COURSE PLAN

FIRST: BASIC INFORMATION

College

College	: Faculty of Karak - Balqa Applied University
Department	: Mechanical Engineering

Course

Course Title	: Sheet Metal Forming
Course Code	: 020209231
Credit Hours	:2 (1 Theoretical, 1 Practical)
Prerequisite	:020209111

Instructor

Name	: Dr. Jamil Haddad
Office No.	:
Tel (Ext)	:
E-mail	: drjamil@bau.edu.jo
Office Hours	:

Class Times

Text Book

- Sheet metal forming : fundamentals(Taylan Altan and A. Erman Tekkaya
- Sheet metal fabrication Techniques and Tips for Beginners and Pros(Eddie Paul)

References

- Engineering Fundamentals: an introduction to engineering (Saeed Moaveni)

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course deals with the differences and the uses of steel board and round shape scissors in sheet metal work, the principle of working with groove core, how to make uses of standing core, working principle of round shape standing core, rectangular and circular wiring in sheet metal work, applying appropriate Workshop Processes, techniques and tools to mark out and form R-Bending shape in sheet metal work, process of marking out and forming cylinder shape with appropriate techniques and tools in sheet metal work, process of making L, Y, S-shape pipes works in sheet metal.

COURSE OBJECTIVES

The objectives of this course are to enable the student to do the followings:

- Ability to Know the differences and the uses of steel board and round shape scissors
- Explain principle of working with groove and round shape standing core
- Ability to apply appropriate Workshop Processes, techniques and tools to mark out and form R-Bending shape
- Explain process of making L-Y-S -shapes pipe work in sheet metal

COURSE LEARNING OUTCOMES

On successful completion of this course, students are expected to be able to:

CLO1. Explain differences and the uses of steel board and round shape scissors
CLO2. Perform principle of working with groove core
CLO3. Perform how to use a standing core
CLO4. Perform working principle of round shape standing core
CLO5. Perform rectangular and circular wiring operation in sheet metal work
CLO6. Apply appropriate workshop processes, techniques and tools to mark out and form R-bending shape in sheet metal work
CLO7. Perform the process of marking out and forming cylinder shape with appropriate techniques and tools in sheet metal work
CLO8. Perform L-shape pipe work process in sheet metal work
CLO9. Perform Y-shape pipe work process in sheet metal work
CLO10. Perform S-shape pipe work process in sheet metal work

COURSE SYLLABUS

Week	Unit	Content	Related L.O. and reference (Chapter)	Notes
1	Introduction, steel board and round shape scissors	• Introduction on sheet metal forming • Know the differences between steel board scissors and round shape scissors	CLO1	
2	Principle of working with groove core	• Know the principle of working with groove core	CLO2	
3	Make uses of standing core	• Know the principle of working with a standing core in sheet metal work	CLO3	
4	Working principle of round shape standing core	• Know the principle of working with a round shape standing core in sheet metal work	CLO4	
5	Rectangular and circular wiring	• Know the method of carrying out rectangular wiring work • Know the process of carrying out circular wiring work	CLO5	

Week	Unit	Content	Related L.O. and reference (Chapter)	Notes
6	Applying appropriate Workshop Processes, Techniques and Tools To Mark out And Form R-Bending shape	• Mark out the R-Bending shape in sheet metal material applying appropriate tools, techniques and safety practice • Cut sheet metal to given size using appropriate tools and machines	CLO6	
7	Applying appropriate workshop processes, techniques and tools to mark out and form R-bending shape	• Form sheet metal to given shape using appropriate tools, machine and techniques	CLO6	
8	**Midterm Exam**			
9	Process of marking out and forming cylinder shape with appropriate techniques and tools	• Mark out the following project in sheet metal material applying appropriate tools and technique. a) Cylinder shape.	CLO7	
10	Process of marking out and forming cylinder shape with appropriate techniques and tools	• Cut sheet metal to given size of shape above with appropriate tools. • Form sheet metal to given shape as stated above with appropriate techniques	CLO7	
11	Process of making L-shape pipe work in sheet metal	• Mark out the L-shape pipe material applying appropriate tools, techniques and safety practice. • Cut sheet metal to given size using appropriate tools and machines.	CLO8	
12	Process of making L-shape pipe work in sheet metal	• Form sheet metal to given shape using appropriate tools, machine and techniques.	CLO8	
13	Process of making Y-shape pipe work	• Mark out the Y-shape pipe material applying appropriate tools, techniques and safety practice. • Cut sheet metal to given size using appropriate tools and machines.	CLO9	
14	Process of making Y-shape pipe work	• Form sheet metal to given shape using appropriate tools, machine and techniques	CLO9	
15	Process of making S-shape pipe work	• Mark out the S-shape pipe material applying appropriate tools, techniques and safety practice. • Cut sheet metal to given size using appropriate tools and machines. • Form sheet metal to given shape using appropriate tools, machine	CLO10	

Week	Unit	Content	Related L.O. and reference (Chapter)	Notes
		and techniques		
16	**Final Exam**			

COURSE LEARNING RESOURCES

The effectiveness of teaching in this course depends on making students familiar with the differences and the uses of steel board and round shape scissors, the principle of working with groove core, how to make uses of standing core, working principle of round shape standing core, rectangular and circular wiring, applying appropriate Workshop Processes, techniques and tools to mark out and form R-Bending shape in sheet metal work, process of marking out and forming cylinder shape with appropriate techniques and tools in sheet metal work, process of making L-Y-S shapes pipe work in sheet metal**.**

Teaching methods:

- Problem-solving skills: through application of these principles to basic engineering problems.
- Online research skills on topics related to course objectives and recent developments in the field of mechanical engineering (welding and plumbing).
- Learning skills and adaptability: Developed by transferring students and reconfiguring work teams to enable them to adapt to other individuals from time to time.

ONLINE RESOURCES

https://www.vitalsource.com/

ASSESSMANT TOOLS

Assessment Tools	%
Projects and Quizzes	20%
MID Exam	30%
Final Exam	50%
Total Marks	100%

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 20% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

GRADING SYSTEM
Example:

Average	Maximum	Minimum
Excellent	100%	90%
Very Good	89%	80%
Good	79%	70%
Satisfactory	69%	60%
Weak	59%	50%
Failed	49%	35%

REMARKS

{The instructor can add any comments and directives such as the attendance policy and topics related to ethics}

COURSE COORDINATOR

Course Coordinator: Dr.Jamil Haddad	**Department Head:**
Signature:	**Signature:**
Date:	**Date:**