

**SAFETY & HEALTH OFFICER:  
INTRODUCTORY COURSE  
GLRT0060-SHO**

**UTM Professional Skills Certificate**

**Trainer**  
Assoc. Prof. Sr Dr. Mohd Saidin Misnan, CQS

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**HEALTH AND SAFETY OFFICER: INTRODUCTORY COURSE**

**Programme**

TIME	DAY 1	DAY 2
9.00 – 10.30	1. Perspective and occupational safety and health (OSH) 2. SHO: Route to OSH Career 3. OSH legislation and regulations 4. Incident Prevention and Accidents causations 5. Hazards at Workplace 6. OSH Management Systems 7. Managing, implementation and controlling of OSH Audit	Review of TASK (Group work)
11.00 – 12.30	Case study analysis on occupational safety and health for workplace	
12.30 – 2.00	BREAK	Submission of TASK
2.00 – 5.30	Presentation of Case study analysis on occupational safety and health for workplace	

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**Student learning time (SLT) and Assessment**

Nos.	Student learning time (SLT)	Percentage	Total SLT (hr)
1	Lecture/discussion		12
2	Reflection Report	40	1
3	Case Study Report	50	2
4	Group Presentation	10	1
	Grand Total	100	16

Individual Task : 1-13  
Group Task : 14-15 (5 members)

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**Resources**

- Open sources from:
  - HIRARC Guidelines\_(web\_www.dosh.gov.my)
  - HIRARC form (<https://www.utm.my> › oshe
  -



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**1**

# Perspective and occupational safety and health (OSH)

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LRT 3 project incident: Contractor issued stop work order, investigation ongoing



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**Scaffolding of LRT 3 Project Collapsed; Causing 1 Death, 4 Injuries, [July 30, 2021](#)**

• Scaffolding on the Light Rail Transit (LRT) 3 project adjacent to Premier Hotel at Jalan Langat, Bandar Bukit Tinggi, Klang which is under construction collapsed yesterday (Thursday, 29th July). The incident that occurred at 2:15 pm resulted in five foreign workers trapped under the rubble with all the victims successfully removed.

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**Bangunan Jaya Supermarket runtuh, tiga maut [Ogos 10, 2021](#)**

PETAING, JAKIM: Satu lagi insiden fatal pada 2.30 pagi ini di lokasi bangunan bawah templat atas kavita Bangunan yang pernah menempati Jaya Supermarket, di Seksyen 14A, Petaling Jaya yang runtuh pada petang semalam.

Kelua Polis Daerah Petaling Jaya HCP Aqmarud Mohamed berkata insiden itu berlaku selepas kerja pasukan mencari dan menyelamat mengambil langkah berjaga-jaga dalam usaha mencari mangsa tanpa mengira masa berjangka yang bersifat tidak terperangkap di bawah templat itu.

Penemuan ini merupakan jumlah ketiga insiden sejak ia memulakan operasi kepada tiga, sejak dua macam dilema semalam. Empat lagi mangsa diperolehi masih terperangkap.

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Office

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**How to manage Occupational Safety and Health at the work place?**

Requires the commitment of the manager to complete **3 steps:**

1. The workplace must have a **Policy Statement** on Occupational Safety and Health;
2. **Planning** (including the implementation of HIRARC, training, instructions and auditing) on Occupational Safety and Health.
3. To take **remedial action** for any improvement to be made.

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**OSH Act?**

- **OSH Act 1994 (Malaysia) Part I - Preliminary Short title**
- Act applies throughout Malaysia to **the industries**.
- **Nothing** in this Act shall apply to work **on board ships governed** by the Merchant Shipping Ordinance 1952, the Merchant Shipping Ordinance 1960 of Sabah or Sarawak or the armed forces.

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**OSH Act Background**

- **Gazetted on February 24, 1994.**
- The legislation requires all employers with **more than five employees** to formulate a written Safety and Health Policy of their workplaces.
- The Act sets out the responsibilities of the **employers** and **employees** in maintaining a safe and healthy working environment.
- 

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## OSH Act Background



- The two main OSH Acts

- Factories and Machinery Act 1967** (Act 139)
- Occupational Safety and Health Act 1994** (Act 514)

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## Objective Of The OSH Act



- to make further provisions for securing that safety, health and welfare of **persons at work**, **for protecting** others against risks to safety or health in connection with the activities of persons at work, **to establish the National Council for Occupational Safety and Health**, and for matters connected with it.

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## Who involved under Occupational Safety and Health Act 1994 (Act 514).?

Everyone who "work" in

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>Manufacturing Sector;</li> <li>Mining and Quarrying;</li> <li>Construction;</li> <li>Agriculture,</li> <li>Forestry and Fishing;</li> <li>Utilities;</li> <li>Storage and Comm.</li> </ul> | <ul style="list-style-type: none"> <li>Wholesale and Retail Trades;</li> <li>Hotel and Restaurant;</li> <li>Finance,</li> <li>Insurance,</li> <li>Real Estate and Business Service Sector;</li> <li>Public Services</li> </ul> |
|---|--|

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2022



OCCUPATIONAL ACCIDENT STATISTICS BY STATE JANUARY TO NOVEMBER 2022 (REPORTED TO DOSH ONLY)

STATE	NPD	PD	DEATH	TOTAL
JOHOR	1082	59	24	1165
KEDAH	398	3	5	406
KELANTAN	115	4	5	124
MELAKA	362	7	2	371
NS SEMBILAN	382	13	6	401
PAHANG	366	9	19	394
PERAK	747	26	20	793
PERLIS	12	0	2	14
PULAU PINANG	695	15	13	723
SABAH	227	22	9	258
SELANGOR	290	26	20	336
TERENGGANU	1301	38	29	1368
WPKL	155	3	11	149
WP LABUAN	168	1	19	208
<b>TOTAL</b>	<b>6306</b>	<b>227</b>	<b>186</b>	<b>6719</b>

LEGEND:  
PD - PERMANENT DISABILITY  
NPD - NON PERMANENT DISABILITY

Source: International Policy and Research Development Division

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2022



OCCUPATIONAL ACCIDENT STATISTICS BY SECTOR JANUARY TO NOVEMBER 2022 (REPORTED TO DOSH ONLY)

SECTOR	NPD	PD	DEATH	TOTAL
Hotel and Restaurant	118	1	0	119
Utilities (Electricity, Gas, Water and Sanitary Service)	178	2	9	189
Finance, Insurance, Real Estate and Business Services	345	4	24	373
Construction	87	2	59	148
Transport, Storage and Communication	234	4	10	248
Manufacturing	4273	183	58	4514
Wholesale and Retail Trade	114	3	2	119
Public Services and Statutory Authorities	74	3	0	77
Mining and Quarrying	27	2	8	37
Agriculture, Forestry and Fishery	856	23	16	895
<b>TOTAL</b>	<b>6306</b>	<b>227</b>	<b>186</b>	<b>6719</b>

LEGEND:  
PD - PERMANENT DISABILITY  
NPD - NON PERMANENT DISABILITY

Source: International Policy and Research Development Division

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2022



## National Occupational Accident & Fatality Rate

Year	2014	2015	2016	2017	2018	2019	2020	2021
Accident Rate	3.10	2.81	2.88	2.93	2.40	2.71	2.18	1.43
Fatality Rate	4.21	4.84	4.84	4.90	4.14	3.83	2.09	2.00

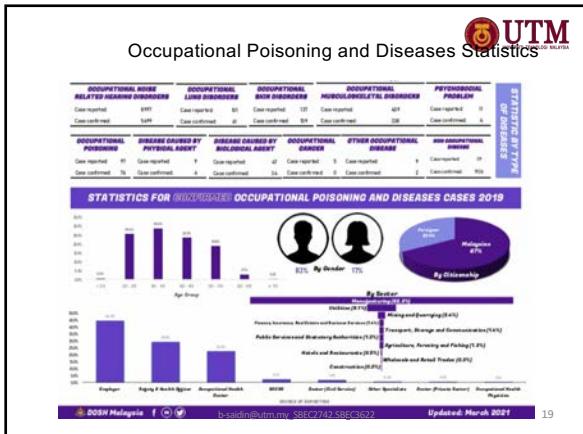
Notes:

1.Occupational accident rate per 1,000 workers

2.Occupational fatality rate per 100,000 workers

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**Fatal Accident Case till, June 2022**

Date	Title Case	Location	Summary Case
2022-08-31	The worker suffered burns and later died as a result of the split hot sludge.	Manufacturing, Johor	A foreign worker suffered burns and later died after being hit by hot sludge during cleaning work on the 'deiling tank'.
2022-08-29	An auxiliary policeman died after being hit by a lorry.	Agriculture, Johor	An auxiliary police officer died after colliding with the rear of a lorry on the side of the road while returning from a patrol to the office.
2022-08-25	Worker killed after falling from a high.	Construction, Sarawak	A foreign sub-contractor worker died after falling from the 13th floor while working overtime installing aluminum windows.
2022-08-24	The worker was killed after falling down the elevator shaft.	Construction, Pulau Pinang	A foreign sub-contractor for elevator installation was killed after falling from the 16th floor while the victim was inspecting the elevator installation.
2022-08-22	The worker died, trapped in the conveyor machine.	Manufacturing, Johor	A worker who was doing repair work on the 'thrasher' door was killed after slipping and falling into the conveyor and getting stuck at the end of the operating machine.
2022-08-21	Dump truck driver killed.	Construction, Terengganu	A dump lorry driver was killed after plunging a 3-meter high hill after the lorry he was driving lost control.

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**Prosecution Case 2022, Sept.**

MEGA POWER ENGINEERING SDN. BHD.	2022-07-27	Construction	Sessions Court 4 Seremban	Section 15(1), OSHA 1994. Failure to ensure so far as is practicable, the safety, health and welfare of employee at work by providing safe operating procedure (SOP) of lifting works using mobile crane.
KART FOOD INDUSTRIES SDN. BHD.	2022-07-27	Manufacturing	Sessions Court Klang	Section 15(1), OSHA 1994. Failure to ensure so far as is practicable, the safety, health and welfare of employee at work by providing safe operating procedure (SOP) of cleaning conveyor.
FAQUA BUILD SDN. BHD.	2022-07-27	Construction	Sessions Court Klang	Section 15(1), OSHA 1994. Failure to ensure so far as is practicable, the safety, health and welfare of employees at work by providing safe workplace by installing a strong fence rail on the open edge.
OCNEED WATER TECHNOLOGY SDN. BHD.	2022-07-27	Construction	Sessions Criminal Court 12	Section 15(1), OSHA 1994. Failure to ensure so far as is practicable, the safety, health and welfare of employee at work by ensuring that ditch digging works are carried out in accordance with safe operating procedure as stated in Safe Operating Procedures (SOP).
UM CONSTRUCTION SDN. BHD.	2022-07-27	Construction	Sessions Criminal Court 13	Section 15(1), OSHA 1994. Failure to ensure so far as is practicable, the safety, health and welfare of employee at work by providing safe workplace.

