

<b>UG</b>	Department: <b>Chemical Engineering</b>
Course Code: <b>CHP212</b>	Course Name: <b>Fluid Particle Mechanics Lab</b>
Credit: <b>2</b>	L-T-P: <b>0-0-3</b>
Version: <b>1</b>	Approved on:
Prerequisite Course: <b>Nil</b>	
<b><i>Any Eight Experiments need to be done from the following:</i></b>	
<ol style="list-style-type: none"> <li>1. Study of Continuous filtration operation through Rotary Drum Filter.</li> <li>2. Study of batch filtration operation through Plate-and-Frame Filter Press.</li> <li>3. Study of flow through Fluidized Beds and pressure drop measurements.</li> <li>4. Determination of Power consumption in Agitating Vessels.</li> <li>5. Determination of viscosity of a fluid by Falling Ball Viscometer.</li> <li>6. Study of power consumption in Crushing and Grinding in Ball Mill.</li> <li>7. Study of Batch Sedimentation Test of calcium carbonate slurry.</li> <li>8. Classification of particles by Elutriator Classifier.</li> <li>9. Sieve Analysis by Sieve Shaker.</li> <li>10. Gas solid separation by Cyclone Separator</li> <li>11. Size reduction by crushers</li> <li>12. Sedimentation study of a slurry in sedimentation set up.</li> </ol>	
<b>Text/Reference Books</b>	
<ol style="list-style-type: none"> <li>1. McCabe, W.L., Smith, J.C., and Harriott, P., "Unit Operations of Chemical Engineering", 6th ed., McGraw Hill, 2001.</li> <li>2. Brown, G. G., et al, "Unit Operations," CBS Publishers &amp; Distributors, New Delhi, 1995.</li> <li>3. Coulson, J. H. and Richardson, J. F., Backhurst, J. R., and Harker, J.H., "Coulson &amp; Richardson's Chemical Engineering," Vol. 2, 4th ed., Asian Books Private Ltd., New Delhi, 1998.</li> <li>4. Perry, R. H. and Green, D.W., "Perry's Chemical Engineers' Handbook," 7th ed., McGraw-Hill, 1998.</li> <li>5. Foust, A.S., et al., "Principles of Unit Operations", 2nd ed., John Wiley, Singapore.</li> <li>6. Chattopadhyay, P. "Unit Operations of Chemical Engineering", Vol. I., Khanna Publishers, Delhi, 1998.</li> </ol>	