NATIONALLY HARMONISED B.Sc. CHEMICAL ENGINEERING PROGRAM				
Course Code	ChEg3115			
Course Name	Mass and Thermal Unit Operations laboratory			
Degree Program	B.Sc. in Chemical Engineering			
Module Name	**Chemical Engineering Basics**			
Module Coordinator	N.N.			
Lecturer	N.N.			
Instructor's Contact Information	Office Phone Email Office hour			
ECTS	3			
Student Work Load	Lecture	Tutorial	Laboratory or Practice	Home study
Weekly basis	**0**	**0**	**3**	**2**
Semester basis(total)	0	0	48	32
Mode of delivery	Parallel (per semester)			
Course Objectives & Competences to be Acquired	The course will introduce the students with practical thermal and mass transfer unit operations. Upon the completion of the courses: The student will be able to make experimental setup to measure effect of different parameters on heat, mass transfer and evaluate performance of transfer equipments.			
Course Description/Course Contents	1. Heat exchanger 2. Boiler 3. Evaporation 4. Distillation 5. Drying 6. Absorption 7. Extraction 8. Leaching 9. Adsorption			
Pre-requisites	Thermal unit operations and in parallel with mass transfer unit operations			

Semester	Year III, Semester II
Status of Course	Compulsory
Teaching & Learning Methods	Laboratory practice
Assessment/Evaluation	• Laboratory report.....70% • End term exam.....30%
Course Policy	**Attendance**: 100% laboratory attendance **Assessments**: students are supposed to handle all assessments on time. **Cheating/plagiarism:** it is strictly forbidden and any misconduct is accountable per the students' code of conduct. Also, please do not chew gum, eat, listen to recorders or CD players, wear sunglasses, or talk about personal problems. Please be sure to turn off pagers and cell phonesbefore class and exam sessions
Literature	• R.E. Treybal : Mass Transfer Operations, • J. D. Seader & E. J. Henley, Separation Process Principles, John Wiley & Sons, 1998. • E. L. Cussler & A. Varma Diffusion : Mass Transfer in Fluid Systems, 2nd ed., CambridgeUniversity Press. • McGraw & Hill C. J. Geankoplis, Transport Processes and Separation Process Principles: Includes Unit Operations, 4th ed., Prentice Hall PTR.
Approval Section	**Module coordinator/module team**