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**Rationale for the OSHAct**

**The most debilitating experience one can have on the job is to be involved in, or exposed to, a work related accident or illness.**

**Effects:**

- Psychologically stressful for the victim's fellow workers
- Extraordinarily expensive for the victim's employer

**Congress passed the OSH Act with the following stated purpose:**

**“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources”**

Occupational Safety and Health Act (OSHAct), 1970.

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**Rationale of OSH Act**

- Uniform law was needed to help reduce the incidence of work-related injuries, illnesses, and deaths and the OSH Act 1970 addressed this need.**

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**Safety n Health Officer**

- An employer who is classified under the Safety and Health Act 1994 must employ a competent person to act as a Safety and Health Officer.
- The Safety and Health Officer is to ensure that the Safety and Health Act 1994 is complied with and also instrumental in promoting a safe and healthy working environment.

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## End of this Session

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**2**

## SHO: Route to OSH Career

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## Career in Occupational Safety and Health

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### What is OSH

Occupational safety and health is an area concerned with protecting the safety, health and welfare of people engaged in work or employment.

Inclusive of other people than the workers, properties and nature (environment)

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### Why become OSH Officer



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### Who is OSH Officer?

Description of SHO stipulated under Sect. 29 OSHA 1994, SHO Reg. 1997 & SHO Order 1997 which explains that a SHO are:

- Registered with DOSH
- Competent person in managing OSH at work place
- Exclusively appointed to ensure compliance with the relevant laws

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**Registered OSH Officer**

**Qualification required to register as SHO:**

- Diploma or higher degree level
- Completed approved training course (i.e. Certificate in SHO) plus three years experience in OSH management
- Experienced in OSH for ten years and above @ any approved qualifications or training determined by the authority

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**Where to works?**

**10 categories except army and shipping**

- Manufacturing
- Mining & Quarry
- Construction
- Agriculture, forestry & fishing
- Utilities
- Transport, storage & communication
- Wholesales & retails
- Hotels and Restaurants
- Finance, Insurance, Real Estate & Business Services
- Public Services & Statutory Authorities

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**Which company must have SHO?**

Under SHO Order 1997;

- Contract of BO or WEC more than RM20 mil
- Any ship building, gas processing or petrochemical industries, chemical and allied industry employing >100 workers
- Any boiler/pressure vessel manufacturing industries, wood working industries, and cement manufacturing industries employing >100 workers
- Any other manufacturing industries employing >500 workers

FACTORIES AND MACHINERY ACT 1967 [ACT139]  
P.U. (A) 328/1986  
FACTORIES AND MACHINERY (BUILDING OPERATIONS AND WORKS OF ENGINEERING CONSTRUCTION) (SAFETY) REGULATIONS 1986  
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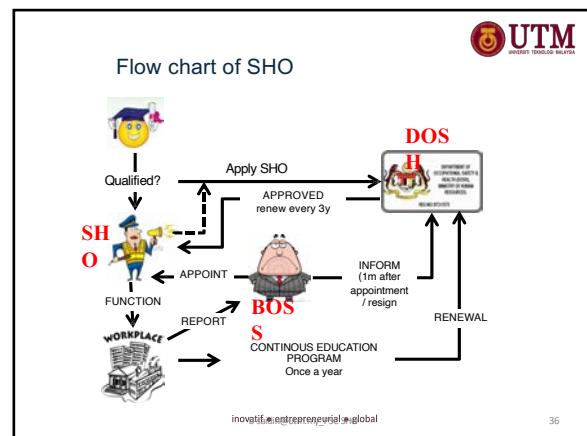
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**Functions of SHO**

**Under SHO Reg. 1997, briefly SHO responsibilities:**

- Advisor
- Inspector or auditor
- Coordinator
- Investigator
- Organizer
- Secretary
- Reporter
- Magistrate
- Quality checker

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**COURSE TITLE** : Safety and Health Officer  
**COURSE DURATION** : 22-days / 165.50-hours  
**COURSE CATEGORY** : Competency  
**HDRF SCHEME** : SBL  
**COURSE FEE** : RM3,180.00 (inclusive of 6% SST) **EXAMINATION FEE** : RM950.00

**1. OBJECTIVE(S):**  
 At the end of the course, the participant will be able to:  
 i. Conduct the hazard identification, risk assessment and risk control.  
 ii. Explain the OSH MS.  
 iii. Plan OSH programs.  
 iv. Interpret OSH legal requirements.  
 v. Be a competent SHO (upon passing the SHO examination and registration with DOSH).

**2. TARGET GROUP(S):**  
 i. Safety Personnel / Managers.  
 ii. Supervisors.  
 iii. OSH Practitioners.  
 iv. Safety and Health Committee Members.  
 v. Unregistered Safety and Health Officers.  
 vi. Engineers, Designers and Architects.  
 vii. Interested Individuals.

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**LAWS OF MALAYSIA**  
**ACT 514**  
**OCCUPATIONAL SAFETY AND HEALTH ACT 1994**

Date of Royal Assent: 15 February 1994  
 Date of publication in the Gazette: 24 February 1994  
 Date of coming into operation: 25 February 1994

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**29. Safety and health officer.**

(1) This section shall apply to such class or description of industries as the Minister may, by order published in the Gazette, specify.

(2) An occupier of a place of work to which this section applies shall employ a competent person to act as a safety and health officer at the place of work.

(3) The safety and health officer shall be employed exclusively for the purpose of ensuring the due observance at the place of work of the provisions of this Act and any regulation made thereunder and the promotion of a safe conduct of work at the place of work.

(4) The safety and health officer shall possess such qualifications or have received such training as the Minister may, by notification in the Gazette, from time to time prescribe.

(5) An occupier who contravenes the provisions of this section shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding five thousand ringgit or to a term of imprisonment not exceeding six months or to both.

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**FEDERAL SUBSIDIARY LEGISLATION**  
**OCCUPATIONAL SAFETY AND HEALTH ACT 1994 [ACT 514]**  
 P.U. (A) 516/1996  
**OCCUPATIONAL SAFETY AND HEALTH (SAFETY AND HEALTH COMMITTEE) REGULATIONS 1996**

Date of publication : 26th December 1996  
 Date of coming into operation : 1st January 1996

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**30. Establishment of safety and health committee at place of work.**

(1) Every employer shall establish a safety and health committee at the place of work in accordance with this section if-

- (a) there are forty or more persons employed at the place of work; or
- (b) the Director General directs the establishment of such a committee at the place of work.

(2) The composition of a safety and health committee established under subsection (1), the election or appointment of persons to the committee, the powers of the members of the committee and any other matter relating to the establishment or procedure of the committee shall be as prescribed.

(3) Every employer shall consult the safety and health committee with a view to the making and maintenance of arrangements which will enable him and his employees to co-operate effectively in promoting and developing measures to ensure the safety and health at the place of work of the employees, and in checking the effectiveness of such measures.

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(4) A person who contravenes the provisions of this section shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding five thousand ringgit or to imprisonment for a term not exceeding six months or to both.

**31. Functions of safety and health committee.**

The safety and health committee established at a place of work pursuant to section 30-

- (a) shall keep under review the measures taken to ensure the safety and health of persons at the place of work;
- (b) shall investigate any matter at the place of work-
  - (i) which a member of the committee or a person employed theretofore considers is not safe or is a risk to health; and
  - (ii) which has been brought to the attention of the employer;
- (c) shall attempt to resolve any matter referred to in paragraph (b) and, if it is unable to do so, shall request the Director General to undertake an inspection of the place of work for that purpose; and
- (d) shall have such other functions as may be prescribed.

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**PART II**  
**COMPOSITION OF SAFETY AND HEALTH COMMITTEE**

**5. Membership of committee.**

(1) A safety and health committee shall consist of -

- (a) a chairman;
- (b) a secretary;
- (c) representatives of employer; and
- (d) representatives of employees.

(2) Where there are one hundred persons or less employed at a place of work, there shall not be less than two representatives each from the employees and the management on the committee; and where there are more than one hundred persons employed at the place of work, there shall not be less than four representatives each from the employees and the management.

**6. Appointment of chairman and secretary of committee.**

(1) An employer or his authorised manager shall be the chairman of a safety and health committee.

(2) The secretary of the committee shall be the person who is employed as the safety and health officer at the place of work.

(3) Where there is no person employed as a safety and health officer at the place of work, the chairman may appoint another person to act as the secretary of the committee or the members may, by ballot, appoint from amongst themselves the secretary of the committee.

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**FEDERAL SUBSIDIARY LEGISLATION**

**OCCUPATIONAL SAFETY AND HEALTH ACT 1994 [ACT 514]**  
P.U.(A) 315/1997  
**OCCUPATIONAL SAFETY AND HEALTH (SAFETY AND HEALTH OFFICER) REGULATIONS 1997**

Date of publication : 21st August 1997  
Date of coming into operation : 22nd August 1997

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**6. Qualification for registration.**

(1) A person who-

- (a) holds a diploma in occupational safety and health or the equivalent thereof from any professional body or institution, approved by the Minister, on the recommendation of the Director General;
- (b) has successfully completed a course of training in occupational safety and health and passed any examination for that course or the equivalent thereof, approved by the Minister, on the recommendation of the Director General, and has a minimum of three years experience in occupational safety and health;
- (c) has been working in the area of occupational safety and health at least for a period of ten years; or
- (d) holds such other qualification or has received such training as prescribed from time to time by the Minister pursuant to subsection 29(4) of the Act,

shall be entitled, on application made by him, to be registered as a safety and health officer.

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**PART V**  
**DUTIES OF SAFETY AND HEALTH OFFICERS**

**18. Duties of safety and health officers.**

It shall be the duty of a safety and health officer-

- (a) to advise the employer or any person in charge of a place of work on the measures to be taken in the interests of the safety and health of the persons employed in the place of work;
- (b) to inspect the place of work to determine whether any plant, power equipment, installation, apparatus or process is dangerous or likely to cause injury to any person in the place of work, is of such nature liable to cause bodily injury to any person working in the place of work;
- (c) to investigate any accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational disease which has happened in the place of work;
- (d) to assist the employer or the safety and health committee, if any, pursuant to regulation 11 of the Occupational Safety and Health (Safety and Health Committee) Regulations 1996 (2)(j)(ii), in organising and implementing occupational safety and health programme at the place of work;
- (e) to become secretary to the safety and health committee, if any, as specified under subregulation (2)(c) of the Occupational Safety and Health (Safety and Health Committee) Regulations 1996, and perform all functions of a secretary as specified in that Regulation;
- (f) to assist the safety and health committee in any inspection of the place of work for the purposes of checking the effectiveness and efficacy of any measure taken in compliance with the Act or any regulations made under the Act;
- (g) to collect, analyse and maintain statistics on any accident, dangerous occurrence, occupational poisoning or occupational disease which have occurred at the place of work;
- (h) to assist any officer in carrying made by the employer or any person in charge of the place of work on any matters pertaining to safety and health of the place of work.

