

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

| | | | |
|---|---|---|----------------------------------|
| Module Title | Fundamentals of Electrical Engineering (DC) | Module Delivery | |
| Module Type | Core | <input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar | |
| Module Code | UOMU0204012 | | |
| ECTS Credits | 7 | | |
| SWL (hr/sem) | 150 | | |
| Module Level | 1 | | |
| Administering Department | MIET | College | CETE |
| Module Leader | Prof.Dr. Bayan Mahdi | e-mail | prof.dr.bayan.mahdi@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | MSc |
| Module Tutor | Prof.Dr. Bayan Mahdi | e-mail | prof.dr.bayan.mahdi@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

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

| | |
|--|---|
| <p>Module Aims أهداف المادة الدراسية</p> | <ol style="list-style-type: none"> 1. To develop knowledge on standard units of electricity and understanding of DC circuit theorems. 2. To understand voltage, current and power of DC circuits. 3. To learn the basic concept of DC electrical circuits connections. 4. To explain the DC electrical circuits. 5. To understand basic laws of electricity. 6. To perform DC-network theorem. 7. To perform DC-circuit analysis methods. 8. To understand independent sources and dependent sources. |
| <p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p> | <ol style="list-style-type: none"> 1. Recognize how electricity works in electrical circuits. 2. List the various terms associated with electrical circuits. 3. Summarize what is meant by a basic electric circuit. 4. Describe electrical power, voltage, and current. 5. Define Ohm's law and define the relation between voltage, resistance, and current. 6. Identify the basic circuit elements and their applications. 7. Discuss the operations of power and energy in electric circuit. 8. Discuss the various properties of resistors connections. 9. Explain the two Kirchhoff's laws used in circuit analysis. 10. Identify the implementation of resistor circuit's connection. 11. Learn measurements of voltage and current. 12. Practical Identification of resistance based on color code. |
| <p>Indicative Contents المحتويات الإرشادية</p> | <p>Indicative content includes the following.</p> <p>DC circuits – Current and voltage definitions, and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law, Network reduction, Introduction to mesh and nodal analysis. [20 hrs]</p> <p>Conversion of delta – connected resistance into an equivalent Wye connection & Vice versa. [10 hrs]</p> <p>Fundamentals of the Power sources connected in parallel, Thevenin and Norton equivalent circuits, current and voltage division, Loop current method, Super position method ,maximum power transfer, Non- linear direct current circuit [20 hrs]</p> <p>Independent sources and dependent sources [10 hrs] source transformation [5 hrs]</p> <p>Revision problem classes [5 hrs]</p> |

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL)

الحمل الدراسي للطالب

| | | | |
|--|-----|--|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل | 79 | Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً | 5 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل | 71 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً | 5 |
| 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 | 2 | 10% (10) | 5, 10 | LO #1, 2, LO# 10 and 11 |
| | Online Assignments | 2 | 10% (10) | 2, 12 | LO # 3, 4, LO# 6, 7 |
| | Projects | 1 | 6% (6) | Continuous | LO# 1-12 |
| | lab | 10 | 10% (10) | Continuous | LO# 1-12 |
| | Report | 1 | 4% (4) | 13 | LO # 5, 8, 9, 12 |
| Summative assessment | Midterm Exam | 3 hr | 10% (10) | 7 | LO # 1-7 |
| | Final Exam | 4hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

| | Material Covered |
|------------------|--|
| Week 1 | Symbols and abbreviations, Units, Electric circuits, and its elements. |
| Week 2 | The direct-current network (Ohm's law, Kirchhoff's voltage and current laws & their use in network). |
| Week 3 | Series elements and Voltage Division. |
| Week 4 | Parallel elements and Current Division. |
| Week 5 | Power sources are connected in parallel. |
| Week 6 Week 7 | Circuit analysis methods: 1- Node voltage method. 2- Loop current method. |
| Week 8 | Mid-term exam. |
| Week 9 | Conversion of delta-connected resistance into an equivalent Wye connection & Vic versa |
| Week 10-13 | Circuit analysis Theorems: 1. Superposition 2. Thevenin 3. Norton 4. Maximum power |
| Week 14-15 | Independent sources and Dependent sources, source transformation and preparation for final exam. |

