



CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY

Kokapet ( Village), Gandipet, Hyderabad, Telangana-500075. www.cbit.ac.in



COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

43  
years

## Chemical Engineering Department

### Minutes of the 10<sup>th</sup> BoS meeting held on 31-05-2022 (Online)

The 10<sup>th</sup> BoS Meeting was held on 31.05.22 in online mode, due to their personal reasons, which the experts had expressed. The meeting was scheduled from 1 PM to 4 30 PM.

The video recording of the meeting is available at

<https://drive.google.com/drive/folders/1vztcBpJHcyr9nJXxc7TWjbVENr9y7w9n?usp=sharing>

#### Members Present in the meeting are:

##### External Members:

1. Dr. Vinod Janardhan, Professor, Department of Chemical Engg, IIT-Hyderabad.
2. Dr. Sreepriya Vedantam, Principal Scientist, Chemical Engg Sciences, IICT, Hyderabad.
3. Sri.P.S.Pavan Kumar, Chief General Manager, Process Safety, Aurobindo Pharma Ltd., Hyd
4. Dr. Disha Ahuja, Managing Director, Ahuja Green Technologies, Secunderabad
5. Dr. T. Bala Narsaiah, Professor, Department of Chemical Engg, JNTU Anantapur

##### External Members Absent:

6. Dr.Gumma Sasidhar, Professor, Department of Chemical Engg, IIT-Tirupati.
7. Dr.V Ramesh Kumar, Professor, College of Technology, Osmania University, Hyderabad
8. Sri. G.Venu Babu, Deputy General manager, Technical services, Hetero Drugs Ltd., Hyd

##### Internal Members.

1. Dr. P.V.Naga Prapurna, Associate Professor, Chair BoS and I/c-HoD, Chemical Engg. Dept,
2. Dr NLN Reddy, Associate Professor, Chemical Engg. Dept. and Director-CDC, CBIT
3. Sri. I. Balakrishna, Sr Assistant Professor, Chemical Engg. Dept. and BoS - Coordinator
4. Dr. P. Madhuri, Assistant Professor, Chemical Engg. Dept.

The following are the outcomes of the discussions held in the meeting:

#### **Semester V**

1. In core subject, CRE II, unit IV and V topics are to be elaborated and include subtopics.
2. In core subject, MTO II, Unit I topics are to be elaborated and redistribute the topics of Distillation among Unit I and Unit II, evenly.
3. In core subject, PMSO, experts are of the opinion, that Principle of modeling and framing of models are to be included in Unit II and also the numerical methods already studied in mathematics in sem-III. Further, the subject is to be renamed as Process Modeling and simulation (PMS), leaving Optimization term. However, the Optimization topics can be introduced as a Professorial elective with title Optimization of Chemical Processes (OCP) in place of Chemical Process Synthesis in sem-VII. The syllabus from the remaining units also need to be reframed accordingly.
4. Suggestion was given to create awareness to the students on use of "Julia software", which is also another advanced tool for chemical engineers. It may also be introduced in place of MATLAB for problem solving. However, it was submitted to the members that this software shall be taken up as a skill development topic and retain MATLAB as a tool for chemical engineers for R20 also.
5. In Professional Elective (PE) II, Fertilizer Technology syllabus has to be reframed with reference to the syllabus of core subject Chemical Technology being studied in sem-IV and thus avoid repetitive topics.
6. In Mass Transfer Lab, check the experiment being offered under Thermodynamics topic and to re-write that experiment suitably.
7. In PMS Lab, under Part B., examples should be a model (any topic from unit II can be taken). Most of the syllabus covers numerical methods. Suggestions were given to include more of modeling and simulation examples.

#### **Semester VI**

8. In core subject TP, if possible, the syllabus has to be reduced and distributed uniformly to help the student understand this advanced course. Example: Unit I has to be reduced if possible. Text book 1 can be removed as it is very old edition (1960)

9. In core subject CET II, check the topic on Whol's method from Unit III and alter accordingly.
10. The core subject, PCI has to be renamed as "Instrumentation & Process Control (IPC) with reference to GATE syllabus. The syllabus has to cover two units on Instrumentation and three units on Process Control. Mention the tuning methods also as sub-topics in the syllabus. Example: "Cohen Coon" tuning method. Topics on Internal model control, valve sizing, positioner etc. are to be removed. Unit III is to be modified. The topics in theory and lab have to be mapped and changed accordingly.
11. The core subject PDE and its lab are to be named same. In theory, Batch reactor design, "Equipment Design Codes and standards" are to be included. Topics on Plant Design and Economics mentioned in Unit I and in Unit III are to be improved. The topics in Unit V are to be equally into other units. Overall, the syllabus has to be reframed suitably.
12. In Professional Elective (PE) III, FCT, it is proposed to add "Fuel cell fundamentals" by Ryan O Hayre (3rd edition) as a suitable text book and also the syllabus can be modified slightly, if possible.
13. For Professional Elective (PE) III, SHA, two books were proposed which can be helpful for the student to learn industrial point of view. Process Safety book by KSN Raju and "Practical Process Safety management" by B. Karthikeyan. Types of Explosions, Runaway reactions, Safety valve rupture and risk assessment topics have to be included in the syllabus.

#### **Semester VII**

14. Professional Elective (PE) IV, CPS needs to be replaced with an advanced useful subject OPS - Optimization of Chemical Processes. It is observed that CPS has already been studied as CT in sem-IV as core subject.
15. In Professional Elective (PE) IV, PI, important concepts pertaining to conversion of batch to continuous processes have to be introduced. In Unit IV, few topics can be reduced or few topics can be shifted to other units. In Unit IV all the topics starting from 'Classification of compact heat exchangers upto Design of compact HE-example'

need to be removed as they are repetition of core subject HT already being studied in sem-IV.

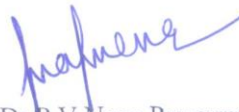
16. In Professional Elective (PE) V, CFD, the textbooks that shall be useful are “Numerical Heat Transfer and Fluid Flow”, by Suhas V. Patankar and “An Introduction to CFD by H K Versteeg and W. Malalasekera. They are to be included as text books/ reference books.
17. In Professional Elective (PE) V, SE, in Unit II, 3R to now in use in industry, 4R (Reduce, Reuse, Recycle, Recover). Under suggested reading, recent version books can be included.

**Others:**

18. It was suggested to offer **Open electives** from the chemical engg department, one subject each for the three open elective pools: in the areas of Industrial Safety, Pollution Control and Energy Engineering.
19. Regarding the Honors and Minor Degree, the expert members agreed to verify and approve the list of courses offered by the department, through email, when announced by NPTEL during July 2022 and January 2023.

The meeting ended on a positive note with above suggestions at 4 30 PM.

  
( I Bala Krishna )  
BoS Coordinator

  
( Dr P V Naga Prapurna )  
Chairman BoS &  
Head of the Dept. Chemical Engg

