



ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES

(UGC AUTONOMOUS)

(Affiliated to AU, Approved by AICTE & Accredited by NBA & NAAC)

Sangivalasa 531 162, BheemunipatnamMandal, Visakhapatnam Dist

DEPARTMENT OF CHEMICAL ENGINEERING

Date: 10-06-2022

DEPARTMENT CIRCULAR

All the IV/IV B. Tech. students of Chemical Engineering are hereby informed to attend the Skill Development course on “Aspen for Simulation and flowsheeting” from 13-06-2022 to 14-06-2022 conducted by Dr. K. China Malakondaiah, Assistant Professor, Chemical Engineering Department. The topics covered are as follows:

Topics
Introduction to Aspen simulation
Property estimation and VLE plots
Simulation of pump and heat exchanger
Simulation of distillation column
Simulation of reactor
Case study of entire flowsheet

Dr. K. China Malakondaiah
Faculty Coordinator

Dr. Ch. Anil

HEAD,
DEPARTMENT OF CHEMICAL
ENGINEERING

SKILL DEVELOPMENT COURSE

on

ASPEN FOR SIMULATION AND FLOWSHEETING

13th to 14th JUNE - 2022

Organized by



**Department of Chemical Engineering
&
ANITS Student Chapter of
Indian Institute of Chemical Engineers,
Waltair Regional Centre**

Anil Neerukonda Institute of Technology and
Sciences (A)
Sangivalasa - 531162
Visakhapatnam Dist, A.P.

ABOUT THE VALUE ADDED COURSE

Aspen Plus is a process modeling tool used for process monitoring, optimization and conceptual design, especially by chemical process industries. This is a simple course on Aspen Plus Simulation engine that will teach one how to model the most common unit operations of a chemical plant. Basic unit operations such as Pump, Reactor, Valve, Heater, Distillation Column etc. will be demonstrated which would be helpful for students, teachers, engineers and researchers in the area of R&D and Plant Design/Operation. The course is didactic, with a lot of applied theory and case studies. At the end of the course one will be able to setup a simulation, run it, get design parameters, optimize and get results. This is highly recommended for those who are willing to take a career in simulation/modeling via software.

Course objectives:

- The student will be able to
1. Model a unit operation
 2. Simulate unit operations and unit processes
 3. Analyze the parameters and variables

Course Modules:

Topic 1: Introduction to Aspen simulation

Topic 2: Property estimation

Topic 3: VLE plots

Topic 4: Simulation of pump

Topic 5: Simulation of heat exchanger

Topic 6: Simulation of distillation column

Topic 7: Simulation of reactor

Topic 8: Simulation of flowsheet

Resource Persons:

Dr. K. China Malakondaiah

Mr. M. Koteswara Rao

Mr. B. Pradeep Santosh Kumar

Dept. of Chemical Engineering, ANITS

Coordinator:

Dr. K. China Malakondaiah

Asst. Prof., Chemical Engineering, ANITS

Mobile No.: 9440437431

Email: kaniganti.che@anits.edu.in

Convener:

