Title of the Program: Electrical Power and Machines Engineering





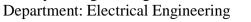


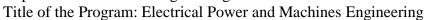
## 42. Course Specification of Industrial Safety

	I. Course Identification and General Information:						
1.	Course Title:	Industrial Safety					
2.	Course Code & Number:	PME:	345				
		Credit Hours Total				Total	
3.	Credit hours:	Th.	Tu	Pr.	Tr.	Total	
		2	2	-	-	3	
4.	Study level/ semester at which this course is offered:	Fourth year- First Semester					
5.	Pre –requisite (if any):	NA					
6.	Co –requisite (if any):	None					
7.	Program (s) in which the course is offered:	BSc. Power Engineering and Electrical Machines				ectrical	
8.	Language of teaching the course:	Engli	sh				
9.	Location of teaching the course:	Electrical Engineering Department/Faculty of Engineering					
10.	Prepared By:	Prof. Dr. Eng. Omar H. Al-Sakaf				f	
11.	Date of Approval						

### **II.** Course Description:

This course enhances safety awareness of students towards potential hazards in the workplace and provides useful practical knowledge for workplace safety which is mandated by national and international standards. Students will identify, evaluate and control potential hazards to prevent or mitigate harm or damage to people, property, or the environment. Emphasis is placed on main causes of industrial accidents and protection, risk management and accident prevention, automated systems and robot safety as well as safety management systems.













	III. Course Intended Learning Outcomes (CILOs)	Referenced PILOs
a1	Define workplace safety and health hazards and ways to control them.	
a2	Identify accident and injury information with respect to valid safety standards, state laws and regulations and where and how to get additional safety information.	A2, A3, A4
<b>b1</b>	Analyze the causes and consequences of industrial accidents.	B1, B4
<b>b2</b>	Deal with national and international applicable safety standards.	<b>D</b> 1, <b>D</b> 1
c1	Conduct a job safety analysis and perform an appropriate accident investigation.	C1, C2
<b>c2</b>	Design a safety and health program.	
d1	Acquire problem solving and design skills using computer applications and Internet for extracting information related to field of study and for preparing and presenting reports.	D1, D2, D3, D4, D5
d2	Employ soft skills, including teamwork, presentation and communication skills.	D4, D3

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:					
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies			
a1 Define workplace safety and health hazards and ways to control them.  a2 Identify accident and injury information with respect to valid safety standards, state laws and regulations and where and how to get additional safety information.	<ul> <li>Lectures,</li> <li>Demonstrations,</li> <li>Interactive class discussion,</li> <li>Tutorials</li> </ul>	<ul> <li>Assignments,</li> <li>Oral Presentations, </li> <li>Quizzes,</li> <li>Tests,</li> <li>Written Exams</li> </ul>			

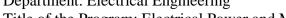
# (B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

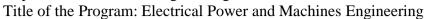
Head of
Department
Asst. Prof. Dr.
Adel Ahmed Al-
Shakiri

Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad







	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
<b>b</b>	J 1	<ul> <li>Lectures,</li> <li>Demonstrations,</li> <li>Interactive class discussion,</li> </ul>	<ul><li>Assignments,</li><li>Oral</li></ul>
b	2 Deal with national and international applicable safety standards.		Presentations,  Quizzes,  Tests,  Written Exams

	(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:					
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies			
c1	Conduct a job safety analysis and perform an appropriate accident investigation.	<ul><li>Lectures,</li><li>Demonstrations,</li><li>Interactive class</li></ul>	<ul><li>Assignments,</li><li>Oral Presentations,</li><li>Quizzes,</li></ul>			
c2	Design a safety and health program	discussion,	<ul><li>Tests,</li><li>Written Exams</li></ul>			

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:					
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies			
d1 Acquire problem solving and design skills using computer applications and Internet for extracting information related to field of study and for preparing and presenting reports.	<ul><li>Demonstrations,</li><li>Interactive class discussion.</li></ul>	<ul><li>Assignments,</li><li>Oral Presentations.</li></ul>			
d2 Employ soft skills, including teamwork, presentation and communication skills.					

