) (Tuesday)	**Session 1 (10.15 – 12.15 pm)**	**Chemical Engineering Thermodynamics- an overview**	**Dr. S. S. Bhagwat** (Professor, Department of Chemical Engineering, ICT, Mumbai)
	Session 2 (1 – 3 pm)	**Sonication and its Applications in Chemical Industry**	**Dr. Satish V. Khedkar** (Associate Professor, Department of Chemical Engineering, College of Engineering & Technology Akola)
	Session 3 (3.15 – 5.15 pm)	**Enjoy Stress**	**Dr. Dilip Patawardhan** (Founder of Nandadeep Netralay, Sangli)
Day 3 (20/01/2021) (Wednesday)	**Session 1 (10.15 – 12.15 pm)**	**Statistical Design of Experiments**	**Prof. Saroj Sundar Baral** (Associate Professor and Head, Department of Chemical Engineering, BITS, Pilani- KK Birla Goa Campus)
	Session 2 (1 – 3 pm)	**Calculations in Chemical Engineering Thermodynamics**	**Dr. S. S. Bhagwat** (Professor, Department of Chemical Engineering, ICT, Mumbai)
	Session 3 (3.15 – 5.15 pm)	**Mathematical modeling and simulation of reactive distillation processes using Aspen Plus and MATLAB**	**Dr. Kiran Patil** (Professor and Head, School of Chemical Engineering, MIT World Peace University, Pune)
Day 4 (21/01/2021) (Thursday)	**Session 1 (10.15 – 12.15 pm)**	**Molecular Phylogeny**	**Dr. Mukesh Kumar Gupta** (Professor, Department of Biotechnology and Biomedical Engineering, NIT Rourkela, Odisha)
	Session 2 (1 – 3 pm)	**Diffusional Studies**	**Dr. Yogesh Nimdeo** (Assistant Professor, Department of Chemical Engineering, IIT Jammu, Jammu & Kashmir)
	Session 3 (3.15 – 5.15 pm)	**Process Modeling and Simulation of Chemical Engineering Systems**	**Dr. Bharat Bhanvase** (Professor and Head, Department of Chemical Engineering, LIT, Nagpur)
Day 5 (22/01/2021) (Friday)	**Session 1 (10.15 – 12.15 pm)**	**Computational Techniques in Chemical Engineering**	**Dr. V. S. Sapkal** (Professor, Department of Chemical Technology, Sant Gadge Baba Amravati University, Amravati)
	Session 2 (1 – 3 pm)	**Applications of Aspen Plus and HYSYS in Chemical Engineering**	**Mr. Sunil Patil** (Principal consultant, Aspen Technology)
22/01/2021 - Valedictory Function (3.15 pm onwards)			

Resource person details

Sr. No.	Resource person name	Affiliation	Contact No.	Email addresses
1	Dr. Sanjay Mahajani	Professor, Department of Chemical Engineering, IIT, Bombay	+91 (22) 2576 7246	sanjaym@che.iitb.ac.in
2	Dr. Y.S. Mahajan	Professor, Department of Chemical Engineering, DBATU, Lonere	9923188748	ysmahajan@dbatu.ac.in
3	Dr. N.A. Mali	Scientist, CSIR-National Chemical Laboratory	+91 20 25902176	na.mali@ncl.res.in
4	Dr. S.S Bhagwat	Professor, Department of Chemical Engineering, ICT, Mumbai	91-223361 2011	ss.bhagwat@ictmumbai.edu.in
5	Mr. Sunil Patil	Principal consultant, Aspen Tech	9822285765	sunil.patil@aspentech.com
6	Dr. Kiran Patil	Professor and Head, School of Chemical Engineering, MIT World Peace University, Pune	020-30273512	kiran.patil@mitpune.edu.in
7	Prof. Saroj Sundar Baral	Associate Professor and Head, Department of Chemical Engineering, BITS, Pilani- KK Birla Goa Campus	0832 – 2580119 (O) +91-9767022314 (M)	ssbaral@goa.bits-pilani.ac.in
8	Dr. Mukesh Kumar Gupta	Professor, Biotechnology and Medical Engineering, NIT, Rourkela	(+91) 661 246 2294	guptam@nitrkl.ac.in
9	Dr. Yogesh Nimdeo	Assistant professor, Department of chemical engineering, IIT Jammu	8169692984	yogesh.nimdeo@iitjammu.ac.in
10	Dr. Bharat Bhanvase	Professor and Head, Department of Chemical Engineering, LIT, Nagpur	9850637449	bharatbhanvase@gmail.com
11	Dr. V. S. Sapkal	Professor, Department of chemical engineering, Sant Gadge Baba Amravati University, Amravati	9422856980	vssapkal@gmail.com
12	Dr. Dilip Patawardhan	Founder of Nandadeep Netralay, Sangli	9923172364	dileep.patwardhan@jeevanvidya.org
13	Dr. Satish V. Khedkar	(Associate Professor, Department of Chemical Engineering, College of Engineering & Technology, Akola)	9850310172	svkhedkar@gmail.com

Sample Certificate

No: ATAL/2020/1606307603

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi – 110 070

AICTE Training and Learning (ATAL) Academy

Certificate

This is certified that **Vivek Sadashiv Kore**, **Assistant Professor** of **Padmabhooshan Vasantraodada Patil Institute of Technology** participated & completed successfully AICTE Training And Learning (ATAL) Academy **Online** FDP on "**Computer Science & Biology**" from **18/01/2021** to **22/01/2021** at **Padmabhooshan Vasantraodada Patil Institute of Technology**.

Advisor-I, ATAL Academy
Mamta Rani Agarwal

Coordinator