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**Safety**

- Safety means:

.....  
.....  
.....

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**Task 1**

**Safety**  
*(in your profession)*

• Safety means (as Chemical/Civil Engineer):  
.....  
.....  
.....

• (Please write the meaning of safety as a Chemical / Civil Engineer / QS / Architect and the importance of implementation safety to your profession)

Time: 5-10 minutes

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**Task 2**

**Accident Prosecution Cases**

Please review three (3) accident prosecution cases related to your discipline/profession from the latest sources or as shown below.  
<https://www.dosh.gov.my/index.php/prosecution-case>

1. .....  
2. .....  
3. .....

Time: 5-10 minutes

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**Task 3**

**Safety and Health Officer (SHO)**

There are 9 duties of SHO listed in the regulation.

1. ....  
2. ....  
3. ....  
4. ....  
5. ....  
6. ....  
7. ....  
8. ....  
9. ....

Time: 5-10 minutes

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**3**

# **OSH Legislations and regulations**

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**OSH Legislations**

Two (2) main acts:  
• AKJ/FMA 1967 (Act 139)  
• AKKP/OSHA 1994 (Act 514)

Relevant acts to be considered:  
• Environmental Quality Act 1974 (Act 127)  
• Employment Act 1955 (Act 265)  
• Electricity Supply Act 1990 (Act 447)  
• Fire Services Act 1988 (Act 341)  
• Petroleum Act 1984 (Act 302)  
• Atomic Energy Licensing Act 1984 (Act 304)  
• Etc..

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**Some Important Extracts Of OSH UTM Regulations**

**Employer should give attention regarding :**

- OSH Policy
  - if > 5 employees
- Competent First Aider
  - If > 20 employees
- Safety & Health Committee (SHC)
  - if >= 40 employees
- Competent Safety & Health Officer (SHO)
  - if >= 100 employees \*\*
- Competent Boiler Man
  - if involve boiler in operation
- etc

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**OSHA 1994**

**Occupational Safety & Health Act 1994 (Act 514)**

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**OSHA 1994**

- The Philosophy of OSHA 1994**  
“Responsibilities to ensure safety and health at the workplace lies on those who create the risk and those who work with the risk”
- Scope**  
– All economic activities except Army and people who are working on the ship
- Over-rule other written legislations pertaining OSH matters for any contradictions
- Self-regulatory

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**General Duties Of Employers**

“It shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, health and welfare at work of his employees”  
[Section 15(1): OSHA 1994]

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**Obligations of the employers towards the employees**

- The employer is obligated to protect the employees in relation to safety, health and welfare through the following procedures:
  - To provide and maintain a safe plant and working system;
  - To put in place procedures so as to ensure safety and health in the usage, handling, storage and transportation of the plant and supplies;
  - To provide information, instruction, training and supervision for new and old employees;
  - To provide and maintain a working environment that is safe and free from health hazards; and
  - To provide the necessary amenities for the welfare of those who are working.

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## “PRACTICABLE”



### Four Criteria:

- The severity of hazard or risk in question
- The state of knowledge of hazard or risk & way of removing or mitigating hazard/ risk
- The availability & suitability of ways to remove or mitigate the hazard or risk
- Cost of removing or mitigating hazard/risk

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## So Far As Is Practicable - Employers Should

1. Provide and maintain plant and system of work
2. Arrangements – Safe use, operation, handling, storage and transportation of substance & plant
3. Provide information, instruction, training & supervision
4. Provide & maintain place of work and means of access to & egress from any place of work
5. Provide & maintain working environment that is safe, without health risk & adequate welfare facilities

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## Employees’ Responsibilities



1. To take reasonable care for the safety and health of himself and of other persons who may be affected by his acts or omissions at work;
2. To co-operate with his employer or any other person in the discharge of any duty or requirement imposed on the employer or that other person by this Act or any regulation made thereunder;
3. To wear or use at all times any protective equipment or clothing provided by the employer for the purpose of preventing risks to his safety and health; and
4. To comply with any instruction or measure on occupational safety and health instituted by his employer or any other person by or under this Act or any regulation made thereunder.

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**Employer must notify** the nearest DOSH office by the quickest means available using telephone, fax, JKPP 6 or JKPP 7 in the unfortunate event of any accident, hazardous incident, industrial poisoning or illness that has happened or may happen at the workplace.

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## Ideal time to form the Safety and Health Committee at the workplace

- The employer **should form** the Safety and Health Committee at the workplace when there are **40** or more employees in the workplace
- or
- **when instructed** by the Director General of DOSH.

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## Functions of the Safety and Health Committee

- The functions of the Safety and Health Committee at the workplace are :
  - **To review** the safety and health procedures at the workplace;
  - **To investigate** any complaints or other related matters that are raised; and
  - **To hold regular discussions** with the employer on issues relating to safety and health at the workplace.

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**“NEGLIGENCE”**

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**“ Failure To Take Reasonable Care ”**

- Duty of care owed
- Breach of duty of care owed
- Loss as a result of breach of that duty


  
**SITE SAFETY**  
 Hard hat must be worn      Warning  
 Protective clothing must be worn      Keep out  
 High visibility jackets must be worn      Danger  
 No smoking or open flames      No smoking or open flames  
 Ear protection must be worn      Site safety starts here

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As a Safety and Health Officer (SHO), what activities (routine/non routine) can you find on site, and what should you do? .....based on OSHA1994 and FMA1967:

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**Task 4**

**OSHA 1994 and FMA 1967**

Please list the duty of **employer** based on OSHA1994 and FMA 1967 :

- .....
- .....
- .....
- .....
- .....

Time: 5-10 minutes

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**Task 5**

**OSHA 1994 and FMA 1967**

Please list the duty of **employee** based on OSHA1994 and FMA1967:

- .....
- .....
- .....
- .....
- .....

Time: 5-10 minutes

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**JABATAN KESELAMATAN DAN KESIHATAN PEKERJAAN KEDAH**  
**KYNAKTAAN MEDIA**  
**SYARIKAT PEMERINAMA DIDAPATI BERSLAHL KERANA CAGAI MENYILENGGARA**  
**KABEL ELEKTRIK DENGAN SELAMAT**

Kulim, 28 November – Sedih syarikat pembendahara iaitu Bina Maju Sdn. Bhd. telah dikenakan hukuman dengan denda RM 2,000.00 kerana tidak mengeluarkan surat persetujuan untuk menyilenggara kabel elektrik yang berbahaya. Selain itu, syarikat ini juga dikenakan siasatan dan dikenakan denda RM 2,000.00 kerana tidak mematuhi peraturan Peraturan Klang dan Jentera (Kendalian Bangunan dan Kerja-Kerja Binaan Kejuruteraan/Keselamatan) 1989, Akta Klang dan Jentera 1947.

Pendakwaan telah dibentangkan oleh Pegawai Pendakwa yang dilantik dari Jabatan Keselamatan dan Kesehatan Pekerjaan Kedah, Mohd Yusof. Sejatah terhadap kasi pula telah dipelaskan ciri-pasukan penyiasat yang dilantik oleh Zaihan bin Zulfiqri dan dilantik oleh Khairul Amrin bin Nordin.

\*\*\*

Dikeluarkan oleh:  
 Pegawai Pengarah  
 Jabatan Keselamatan dan Kesehatan Pekerjaan Kedah  
 28 November 2018

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**CONSTRUCTION ENTRANCE ONLY**  
**Personal protective equipment must be worn**  
 Safety helmet  
 Safety harness  
 Safety footwear

05.09.2007 - 13-45

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**Office Safety**

The poster contains sections on office equipment, trips, falls & collisions, and other hazards. It includes illustrations and tips such as 'Ensure you have a good working environment', 'Keep your work area clean', 'Avoid slips and trips by keeping walkways clear', and 'Always use the stairs instead of the lift'.

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### General Duties Of Designers, Manufacturers And Suppliers

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- Section 20.
  - General duties of manufacturers, etc., as regards plant for use at work.
- Section 21.
  - General duties of manufacturers, etc., as regards substances for use at work.

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### General Duties Of Employees

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"It shall be the duty of every employee while at work..."  
[Section 24 (1): OSHA 1994]

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### responsibility of the employees at the workplace

UTM

- Every employee** has the **responsibility** to :
  - Be reasonably attentive so as to **avoid injury** onto themselves as well as others while carrying out their work activities; and
  - Co-operate** with the employer and others so as to fulfill the provision of the law.

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### Right of employees!

The employees can expect to be protected from discrimination, injury or re-designated by the employer **in cases if :**

- He/She **make a report** about the unsafe conditions or work practices in the workplace;
- He/She **become a member** of the safety and health committee; and
- He/She **carry out his/her duties** as a member of the safety and health committee.

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UTM

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## Regulations Under OSHA 1994

1. Occupational Safety and Health (Employer's Safety and Health General Policy Statements)(Exception) Regulations 1995;
2. Occupational Safety and Health (Control of Industrial Major Accident Hazard) Regulations 1996;
3. Occupational Safety and Health (Safety and Health Committee) Regulations 1996;
4. Occupational Safety and Health (Classification, Packaging and Labeling of Hazardous Chemicals) Regulations 1997;
5. Occupational Safety and Health (Safety and Health Officer) Regulations 1997;

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## Regulations Under OSHA 1994 (cont)

6. Occupational Safety and Health (Safety and Health Officer) Order 1997;
7. Occupational Safety and Health (Prohibition of Use of Substance) Order 1999;
8. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous To Health) Regulations 2000;
9. Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulations 2004

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## Task 6 OSHA 1994

Please list FIVE regulations under OSHA 1994 :  
<https://www.dosh.gov.my/index.php/legislation/eregulations>

1. ....
2. ....
3. ....
4. ....
5. ....