IV. Course Content:	
A – Theoretical Aspect:	

Head of
Department
Asst. Prof. Dr.
Adel Ahmed Al-
Shakiri

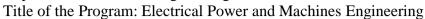
Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti

Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad

Sana'a University Faculty of Engineering

Department: Electrical Engineering











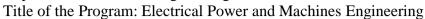
Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact Hours
1.	The Work Environment and Its Relation to the Safety and Occupational Health Requirements	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Facilities and Workstations</li> <li>Maintenance of Plant         <ul> <li>Facilities</li> </ul> </li> <li>Industrial Sanitation and             <ul> <li>Personnel Facilities</li> <li>Occupational Health                     <ul> <li>Services</li> <li>National and International                                <ul></ul></li></ul></li></ul></li></ul>	1	2
2.	Workplace Exposures and Personal Protective Equipment	a1, a2, b1, b2, c1, c2, d1,d2	<ul> <li>Main Causes of Industrial Accidents and Protection</li> <li>Personal Protective Equipment: Function, Types, Selection</li> </ul>	1	2
3.	Material Handling Safety	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Types of Material Handling (Manual, Mechanized, Automated)</li> <li>Accidents and Injuries</li> <li>Preventive Measures to Reduce Accidents</li> </ul>	1	2
4.	Electrical Safety	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Potential Hazards of         Electricity</li> <li>Forms of Electrical Hazards</li> <li>Forms of Electric Shock and         Protection</li> <li>Protective Strategies         Against Electrical Hazards</li> </ul>	2	4
5.	Chemical Safety	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Classification of Chemicals and Labeling</li> <li>Chemical Accidents</li> <li>Preventive Measures</li> </ul>	1	2

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic
Development
Center & Quality
Assurance
Assoc. Prof. Dr.
Huda Al-Emad

Sana'a University
Faculty of Engineering

Department: Electrical Engineering







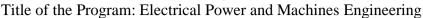




		o1 o2 b1	on Chemical Safety  Potential Hazards of		
6.	Machine	a1, a2, b1, b2, c1, c2,	Machines	1	2
	Safety	d1, d2	Methods of Safeguarding     Legleout and Taggett		_
7.	Fire Safety	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Lockout and Tagout</li> <li>Fire Triangle</li> <li>Common Fire Hazards</li> <li>Fire Protection</li> <li>Fire Prevention</li> <li>Evacuation</li> </ul>	2	4
			Fire Fighting		
8.	Industrial Automation and Robots Safety	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Elements of Automation         Safety Systems</li> <li>Programmable Automation         Controllers</li> <li>Safety Communication         Networks</li> <li>Hazards Associated with         Robots</li> <li>Safety Requirements for         Working with Robots</li> </ul>	2	4
9.	Risk Management	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Risk Management Cycle</li> <li>Hazard Identification</li> <li>Job Safety Analysis</li> <li>Risk Assessment</li> <li>Risk Control</li> <li>Accident Investigation</li> </ul>	2	4
10.	Safety Management Systems	a1, a2, b1, b2, c1, c2, d1, d2	<ul> <li>Concepts and components of a health and safety management system</li> <li>Development of OHSAS18001 and accreditation</li> <li>Safety Auditing</li> </ul>	1	2
		Units Per Sei		14	28

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad









#### **B** – Tutorial

(Assignments and presentations, discussion and analysis of case studies and mini projects)

Order	Topics	Number of Weeks	Contact Hours	Learning Outcomes
1.	Tools, techniques and, how-to's to establish organization-wide safety training and support programs.	6	12	
2.	How to identify and eliminate safety hazards, health threats, and other workplace dangers.	4	8	b1, b2, c1, c2, d1, d2
3.	Promote a safe and healthy work environment in accordance with valid standards and requirements.	4	8	
	Number of Weeks /and Units Per Semeste	r	14/28	