Dr. Ch. Anil,

HoD, Chemical Engineering, ANITS



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SANGIVALASA 531 162, BHEEMUNIPATNAM MANDAL, VISAKHAPATNAM DIST

DEPARTMENT OF CHEMICAL ENGINEERING



Aspen for Simulation and flowsheeting

S.No.	Roll No.	Name of the Student	13-06-2022	14-06-2022
1	318126502019	KUNDEM GURU MANIKANTA	K. Gurukul	K. Gurukul
2	319126502001	BANDARU PRATYUSHA KUMAR	[Signature]	[Signature]
3	319126502002	BURADA RADHA SAI	B. R. Sai	B. R. Sai
4	319126502003	CHANDRA MAHANTI VENKATADURGA	[Signature]	[Signature]
5	319126502004	CHINTAKAYALA RANI	Ch. Rani	Ch. Rani
6	319126502005	DEVU VENKATA SAI RAGHAVA	[Signature]	[Signature]
7	319126502006	DORNALA VISHNU VARDHAN REDDY	D. Vishnu	D. Vishnu
8	319126502007	GANTI MAHAPATRUNI VAISHNAVI	[Signature]	[Signature]
9	319126502008	GONNABATHULA SRI SIVA SATYA N	G. Nithulu	G. Nithulu
10	319126502009	KONATHALA CHOLA GOWRI VENKATA	K. Atul	K. Atul
11	319126502010	KOTNI MUTYALA RAHUL		
12	319126502011	LANKALAPALLI NAVEEN KUMAR		
13	319126502012	NEELAPU DANIEL	N. Daniel	N. Daniel
14	319126502014	POTNURU RAHUL		
15	319126502015	SAYED FAYAZ	S. Fayaz	S. Fayaz
16	319126502016	SIGATAPU HEMA CHAND	[Signature]	[Signature]
17	319126502017	SIGIREDDY CHANDRA SEKHAR	S. C. Sekhar	S. C. Sekhar
18	319126502018	TIRRI UDAY	T. Uday	T. Uday
19	319126502020	YETUKURI VAMSI KRISHNAM RAJU		
20	320126502L01	MEDISETTI AKHIL	Akhil	Akhil
21	320126502L02	DODDI BHARANI KUMAR	Bharani Kumar	Bharani Kumar
22	320126502L03	BODDAPU SUNITHADEVI	B. Sunitha Devi	B. Sunitha Devi
23	320126502L04	BATTI MALATHI	B. Malathi	B. Malathi
24	320126502L06	POTHULA SAI SUBRAHMANYAM	P. Sai Subrah	P. Sai Subrah
25	320126502L07	PEDDADA SUSHRUTH SAI KUMAR		
26	320126502L08	DIMILI YOGESWARABABU	[Signature]	[Signature]
27	320126502L09	VATHADA MANIKANTA	[Signature]	[Signature]
28	320126502L11	SAMMIDI KUMARI	S. Kumari	S. Kumari
29	320126502L12	MYLIPILLI SAI ROSHITHA	M. Sai Roshitha	M. Sai Roshitha

31	320126502L14	BEVARA NAVEEN	B. Naveen	B. Naveen
32	320126502L15	PAISAKA CHANDRIKA	P. Chandrika	P. Chandrika
33	320126502L16	KOLATI VIJAY VARMA	V. Vijay Varma	V. Vijay Varma
34	320126502L17	TAMADA AJAY KUMAR		
35	320126502L18	RAPETI GNANESWAR	R. Ganeswar	R. Ganeswar
36	320126502L19	MADICHERLA ASWANI RAM	M. Ashwin Ram	M. Ashwin Ram
37	320126502L20	VAKADA SRAVANI	V. Sravani	V. Sravani
38	320126502L21	KOTA PEDALOVARAJU	K. P. Pedalovaru	K. P. Pedalovaru
39	320126502L22	KANDREGULA MANOHAR		
40	320126502L23	PERAPU NAVEEN		
41	320126502L24	SYED MOHAMMAD FAREED	S. M. Fareed	S. M. Fareed
42	320126502L25	YAMALA RAM KIRAN KUMAR		
43	320126502L26	KONA GANGU NAIDU		
44	320126502L27	MUSKAN	Muskan	Muskan
45	320126502L28	Y V SURYA KANAKA AKHILA	Y. V. Akhila	Y. V. Akhila
46	320126502L33	BONDA GUNA SREE	B. Guna Sree	B. Guna Sree
47	320126502L34	ATTA VAMSI	A. Vamsi	A. Vamsi
48	320126502L35	BUDDHA SURESH		

K. Ch. Mad
Faculty Coordinator

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DEPARTMENT OF CHEMICAL ENGINEERING

Report on Skill Development course on “Aspen for Simulation and flowsheeting” during 13-06-2022 to 14-06-2022