Time: 5-10 minutes

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## Summary of Regulations Under OSHA 1994

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## Occupational Safety and Health (Employer's Safety and Health General Policy Statements)(Exception) Regs 1995

- Exception for those who carry on an undertaking with not more than five (5) employees
- Refer Section16 OSHA 1994
- Need to review from time to time if necessary

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### **Occupational Safety and Health (Control of Industrial Major Accident Hazard) Regs 1996**

- Famously known as CIMAH
- Shall apply to all industrial activities:
  - An operation carried out in an industrial installation referred to in Schedule 4 involving or likely to involve one or more hazardous substances, and includes on-site storage and on-site transport which are associated with the operation; or

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### **Occupational Safety and Health (Control of Industrial Major Accident Hazard) Regs 1996 - (cont)**

- A storage of hazardous substances or preparations at any place, installation, premises, building or area of land, whether isolated or within an establishment; being a site used for the purpose of storage
- Hazardous substances
  - Refer Schedule 1 and Schedule 2

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### **Occupational Safety and Health (Safety and Health Committee) Regs 1996**

- Famously known as SHC
- Also refer Section 30 OSHA 1994
  - Shall establish SHC if
    - No. of employees  $\geq 40$  persons
    - Directed by the Director General of DOSH
- SHC structure
  - 1 x Chairperson
  - 1 x Secretary
  - Representatives of employer (min 2/4)
  - Representatives of employees (min 2/4)

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### **Occupational Safety and Health (Safety and Health Committee) Regs 1996 – (cont)**

- An employer or his authorised manager shall be the chairperson
- SHO or any suitable person appointed by the chairperson shall be the secretary
- Meeting shall be conducted not less than once in three months
- An inaugural meeting shall be convened by the employer

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### **Occupational Safety and Health (Classification, Packaging and Labeling of Hazardous Chemicals) Regs 1997**

- Famously known as CPL
- Shall apply to a supplier of hazardous chemicals for use at work except (refer Section 3)
- Refer Schedule I to V

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### **Occupational Safety and Health (Safety and Health Officer) Regs 1997**

- These regulations cover:
  - Registration Of A Safety And Health Officer
  - Notification Of A Safety And Health Officer
  - Duties Of An Employer
  - Duties Of Safety And Health Officers
  - Miscellaneous

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## Occupational Safety and Health (Safety and Health Officer) Order 1997

- Class or description of industries required to employ SHO:
  - Any building operation; contract price of the project > RM20 million
  - Any work of engineering construction; contract price of the project > RM20 million
  - Any ship building; > 100 employees
  - Any gas processing activity / petrochemical industries; > 100 employees
  - Any chemical and allied industries; > 100 employees

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## Occupational Safety and Health (Safety and Health Officer) Order 1997 - (cont)

- Shall employ SHO:
  - Any boiler and pressure vessel mfg activity; > 100 employees
  - Any metal industry; > 100 employees
  - Any wood working industry; > 100 employees
  - Any cement mfg activity; > 100 employees
  - Mfg activity & service other than the above; > 500 employees

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## Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous To Health) Regs 2000

- Famously known as USECHH 2000
- These regulations shall apply to all places of work where chemicals hazardous to health:
  - Refer Regulation 3 (exception)
  - Refer Schedule I or II (relevant chemicals)
  - Refer Regulation 2; additional chemical list to Schedule I and II

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## Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous To Health) Regs 2000 - (cont)

- Each chemical shall have SDS
- Shall conduct assessment of risk to health; carried out by a competent assessor (CHRA)
- CHRA will suggest control measures to be taken
- If local exhaust ventilation (LEV) needed; shall be designed by registered professional engineer

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**Science Kit  
& Boreal  
Laboratories**

### MATERIAL SAFETY DATA SHEET



<b>SECTION I NAME</b>		<b>24 HOUR EMERGENCY ASSISTANCE</b>			
Product	PHENOLPHTHALEIN, POWDER	Chemical Emergency Response Phone No.	03-902-424-9300		
Chemical Name	3,3'-Bis(4-phenylhydrosyphthalide)	Emergency Response Unit	PPB 110		
Formula	C <sub>24</sub> H <sub>22</sub> O <sub>4</sub>	Effect Date	February 18, 2003		
Unit Size	40.0 to 2.5 Kg.				
C.A.S. No.	77-03-0				
<b>SECTION II INGREDIENTS OF MIXTURES</b>		<b>TLV Units</b>			
Principal Component(s)	%	None established			
Phenolphthalein powder	100%				
<b>CAUTION! MAY BE HARMFUL IF SWALLOWED.</b>					
<b>SECTION III PHYSICAL DATA</b>					
Melting Point (°F)	258-267°C (490°-505°F)	Specific Gravity (M.O. = 1)	1.277 (32°C/4°C)		
Boiling Point (°F)	Decomposes.	Flash Point	N/A		
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate	N/A		
Vapor Density (Air=1)	TEA				
Solubility in Water	0.000% at 25°C.				
Appearance & Odor	White powder; no odor.				

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### MATERIAL SAFETY DATA SHEET STEEL PRODUCTS



I. IDENTIFICATION		II. HAZARD STATEMENT	
PRODUCT NAME:	POWER-STAT SALVAGED	INFORMATION CONCERNING HAZARDOUS SUBSTANCES	REVISION NUMBER:
MANUFACTURER:	UTM POWER-STAT SALVAGED	EMERGENCY AND SPILL RESPONSE	REVISED BY:
DISCLAIMER:	DISCLAIMER	DISCLAIMER	DISCLAIMER
EMERGENCY PHONE NUMBER:	03-902-424-9300	DISCLAIMER	DISCLAIMER
EMERGENCY RESPONSE UNIT:	PPB 110	DISCLAIMER	DISCLAIMER
EFFECTIVE DATE:	February 18, 2003	DISCLAIMER	DISCLAIMER
III. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS			
IV. FIRST AID MEASURES			
V. FIRE FIGHTING MEASURES			
VI. ACCIDENTAL RELEASE MEASURES			
VII. HANDLING AND STORAGE			
VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION			
IX. PHYSICAL AND CHEMICAL PROPERTIES			
X. REACTIVITY			
XI. TOXICOLOGICAL INFORMATION			
XII. ECOLOGICAL INFORMATION			
XIII. DISPOSAL CONSIDERATIONS			
XIV. TRANSPORT INFORMATION			
XV. REGULATORY INFORMATION			
XVI. OTHER INFORMATION			

MSDS-POWER-STAT SALVAGED-001 Page 1

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### Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous To Health) Regs 2000 - (cont)

- The monitoring of exposure shall be conducted by a hygiene technician
- The medical surveillance shall be carried out by an occupational health doctor (OHD)

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### Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regs 2004

- Famously known as NADOPOD
- Elaboration for the Section 32 OSHA 1994
- To notify the nearest DOSH office by the quickest means available and to report about the accident or dangerous occurrence within 7 days if involved:
  - death
  - Serious bodily injury which prevents the person from following his normal occupation for more than 4 calendar days
- Refer Schedule First, Second and Third

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### Complete PPE



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## 4 Incident Prevention and Accidents causations in work place

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### Recognised your hazards

- There are 5:

  - Physical hazards
  - Chemical hazards
  - Biological hazards
  - Psychosocial hazards
  - Ergonomic hazards



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**ACCIDENT**

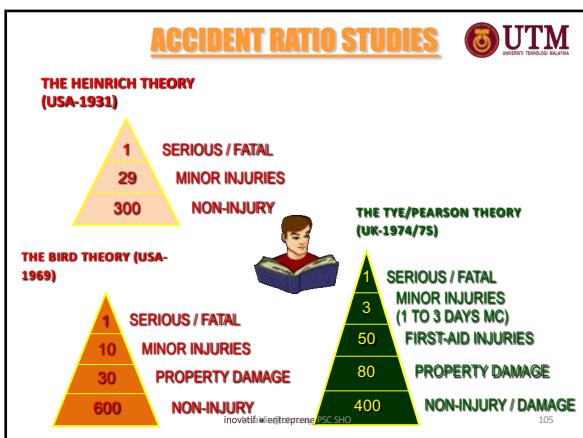
“An unexpected, unplanned event in sequence of events, that occurs through a combination of causes. It results in **injury or disease** to an individual, damage to property or equipment, a near-miss, a loss or any combination of these effects”.

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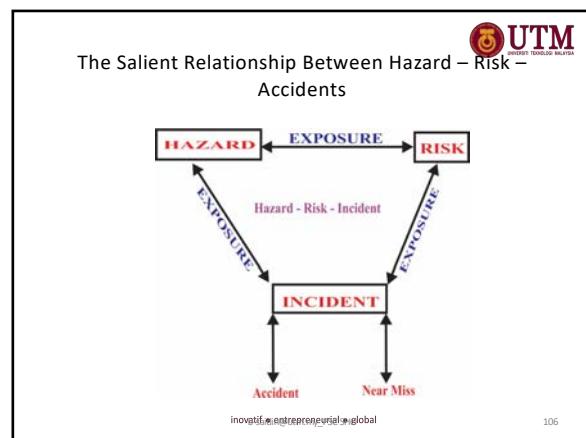


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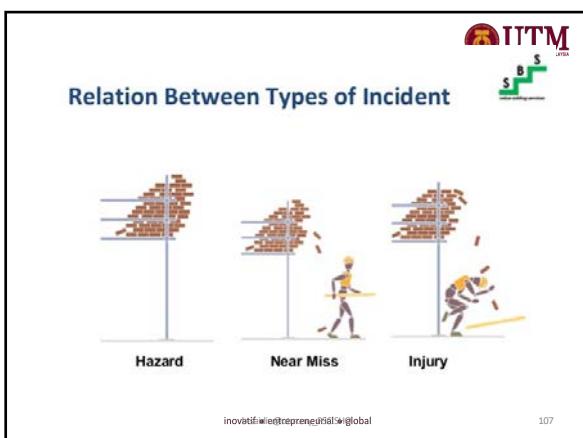
104



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106



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**ACCIDENT CAUSATION THEORIES**

**HEINRICH (1930's)**

Emphasis for prevention on unsafe acts/condition.

Approach can lead to blaming the worker when management system is at faults (prone worker approach).

**Five Factors/Stages in the Sequence of Events:**

1. Ancestry / Social Environment
2. Fault Of A Person
3. Unsafe Acts / Condition
4. Accident
5. Injury

**HEINRICH THEORY**

"The occurrence of an injury invariably results from a completed sequence of factors."

- 1. Inherency or social environment
- 2. Fault of a person
- 3. Unsafe act and/or condition
- 4. Accident
- 5. Injury

**There is a need to remove Item 5**

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**ACCIDENT CAUSATION THEORIES**

**MULTIPLE CAUSATION THEORY**

More than one cause to any accident.

The multicauses is equivalent to the third stage in the Heinrich theory.

Heinrich made reference to "Underlying causes". What were these cause.

**Using 5W, 1H.**

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**KENYATAAN MEDIA**  
JABATAN KESELAMATAN DAN KESEHATAN PEKERJAAN  
WILAYAH PERSEKUTUAN KUALA LUMPUR & PUTRAJAYA

**KES "SKYLIFT": TUMBANG DI TAPAK PEMBINAAN WILAYAH PERSEKUTUAN PUTRAJAYA**

Putrajaya, 23 Mac – Satu kemalangan telah terjadi di Tapak Cawangan Pembinaan 4 Blok Bantuan Projek, 21 – ZK, Jalan Kembang, Pusat 1, 62000 Wilayah Persekutuan Putrajaya pada jam keenam kuartu 31 petang, 21 Mac 2019. Kemalangan berlaku semasa aktiviti kerja membenarkan cemari dengan menggunakan "Skylift" dimana secara tidak sengaja "Skylift" tersebut telah condong dan akhirnya tumbang. Dua orang pekerja maut kerana terserempak ketar dan tersengkal pada "hamers" yang diletak pada "bucket" jentara tersebut. Walau bagaimanapun, dua orang pekerja tersebut telah mendapat kecederaan dan telah dibantuan ke Hospital Putrajaya untuk mendapatkan rawatan lanjut.