Delivery Plan (Weekly Lab. Syllabus)

المنهاج السبوعي للمختبر

| | Material Covered |
|-------------|---|
| Week 1 | Introduction to electrical elements, sources, and measuring devices related to electrical circuits. |
| Week 2 | Resistance measurement based on AVO meter readings and color code identification. |
| Week 3 | Verification of Ohm's Law |
| Weeks 4-5 | Verification of KVL and KCL |
| Weeks 6-7 | Verification of Thevenin's and Norton's theorems |
| Weeks 8-9 | Verification of the superposition theorem |
| Week 10 | Verification of the maximum power transfer theorem |
| Week 11 | Verification of the Nodal Voltage Theorem |
| Week 12 | Verification of the Mesh Theorem |
| Weeks 13-14 | Practical implementation of Independent sources and Dependent sources |
| Week 15 | Preparation for Final exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|--|---------------------------|
| Required Texts | Fundamentals of Electric Circuits, C.K. Alexander and M.N.O Sadiku, McGraw-Hill Education | Yes |
| Recommended Texts | Electric Circuits Seventh Edition, Schaum's Outline Series | No |
| Websites | https://www.youtube.com/watch?v=SfKw8bHk7-o (for practical implementation of Independent sources and Dependent sources, Weeks 13-14) | |

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| Module Information | | | |
|------------------------------------|----------------------|--|-----------------------------------|
| معلومات المادة الدراسية | | | |
| Module Title | Computer Principles | Module Delivery | |
| Module Type | Basic | <input checked="" 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 | UOMU024012 | | |
| ECTS Credits | 3 | | |
| SWL (hr/sem) | 75 | | |
| Module Level | 1 | | |
| Administering Department | MIET | College | CETE |
| Module Leader | myasar mundher adnan | e-mail | Myasar.mundher.adnan@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | DR |
| Module Tutor | myasar mundher adnan | e-mail | Myasar.mundher.adnan@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

| 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

| | |
|--|--|
| <p>Module Objectives أهداف المادة الدراسية</p> | <ol style="list-style-type: none">1. To understand operating system, be familiar with its types.2. To be familiar with the desktop.3. To be familiar and manage files and folders.4. To be familiar with the basic concepts of hardware components of the computer.5. To be able to use the basic functions in control panel.6. To recognize software types.7. To be able to understand the basic similarities and differences among (MS Office) applications.8. To be able to use MS Word program.9. To be able to use MS Excel program.10. To be able to use MS PowerPoint program.11. To be able to use MS Outlook.12. To be familiar with search engines and the World Wide Web.13. To be able to use Google apps.14. To be introduced to AI tools. |
| <p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p> | <ol style="list-style-type: none">1. Demonstrate understanding of operating systems, including their types.2. Navigate and utilize the desktop effectively.3. Manage files and folders proficiently.4. Identify hardware components of a computer system.5. Utilize the control panel efficiently.6. Differentiate software types and their applications.7. Effectively utilize essential applications such as MS Office.8. Demonstrate proficiency in using the MS Word program.9. Demonstrate proficiency in using the MS Excel program.10. Demonstrate proficiency in using the MS PowerPoint program.11. Utilize MS Outlook for email and scheduling purposes.12. Navigate search engines and utilize the World Wide Web effectively.13. Utilize Google apps for various tasks.14. Basic Use of AI tools. |
| <p>Indicative Contents المحتويات الإرشادية</p> | <p>Indicative content includes the following. Introduction to Operating Systems: Definition, functions, and capabilities of an operating system. Types of operating systems (e.g., Windows, macOS, Linux) with examples. Differences between operating systems and software applications. Power</p> |

