

<b>NATIONALLY HARMONISED B.Sc. CHEMICAL ENGINEERING PROGRAM</b>				
Course Code	ChEg3123			
Course Name	Reaction Engineering Laboratory			
Degree Program	B.Sc. in Chemical Engineering			
Module Name	<b>Reaction and Biochemical Engineering</b>			
Module Coordinator	N.N.			
Lecturer	N.N.			
Instructor's Contact Information	Office: Phone: Email: Office hour:			
ECTS Credits	<b>3CP</b>			
Student work load per Week	Lecture	Tutorial	Lab/ practice	Home study
	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>
Student work load per semester	<b>0</b>	<b>0</b>	<b>48</b>	<b>32</b>
Mode of Delivery	<b>Parallel ( Semester wise)</b>			
Course Objectives & Competences to be Acquired	<p>The course will give practical skill in reaction mechanisms and demonstrate various reactor types.</p> <p>Hence, upon the completion of laboratory activities the students will able to</p> <ul style="list-style-type: none"> <li>✓ <i>determine the reaction kinetics (Rate of reaction, order of reaction, and rate constant, RTD)</i></li> <li>✓ <i>differentiate between type of reactors</i></li> <li>✓ <i>make experimental setup to measure effect of different parameters on reaction kinetics in different reaction mode, and</i></li> <li>✓ <i>evaluate reactors performance,</i></li> </ul>			
Course Description/Course Contents	<p>Laboratory activities :</p> <ul style="list-style-type: none"> <li>✓ Heat of reaction</li> <li>✓ Heat of combustion</li> </ul>			

	<ul style="list-style-type: none"> <li>✓ Reaction equilibrium</li> <li>✓ Analysis of Kinetics of Catalytic Reactions</li> <li>✓ Analysis of Kinetics of Non-Catalytic Reactions</li> <li>✓ Analysis of Characteristic parameters of <ul style="list-style-type: none"> <li>▪ Batch Reactor</li> <li>▪ Continuous Stirred Tank Reactor</li> <li>▪ Plug Flow Reactor</li> <li>▪ Cascade Reactors</li> </ul> </li> </ul>
Pre-requisites	ChEg3121 (Reaction Engineering I), Pro-requisite (ChEg3122, Reaction Engineering II)
Semester	Year III, semester II
Status of Course	Core
Teaching & Learning Methods	Laboratory practices and writing reports
Assessment/Evaluation	<ul style="list-style-type: none"> <li>✓ Laboratory reports ----- 70%</li> <li>✓ Final exam----- 30%</li> </ul>
Course Policy	<p><b>Attendance:</b> As per the harmonized academic policy, Attendance must be 100%</p> <p><b>Assessments:</b> Students are supposed to handle all the assessments on time.</p> <p><b>Cheating/ Plagiarism:</b> It is strictly forbidden and any miss conduct is accountable as per the students code of conduct.</p>
Literature	<ol style="list-style-type: none"> <li>1. Reaction Laboratory Manual</li> <li>2. Levenspiel, O (2002). Chemical Reaction Engineering, John Wiley &amp; Sons, 3rd edition</li> <li>3. Fogler, HS (1992) Elements of Chemical Reaction Engineering, Prentice-Hall Inc</li> <li>4. Smith, JM (1981) Chemical Engineering Kinetics.</li> <li>5. Perry., Chemical Engineers Hand Book</li> </ol>
Approval Section	<b>Module Team/ Course Chair</b>