



UNIVERSITI TEKNOLOGI MARA

FSG301: LABORATORY MANAGEMENT

Course Name (English)	LABORATORY MANAGEMENT APPROVED
Course Code	FSG301
MQF Credit	3
Course Description	This is a management laboratory course which provides a basic knowledge on the laboratory management such as general safety guidelines to ensure a safe environment while working in the laboratory. Topic such as total quality management systems in the laboratory will facilitate the mutual recognition of analytical data between the laboratories and trading partners in a relation to the regulations and international standards.
Transferable Skills	Demonstrate social skills and responsibility to society and relevant stakeholders. Practice ethical standards and professionalism. Demonstrate relevant and appropriate managerial skills.
Teaching Methodologies	Lectures, Case Study, Discussion, Project-based Learning
CLO	CLO1 Demonstrate social responsibility skills in organizing appropriate safety and health activities with community. CLO2 Demonstrate the compliances toward the code of practices in the scope of environmental quality act. CLO3 Manage the ideas in organized manner by introducing the quality management systems in the laboratory.
Pre-Requisite Courses	No course recommendations
Topics	
1. Safety and Safety Awareness 1.1) 1.1 Definition of safety, accidents, hazards and risks 1.2) 1.2 Incident and causes 1.3) 1.3 Accident Causation Theories 1.4) 1.4 Productivity aspects of safety 1.5) 1.5 Safety and Health Policy statement 1.6) 1.6 Steps in Implementation Safety and Health Policy	
2. OSH Risk Management 2.1) 2.1 Basic principle of risk management 2.2) 2.2 Hazard Identification 2.3) 2.3 Risk Assessment 2.4) 2.4 Risk control 2.5) 2.5 Accident record	
3. Classification of Hazards 3.1) 3.1 Physical hazard 3.2) 3.1.1 Mechanical hazard 3.3) 3.1.2 Electrical hazard 3.4) 3.1.3 Radioactive hazard 3.5) 3.2 Biological hazard 3.6) 3.3 Chemical Hazard 3.7) 3.4 Ergonomic Hazard 3.8) 3.5 Psychosocial hazard	

4. Laboratory Legislations

- 4.1) 4.1 Occupational Safety and Health Act (OSHA)1994
- 4.2) 4.1.1 Introduction to the aims and objectives of OSHA
- 4.3) 4.2 Relevant regulations to OSHA
- 4.4) 4.2.1 Chemical Industrial Major Accident Hazard Regulation, 1996
- 4.5) 4.2.2 Classification, packaging and labeling of Hazardous Chemical Regulation, 1998
- 4.6) 4.2.3 Use and Standard of Exposure of Chemical Hazardous to Health Regulation, 2000
- 4.7) 4.2.4 Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease, Regulation 2004
- 4.8) 4.3 Equipment installation and Certificate of Eligibility according to Factory Machinery Act
- 4.9) 4.4 Environmental Quality Act
- 4.10) 4.4.1 Introduction to the aims and objectives of Environmental Quality Act
- 4.11) 4.4.2 Environmental audit
- 4.12) 4.4.3 Report on Impact on environment resulting from prescribed activities
- 4.13) 4.4.4 Scheduled waste management
- 4.14) 4.5 Regulations to Environment Quality Act
- 4.15) 4.5.1 Environmental Quality (Industrial Effluent) Regulations 2009
- 4.16) 4.5.2 Environmental Quality (Licensing) Regulations 1977
- 4.17) 4.5.3 Environmental Quality (Sewage and Industrial Effluents) (Amendment) Regulations 2000

5. Quality Systems in Laboratory

- 5.1) 5.1 Quality Systems
- 5.2) 5.2 ISO 9000 - Quality management
- 5.3) 5.3 ISO/IEC 17025
- 5.4) 5.4 ISO/IEC 17021
- 5.5) 5.5 Product Certification
- 5.6) 5.5.1 ISO/IEC 17065
- 5.7) 5.5.2 Good Manufacturing Practices (GMP)
- 5.8) 5.5.3 Islamic Manufacturing Practices (IMP)
- 5.9) 5.6 Occupational Safety and Health Management System (OSHMS)
- 5.10) 5.6.1 MS 1722:2011
- 5.11) 5.6.2 ISO 45001:2018

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Community Service	Feedback from community for the SULAM project	10%	CLO1
	Written Report	Reflection report prepared from the SULAM project	30%	CLO1
	Written Report	Write one proposal for prospective application of the quality system	30%	CLO3
	Written Report	Write one report of case study from the data collection or investigation of audit report	30%	CLO2

Reading List	Reference Book Resources	<ul style="list-style-type: none"> • <i>Laws of Malaysia Act 514 2006, Occupational Safety and Health Act 1994</i>, Percetakan Nasional Malaysia Bhd • <i>Laws of Malaysia Act 139 2006, Factories and Machinery Act 1967 (Revised - 1974)</i>, Percetakan Nasional Malaysia Bhd • <i>Laws of Malaysia Act 127 2006, Environmental Quality Act 1974</i>, Percetakan Nasional Malaysia Bhd • Kementerian Kesihatan Malaysia. 2016, <i>Guideline on Food Safety is the responsibility of the Industry (MeSTI) Certification Scheme</i> • Jabatan Kemajuan Islam Malaysia 2015, <i>Manual Procedure for Malaysia Halal Certification</i>, 3rd edition 2014 Ed.
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	