| | |
|--|--|
| | <p>options: computer power on/off and power settings. (3 hrs)</p> <p>Exploring the Desktop: Navigating the desktop environment. Using the start button and working with applications. Understanding the relationship between software and hardware, their differences, importance, and influence on each other. Introduction to software updates. Exploring the taskbar. (6 hrs)</p> <p>Files and Folders: Understanding the typical window and file management. Introduction to the Recycle Bin. Understanding file names and common extensions. (6 hrs)</p> <p>Computer Hardware: Identifying various computer types . Exploring components inside a computer, such as the microprocessor, system memory, and storage systems. Recognizing input/output devices and their interaction. (6 hrs)</p> <p>Familiarity with the control panel and its categories and usage. (6 hrs)</p> <p>Software Overview: Understanding software requirements and their implications for hardware. Introduction to different types of application software + Dealing with viruses and malwares (2 hrs)</p> <p>Main Screen Features: Common features found in word processing, spreadsheet, and presentation software. Understanding the ribbon, tabs, and status bar, and their specific functions in each application. (3 hrs)</p> <p>MS Office Basics: Definitions and key concepts in MS Office applications and Usage. (9 hrs)</p> <p>Google apps and Gmail (3hrs)</p> <p>Digital Citizenship: Identifying ethical issues in the digital realm, including intellectual property, copyright, and licensing. Protecting data and computers from software threats and understanding viruses. Ensuring online privacy and security. And basic understanding and usage for AI tools (3 hrs)</p> |
|--|--|

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

| | |
|-------------------|--|
| Strategies | <p>Incorporate a mix of theoretical study, hands-on practice, experimentation, and real-world applications to reinforce understanding and proficiency in each of the desired learning outcomes. Seek feedback, engage in discussions, and actively participate in exercises to enhance learning and address any gaps in knowledge.</p> |
|-------------------|--|

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ 14 اسبوعا

| | | | |
|--|----|---|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل | 49 | Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا | 3 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل | 26 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا | 2 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل | 75 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|-----------------------------|------------------------|-------------|------------------|----------------------|---|
| Formative assessment | Quizzes | 2 | 10% (10) | 5 and 9 | LO #1, #2, #3 and #6, #7 |
| | Assignments | 2 | 10% (10) | 4 and 6 | LO #4, #8, #12 and #5, #12 |
| | Projects / Lab. | 5 | 15% (15) | 10,11,12, 13 and 14, | LO #7, #12, #13 and #8, #12, #13 and #9, #12, #13 and #10, #12, #13 and #11, #12, #13 |
| | Report | 1 | 5% (5) | 6 | LO #12, #7, #8 and #12 |
| Summative assessment | Midterm Exam | 3hr | 10% (10) | 8 | LO #1 - #6 |
| | Final Exam | 4hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

| Material Covered | |
|------------------|--|
| Week 1 | Introduction to operating system and its types, the differences between operating systems and software applications; Common operating system features. |
| Week 2 | Looking and navigation of the desktop; start button components ; Understanding Taskbar ,Software and hardware relationship. |
| Week 3 | Software updates+, Files and folders looking at typical window.+ Understanding files and folders+ Libraries. |
| Week 4 | Understanding Recycle bin; understanding file name and common extensions. View options + Computer hardware identifying computers |
| Week 5 | Looking inside a computer (microprocessor, system memory, storage systems)+ recognizing input/output devices + understanding how it works together. |
| Week 6 | Understanding control panel categories + Understanding Ease of access + Understanding User account rights . |
| Week 7 | What is software , application software + Avoiding and dealing Viruses and malwares. |
| Week 8 | Mid Term |
| Week 9 | MS office common features and differences. |
| Week 10 | Basic concepts and Usage of MS Word + Basic concepts and Usage of MS Power Point. |
| Week 11 | Basic concepts and Usage of MS Excell + Basic concepts and Usage of MS Outlook. |
| Week 12 | Introduction to Google apps. |
| Week 13 | Digital citizenship identifying ethical issues; protecting your data or computer. |
| Week 14 | Basic understanding and usage for AI tools. |
| Week 15 | Preparatory week before the final Exam. |

