UNIVERSITI TEKNOLOGI MARA

CHE485: CHEMISTRY LABORATORY

Course Name (English)	CHEMISTRY LABORATORY APPROVED
Course Code	CHE485
MQF Credit	1
Course Description	This course provides a complementary practical experience to the theoretical work studied in the physical, inorganic and organic chemistry courses. The course comprises of open-ended laboratory investigations, which require effective communication, delegation and time-management skills to achieve the experimental aims.
Transferable Skills	Chemistry laboratory skills
Teaching Methodologies	Lab Work, Discussion, Supervision
CLO	CLO1 Organise experiments which a complementary to the theoretical work covered in the physical, inorganic and organic chemistry course. CLO2 Analyse well-structured experimental methodologies for open ended methodology for open ended investigation, the procedures and theories incorporated in the laboratory work to present industrial engineering problems. CLO3 Display team work and responsibility with other members on the experimental design and methods adopted, findings and conclusion for the experiments. CLO4 Display leadership skills effectively and positive attitude in conducting experimental work and group discussion.
Pre-Requisite Courses	No course recommendations

Topics
1. Laboratory Safety and Course Briefing 1.1) 1. Lesson plan briefing 1.2) 2. Introduction to the course 1.3) 3. Data acquisition and analyses briefing. 1.4) 4. Lab assessment methods and safety procedures. 1.5) 5. Standard operating procedure briefing.
2. Experiment 1 2.1) Acid and base experiment.
3. Experiment 2 3.1) Kinetics of chemical reaction
4. Experiment 3 4.1) Determination of heat of neutralization.
5. Experiment 4 5.1) Stoichiometry analysis
6. Experiment 5 6.1) Adsorption spectroscopy analysis.
7. Experiment 6 7.1) Identification of organic compounds using instrumental and wet chemistry analyses.
8. Self assessment 8.1) n/a

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Final Test	Test - 50 MCQs.	20%	CLO2
Visual Asssessment	Rubric assessment	10%	CLO4
Visual Asssessment	Commitment and responsibility in team	10%	CLO3
Visual Asssessment	Experimental works (Experiments 1 & 6).	20%	CLO1
Written Report	Report Open-ended experiments (2-5)	40%	CLO2

Reading List	**Reference Book Resources**	• **Silberberg, M 2018, *Chemistry: The molecular Nature of Matter and Change*, 8 Ed., McMgraw-Hill, NY**
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	