

COURSE INFORMATION

School/Faculty:	Faculty of Technology and Informatics Razak (FTIR)	Page:	1 of 5
Program name:	Executive Diploma in Occupational Safety and Health		
Course code:	FRSS 1163	Academic Session/Semester:	2021/2022-1
Course name:	Occupational Safety	Pre/co requisite (course name and code, if applicable):	
Credit hours:	3		

Course synopsis	This course introduces students to the fundamentals occupational safety which cover topics in hazards identification and accident prevention. Safety related topics are covered in length to include machinery safety, electric passenger and goods lift safety, pressure boiler and UPV, electrical safety and hand and power tools safety. Other topics are welding and hot work, fire safety, mechanical handling, work on height, MVA, housekeeping and maintenance safety. Students should be able to identify all safety hazards at the workplace and recommend control measures.			
Course coordinator (if applicable)	PM Dr Abd Rahman bin Abdul Rahim			
Course lecturer(s)	Name	Office	Contact no.	E-mail
	PM Dr Abd Rahman bin Abdul Rahim		019-756-8588	rahmanar@utm.my
	Dr. Sa'ardin Bin Abdul Aziz		019-264 3641	saa.kl@utm.my
	Dr. Mohd Yusof Bin Md Daud		019-603 8525	yusof.kl@utm.my

Mapping of the Course Learning Outcomes (CLO) to the Programme Learning Outcomes (PLO), Teaching & Learning (T&L) methods and Assessment methods:

No.	CLO*	PLO (Code)	**Taxonomies and ***generic skills	T&L methods	****Assessment methods
CLO1	Identify various safety hazards at the workplace	PLO1	C3	Lecture, active learning	T (15%) PMA (20%)
CLO2	Describe steps to reduce the risk of accidents at the workplace	PLO2	C3	Lecture, active learning	T (15%) PMA (20%)
CLO3	Explain related safety requirements according to the regulations	PLO3	P3 CTPS3	Lecture, active learning	Case Study presentation (20%)
CLO4	Prepare safety plan according to related safety hazards	PL04	P4, A2	Lecture, active learning	PMA (10%)

*This is the basic mapping required for the CI. Any added information is allowed (extra columns for weight or other elements) **provided** this is made consistent for all CI at program/school/faculty level.*

**Up to 5 CLO*

*Refer **Taxonomies of Learning and ***UTM's Graduate Attributes for UG and Generic Skills for PG, where applicable for measurement of outcomes achievement*

Prepared by:	Certified by:
Name: PM Dr Abd Rahman bin Abdul Rahim	Name:
Signature: <i>Abd Rahman</i>	Signature:
Date: 15 September 2020	Date:

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****T – Test; Q – Quiz; HW – Homework; Asg – Assignment; PR – Project; Pr – Presentation; F – Final Exam etc.

Details on Innovative T&L practices:

No.	Type	Implementation
1.	Active learning	Conducted through in-class activities
2.	Lecture	Conventional Lecture / Online Learning

Weekly Schedule:

Week 1	Chapter 1: Occupational Safety Safety management / workplace hazard identification Building and plant layout / machinery installation Factories and Machinery (Notification, Certificate of Fitness and Inspection) Regulations, 1970 Factories and Machinery (Certificates of Competency Examinations) Regulations, 1970 (Revised 1983)
Week 2	Chapter 2: Machinery Safety Machinery hazards Guarding and fencing of machinery Safe machine operations and maintenance Factories and Machinery (Fencing of Machinery and Safety) Regulations 1970
Week 3	Chapter 3: Electric Passenger and Goods Lift Safety Types of lifting machines Hazards of lifting machines General and legal requirements for safe lifting – PMA, certificate of fitness Factories and Machinery (Electric Passenger and Goods Lift) Regulations, 1970
Week 4	Chapter 4: Steam Boiler and UPV Types of pressure vessel fired and unfired Hazards of pressure vessels Legal and general requirements of pressurized equipment Factories and Machinery (Steam Boiler and Unfired Pressure Vessel) Regulations, 1970
Week 5	Chapter 5: Electrical Safety Electricity generation Electrical hazards Work safe with electricity Electricity Supply Act 1990
Week 6	Chapter 6: Hand and Power Tools Types of hands and power tools Hazards of hand and power tools / injury from accidents Safety of hands and power tools
Week 7	Chapter 7: Welding and Hot work Types of welding and hot work Hazards in welding and hot work Safety in welding and hot-work – PTW, LOTO
Week 8	Mid-Semester Break
Week 9	Chapter 8: Fire Safety Fire triangle / Fire class Fire suppression systems and extinguishing agents