Berhubung dengan itu, keseluruhan kerentenan tersebut telah diajukan oleh pegawai penyelidik JKKP WPKL & Putrajaya untuk mengenepas punca sebenar kejadian, JKKP WPKL & Putrajaya tetapi mengenepas satu (1) nota berang bagai aktiviti kerja pembinaan yang dilakukan dengan menggunakan "Skylift". Tindakan perintegron akan dalam bentuknya dituntut terhadap penganggaran perintegron pendakwaan di bawah Akta Keselamatan dan Kesehatan Pekerjaan 1994 ke atas pihak yang bertanggungjawab.

JKKP memandang setiap kerentenan yang berlaku tentunya yang melibatkan keselamatan dan kesehatan pekerjaan dan keseluruhan sistem ini boleh dikatakan jika melainkan mewakilkan penilaian dan kewujudan risiko yang komprehensif termasuk mengikut kestabil yang dinyatakan dalam Garis Panduan Bagi Penganggaran Hazard, Penilaian Risiko dan Kewujudan Risiko (HRARC).

Dikeluarkan oleh:  
Jabatan Keselamatan dan Kesehatan Pekerjaan  
Wilayah Persekutuan Kuala Lumpur & Putrajaya  
23 Mac 2019

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**Task 7**

**OSH related Guidelines**

Please list FIVE OSH related guidelines related to your study discipline/profession

[https://www.dosh.gov.my/index.php/legislation/guideline\\_s](https://www.dosh.gov.my/index.php/legislation/guideline_s)

1. ....

2. ....

3. ....

4. ....

5. ....

Time: 5-10 minutes

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**Task 8**  
Accident Causation

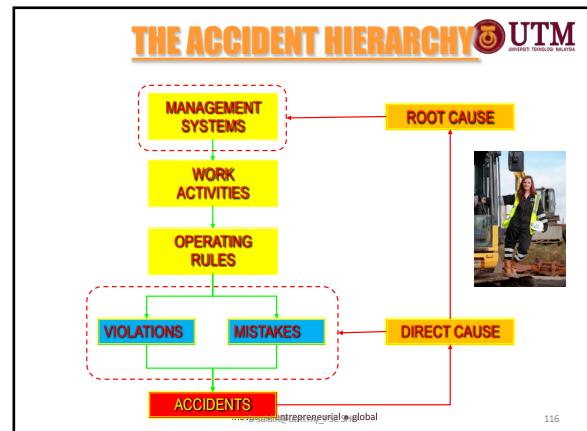
Please review three (3) Fatal Accident cases related to your discipline/profession from the latest sources or as shown below.  
<https://www.dosh.gov.my/index.php/fatal-accident-case-1>

1. ....
2. ....
3. ....

Time: 5-10 minutes

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**POPULAR OCCUPATIONAL INCIDENT THEORIES**

1. Domino Theory  
2. Loss Control Theory  
3. Multiple Causation Theory  
4. Reason's Swiss Cheese Theory

*ACCIDENT CAUSATION*

... all these theories will affect the approach in preventing and investigating incident

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**Task 9**  
Accident Theory  
(*workplace*)

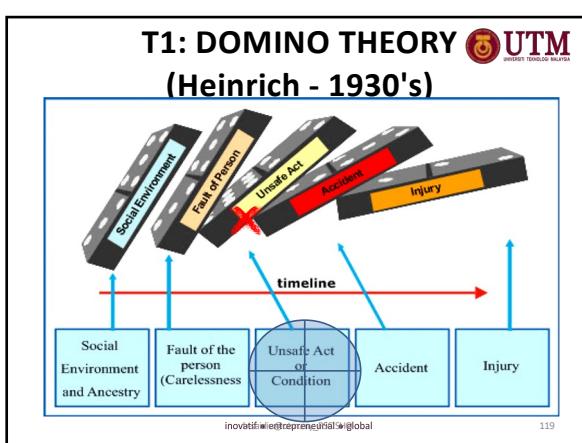
Please review some of the accident theories from the latest sources (internet etc)

1. ....
2. ....
3. ....

Time: 5-10 minutes

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**UNSAFE ACTS - Examples**

- Not following the proper instructions
- Taking short-cut
- Horse-play
- Not using the given/provided PPE
- Doing tasks out of capabilities
- Take-for-granted attitude

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## UNSAFE ACTS - Issues

- The most difficult to handle
  - To change attitude is not that easy
- The best is to create Safe & Healthy Work Culture



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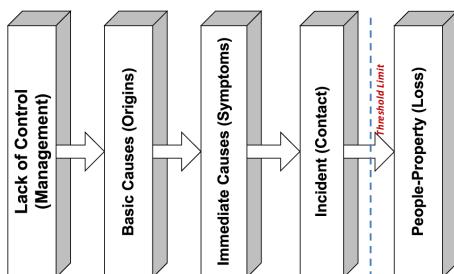


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## T2: LOSS CONTROL THEORY (Frank Bird - 1974)



Source: Bird and Loftus (1974)

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## ACCEPTED ACCIDENT THEORIES

- Multiple Causation Theory
  - A single unsafe act or condition may or may not cause an accident but both are caused by lack of management control
- Bird's Loss Control Theory
  - In line with Shewhart (1930's) theory of quality control.
- Heinrich's theory is weak and negative
  - Blaming victim and lack system thinking, continual improvements, upstream control and worker participation. Swiss Cheese.
  - Swiss Cheese
- An organization should always improve and strengthen its barriers of defense to avoid a hazard passes through all of the holes which leads to accident.

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## WHAT IS INCIDENT?

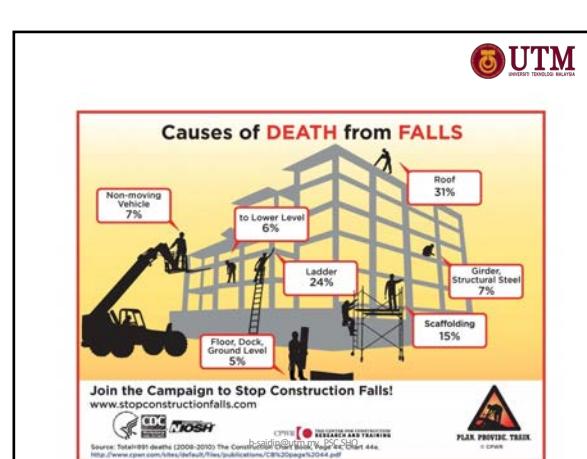
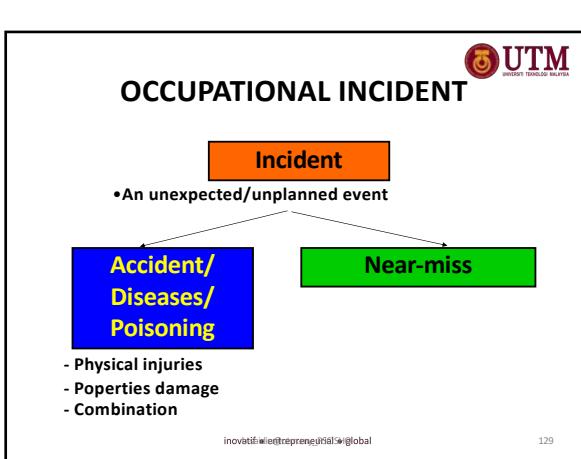
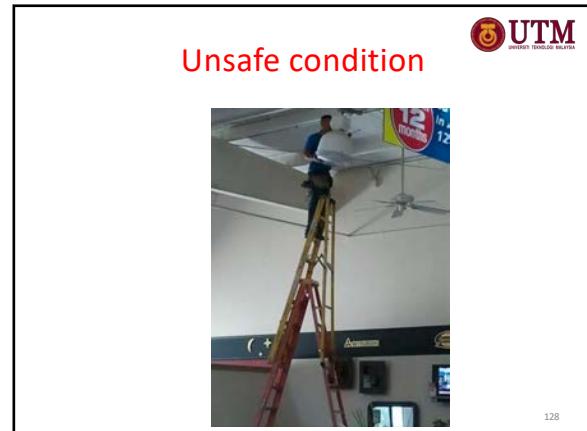
- An unexpected / unplanned event **resulting from several sequence of events.**
- It happens through a combination of causes.



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**Task 10**

**Unsafe Act vs Unsafe Condition**  
(*workplace*)

Please review some unsafe act **vs** unsafe condition at workplace (internet etc)

1. ..... (Unsafe .....)
2. ..... (Unsafe .....)
3. ..... (Unsafe .....)
4. ..... (Unsafe .....)
5. ..... (Unsafe .....)

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Time: 5-10 minutes

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**5**

## Hazard at Work Place

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**Key Principles of Health and Safety**

- Employer is responsible for maintaining a safe and healthy workplace
- Employees should be involved in developing policies and programs
- There should be no sanctions for H&S related activities
- Employer should implement best and most effective practices/policies to protect workers from hazards

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**Overview of Hazards**

**What's going on in your workplace?**

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Image by: Diamond Rubber Products photostream

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**Recognised your hazards**

- There are 5:

1. Physical hazards
2. Biological hazards
3. Chemical hazards
4. Psychosocial hazards
5. Ergonomic hazards

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## HIRARC of activity: hazards

**Worked example**

**Scenario 1: Wood panel cutting process**

A team of two workers operates a cross cut saw machine. Their work includes loading wood panel onto the machine, cutting the wood and unloading the cut wood. They also need to repair and maintain the machine regularly as well as to change the blades of the machine. (Caution: This example may not be applicable to similar work in your workplace).

