

**DEPARTMENT OF CHEMICAL ENGINEERING  
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620015**

COURSE PLAN – PART I			
Course Title	Chemical Reaction Engineering lab		
Course Code	CLLR15	No. of Credits	2
Course Code of Pre-requisite subject(s)			
Session	July/ Jan. 2019	Section (if, applicable)	
Name of Faculty	Dr.P.Sivashanmugam Dr.K.Muthukumar	Department	Chemical Engineering
Email	psiva@nitt.edu	Telephone No.	09442115384
Name of Course Coordinator(s) (if, applicable)	Dr.K. M.Meera S Begum		
E-mail	meera@nitt.edu	Telephone No.	9489066230
Course Type	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
<b>Syllabus (approved in BoS)</b>			
<ol style="list-style-type: none"> <li>1. Adiabatic Reactor</li> <li>2. Batch reactor –I</li> <li>3. Batch reactor –II</li> <li>4. Mixed Flow Reactor</li> <li>5. Mixed Flow Reactor in series</li> <li>6. Plug Flow Reactor</li> <li>7. Mixed Flow Reactor followed by Plug Flow Reactor</li> <li>8. RTD studies in Mixed Flow Reactor</li> <li>9. RTD studies in Plug Flow Reactor</li> </ol>			
<b>COURSE OBJECTIVES</b>			
To provide experience on experimentally finding activation energy and kinetics of particular chemical reaction, evaluation of performance of single and multiples reactors and evaluation of performance of non-ideal reactors			
<b>COURSE OUTCOMES (CO)</b>			
Course Outcomes			Aligned Programme Outcomes (PO)

able to verify the basis learnt in theory on finding activation energy and finding kinetics of particular chemical reaction, evaluation of performance of single and multiples reactors and evaluation of performance of non-ideal reactors	PO1, PO2, PO5 to PO12
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COURSE PLAN – PART II				
<b>COURSE OVERVIEW</b>				
To provide experience on experimentally finding activation energy and kinetics of particular chemical reaction, evaluation of performance of single and multiples reactors and evaluation of performance of non-ideal reactors				
<b>COURSE TEACHING AND LEARNING ACTIVITIES</b>				
<b>S.No.</b>	<b>Week/Contact Hours</b>	<b>Topic</b>	<b>Mode of Delivery</b>	
The whole class strength is divided into two batches and each is divided into 9 batches with three or four members in each batch. Experiments will be conducted in every week for 9 weeks to complete all experiments and two more class will be allocated for redo experiments				
<b>COURSE ASSESSMENT METHODS (shall range from 4 to 6)</b>				
<b>S.No.</b>	<b>Mode of Assessment</b>	<b>Week/Date</b>	<b>Duration</b>	<b>% Weightage</b>
1	Continuous Assessment will be done for all experiments with weightage of 50%			
2	Compensation Assessment*	Redo classes will be conducted for who were absent or not did the experiments properly		
3	Final Assessment *	Final Assessment will be conducted for three hours with experiments and objective type questions with 50% weightage		
<b>*mandatory; refer to guidelines on page 4</b>				
<b>COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)</b>				
Course exit survey may be conducted at end of the end of the course. Beside this students feedback during class committee meeting before first and second assessment will be considered in a positive way and delivered in a corrective way				
<b>COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, , academic honesty and plagiarism etc.)</b>				
<b>MODE OF CORRESPONDENCE (email/ phone etc) Email :psiva@nitt.edu, cell :9442115394</b>				
<b>ATTENDANCE</b>				
➤ At least 75% attendance in each course is mandatory.				

- A maximum of 10% shall be allowed under On Duty (OD) category.
- Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.

### COMPENSATION ASSESSMENT

Redo classes will be conducted for who were absent or not did the experiments properly

### ACADEMIC HONESTY & PLAGIARISM

In the examination no modern gadgets like smart cell phone are allowed. Severe action will be taken against those found indulge in doing mal-practice of any form

### ADDITIONAL INFORMATION : Nil

The passing minimum shall be as per the regulations.

(Peak/3) or (Class Average/2) whichever is lower

### FOR APPROVAL

*Dr. P. Sivashanmugam*

Course Faculty \_\_\_\_\_

CC-Chairperson \_\_\_\_\_

HOD \_\_\_\_\_

*(Dr. P. Sivashanmugam)*

*(Dr. K. W. Sheela)*

*(K. H. Meera S. Raju)*