Delivery Plan (Weekly Lab. Syllabus)

المنهاج السبوعي للمختبر

| Material Covered | |
|------------------|---|
| Week 1 | Lab 1: Getting to know computer hardware + turn on and shut down options +looking at the desktop + using mouse (Menu, pointing, selecting, dragging, scrolling and execution)+ using start button |
| Week 2 | Lab 2: Create a folder (and file) , Rename, Copy, Cut, find, shortcut +Recycle bin ; using task bar |
| Week 3 | Lab 3: looking at a typical window +control buttons + move, resize a window+ view options+ select files + file options +using taskbar. |

| | |
|----------------|--|
| Week 4 | Lab 4: Install, open, close, and(control panel- Programs) uninstall applications(internet and other sources); Control Panel (power options), Control Panel (add a device or printer), Control Panel (Project). |
| Week 5 | Lab 5: Personalization (background and color) +(User Account (create a standard account, change password , picture and name) Control Panel- Clock and region (change date, time , and region) + Ease of Access (Narrator, Magnifier, on screen keyboard)). |
| Week 6 | Lab 6: MS Office (word, Excel, Power point, outlook) Starting each program and identify the main screen in details as title bar, main ribbons, etc. |
| Week 7 | Lab 7: MS Word (Home Tab, Insert Tab, Layout Tab, View Tab + Watermark, Page boarder and Page color). |
| Week 8 | Lab 8: Mid Term |
| Week 9 | Lab 9: MS Excel (Home Tab, Insert, Page layout, Formula, Data). |
| Week 10 | Lab 10: MS Power Point (Home Tab, Insert, Design, Transition, Animation). |
| Week 11 | Lab 11: MS outlook (Home Tab, send and receive) + Calendar. |
| Week 12 | Lab 12: Google apps Vs MS office. |
| Week 13 | Lab 13: Creating Gmail+ basic e-mail functions+ using google class. Using internet (Google scholar + fining courses and materials, Khan academy and finding resources). |
| Week 14 | Lab 14: Using AI tools |
| Week 15 | Preparation for Final exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|---|---------------------------|
| Required Texts | Internet and Computing Core Certification | No |
| Recommended Texts | | |
| Websites | https://alison.com/tag/microsoft Share and Discover Knowledge on SlideShare https://support.microsoft.com/en-us/training https://support.google.com/a/users https://edu.gcfglobal.org/en/topics/googleapps/# https://edu.gcfglobal.org/en/subjects/office/# https://chat.openai.com | |

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| Module Information | | | |
|------------------------------------|--------------------------|-------------------------------|--|
| معلومات المادة الدراسية | | | |
| Module Title | Differential Mathematics | | Module Delivery |
| Module Type | Support | | <input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar |
| Module Code | UOMU024013 | | |
| ECTS Credits | 5 | | |
| SWL (hr/sem) | 125 | | |
| Module Level | 1 | Semester of Delivery | |
| Administering Department | MIET | College | CETE |
| Module Leader | Arzaq Salim Abd Ali | e-mail | arzaq.saleem.abd@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | MSc. |
| Module Tutor | Arzaq Salim Abd Ali | e-mail | arzaq.saleem.abd@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