Company:	2F Furniture Entp	Conducted by:	Mr. S (Supervisor), Miss M & Mr. L (Operator)
Process / Location:	Wood cutting/Panel Sect.	Date: (From... to ...)	24 Jun 2007 to 28 July 2007
Approved by:	Mr. K (Name, designation)	Date:	25 Julai 2007
		Review Date:	1. _____ 2. _____

1. Hazard Identification		2. Risk Analysis			3. Risk Control				
No.	Work Activity	Hazard	Which can cause/effect	Existing Risk Control (if any)	Likelihood	Severity	Risk	Recommended Control Measures	PIC (Per date/ status)
1	Using the machine with wood	Cutting blade	Cuts first and ripe injury	Safe work practice	4	1	8 (Low)	Use leather hand glove	Analys (26 July 2007) completed
2	Operating the machine	Unguarded machine	Hand get caught into moving parts / machine	Safe work practice, daily maintenance and regular maintenance	1	12 (Medium)	To Fix 1 guard	Obs (26 July 2007) completed	Obs (26 July 2007) completed
3	Unloading cut wood	Flying fragments	Increase rate of injury due to flying fragments of blades that break during cutting	Warning sign, training, graphics	4	3 (Medium)	Use stronger blades, To fix 1 guard	Maka (26 July 2007) completed	All Obs (26 July 2007) ESD
4	Repair and maintenance of the machine	Heavy load	Medium strain / back pain	Manual lifting procedure	3	1 (Low)	Use mechanical lifter	Obs (26 July 2007) completed	Obs (26 July 2007) completed
		Sudden cuts from blade if getting caught in machine	Safe work practice	4	10 (High)	To make safety start	Analys (26 July 2007) completed	Analys (26 July 2007) completed	

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## Borang HIRARC (HIRARC FORM)

Peraksa/Institusi Yang Melakukan Borang	Universiti Teknologi Malaysia	Wakil/Orang yang Berkenan	
Pos/Alamat/Tempat		Tarikh Borang:	(Hari) _____ / (Bulan) _____ / (Tahun) _____
Penulis/Orang		Tarikh Simpanan:	(Hari) _____ / (Bulan) _____ / (Tahun) _____
Kelulusan:		Tarikh Simpanan Simpanan:	

1. Pengetahuanan Hazard				2. Audit Risiko		3. Kriteria Risiko			
No.	Alasan/Keje	Borang	Yang Boleh Mengalihfikirkan/Kesan	Kriteria Risiko (A)	Kategorian (B)	Kategori Risiko (C)	Langkah Kuaralan Yang Diperlukan	Osang Kuaralan (Terkini Terbaharu)	
1	Mengambil pisau kipas dari mesin	Bersinggah bagi rujukan	Terdapat segolongan teknik	PTK kunci ke bantuan	4	1	X	4. HOP/Teknik sik, dan progressif	Home
2	Mengambil pisau kipas dari mesin	Pisau kipas bergerak	Kendalian dilihat berlaku	PTK untuk bentuk daya	1	2	X	4. HOP/Teknik sik, dan progressif	Home
3	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	PTK pergilah	PTK pergilah	1	2	X	4. Tempahan progressif, pemantauan tetap dan perbaikan	Home
4	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	PTK pergilah	PTK pergilah	1	2	X	4. Tempahan progressif, pemantauan tetap dan perbaikan	Home
5	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. Pemantauan bersyarat, teknik perbaikan tetap dan perbaikan	Home
6	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. SOP/air cool pengeluaran	Home
7	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. Berendam SOP	Home

**Daftar Kuaralan:**

- 1. Pengurusan Bahaya dan Risiko
- 2. Implementasi
- 3. Monitoring dan Pengawasan
- 4. Sistem Operasi (SOP)
- 5. Sistem Pengurusan Risiko
- 6. Sistem Pengurusan Kelebihan
- 7. Laporan Keadaan Laksana/Rapor Simpanan

**Daftar Kuaralan:**

- 1. Pengurusan Bahaya dan Risiko
- 2. Implementasi
- 3. Monitoring dan Pengawasan
- 4. Sistem Operasi (SOP)
- 5. Sistem Pengurusan Risiko
- 6. Sistem Pengurusan Kelebihan
- 7. Laporan Keadaan Laksana/Rapor Simpanan

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## HIRARC

RISK MATRIX					
PROBABILITY ↑	5	10	15	20	25
Likely - 4	4	8	12	16	20
Possible - 3	3	6	9	12	15
Unlikely - 2	2	4	6	8	10
Very Unlikely - 1	1	2	3	4	5
	1	2	3	4	5
Negligible	Slight	Moderate	High	Very High	
	SEVERITY →				
Risk	Risk Level	Action			
1 to 6	Low Risk	May be acceptable but review task to see if risk can be reduced further			
8 to 12	Medium Risk	Task should only be undertaken with appropriate management authorization after consultation with specialist personnel and Task must not proceed. It should be redefined or further control measures put in place to reduce risk. The controls should be			
15 to 25	High Risk				

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## Borang HIRARC (HIRARC FORM)

**Table 5.9: Actions Recommended Based on Risk Level**

Risk Value	Description	Action Recommended
15 to 25	High	Requires IMMEDIATE action to control the hazard as detailed in the hierarchy of control. Action taken must be documented on the risk assessment form including the date for completion.
5 to 14	Medium	Requires a planned approach to controlling the hazard and applies temporary measure if required. Actions taken must be documented on the risk assessment form including date for completion.
1 to 4	Low	May be considered as acceptable and further reduction may not be necessary. However, if the risk can be resolved quickly and efficiently, control measures should be implemented and recorded.

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## Table 5.8: Risk Matrix

Severity					
Likelihood	1	2	3	4	5
5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5

Legend:  
High  
Medium  
Low

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## Borang HIRARC (HIRARC FORM)

Peraksa/Institusi Yang Melakukan Borang	Universiti Teknologi Malaysia	Wakil/Orang yang Berkenan	
Pos/Alamat/Tempat		Tarikh Borang:	(Hari) _____ / (Bulan) _____ / (Tahun) _____
Penulis/Orang		Tarikh Simpanan:	(Hari) _____ / (Bulan) _____ / (Tahun) _____
Kelulusan:		Tarikh Simpanan Simpanan:	

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1	Mengambil pisau kipas dari mesin	Bersinggah bagi rujukan	Terdapat segolongan teknik	PTK kunci ke bantuan	4	1	X	4. HOP/Teknik sik, dan progressif	Home
2	Mengambil pisau kipas dari mesin	Pisau kipas bergerak	Kendalian dilihat berlaku	PTK untuk bentuk daya	1	2	X	4. HOP/Teknik sik, dan progressif	Home
3	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	PTK pergilah	PTK pergilah	1	2	X	4. Tempahan progressif, pemantauan tetap dan perbaikan	Home
4	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. Tempahan progressif, pemantauan tetap dan perbaikan	Home
5	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. Pemantauan bersyarat, teknik perbaikan tetap dan perbaikan	Home
6	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. SOP/air cool pengeluaran	Home
7	Mengambil pisau kipas dengan menggunakan bukukan dari mesin	Tangan per	Tangan teknik	PTK untuk bentuk daya	2	3	X	4. Berendam SOP	Home

**Daftar Kuaralan:**

- 1. Pengurusan Bahaya dan Risiko
- 2. Implementasi
- 3. Monitoring dan Pengawasan
- 4. Sistem Operasi (SOP)
- 5. Sistem Pengurusan Risiko
- 6. Sistem Pengurusan Kelebihan
- 7. Laporan Keadaan Laksana/Rapor Simpanan

**Daftar Kuaralan:**

- 1. Pengurusan Bahaya dan Risiko
- 2. Implementasi
- 3. Monitoring dan Pengawasan
- 4. Sistem Operasi (SOP)
- 5. Sistem Pengurusan Risiko
- 6. Sistem Pengurusan Kelebihan
- 7. Laporan Keadaan Laksana/Rapor Simpanan

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**6**

## OSH Management Systems and Arrangements

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**Health, Safety & Environment Management**

- Systematic use of techniques to identify and remove hazards, the control of risks which remain, and the use of techniques to influence the behaviour and encourage safe attitudes. This is the primary responsibility of management.

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**Carta Organisasi Jawatankuasa Persekitaran, Keselamatan, Kesihatan Pekerjaan (OSHEC) Fakulti Alam Bina dan Ukur 2020-2022**

Updated: 30/4/2018 (bv 2/2018)

Kemahiran Status: P1010002

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**FACI: Jawatankuasa Persekitaran, Keselamatan, Kesihatan Pekerjaan (OSHEC) - Mengeloh Zone**

Report: Carta Organisasi Jawatankuasa Persekitaran, Keselamatan, Kesihatan Pekerjaan (OSHEC) No. 001-KK-KM-001-2018 Date: 30/4/2018 Time: 10:45 AM Page: 01 of 01 Cetak pada: 30/4/2018 10:45 AM UTM Authority

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**What is S, H & E Management?**

Treat, Monitor and Review Risks & Controls?

Establish a SH&E Management System!

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**Task 11**

### Safety Management Plan

Please identify UTM Safety Policy. (from establish sources):

- .....

\*\*\*Task 14 Time: 5-10 minutes

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**Task 12**

### Safety Management Plan

Please identify any Faculty/School (i) /Safety and Health Committee, (ii) Emergency Response Team ERT and (iii) emergency contact no., etc. (from establish sources):

1. .....
2. .....
3. .....

\*\*\*\*Task 14      Time: 5-10 minutes

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**7**

### Managing, implementation and controlling of OSH Audit

#### Hazard Identification, Risk Assessment & Risk Control (HIRARC)

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[www.dosh.gov.my](http://www.dosh.gov.my)

### HIRARC guidelines

The cover of the HIRARC guidelines document is dark purple with gold text. It reads "Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC)" in large letters, followed by "Department of Occupational Safety and Health, Ministry of Human Resources" and "2008".

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### Some Abbreviations and Terms

- AFAP - As far as (reasonably) practicable
- DG - Dangerous goods
- Employer - Employer who has management control of the facility
- Facility - any building or structure at which Schedule 1 materials are present or likely to be present for any purpose
- FMEA/FMECA - Failure modes and effects analysis/ Failure modes and effects criticality analysis
- FTA - Fault Tree Analysis
- HAZID - Hazard identification
- HAZOP - Hazard and operability study
- HSR - Health and safety representative
- LOC - Loss of containment
- LOPA - Layers of protection analysis

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### Some Abbreviations and Terms

- MHF - Major hazard facility
- MA - Major accident
- OHS - Occupational health & safety
- PFD - Process Flow Diagram
- P&ID - Piping and Instrumentation Diagram
- PSV - Pressure safety valve
- SMS - Safety management system
- PTW - Permit to work
- MSDS - Material Safety Data Sheet
- CSDS - Chemical Safety Data Sheet
- JSA - Job Safety Analysis
- SOP - Safety Operating Procedure
- PPE - Personal Protective Equipment

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### The important of HIRARC

- Gives organisations a more effective way of managing hazards
- Requirement of the law e.g.
  - OSHA:1994, CIMAH & USECHH Regulations
- Requirement of management system standards
  - MS1722:2011,
  - OHSAS 18001 : 2007 and
  - ISO 14001 : 2007, etc.

