

Ministry of Higher Education and Scientific Research

Supervision and Scientific Evaluation Body

Quality Assurance and Academic Accreditation Office

Course Description Sample

Subject: Workshops

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| 1. Educational Institution | Shatt Al Arab University College |
| 2. Department / Center | Mechanical Power Engineering. |
| 3. Course Title /Code | Workshops/ PMAC102 |
| 4. Lecturer Name | Adil Kadhim Abdul Abbas |
| 5. Type of Teaching | Practical |
| 6. Academic Year /Term | First Stage/First term |
| 7. Total No. of Teaching Hours | 112 |
| 8. Date of Preparing this Course Description | 20/11/2023 |

9. Course Objectives

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| Identify the students on the gain of the manual skills by preceding the operations and manufacturing processes. |
| Training on Files and the cold process: types and specifications of files. |
| Training on Saw cutting: hand saw, saw weapon, saw weapon installation. |
| Training on Lathe: specifications, use, accessories and installation methods - forming the lathe - types of lathe pens and the use of measuring tools. |
| Practical exercises for welding opposite surfaces, perpendicular surfaces, inclined surfaces and circuit welding, longitudinal and transverse cutting - cutting: circle, irregular shapes. |

10. Course Output, Methodology and Evaluation

(A) Cognitive Objectives

Training and doing manual operation. Also, doing the maintenance by using different manual tools and measuring instruments

(B) Skill Objectives Related to the Program:

By the end of the engineering mechanics module, students should be able to: preceding the operations and manufacturing processes, and doing the maintenance by using different manual tools and measuring instruments

Methods of Teaching and Learning

The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, and hand-in assignments.

Methods of Evaluation

| Number | calendar element | degree |
|--------|------------------|--------|
| 1 | Reports | 60% |
| 2 | Quizzes | 40% |

(C) Sentimental and Value Objectives

Expending the student critical thinking skills

Methods of Teaching and Learning

Theoretical explanation for each workshop and explaining different tools and machines with the practical exercise.

Methods of Evaluation

Development the student skills by doing the written exam, Case studies, Quizzes, seminars, Practical testing, and Online testing.. This exams have achieved through classes and interactive tutorials.

D) General and Qualitative Skills (other skills related to the ability of employment and personal development)

Achieve a practical exercise on different machines and manual tools.

11. Course Structure

| Week | No of Hours | Required Learning Output | Title of Subject | Teaching Method | Evaluation |
|------|-------------|--------------------------|----------------------------------|-----------------|------------|
| 1 | 6 | 100% | Industrial Safety | practical | |
| 2 | 6 | 100% | Measurement Tools: Vernier | practical | |
| 3 | 6 | 100% | Measurement Tools: Micrometer | practical | |
| 4 | 6 | 50% | Grinding | practical | |
| 5 | 6 | 50% | Sawing | practical | |
| 6 | 6 | 50% | Drilling | practical | |
| 7 | 6 | 50% | Carpentry | practical | |
| 8 | 6 | 100% | Lathe parts and tools | practical | |
| 9 | 6 | 100% | Turning training | practical | |
| 10 | 6 | 100% | manual Welding | practical | |
| 11 | 6 | 100% | Welding training | practical | |
| 12 | 6 | 100% | MIG and TIG Welding | practical | |
| 13 | 6 | 100% | Point welding | practical | |
| 14 | 6 | 100% | SAW welding | practical | |
| 15 | | 100% | Gas Welding | practical | |

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|----|---|------|-----------------|-----------|--|
| | 6 | | | | |
| 16 | 6 | 100% | Gas Cutting | practical | |
| 17 | 6 | 100% | Shaping Machine | practical | |
| 18 | 6 | 100% | Casting I | practical | |
| 19 | 6 | 100% | Casting II | practical | |
| 20 | 6 | 100% | Forging | practical | |

12. Infrastructure

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| a. Textbooks | العزاوي عبد فارس علي , الورش الهندسية , جامعة تكريت , كلية الهندسة , 2022. Khalid Ayob, Salman Dawod, Engineering Workshops manual, Basra University, College of Engineering, 1986. |
| b. References | Sing, Rajendar, Introduction to Basic Manufacturing Process Workshop Technique; Publication date. January 1, 2010. |
| c. Recommended books and periodicals (journals, reports, etc.) | 1. Tate, M. L. (2009). Workshops. The Learning Professional, 30(1), 44. 2. Mgreen, R., & Levinsen, K. T. (2017). Workshops as a research methodology. Electronic Journal of E-learning, 15(1), 70-81. |
| d. Electronic references, internet websites, etc | https://themeforest.net/search/mechanical%20workshop https://tapintosafety.com.au/mechanical-workshop/ |

13. The Plan of Improving the Course

The course should be improved by increasing of training the experiments on each machine and developing the ability of the students to achieve different manual operations.