#### **Teaching Strategies of the Course:** V.

- Lectures
- Interactive class discussion
- Demonstration Safety Video Clips, Internet Search for Safety Resources, Safety Exhibition
- **Tutorials**
- Field Visits

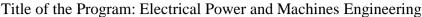
1	VI. Assignments:			
No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1.	Homework.			
2.	Assignments to assess ability to solve problems and analyze results independently.	b1, b2, c1, c2, d1,	1 - 14	22.5
3.	Presentations.	u2		
4.	Mini Projects - Scientific Research Work.			
	Total			22.5

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri

Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti

Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad





VI	VII. Schedule of Assessment Tasks for Students During the					
	Semester:					
No.	Assessment Method	Week	Mark	Proportion of	Aligned Course	
		Due Mark	Final Assessment	<b>Learning Outcomes</b>		
1.	Assignments.	1-13	22.5	15%		
2.	Mid-Term Exam.	8	22.5	15%	b1, b2, c1, c2, d1, d2	
3.	Final Exam	16	105	70%	$ \begin{bmatrix} 01, 02, 01, 02, 01, 02 \end{bmatrix} $	
	Total		150	100%		

### **VIII. Learning Resources:**

### 1- Required Textbook

Omar Al-Sakaf, (2016), 'Introduction to Industrial Safety', 1st Edition, Sana'a, Yemen.

#### 2- Essential References.

- 1. C. Ray Asfahl & David W. Rieske (2010). Industrial Safety and Health Management, 6<sup>th</sup> Edition. Prentice Hall: Upper Saddle River. ISBN-13:978-0-13-236871-1.
- 2. David L. Goetsch, (2000), The Safety and Health Handbook, Prentice Hall.
- 3. Encyclopedia of Occupational Health and Safety. International Labor Office. Comprehensive reference work; source of practical information, 2010, www.ilo.org.
- 4. Yemen Occupational Safety and Health Manual (Arabic), 1st Edition, 1999.
- 5. National Occupational Health and Safety Legislations in the Republic of Yemen (Arabic), First Edition, 2001.
- 6. U.S. Department of Labor, OSHA Safety and Health Standards 29 CFR1910, 2010.
- 7. Hagan, Philip E., Montgomery, John F., O'Reilly, James T., 2009, Accident Prevention Manual for Business & Industry; Administration & Programs, 13<sup>th</sup> Edition. Itasca, Illinois; National Safety Council. ISBN: 978-0-87912-280-5E.
- 8. Height, Joel M., 2008, The Safety Professionals Handbook; Technical Applications. Des Plaines Illinois; American Society of Safety Engineers. ISBN: 978-1-885581.

#### 3- Electronic Materials and Web Sites etc.

- Video clips.
- Links to information resources.

#### **IX.** Course Policies:

#### 1. Class Attendance:

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad

Sana'a University
Faculty of Engineering

Department: Electrical Engineering

Title of the Program: Electrical Power and Machines Engineering









A student should attend not less than 75 % of total hours of the subject; otherw not be able to take the exam and will be considered as exam failure. If the absent due to illness, he/she should bring an approved statement from univers  Tardy:  2. For late in attending the class, the student will be initially notified. If he repeated	student is
absent due to illness, he/she should bring an approved statement from univers  Tardy:  2. For late in attending the class, the student will be initially notified. If he repeated	
Tardy: 2. For late in attending the class, the student will be initially notified. If he repeated	sity Clinic
2. For late in attending the class, the student will be initially notified. If he repeated	
	ed lateness
in attending class he will be considered as absent.	
Exam Attendance/Punctuality:	
A student should attend the exam on time. He is Permitted to attend an exar	m half one
hour from exam beginning, after that he/she will not be permitted to take the	exam and
he/she will be considered as absent in exam-	
Assignments & Projects:	
<b>4.</b> The assignment is given to the students after each chapter; the student has to	submit all
the assignments for checking on time-	
Cheating:	
5. For cheating in exam, a student will be considered as failure. In case the considered as failure.	cheating is
repeated three times during his/her study the student will be disengaged from the	ne Faculty-
Plagiarism:	
Plagiarism is the attending of a student the exam of a course instead of another	er student.
<b>6.</b> If the examination committee proved a plagiarism of a student, he will be d	disengaged
from the Faculty. The final disengagement of the student from the Faculty	should be
confirmed from the Student Council Affair of the university.	
Other policies:	
	otherwise
- Mobile phones are not allowed to use during a class lecture. It must be closed.	
- Mobile phones are not allowed to use during a class lecture. It must be closed, the student will be asked to leave the lecture room	, other wise
	, other wise