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Week 10	Chapter 9: Mechanical Handling Types of mechanical handling – conveyor, forklifts, cranes Hazards of mechanical handling Safety of mechanical handling
Week 11	Chapter 10: Work on Height Hazards of working on heights Ladders, scaffoldings and work platforms Safety of working on heights
Week 12	Chapter 11: Motor Vehicle Safety Motor vehicle hazards and accidents Traffic control and safety
Week 13	Chapter 12: Housekeeping Housekeeping hazards 5-S and housekeeping Factories and Machinery (Safety, Health and Welfare) Regulations, 1970
Week 14	Chapter 13: Maintenance Safety Hazards in maintenance Maintenance safety systems – PTW, LOTO Certificated machinery maintenance – boiler, lifts, pressure vessels, electrical generators
Week 15	Chapter 14: Special Topics in Occupational Safety Current issues in occupational safety

Transferable skills (generic skills learned in course of study which can be useful and utilised in other settings):

Team working
Written communication

Student learning time (SLT) details:

Distribution of student Learning Time (SLT) Course content outline					Teaching and Learning Activities		TOTAL SLT
	Guided Learning (Face to Face)				Guided Learning Non-Face to Face	Independent Learning Non-Face to face	
CLO	L	T	P	O			
CLO1	4h			9h	10h	10h	33h
CLO2	4h			9h	10h	8h	31h
CLO3	4h			3h	10h	10h	27h
CLO4	4h			5h	10h	10h	29h
Total SLT	16h			26h	40h	38h	120h

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Continuous Assessment		PLO (Code)	Percentage	Total SLT
1	Test 1	PLO1	15	As in CLO 1 (1h)
2	Test 2	PLO2	15	As in CLO 2 (1h)
3	Case Study Presentation	PLO3	20	As in CLO 3 (4h)
Final Assessment			Percentage	Total SLT
4	Post Module Assessment	PLO1, PLO2, PLO4	50	As in CLO4 (4h)
Grand Total			100	120h

L: Lecture, T: Tutorial, P: Practical, O: Others

Special requirement to deliver the course (e.g.: software, nursery, computer lab, simulation room):

Nil

Learning resources:

Text book (if applicable)

Friss, R.H. Occupational Safety and Health, Jones and Bartlett, Massachusetts. 2016.

Main references

Jensen, Roger, C. Risk-Reduction Methods for Occupational Safety and Health, 2nd Edition. John Wiley and Sons, New Jersey, 2020.

Additional references

1. Ridley, J. Safety at Work. 2nd Edition. Butterworth, 2003.
2. Accident Prevention Manual for Business & Industry (Engineering & Technology – National Safety Council US, 3th Edition, 2009.

Academic honesty and plagiarism: (Below is just a sample)

Assignments are individual tasks and NOT group activities (UNLESS EXPLICITLY INDICATED AS GROUP ACTIVITIES)
Copying of work (texts, simulation results etc.) from other students/groups or from other sources is not allowed. Brief quotations are allowed and then only if indicated as such. Existing texts should be reformulated with your own words used to explain what you have read. It is not acceptable to retype existing texts and just acknowledge the source as a reference. Be warned: students who submit copied work will obtain a mark of **zero** for the assignment and disciplinary steps may be taken by the Faculty. It is also unacceptable to do somebody else's work, to lend your work to them or to make your work available to them to copy.

Other additional information (Course policy, any specific instruction etc.):

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Disclaimer:

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Note:

This template has been filled in as a **sample** for a UG engineering program, please use the proper PLO code for other academic programs (Refer [Hasil Pembelajaran Program \(PLO\) UTM berdasarkan MQF 2.0](#) at CIDU web page).