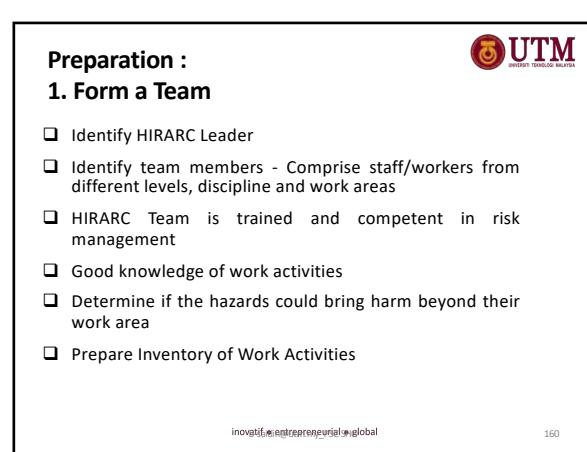
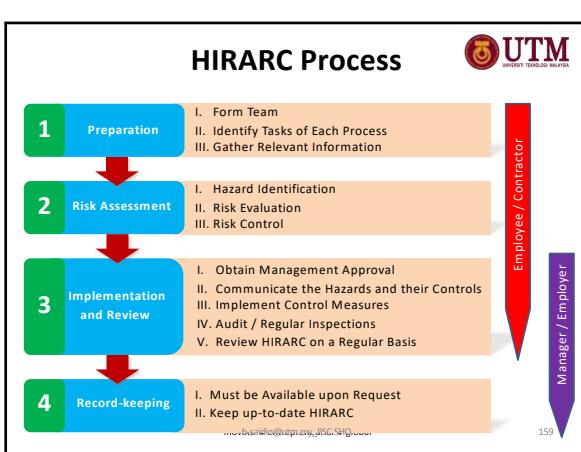
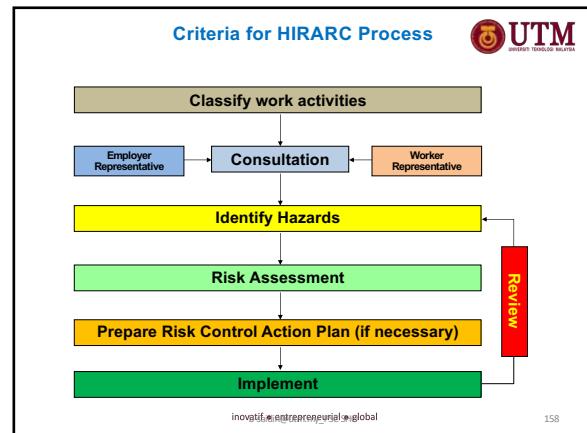
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**OSHA – Section 15(1)**  
**General Duties of Employers**

“ It shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, health and welfare at work of his employees ”

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**Preparation :**  
**2. Identify Tasks of Each Process**

- Divide the workplace into few distinct areas / process.
- Assign HIRARC Team for each distinct area / process – 1 team can work for more than 1 distinct area / process.
- Prepare HIRARC form for area(s) / process assigned by HIRARC leader. Fill-up :
  - location,
  - Process,
  - Team members,
  - Task

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**Preparation :**  
**3. Gather Relevant Info**

- Should be related to HIRARC scope - Workplace layout plan, process or work flowchart & list of work activities in the process.
- Source of information –
  - List of tools, machinery and chemicals used
  - Records of past incidents & accidents
  - Observations, interviews and feedback on WSH related matters
  - Safety inspection records and audit reports
  - Manufacturer's instruction manual including material safety data sheets

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**(con't) Preparation:**  
**3. Gather Relevant Info**

- Relevant legislation, Codes of Practice and specification.
- Details of existing risk control measures.
- Safe work procedure.
- Copies of previous HIRARC.
- Medical records of workers



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**BORANG HIRARC (HIRARC FORM)**

Fakulti/Jabatan/Unit/Makmal/Bengkel/ Proses Kerja/Lokasi/Rak:	Disediakan Oleh: (Nama, Jawatan)
Waktu (Waktu (Nama, Jawatan, Tandatangan)	Tarikh Penerbitan (tarikh) Tarikh Disemak:
Tarikh Dibuatkan:	Tarikh Semakan Semula:

1. Pengenalpastikan Hazar			2. Analisis Risiko			3. Kawalan Risiko			
Bil.	Aktiviti Kerja	Hazard	Yang Boleh Mengakibatkan/ Kesan	Kawalan Risiko (welia ada)	Kebangkitan (A)	Kriteria (B)	Tahap Risiko (AxB)	Langkah Kawalan Yang Diharuskan	Orang Bertanggungjawab (Terlik Tomi/Staf)
1									
2									
3									
4									
5									

Gol. Kejuruteraan (Kebangkitan)  
5-Pusing Marakai (Setiap Jari)  
4-Mangkin (Setiap Hari)  
3-Dapat Dijemput (Setiap Minggu)  
2-Irting Sekali (Setiap Bulan)  
1-Tidak Mungkin (Ditakhluk Selalui)

Gol. Kejuruteraan / Kesianan  
5-Mulih-palsu  
4-Kerasat  
3-Sesiai (MC sekali) / Injiliran (Penuh Sakit)  
2-Mberi rasa sakit dalam 3 hari/Kedudukan Tidak Kekal  
1-Lazat Kecil, Lobsu, Luka Ringan, Keselesaan Ringan

Lantik Jawatan (Bentuk) Kawalan  
1-Pengeluaran  
2-Penggarisan  
3-Kawalan Kejuruteraan  
4-Kawalan Keamanan  
5-Penilaian Perkiraan dan Pelaksanaan

Tahap Risiko  
1-4 = Rendah (Low)  
5-12 = Sedeharan (Medium)  
13-25 = Tinggi (High)

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**Risk Assessment :**  
**4. Hazard Identification**

- "A process in identifying hazards existence and interpreting their character.

Company: Process / Location:	Conducted by: (Name, designation)
Approved by: (Name, designation)	Date: Review Date: Next Review Date:

1. Hazard Identification			2. Risk Analysis			3. Risk Control		
No.	Work Activity	Hazard	Which can cause/effect	Existing Risk Control (if any)	Likelihood	Severity	Risk	Recommended Control Measures (Due date/status)
1								
2								
3								
4								
5								

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**(con't) Risk Assessment:**  
**4. Hazard Identification**

- Hazard** - "anything (object / situation) that can cause harm"
- How to Identify Hazard?**
  - Ways to identify hazards
    - Brainstorming
    - Process review
    - Workplace inspections
    - Accident & incident investigation
    - Sources of hazards (refer to next slide)

**Danger**

"Situation where the risk is relatively higher"

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**Harms from the 5 M's!**

<b>Machinery</b>	Installation, layout and design of equipment
<b>Materials</b>	Substances such as chemicals in the workplace
<b>Man</b>	The way people carry out their work
<b>Media</b>	Quality of air in the workplace, amount and placement of lighting, noise, vibration etc.
<b>Method</b>	Shortcut, work practice, etc.

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**HAZARD Identification**  
**Workshop**

**in Groups**

**Activity:**  
**List Hazards by Class**

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**Risk Assessment :**  
**5. Analyze Risk**

**Analyze risk –**

- What will be the effect cause by each hazards
- Effect to people, property & environment.

1. Hazard Identification			
No.	Work Activity	Hazard	Which can cause/effect
1	Loading the machine with wood	Cutting blades	Cuts / first aid type injury
2	Operating the machine	Unguarded machine	Hand get caught into rotating parts / amputation
3		Flying fragments	Serious cuts & eye injuries by flying fragments of blade that break during cutting
4	Unloading cut wood	Heavy load	Musculoskeletal strain / back pain
	Repair and maintenance of the machine	Unguarded machine	Serious cuts from blade & getting caught in rotating parts if machine is accidentally started

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**Risk Assessment :**  
**6. Risk Evaluation**

**What is a Risk?**

- “Likelihood / chance of harm to happen”
- Risk level = Likelihood x Severity (Refer to Risk matrix)

		Severity of the potential injury/damage				
		Insignificant damage to Property	Non-hospitalizable Injury, minor loss of Process or limited damage to Property	Hospitalizable Injury, moderate loss of Process or limited damage to Property	Major Injury, Single Fatality or critical loss of Process or damage to Property	Multiple Fatalities Catastrophic Loss of Business
Likelihood of the hazard happening	Almost Certain	1	2	3	4	5
	Will probably occur	4	8	12	16	20
	Possible occur	3	6	9	12	15
	Remote possibility	2	4	6	8	10
	Extremely Unlikely	1	2	3	4	5

Risk matrix  
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**HIRARC TABLE**

DESCRIPTIONS HIRARC TABLE

TABLE A LIKELIHOOD			TABLE B SEVERITY		
LIKELIHOOD DESCRIPTIONS	EXAMPLE	RATING	SEVERITY (S) / DESCRIPTIONS	EXAMPLE	RATING
Most likely	The most likely result of the hazard / event being realized	1 / WEEK	Serious	Heavy fatalities, irrecoverable property loss, permanent disability, hospitalization	5
Possible	Has a good chance of occurring and is not unusual	1 / MONTH	Major	Major property damage if hazard is realized	4
Conceivable	Might occur at sometime in future	1 / QUARTER	Medium	Disabling but not permanent injury	3
Remote	Has not been known to occur after many years	1 / HALF YEAR	Minor	Cut and injury	2
Inconceivable	Is practically impossible and has never occurred	1 / YEAR	Negligible	First Aid	1

TABLE C RISK ANALYSIS

SEVERITY SEVERITY		RISK DESCRIPTIONS		ACTION	
LIKELIHOOD	RATING	1-5	HIGH	2. RISK MANAGEMENT ACTION: Identify the hazard as defined in the hierarchy of control actions taken must be documented on the risk assessment form. If the risk is determined to be HIGH, then it requires a STOP AND THINK process to determine if a control measure is required. Actions taken must be documented on the risk assessment form. If the risk is determined to be LOW, it may be considered as ALMOST CERTAIN and no action is necessary. However, if the risk can be resolved quickly and efficiently, control measures should be implemented and recorded.	
1-5	5	20	16	12	8
4	4	10	12	9	6
3	3	10	12	9	6
2	2	5	4	3	2
1	1	5	4	3	2

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**Risk Assessment (cont'd) :**  
**6. Risk Evaluation**

**Other example of Risk matrix -**

Potential Consequences						
	L6	L5	L4	L3	L2	
Likelihood	Minor injuries or discomfort.	Injuries or illness requiring medical treatment or temporary impairment.	Injuries or illness requiring hospital admission.	Hair or illness resulting in permanent impairment.	Fatality	
	Not Significant	Minor	Moderate	Major	Severe	
	Expected to occur regularly under normal circumstances	Almost Certain	Medium	High	Very High	Very High
	Expected to occur at some time	Likely	Medium	High	Very High	Very High
	May occur at some time	Possible	Low	Medium	High	Very High
	Not likely to occur in normal circumstances	Unlikely	Low	Low	Medium	High
Could happen, but probably never will	Rare	Low	Low	Low	Medium	

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**Risk Assessment (cont'd) :**  
**6. Risk Evaluation**

**Likelihood of an occurrence**

- Ask the question “how many time has this event happened in the past?”
- Assessing likelihood is based worker experience, analysis or measurement.