Reviewed	Vice Dean for Academic Affairs and Post Graduate Studies: Asst. Prof. Dr. Tarek
By	A. Barakat
	President of Quality Assurance Unit: Assoc. Prof. Dr. Mohammed Algorafi
	Name of Reviewer from the Department: Asst. Prof. Dr. Adel Ahmed Al-Shakiri
	Deputy Rector for Academic Affairs Asst. Prof. Dr. Ibrahim AlMutaa
	Assoc. Prof. Dr. Ahmed Mujahed

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



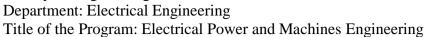




### Asst. Prof. Dr. Munasar Alsubri

Title of the Program: Electrical Power and Machines Engineering

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic
Development
Center & Quality
Assurance
Assoc. Prof. Dr.
Huda Al-Emad





# 42. Course Plan of Industrial Safety

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	Prof. Dr. Eng. Omar H. Al- Sakaf	Office Hours					
Location& Telephone No.	Faculty of Engineering Mobile: 733772328/773332328	SAT	SUN	MON	TUE	WED	THU
E-mail	oalsakaf@gmail.com oalsakaf@yahoo.com		08:00 - 12:00				

-	II. Course Identification and	Gener	ral Info	rmation	ı:	
1.	Course Title:	Industrial Safety				
2.	Course Number & Code:	PME345				
		Credit Hours			Total	
3.	Credit hours:	Th.	Tu.	Pr.	Tr.	Total
		2	2	-	-	3
4.	Study level/year at which this course is offered:	Fourth year- First Semester				
5.	Pre –requisite (if any):	General Engineering Knowledge				
6.	Co –requisite (if any):	None				
7.	Program (s) in which the course is offered	BSc. Power Engineering				
8.	Language of teaching the course:	English	h			
9.	System of Study:	Regula	ır			
10.	Mode of delivery:	Face-to	o-Face			
11.	Location of teaching the course:		cal Engingineering	eering Dep	partment/	Faculty

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



Title of the Program: Electrical Power and Machines Engineering

### **III.** Course Description:

This course enhances safety awareness of students towards potential hazards in the workplace and provides useful practical knowledge for workplace safety which is mandated by national and international standards. Students will identify, evaluate and control potential hazards to prevent or mitigate harm or damage to people, property, or the environment. Emphasis is placed on main causes of industrial accidents and protection, risk management and accident prevention, automated systems and robot safety as well as safety management systems.

### **IV.Intended Learning Outcomes (ILOs) of the Course:**

- 1. Define workplace safety and health hazards and ways to control them.
- **2.** Identify accident and injury information with respect to valid safety standards, state laws and regulations and where and how to get additional safety information.
- **3.** Analyze the causes and consequences of industrial accidents.
- **4.** Deal with national and international applicable safety standards.
- **5.** Conduct a job safety analysis and perform an appropriate accident investigation.
- **6.** Design a safety and health program.
- **7.** Acquire problem solving and design skills using computer applications and Internet for extracting information related to field of study and for preparing and presenting reports.
- **8.** Employ soft skills, including teamwork, presentation and communication skills.