| 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 الرشادية

| | |
|--|--|
| <p>Module Objectives أهداف المادة الدراسية</p> | <ol style="list-style-type: none">1. To develop problem solving skills and understanding of Differential calculus through a broad range of Differentiation techniques.2. To understand limits and theory of derivative and apply it on various types of functions.3. This is the basic subject for all engineering fields.4. Demonstrate basic knowledge and understanding of a core of plane analytical geometry, algebra and applied mathematics.5. Introduce student to Derivatives of trigonometric functions and their inverses. |
| <p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p> | <ol style="list-style-type: none">1. Recall basic concepts of calculus: functions, variables, limits, and continuity.2. Use the limit laws to evaluate the limit of a function.3. Discuss continuity at a point and continuity over an interval.4. Understand transcendental functions and how a function and its inverse are related.5. Define Plane analytical geometry and identify how conic sections are formed in addition to define both in words and in algebraic formulae, a circle and its center and radius, and an ellipse and its foci.6. Learn how to convert rectangular coordinates to polar coordinates and vice versa, as well as plot points using polar coordinates.7. Differentiate algebraic and transcendental functions8. Midterm9. Discuss Chain rules and applications of the derivatives.10. Define determinants and understand their relation to matrices . Also explain the methodology for finding a determinant.11. Learn how to solve Linear equations by Cramer's rule. |
| <p>Indicative Contents المحتويات الرشادية</p> | <p>Indicative content includes the following. Limits and Continuity, Trigonometric functions, and their inverses. Hyperbolic and inverse hyperbolic functions, Exponential function and logarithmic function. Plane analytical geometry, parabola & ellipse, hyperbola. [25 hrs]</p> <ol style="list-style-type: none">1. Polar coordinates, Theory and rules of derivatives, Implicit Differentiation and Chain rules, Derivatives of trigonometric functions and their inverses. Derivatives of Transcendental functions and their inverses. [33 hrs]2. Properties of determinants, Solution of Linear equations by Cramer's rule. [10 hrs]3. Revision problem classes [5 hrs] |

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

The major approach used to offer this module will be to promote student engagement in the exercises while also enhancing and broadening their critical thinking abilities. Classes and interactive lessons will be used to achieve this.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

| | | | |
|--|-----|---|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل | 78 | Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا | 5 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل | 47 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل | 125 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|-----------------------------|----------------------------|-------------|------------------|----------|---------------------------|
| Formative assessment | Quizzes | 2 | 10% (10) | 6 and 10 | LO #2, #7, #9, and #10 |
| | Online assignments | 2 | 10% (10) | 4 and 12 | LO #1 - #5 and #6 - #10 |
| | Report | 1 | 10% (10) | 14 | LO #1 - #8 |
| | On Site assignments | 2 | 10% (10) | 2 and 5 | LO #1 - #10 |
| Summative assessment | Midterm Exam | 2hr | 10% (10) | 7 | LO #1 - #7 |
| | Final Exam | 3hr | 50% (50) | 16 | LO #1 - #10 |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

| | Material Covered |
|---------|--|
| Week 1 | Limits and Continuity |
| Week 2 | Transcendental functions- trigonometric functions, and their inverses. |
| Week 3 | Transcendental functions-Hyperbolic and inverse hyperbolic functions |
| Week 4 | Transcendental functions-Exponential function and logarithmic function. |
| Week 5 | Plane analytical geometry, parabola & ellipse, hyperbola. |
| Week 6 | Polar coordinates. |
| Week 7 | Mid-term Exam |
| Week 8 | Theory and rules of derivatives. |
| Week 9 | Implicit Differentiation and Chain rules. |
| Week 10 | Derivatives of trigonometric functions , Derivatives of inverse trigonometric functions. |
| Week 11 | Derivatives of the exponential and natural logarithms functions. |
| Week 12 | Derivatives of Hyperbolic and inverse hyperbolic functions. |
| Week 13 | Applications of the derivatives. |
| Week 14 | Determinants and properties of determinants. |
| Week 15 | Solution of Linear equations by Cramer's rule. + Preparatory week before the final Exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|-------------------|--|---------------------------|
| Required Texts | Engineering Mathematics I (pdf) | No |
| Recommended Texts | Thomas ' Calculus (pdf) Fouteenth edition Based on the original work by GEORGE B. THOMAS, JR. | No |
| Websites | https://elearningatria.files.wordpress.com/2013/10/differential-calculus-1-23.pdf http://dl.konkur.in/post/Book/Paye/Thomas-Calculus-14th-Edition-%5Bkonkur.in%5D.pdf | |