No	Indeks Kemungkinan (L)	Penerangan
5	Paling mungkin	Hazard / kejadian yang paling mungkin berlaku (Harian)
4	Mungkin	Mungkin boleh berlaku dan bukanya luar biasa (Mingguan)
3	Dapat dijangka	Mungkin berlaku pada masa akan datang (Bulanan)
2	Jarang sekali	Belum diketahui berlaku selepas beberapa tahun (1 hingga 4 tahun)
1	Tidak dapat dijangka	Boleh dikatakan mustahil dan tidak pernah berlaku (5 tahun ke atas)

No	Indeks Keterukuran (S)	Penerangan
5	Mala petaka	Banyak kematian, kerosakan besar benda dan pengeluaran tidak dapat dipulihkan.
4	Fatal (kematian)	Kira-kira satu kematian, kerosakan besar benda jika hazard berlaku.
3	Serius (Kecederaan berat)	Kecederaan yang tidak fatal, hilang upaya kekal (MC > 5 days)
2	Ringan	Menyebabkan hilang upaya tetapi bukan kecederaan kekal (MC < 5 days)
1	Sedikit sahaja	Sedikit lebam, luka, kecederaan jenis rawatan awal rawatan kecemasan.

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**Risk Assessment (cont'd) :**  
**6. Risk Evaluation**

**Likelihood of an occurrence**

- Ask the question “how many time has this event happened in the past?”
- Assessing likelihood is based worker experience, analysis or measurement.

RATING	LIKELIHOOD (L)	EXAMPLE
5	Most likely	The most likely result of the hazard / event being realized
4	Possible	Has a good chance of occurring and is not unusual
3	Conceivable	Might be occur at sometime in future
2	Remote	Might be occur at sometime in future
1	Inconceivable	Is practically impossible and has never occurred

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**Risk Assessment (cont'd) :**

### 6. Risk Evaluation

**Severity of hazards**

- Based upon an increasing level of severity to an individual's health, environment, or to property.

RATING	SEVERITY (S)	EXAMPLE
5	Catastrophic	Numerous fatalities, irrecoverable property damage and productivity
4	Fatal	Approximately one single fatality major property damage if hazard is realized
3	Serious	Non-fatal injury, permanent disability
2	Minor	Disabling but not permanent injury
1	Negligible	Minor abrasions, bruises, cuts, first aid type injury

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**Risk Assessment (cont'd) :**

### 6. Risk Evaluation

**How to evaluate the Risk ?**

- List all existing control measures for each effect in the 'Existing Risk Control' column
- Rate the most likely severity outcome of the effect in the 'Severity' column
- Rate the likelihood that the hazard may cause the injury/ill-health in the 'Likelihood' column
- Multiply the 'Severity' and 'Likelihood' columns

2. Risk Analysis			
Existing Risk Control (if any)	Likelihood	Severity	Risk
Safe work practice	4	1	4 (Low)
Safe work practice, daily pre-use check and regular maintenance	4	3	12 (Medium)
Warning signs, Training, Safety glasses	4	3	12 (Medium)
Manual lifting procedure	3	1	3 (Low)
Cover 'n' button Safe work practice	4	4	16 (High)

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**HIRARC Exercise**

### Hazard Identification – Risk Evaluation

#### (Workshop)

**HIRARC FORM**

Company:	2F Furniture Emp	Conducted by:	Mr. S (Supervisor), Miss M & Mr. I. (Operator)
Process / Location:	Wood cutting/Panel Sect.	Date (from... to ...)	24 Jun 2007 to 28 July 2007
Approved by:	Mr. K (Manager)	Review Date:	1. 2.
Date:	25 Jul 2007		

No.	Work Activity	Hazard	Which can cause/effect	2. Risk Analysis		
				Existing Risk Control (if any)	Likelihood	Risk
1	Using the machine with wood	Cutting blades	Cuts / fine and sharp injury	Safe work practice	4	1
2	Operating the machine	Unprotected rotating parts	Hand got caught into rotating parts / fingers cut off	Safe work practice, daily pre-use check and regular maintenance	4	3
3	Unloading cut wood	Flying fragments	Fingers cuts & eye injuries by flying fragments or blades that break during cutting	Warning signs, Training, Safety glasses	3	2
4	Repair and maintenance of the machine	Unprotected rotating parts	Services can from blade & getting caught in the machine when it is accidentally started	Manual lifting procedure	3	1
				Cover 'n' button Safe work practice	4	4

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**Risk Assessment :**

### 7. Risk Control

**Risk Control**

- Identify additional Control Measures which able to reduce the Risk Level.
- Identify responsible person for each control.

1. Hazard Identification			2. Risk Analysis			3. Risk Control	
No.	Work Activity	Hazard	Which can cause/effect	Existing Risk Control (if any)	Likelihood	Severity	Risk
1							
2							
3							
4							
5							

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**Risk Assessment (cont'd):**

### 7. Risk Control

Consider more effective measures in the hierarchy of control

Hierarchy of Control		Examples for Noise Control	
ELIMINATION	Most Effective	Change the Work Process	
SUBSTITUTION		Replace Metal Gears with Pulley with Belt	
ENGINEERING CONTROLS		Implement Noisy Machine Enclosure	
ADMINISTRATIVE CONTROLS		Implement Work Rotation	
PERSONAL PROTECTIVE EQUIPMENT	Least Effective	Provide Hearing Protectors	

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**HIRARC Exercise**

### Identify Additional Controls –

#### (Workshop)

**HIRARC FORM**

Company:	2F Furniture Emp	Conducted by:	Mr. S (Supervisor), Miss M & Mr. I. (Operator)
Process / Location:	Wood cutting/Panel Sect.	Date (from... to ...)	24 Jun 2007 to 28 July 2007
Approved by:	Mr. K (Manager)	Review Date:	1. 2.
Date:	25 Jul 2007		

3. Risk Control	
Recommended Control Measures	R/C (Due date/ status)
Use leather hand glove	Completed
To Fix L-guard	Completed
Change (On Open) 2007	
Use strong metal belt	Completed
Use strong metal belt	Completed
The leather belt is still	Completed
To make safety start button	Ahead of time (2007)
Ahead of time (2007)	Completed

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**Individual Assignments 1-13**

**FILL IN YOUR PARTICULARS:**

Student Name: \_\_\_\_\_  
 Matric Number: \_\_\_\_\_  
 IC Number: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Year and Program: \_\_\_\_\_  
 School/Faculty Name: \_\_\_\_\_

**Submission:**  
 Individual Task in PSC elearning, and  
 Group Task: Leader, by email (cc all group members) and elearning

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**Task 13**  
**Spot the Hazard on slide 17**

Please identify at least seven (7) hazards at the workplace as shown in the picture (circle and label them on the picture)

1. .....  
 2. .....  
 3. .....  
 4. .....  
 5. .....  
 6. .....  
 7. .....

Time: 10-20 minutes

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**Hazards in the Workplace !!!**

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**Task 14-15: Sequence of presentation**

• Page 1: Group info: name of course, section, Trainer name; date; name of group members; dan detail IC, ID, matriks, tel no.

• Page 2: Group photo (meeting in session 2) and workshop 2

• Page 3: UTM Safety policy, Safety 7 Health Committee, ERT of school/Faculty dan emergency contact no.

• Page 4: Excel of HIRARC Table, all in table form

• **PRESENTATION OF 3 HIGHEST RISK**

• Page 5: Detail of HIGH RISK 1, proof of photo dan HIRARC detail

• Page 6: Detail of HIGH RISK 2, proof of photo dan HIRARC detail

• Page 7: Detail of HIGH RISK 3, proof of photo dan HIRARC detail

• Ditto pg 8-X: Other Hazard and RISK 4-12 separate and detail HIRARC form

• Page y: Detail of Task 15 and timelines in 2 nos pages of ppt

• Page z: Group photo (presentation session with Trainer)

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**Task 14 (Group)**  
**HIRARC at workplace**

Please prepare HIRARC at your workplace/ faculty/hostel/house, etc:

1. HIRARC form, can be download from [www.dosh.gov.my](http://www.dosh.gov.my), or web OSHE.utm.my
2. Or in excel format (edited from original form as an example from dosh guidelines
3. Please identify 12 activity and types of safety hazard, health hazard and environmental hazard. Proof of photo, etc
4. Photo as proof of evidence of finding for each hazard/situation/process (HI Hazard identification)
5. Solution/recommendation as SHO in 3 highest risk.
6. Presentation, and task submission in ppt
7. Submission to: [mohdsaidinmisn@gmail.com](mailto:mohdsaidinmisn@gmail.com) & cc e-mel to all group members

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Time: 180 minutes

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**Sample HIRARC Form from DOSH**

1. Hazard Identification			2. Risk Analysis			3. Risk Control			
No.	Work Activity	Hazard	Which can cause/effect	Existing Risk Control (if any)	Likelihood	Severity	Risk	Recommended Control Measures	PC (Doc date/ status)
1	Loading the machine with wood	Cutting blades	Cuts - first aid type injury	Safe work practice	4	1	4 (Low)	Use leather hand glove	Aidy (26July2011)
2	Operating the machine	Unguarded machine	Hand get caught into rotating parts / amputation	Safe work practice; daily pre-use check and regular maintenance	4	3	5 (Medium)	To Fix L-guard	Chair (26Ogos2011)
		Flying fragments	Serious cuts & eye injuries by flying fragments of blades that break during cutting	Warning signs, Training, Safety goggles	4	3	5 (Medium)	Use stronger blades, Add PEL, guard metal	Chair (26Ogos2011)
3	Unloading cut wood	Heavy load	Muscular strain / back pain	Manual lifting procedure	3	1	1 (Low)	Use mechanical lifter	UAS/OS (Ogos 2011)
4	Repair and maintenance of the machine	Unguarded machine; bad work practice	Serious cuts from blade & getting caught in rotating parts if machine is accidentally started	Cover on/banish Safe work practice	4	4	4 (High)	To make delay start button	Chair (26Ogos 2011)

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**Task 14 (Group)**

• Write ALL Group member name, ic/passport, matric number, tel, etc.

• If you don't have any group, then you can do this alone

Group Member Name	ic/passport	Matric Number	Tel
1. Your Name			
2. Your friend's name			
3. Your friend's name			
4....			
5....			

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**Fill 12 activities with 5 safety hazards, 4 health hazards and 3 environmental hazards and**

Row	Work Activity	Hazard	Which can cause/effect	Existing Risk Control		Likelihood	Severity	Risk	Recommended Control Measures	PIC (due date/ action)
				Existing Risk Control (if any)	Control Measure					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

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add picture, evidence etc in additional slides to support your works

Row	Work Activity	Hazard	Which can cause/effect	Existing Risk Control		Likelihood	Severity	Risk	Recommended Control Measures	PIC (due date/ action)
				Existing Risk Control (if any)	Control Measure					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

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**Task 15 (Group)**  
**Career path of Safety and Health Officer**

Based on selected programs (ex. Architecture/ Civil Engineering/ Chemical, and etc Undergraduate studies at UTM), please prepare a career path a Safety and Health Officer in detail needs and appropriateness to OSHA 1994 and SHO Regulations (with timeline track and detail process)

1. Presentation, and task submission in ppt
2. Submission to: mohdsaidinmisnan@gmail.com cc e-mel to all group members

inovatif.wira@entrepreneurial.global Time: 60 minutes

**OCCUPATIONAL SAFETY, HEALTH & ENVIRONMENT (OSHE)**

**UTM Professional Skills Certificate**

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