Title of the Program: Electrical Power and Machines Engineering









## **V. Course Content:**

### A – Theoretical Aspect:

	leorencai Aspect.		Number	Contact
Order	Units/Topics List	Sub Topics List	of Weeks	Hours
1.	The Work Environment and Its Relation to the Safety and Occupational Health Requirements	<ul> <li>Facilities and Workstations</li> <li>Maintenance of Plant Facilities</li> <li>Industrial Sanitation and Personnel Facilities</li> <li>Occupational Health Services</li> <li>National and International Safety Codes and Standards</li> </ul>	1 <sup>st</sup>	2
2.	Workplace Exposures and Personal Protective Equipment	<ul> <li>Main Causes of Industrial Accidents and Protection</li> <li>Personal Protective Equipment: Function, Types, Selection</li> </ul>	2 <sup>nd</sup>	2
3.	Material Handling Safety	<ul> <li>Types of Material Handling (Manual, Mechanized, Automated)</li> <li>Accidents and Injuries</li> <li>Preventive Measures to Reduce Accidents</li> </ul>	3 <sup>rd</sup>	2
4.	Electrical Safety	<ul> <li>Potential Hazards of Electricity</li> <li>Forms of Electrical Hazards</li> <li>Forms of Electric Shock and Protection</li> <li>Protective Strategies Against Electrical Hazards</li> </ul>	4 <sup>th</sup> ,5 <sup>th</sup>	4
5.	Chemical Safety	<ul> <li>Classification of Chemicals and Labeling</li> <li>Chemical Accidents</li> <li>Preventive Measures</li> <li>The International Program on Chemical Safety</li> </ul>	6 <sup>th</sup>	2
6.	Machine Safety	Potential Hazards of Machines	7 <sup>th</sup>	2

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad







Title of the Program: Electrical Power and Machines Engineering

Numbe	r of Weeks /and Units F	Per Semester	16	32
12.	Final Exam		16 <sup>th</sup>	2
11.	Safety Management Systems	<ul> <li>Concepts and components of a health and safety management system</li> <li>Development of OHSAS18001 and accreditation</li> <li>Safety Auditing</li> </ul>	15 <sup>th</sup>	2
10.	Risk Management	<ul> <li>Risk Management Cycle</li> <li>Hazard Identification</li> <li>Job Safety Analysis</li> <li>Risk Assessment</li> <li>Risk Control</li> <li>Accident Investigation</li> </ul>	13 <sup>th</sup> ,14 <sup>th</sup>	4
9.	Industrial Automation and Robots Safety	<ul> <li>Elements of Automation Safety Systems</li> <li>Programmable Automation Controllers</li> <li>Safety Communication Networks</li> <li>Hazards Associated with Robots</li> <li>Safety Requirements for Working with Robots</li> </ul>	11 <sup>th</sup> ,12 <sup>th</sup>	4
8.	Fire Safety	<ul> <li>Fire Triangle</li> <li>Common Fire Hazards</li> <li>Fire Protection</li> <li>Fire Prevention</li> <li>Evacuation</li> <li>Fire Fighting</li> </ul>	9 <sup>th</sup> ,10 <sup>th</sup>	4
7	Midterm Exam	<ul><li>Methods of Safeguarding</li><li>Lockout and Tagout</li></ul>	8 <sup>th</sup>	2

### **B** – Tutorial

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad







Title of the Program: Electrical Power and Machines Engineering

(Assignn	(Assignments and presentations, discussion and analysis of case studies and mini projects)				
Order	Topics Numb of Wee		Contact Hours	Learning Outcomes	
1.	Tools, techniques and, how-to's to establish organization-wide safety training and support programs.	1 <sup>st</sup> ,2 <sup>nd</sup> ,3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	12		
2.	How to identify and eliminate safety hazards, health threats, and other workplace dangers.	7 <sup>th</sup> ,8 <sup>th</sup> ,9 <sup>th</sup> ,10 <sup>th</sup>	8	b1, b2, c1, c2, d1, d2	
3.	Promote a safe and healthy work environment in accordance with valid standards and requirements.	11 <sup>th</sup> ,12 <sup>th</sup> ,13 <sup>th</sup> ,14 <sup>th</sup>	8		
Number of Weeks /and Units Per Semester			14/28		

## VI. Teaching Strategies of the Course:

- Lectures
- Interactive class discussion
- Demonstration Safety Video Clips, Internet Search for Safety Resources, Safety Exhibition
- Tutorials
- Field Visits