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

| | | | |
|---|------------------------|---|------------------------------------|
| Module Title | Engineering Drawing | Module Delivery | |
| Module Type | Support | <input type="checkbox"/> Theory | |
| Module Code | UOMU024014 | <input type="checkbox"/> Lecture | |
| ECTS Credits | 5 | <input checked="" type="checkbox"/> Lab | |
| SWL (hr/sem) | 125 | <input type="checkbox"/> Tutorial | |
| Module Level | 1 | Semester of Delivery | 1 |
| Administering Department | MIET | College | CETE |
| Module Leader | Alaa Khalid Abd Alreda | e-mail | Alaa.Khalid.Abdalreda@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | MSC. |
| Module Tutor | Alaa Khalid Abd Alreda | e-mail | Alaa.Khalid.Abdalreda@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

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

| | |
|---------------------------------|--|
| Module Aims | <p>The module aims for the Basics of Engineering Drawing courseware is to teach the student the basic commands necessary for professional 2D drawing, design, and drafting using AutoCAD. Upon completion of the course, the student will:</p> <ul style="list-style-type: none">• Become familiar with the AutoCAD user interface.• Understand the fundamental concepts and features of AutoCAD.• Use the precision drafting tools in AutoCAD to develop accurate technical drawings.• Present drawings in a detailed and visually impressive manner.• Develop a level of comfort and confidence with AutoCAD through hands-on experience. |
| Module Learning Outcomes | <p>Upon completion of the course, students should be able to:</p> <ol style="list-style-type: none">1. The student will describe key terms and concepts associated with drafting and the drafting profession.<ul style="list-style-type: none">• Identifying software drafting tools (e.g. AutoCAD, Micro station, SolidWorks, and Google Sketch Up).2. The student will identify elements of the AutoCAD software interface.<ul style="list-style-type: none">• Starting the AutoCAD program from the start menu.• Using existing AutoCAD templates to create drawing documents.• Identifying file extensions (such as.dwg, dxf, dwt, and .bak) and file locations.• Creating, formatting, editing and saving an Auto CAD drawing.3. The student will demonstrate an understanding of the skills necessary to create basic 2D AutoCAD drawings.<ul style="list-style-type: none">• Drawing lines, curves, circles, ellipses, rectangles, polygons, and donuts.• Modifying a drawing using the Erase tool.• Identifying and using the various types of Object Snaps and Auto tracking.• Using the offset tool, drawing points, construction lines and rays.4. The student will demonstrate the ability to modify an AutoCAD drawing.<ul style="list-style-type: none">• Creating and managing multiple layers that define line color, line width, line type, etc.• Identifying and using object editing tools (such as fillet, chamfer, break, join, trim, extend, lengthen, and scale).• Arranging and patterning objects with move, copy, mirror, rotate, align, and array.5. The student will demonstrate an understanding How to assign: Dimension - Linear, Aligned, Radius, Diameter, Center Mark, Angle, Arc length, Continuous, Baseline, Tolerance, Dimension Space.6. The student will demonstrate an understanding Dealing with: Text, Style, M text, Scale text, Spell, |

