****

**Department of *Aviation***

**College of Engineering**

**University of Salahaddin**

**Subject: *Workshop technology***

**Course Book – *For example (Year 1)***

**Lecturer's name *Msc.* *Mustafa Mohammed Mohammed***

**Academic Year: *2022/2023***

**Course Book**

|  |  |
| --- | --- |
| **1. Course name** | **Workshop technology** |
| **2. Lecturer in charge** | **Lecturer MSc. Mustafa Mohammed Mohammed** |
| **3. Department/ College** | **Aviation Dept. / College of Engineering** |
| **4. Contact** | **e-mail: mustafa.mohammed@su.edu.krd****Tel:**  |
| **5. Time (in hours) per week**  | **Theory: 2****Practical: 3**  |
| **6. Office hours** | **4 hours** |
| **7. Course code** | **109**  |
| **8. Teacher's academic profile**  | **-BSc. Electrical engineering /Rafidain University 2007.****-MSc. Communications eng. And networks/ Birmingham university 2014.****Assistant lecturer / Erbil international university/2017-2019****Assistant lecturer / Nobel institute/2020-2021.****Assistant lecturer / salahddin university/2022.****-20 participation in workshops for higher education.****International trainer in e-government 2016-2022** |
| **9. Keywords** | **Derivatives and partial derivatives, Differential equation, Maxima and minima evaluation. Integration and applications, hyperbolic functions.**  |
| **10. Course overview:** Workshop technology is one of the most important lecture that helps student to be familiar with engineering conception. Engineers must know how to deal with engineering environment during project implementation, moreover many factors have to be taken in consideration during work such as safety, work knowledge and work skills. Using engineering tools in a safe environment is a significant requirement for a success project. Students have to learn how to use that tools during their need based on academic usage. |
| **11. Course objective:**The aviation engineers during the application need to deal with the technical problems in the time of aircraft maintenance. Accuracy in the work after getting high skills in the work is an neccessory factor for keeping the aircraft body in safe.That is why the below objectives are need:* Health and safety environment.
* Morality in the work
* Know the safety precautions to be followed in a work shop.
* Describe ferrous metals , non-ferrous metals and non-metals
* Mechanical Properties of Metals
* Tools
 |
| **12. Student's obligation**The students are asked to attend al the lectures and they should arrive on time to the class and that is their responsibility to find out what assignment to be made when they are absent. They should active participation in the class for their successes. The student must participate in all quizzes and exams. He has to present all the home work at the required time.  |
| **13. Forms of teaching**Using a whiteboard tool to cover in details all the required explanation. |
| **14. Assessment scheme**- Midterm Exam: 15 % practical: 35 %-Final Exam: 50 %‌ |
| **15. Student learning outcome:**- They are expecting how to use safe environment during work- Their ability to use tools.- Students will use new technology to enhance their skills during work in a factory.- The students will able to distinguishes between metal and nonmetal.- the student will be able to perform practically factory machine   |
| **16. Course Reading List and References‌:**▪ Key references:* Pamila C. Hamilton , the workshop 1995. How to design and lead workshop.
 |
| **17. The Topics:** | **Lecturer's name** |
|

|  |
| --- |
| **week 1:** introduction to managing safely**week 2:** assessing risks**week 3:** controlling risks**week 4:** understanding responsibilities**week 5:**  understanding hazards**week 6:**  welding**week 7:** plumbing**week 8:** carpentry**week 9 :** classification of engineering materials**week 10:** cutting tools**week 11:** striking tools**week 12 :** holding tools**week 13 :** marking and measuring tools**week 14:** chisels**week 15:** scrapers**week 16 :** sockets**week 17** : holding devices or vices**week 18** : marking tools**week 19:** surface plate**week 20:** halving joint**week 21 :** wood planner**week 22:** forging and welding**week 23:** hammers**week 24:** heating devices**week 25:** foundry**week 26:** advantages of casting |

 | **Mustafa mohammed mohammed**  |
| **18. Practical Topics (If there is any)** |  |
| * Tool usage.
* CNC
* Carpentry
* Welding
* Casting
* piping
 |  |
| **19. Examinations:*****1. Compositional:*** All relative topics in both theory and practical , the student has to finish all the requirement to meet the syllabus . |
| **20. Extra notes:**The students should support themselves be able to solve and design project daily by them and not neglect the subject. |
| **21. Peer review :** |