-	VII.Assignments:			
No	Assignments	Aligned CILOs(symbols)	Week Due	Mark
1.	Homework.			
2.	Assignments to assess ability to solve problems and analyze results independently.	b1, b2, c1, c2, d1,	1 - 14	22.5
3.	Presentations.	02		
4.	Mini Projects - Scientific Research Work.			
	Total			22.5

Title of the Program: Electrical Power and Machines Engineering









#### VIII. Schedule of Assessment Tasks for Students During the **Semester:** No. **Assessment Method** Week Due Mark **Proportion of Final Assessment** 1-13 1. Assignments. 22.5 15% 2. Mid-Term Exam. 8 22.5 15% Final Exam 16 70% 3. 105 **150** 100% **Total**

### **IX.** Learning Resources:

### 1- Required Textbook

Omar Al-Sakaf, (2016), 'Introduction to Industrial Safety', 1st Edition, Sana'a, Yemen.

#### 2- Essential References.

- 1. C. Ray Asfahl & David W. Rieske (2010). Industrial Safety and Health Management, 6<sup>th</sup> Edition. Prentice Hall: Upper Saddle River. ISBN-13:978-0-13-236871-1.
- 2. David L. Goetsch, (2000), The Safety and Health Handbook, Prentice Hall.
- 3. Encyclopedia of Occupational Health and Safety. International Labor Office. Comprehensive reference work; source of practical information, 2010, www.ilo.org.
- 4. Yemen Occupational Safety and Health Manual (Arabic), 1st Edition, 1999.
- 5. National Occupational Health and Safety Legislations in the Republic of Yemen (Arabic), First Edition, 2001.
- 6. U.S. Department of Labor, OSHA Safety and Health Standards 29 CFR1910, 2010.
- 7. Hagan, Philip E., Montgomery, John F., O'Reilly, James T., 2009, Accident Prevention Manual for Business & Industry; Administration & Programs, 13<sup>th</sup> Edition. Itasca, Illinois; National Safety Council. ISBN: 978-0-87912-280-5E.
- 8. Height, Joel M., 2008, The Safety Professionals Handbook; Technical Applications. Des Plaines Illinois; American Society of Safety Engineers. ISBN: 978-1-885581.

#### 3- Electronic Materials and Web Sites etc.

- Video clips.
- Links to information resources.

#### X. Course Policies:

#### 1. | Class Attendance:

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad







Department. Licetics	ai Liigineering		
Title of the Program:	<b>Electrical Power</b>	and Machines Engi	neering

	A student should attend not less than 75 % of total hours of the subject; otherwise he will
	not be able to take the exam and will be considered as exam failure. If the student is
	absent due to illness, he/she should bring an approved statement from university Clinic
_	Tardy:
2.	For late in attending the class, the student will be initially notified. If he repeated lateness
	in attending class he will be considered as absent.
	Exam Attendance/Punctuality:
3.	A student should attend the exam on time. He is Permitted to attend an exam half one
J.	hour from exam beginning, after that he/she will not be permitted to take the exam and
	he/she will be considered as absent in exam-
	Assignments & Projects:
4.	The assignment is given to the students after each chapter; the student has to submit all
	the assignments for checking on time-
	Cheating:
5.	For cheating in exam, a student will be considered as failure. In case the cheating is
	repeated three times during his/her study the student will be disengaged from the Faculty-
	Plagiarism:
	Plagiarism is the attending of a student the exam of a course instead of another student.
6.	If the examination committee proved a plagiarism of a student, he will be disengaged
	from the Faculty. The final disengagement of the student from the Faculty should be
	confirmed from the Student Council Affair of the university.
	Other policies:
	- Mobile phones are not allowed to use during a class lecture. It must be closed, otherwise
7.	the student will be asked to leave the lecture room
	- Mobile phones are not allowed in class during the examination.
	Lecture notes and assignments my given directly to students using soft or hard copy

Title of the Program: Electrical Power and Machines Engineering









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