



Northern Technical University
College of Oil & Gas Techniques
Engineering/Kirkuk
Department of Renewable energy Techniques
Engineering



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| Module Information | | | |
|------------------------------------|----------------------|-------------------------------|---|
| معلومات المادة الدراسية | | | |
| Module Title | Workshop | | Module Delivery |
| Module Type | Core | | <input type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar |
| Module Code | RETE 103 | | |
| ECTS Credits | 6 | | |
| SWL (hr/sem) | 150 | | |
| Module Level | 1 | Semester of Delivery | |
| Administration Department | RETE | College | College of Oil & Gas Techniques Engineering/Kirkuk |
| Module Leader | Naseer Tawfeeq Alwan | e-mail | naseer.t.alwan@ntu.edu.iq |
| Module Leader's Acad. Title | Lecturer | Module Leader's Qualification | PhD |
| Module Tutor | Name (if available) | e-mail | |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 01/06/2023 | Version Number | |

| Relation with other Modules | | | |
|-----------------------------------|------|----------|--|
| العلاقة مع المواد الدراسية الأخرى | | | |
| Prerequisite module | None | Semester | |
| Co-requisites module | None | Semester | |



Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

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| <p>Module Aims أهداف المادة الدراسية</p> | <ol style="list-style-type: none"> 1. The student is able to acquire manual skills by carrying out the operation and manufacturing processes using various hand tools and measuring tools. 2. Introducing the student to gaining the manual skill by implementing the operations and connection of the manual tools and measuring tools for the household refrigeration and air conditioning equipment. 3. The laboratory material consists of laboratory workshops and refrigeration workshop. |
| <p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p> | <ol style="list-style-type: none"> 1. To familiarize the student with the importance of workshops. 2. To teach the student how to acquire the manual skill by carrying out the operation and manufacturing processes using various hand tools and measuring tools. 3. To distinguish the manual tools and measuring tools for the household refrigeration and air conditioning equipment. |
| <p>Indicative Contents المحتويات الإرشادية</p> | <p>Indicative content includes the following.</p> <p><u>Part A - Tools</u> Include recognition of different tools. Employed for surface preparation and methods of application correctly, Devices of measuring dimensions, Calipers, types and uses, drill types and dimensions</p> <p><u>Part B - Measuring tools</u> T Steel miler, Veneer, Micrometer, Height & height gauge hand tools, Saws, Hammers, Files, Scriber , Chisels , Taps and dies , Surface plate , Bench working.</p> <p><u>Part C - WeldingWorkshop</u> Include recognition of tools and materials employed – Gas cylinder of oxy – Acetylene welding of surface – Electrical are welding exercise – Welding spot.</p> <p><u>Part D - LathingWorkshop</u> lathe machine – Parts – Operation - Practice on longitudinal lathing – Making center – Puncturing – Making external teeth – Practice - Employing measuring tools – internal & external lath machining.</p> |

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

| | |
|--------------------------|--|
| <p>Strategies</p> | |
|--------------------------|--|



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| | <p>Teaching Method 1 – Asynchronous on-line course materials Description: Podcasts, videos and articles in workshop Attendance Recorded: yes</p> <p>Unscheduled Directed Student Hours (time spent away from the timetabled sessions but directed by the teaching staff).</p> <p>Teaching Method 2 - Practical Description: Practical homework assignments Attendance Recorded: Yes Unscheduled Directed Student Hours (time spent away from the timetabled sessions but directed by the teaching staff).</p> |
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| Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
|--|-----|---|-----|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل | 93 | Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا | 6 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل | 57 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.8 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل | 150 | | |

| Module Evaluation تقييم المادة الدراسية | | | | | |
|---|------------------------|-------------|------------------|------------|---------------------------|
| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
| Formative assessment | Quizzes | No | No | No | No |
| | Assignments | No | No | No | No |
| | Projects / Lab. | 14 | 10% (10) | Continuous | All |
| | Report | 14 | 30% (30) | Continuous | All |
| Summative assessment | Midterm Exam | 2 hr | 10% (10) | 7 | LO # 1-6 |
| | Final Exam | 3 hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |



Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

| Material Covered | |
|-------------------------|--|
| 1 | Tools Include recognition of different tools. Employed for surface preparation and methods of application correctly, Devices of measuring dimensions, Calipers , types and uses , drill types and dimensions |
| 2-3 | Measuring tools Steel miler , Veneer , Micrometer , Height & height gauge hand tools , Saws , Hammers , Files , Scriber , Chisels , Taps and dies , Surface plate , Bench working. |
| 4-6 | WeldingWorkshop Include recognition of tools and materials employed – Gas cylinder of oxy – Acetylene welding of surface – Electrical are welding exercise – Welding spot. |
| 7-9 | LathingWorkshop lathe machine – Parts – Operation - Practice on longitudinal lathing – Making center – Puncturing – Making external teeth – Practice - Employing measuring tools – internal & external lath machining. |
| 10-11 | AlloyingWorkshop Contents of alloying workshops – Alloying sands and characteristics – Additives for improvement – Metals melts – Method of casting – Sand mould shaping – Heat treatment. |
| 12-13 | CarpentryWorkshop tools, machinery in the carpentry workshop, Fundamental principles – types of wood – application samples preparation |
| 14-15 | CarsWorkshop Modes of car motor operation - Fuel feed pump - Electrical spark transfer device - Pistons in cylinder as motion transfer device to the front, back wheels. |
| 16 | Preparatory week before the final Exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|-----------------------|-------------|----------------------------------|
| Required Texts | Workshop | Yes |



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Grading Scheme

مخطط الدرجات

| Group | Grade | التقدير | Marks (%) | Definition |
|-------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Success Group (50 - 100) | A - Excellent | امتياز | 90 - 100 | Outstanding Performance |
| | B - Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| | C - Good | جيد | 70 - 79 | Sound work with notable errors |
| | D - Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| | E - Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| Fail Group (0 – 49) | FX – Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| | F – Fail | راسب | (0-44) | Considerable amount of work required |
| | | | | |

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.