Title: Aspen for Simulation and flowsheeting

Details of the resource person:

- 1) Dr. K. China Malakondaiah, Asst. Professor, Department of Chemical Engineering, ANITS (Ph. No. 9440437431)
- 2) Mr. M. Koteswara Rao, Assistant Professor, Department of Chemical Engineering, ANITS (Ph. No. 7382141550)
- 3) Mr. B. Pradeep Santosh Kumar, Assistant Professor, Department of Chemical Engineering, ANITS (Ph. No. 9494578473)

Topics covered during the course:

The Department of Chemical Engineering, ANITS, Visakhapatnam, in association with ANITS IChE Students chapter under Waltair Regional Centre organized Skill development course on, “Aspen for Simulation and flowsheeting”, during 13-06-2022 to 14-06-2022. The topics covered include introduction to aspen flowsheeting, property estimation and plotting vapor liquid equilibria diagrams, simulation of pump, heat exchanger, distillation column, flash column and reaction. One case study covering the entire plant is also practised to make students familiar with the flowsheeting. A total of 48 students attended the course.

Outcomes:

The students benefited from this course as they learnt

1. Plot VLE diagrams and estimate properties of components
2. Simulate various equipments
3. Analyze the cause and effect of parameters on the end result
4. Flowsheeting of the entire plant.

