**First and Second Semester**

**Module 1**

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| Module Information | | | | |
| Module Title | Workshops | | | Module Delivery |
| Module Type | Support | | | Theory  \*  Lecture  Lab  Tutorial  Practical  Seminar |
| Module Code | WORSH11 | | |
| ECTS Credit/year | 4 | | |
| SWL/year | 100 | | |
| Module level | | 1 | Semester of Delivery | 2 |
| Module Leader | | Training and Workshops Center | College |  |
| Module Leader Academic Title | | Prof. | e-mail | twc@uotechnology.edu.iq |
| Module Tutor | |  | Module Leader’s Qualification | Ph.D. |
| Peer Reviewer Name | |  | e-mail |  |
| Scientific Committee Approval Date | | 1/6/2023 | e-mail |  |
|  | |  | Version Number | 1 |

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| Relation with other Modules | | | |
| Prerequisite Module | - | Semester | - |
| Co-requisite Module | - | Semester | - |

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| Module Aims, Learning Outcomes and Inductive Contents | |
| Module Aims | 1-Preparing applied engineers in the field of engineering sciences who are distinguished by a high level of knowledge and technological creativity, in line with the strict standards adopted globally in quality assurance and academic accreditation of the corresponding engineering programs, while adhering to the ethics of the engineering profession.  2. Enable the student to know and understand work systems, risks, and the factors surrounding them.  3. Enable the student to know and understand theoretical principles in handicrafts and measurements. |
| Module Learning Outcomes | 1- To familiarize the student with the vocabulary of occupational safety and its importance in the field of work.  2- Acquisition of the student’s manual operation skills, for example (Filings and Tinsmith workshops), and mechanical operation skills, for example (Turning).  3- Acquisition of the student’s mechanical forming skills, for example (Casting and Blacksmithing).  4- The student acquires basic engineering skills such as Welding, Carpentry, and Electrical installations that serve him in the professional field.  5- Enabling the student to operate the various machines and devices in mechanical operations and formation.  6- Cooperative learning by working collectively. |
| Inductive Contents | 1. Introducing the student to the basics of the art of turning and milling, types of cold working machines, the skill of dealing with them, choosing metals, operational tools, and methods of measurement and standardization 2. Introducing the student to the basics of the art of casting, hot forming, metal selection, method of working on casting furnaces and tools, and manufacturing casting molds 3. Familiarize students with the basics of cars and the systems they use, as well as maintenance, disassembly, and assembly processes. 4. Introducing students to the basics of household and industrial electrical appliances, the skill of using tools, and designing electrical circuits and control panels 5. Introducing the student to the basics of the art of plumbing, leveling surfaces, the skill of using tools, manufacturing and installing geometric shapes, and methods of measurement and standardization 6. Introducing the student to the basics of the art of blacksmithing, cold and hot forming of metals, the method of hardening them, and the skills of dealing with hand tools, forming machines, and heating furnaces 7. Introducing the student to the basics of the art of filing and manual operation of metals with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and the methods of measurement and standardization 8. Introducing the student to the basics of the art of welding, the installation and assembly of metals, the types of welding machines, the skills of dealing with them, the types of welding, and the methods of measurement and standardization 9. Introducing the student to the basics of the art of carpentry and woodworking with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and methods of measurement and standardization |

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| Learning and Teaching Strategies | |
| Strategies |  |

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| Student Workload (SWL) | | | |
| Structured SWL (h/sem) | 46.5 | Structured SWL (h/w) | 3.00 |
| Unstructured SWL (h/sem) | 3.5 | Unstructured SWL (h/w) | 0.23 |
| Total SWL (h/sem) | 50 |  |  |
| Structured SWL (h/year) | 93 | Structured SWL (h/w) | 3.00 |
| Unstructured SWL (h/year) | 7 | Unstructured SWL (h/w) | 0.23 |
| Total SWL (h/year) | 100 |  |  |

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| Module Evaluation | | | | | |
|  | | Time/No. | Weight (Marks) | Week Due | Relevant Learning Outcome |
| Formative Assessment | Quizzes |  |  |  |  |
| Assignments |  |  |  | All |
| Projects / Practice | Every 3 weeks | 60% | Continuous |  |
| Report |  |  |  |  |
| Summative Assessment | Midterm Exam |  |  |  |  |
| Exam | Every 3 weeks | 40% | Continuous | All |
| Total assessment | | | 100% |  |  |

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| Delivery Plan (Weekly Syllabus) | |
|  | Materials Covered |
| Week 1 | Fitting workshop  Occupational safety and its importance in filing workshops  -An introduction to the basics of filing  -Pen holder exercise “preparation and preparation” |
| Week 2 | Fitting workshop  Pencil holder exercises finishing and assembling. |
| Week 3 | Fitting workshop  -The catcher exercise.  - Clamping exercise.  Written exam in practical exercises. |
| Week 4 | Carpentry workshop  -Occupational safety and its importance in carpentry workshops.  - An introduction to carpentry, its types, types of wood, tools used, and preparation Preparing the tools used  Face modification exercise using the reindeer |
| Week 5 | Carpentry workshop  Garden fence work and how to connect its parts, the eight-star exercise |
| Week 6 | Carpentry workshop  - Wood smoothing exercise using smoothing paper  - Wood dyeing exercise in three stages  Final smoothing and varnishing exercise  Written exam in practical exercises |
| Week 7 | The tinsmith workshop  Occupational safety and its importance in plumbing workshops  An introduction to plumbing, its tools, and plumbing stages  Planning and marking exercise on metal plates |
| Week 8 | The tinsmith workshop  Geometric shapes  Types of individuals and methods of individuals  Geometric shape individuals exercise on a metal board |
| Week 9 | The tinsmith workshop  Cone members exercise  - Exercise of cylinders with an oblique cut  Roll forming operations  Connection without the use of an intermediary  Written exam in practical exercises |
| Week 10 | Electric Workshop  Occupational Safety and its importance in electrical workshops  An introduction to the basics of electrical installations  - Linking a simple circuit consisting of a lamp to the control of a single-way switch.  Connect two lamps in series with one-way switch control.  Connecting two lamps in parallel with the control of a single road switch.  Connect two lights with one-way dual switch control. |
| Week 11 | electric Workshop  Connect a fluorescent lamp circuit to a one-way switch control  Connecting an electric supply socket circuit to the control of a separate or combined one-way switch  Written exam in practical exercises |
| Week 12 | electric Workshop  Occupational Safety and its importance in blacksmithing workshops  Introduction to the basics of Blacksmithing  - Barbell adjustment exercise  Eight-star exercise  - Exercise forming the number eight in English  Exercise forming the number six in English |
| Week 13 | supplementary training curriculum  Welding workshop  Plumbing workshop  Blacksmith's workshop |
| Week 14 | supplementary training curriculum  - Automotive workshop  - Turning workshop  Fitting workshop |
| Week 15 | supplementary training curriculum  Carpentry workshop  The plumbing workshop  electric Workshop |

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| Learning and Teaching Resources | | |
|  | Text | Available in the library |
| Required Texts | Workshop technology and measurements, Ahmed Salem Al-Sabbagh, | yes |
| Recommended Texts |  |  |
| Websites |  |  |