Department :Chemical Engineering **Division:** Chemical Engineering

Course Title : Chemical engineering Lab (I)

Aim:

Improving Laboratory skill, Communication, and teamwork skill in students by measuring Experimental Parameters and Analyzing Data Related to Second Year Courses in the Undergraduate Chemical Engineering Program including Fluid Mechanics and Thermodynamics for chemical Engineers

- **Syllabus:**

✓ Measurement of fluid property (Determination of viscosity, volume of liquids, Cp and Cv, Thermal conductivity)
✓ Heat measurement
✓ Refrigeration cycle
✓ Measurement of pressure drop and fluid friction
✓ Pipe network
✓ Investigation of laminar and turbulent flow regimes (Reynolds experiment)
✓ Measurement of flow rate in pipes and channels
✓ Measurement of drag coefficient.
✓ Investigation of pump performance, power and efficiency
✓ Investigation of compressible and incompressible fluids
✓ Determination of fluid velocity distribution in a given geometry

- **Reading Resources:**