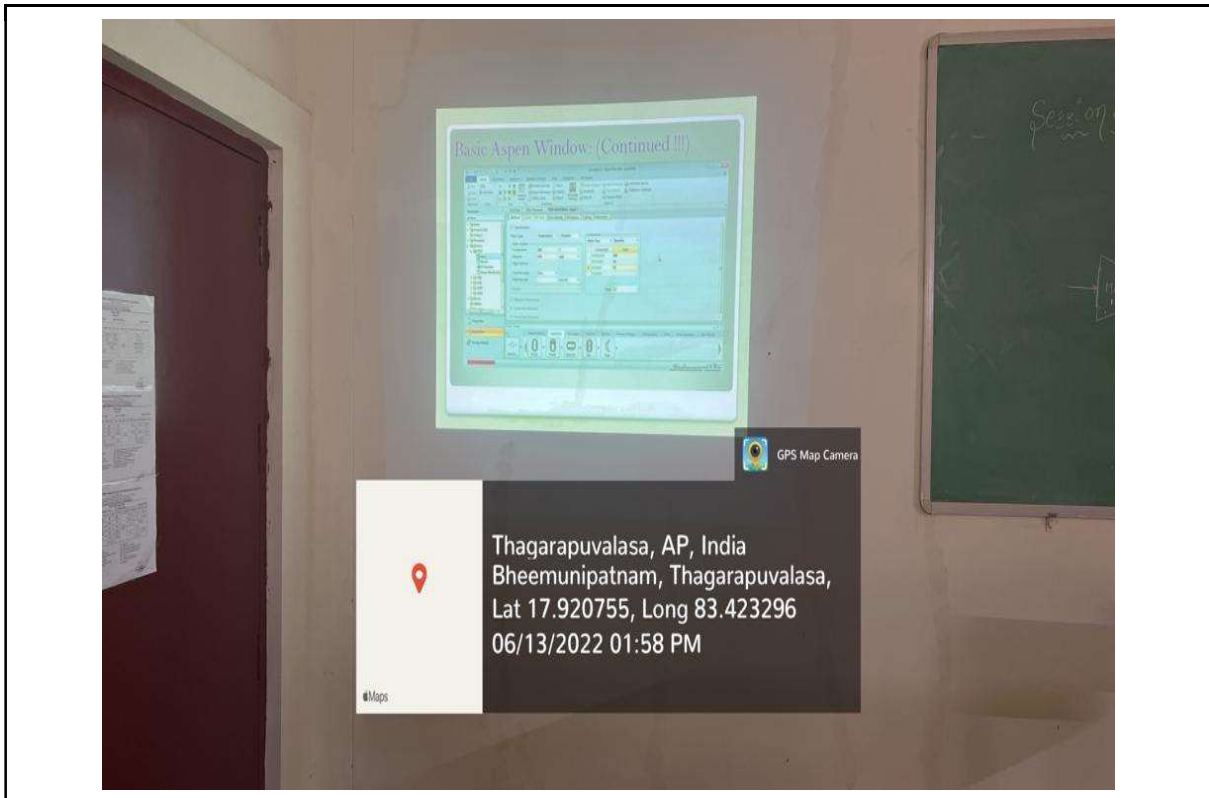


Figure 1: Session on introduction to Aspen plus

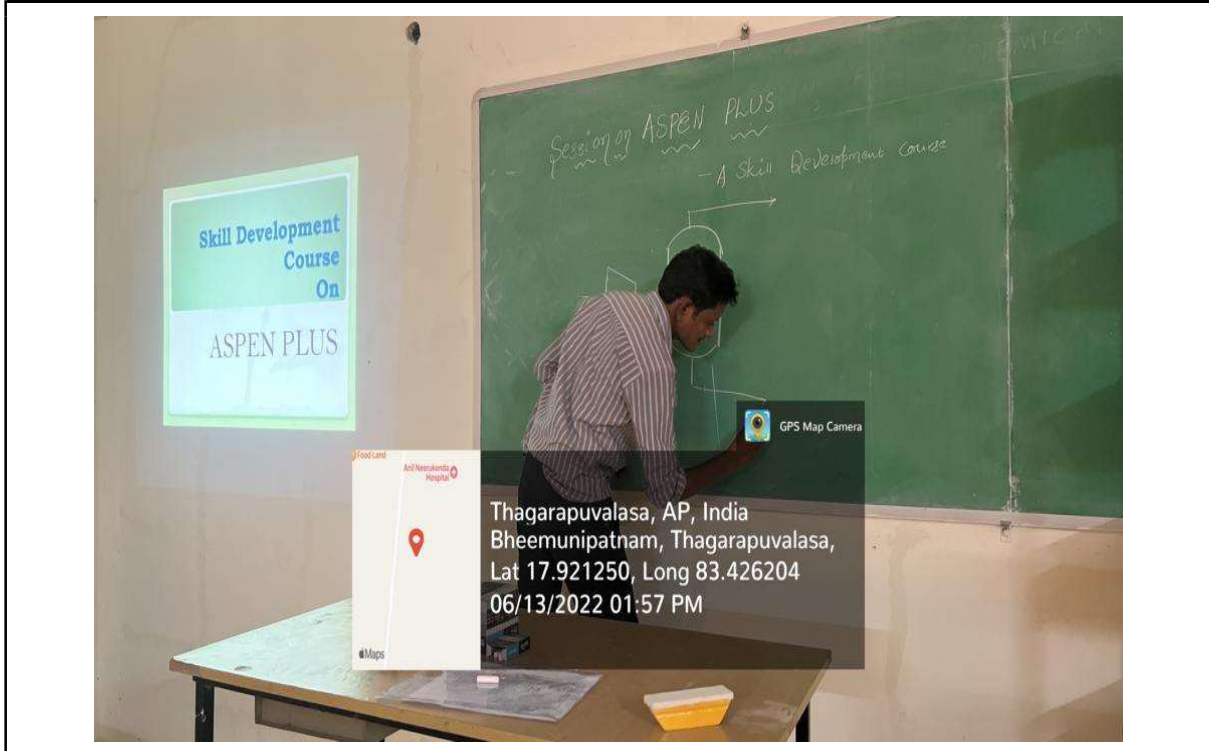


Figure 2: Lecture Session on flash column



Figure 3: Students practicing Aspen plus

K. Ch. Mal

Dr. K. China Malakondaiah
Faculty Coordinator

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