| | |
|-----------------------------------|--|
| | <p>7. The student will demonstrate the Object viewing.</p> <ul style="list-style-type: none"> • Zooming techniques • Panning techniques <p>8. The student will demonstrate the ability to output drawings in AutoCAD.</p> <p>9. Drawing 3d modeling.</p> <p>10. Drawing the Exercises.</p> |
| <p>Indicative Contents</p> | <p>Basic Drawing & Editing Commands [20 hrs.]</p> <ul style="list-style-type: none"> • Drawing Lines • Erasing Objects • Drawing Lines with Polar Tracking • Drawing Rectangles • Drawing Circles • Undo and Redo Actions <p>Making Changes in Your Drawing [4 hrs.]</p> <ul style="list-style-type: none"> • Selecting Objects for Editing • Moving Objects • Copying Objects • Rotating Objects • Scaling Objects • Mirroring Objects • Editing with Grips <p>Display Control [4 hrs.]</p> <ul style="list-style-type: none"> • Zoom • Pan • Redraw • Clean Screen. <p>Adding Dimensions [4 hrs.]</p> <ul style="list-style-type: none"> •Dimensioning Concepts •Adding Linear Dimensions •Adding Radial and Angular Dimensions •Editing Dimensions <p>Hatching [4hrs]</p> <ul style="list-style-type: none"> •Hatching •Editing Hatches <p>Printing Your Drawing [4 hrs.]</p> <ul style="list-style-type: none"> •Printing Layouts • Print and Plot Settings <p>3D MODELLING, Convert 2D to 3D, Solid Editing [19 hrs.]</p> |

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

When it comes to learning and teaching engineering drawing using AutoCAD, there are several strategies that can be effective. Here are some recommendations:

1. **Familiarize with the Software:** Before diving into engineering drawing concepts, it's important to become familiar with the AutoCAD software. This includes understanding the user interface, basic tools, and commands. Start with introductory tutorials or online resources that cover the basics of AutoCAD.
2. **Start with Fundamentals:** Begin by teaching the fundamental concepts of engineering drawing, such as orthographic projection, isometric projection, dimensioning, and tolerancing. Explain the principles and techniques used in creating accurate and clear technical drawings.
3. **Hands-on Practice:** Engineering drawing is a practical skill, so provide ample opportunities for hands-on practice. Assign exercises and projects that require students to create different types of drawings using AutoCAD.
4. **Encourage them to explore and experiment with various tools and commands.**
5. **Step-by-Step Instructions:** Break down complex drawing tasks into smaller, manageable steps. Provide step-by-step instructions and demonstrations using AutoCAD, showing students how to execute each step effectively. This approach helps students understand the workflow and build their confidence.
6. **Visual Aids and Examples:** Utilize visual aids, such as slides, diagrams, and examples, to reinforce concepts. Show real-world engineering drawings and explain how they were created using AutoCAD. Visual representations can enhance understanding and make abstract concepts more tangible.
7. **Group Activities and Collaboration:** Promote collaboration among students by assigning group activities or projects. This allows them to work together, share knowledge, and learn from one another. Encourage students to discuss their approaches and problem-solving techniques related to engineering drawing in AutoCAD.
8. **Provide Feedback:** Regularly provide constructive feedback on students' drawings. Highlight areas for improvement, suggest alternative methods, and point out common mistakes. This feedback loop is crucial for students to refine their skills and develop a deeper understanding of engineering drawing principles.
9. **Stay Updated with AutoCAD Features:** AutoCAD is regularly updated with new features and enhancements. Stay up to date with these changes to ensure you're teaching the latest tools and workflows. Familiarize yourself with new capabilities that can improve efficiency and accuracy in engineering drawing.
10. **Online Resources and Communities:** Encourage students to explore online resources, tutorials, and communities dedicated to AutoCAD and engineering

drawing. There are numerous websites, forums, and YouTube channels that offer valuable content and support for learning AutoCAD.

11. Project-Based Learning: Incorporate project-based learning into the curriculum, where students can apply their engineering drawing skills to real-world scenarios. Assign projects that simulate industry-related tasks, such as creating architectural plans, mechanical assemblies, or electrical schematics using AutoCAD.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب ل 15 اسبوع

| | | | |
|--|-----|--|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل | 63 | Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعي | 4 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل | 62 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعي | 4 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل | 125 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|-----------------------------|---------------------------|-------------|------------------|--------------|---------------------------|
| Formative assessment | Quizzes | 2 | 20% (20) | 5, 12 | (LO #3,4) (LO #5,6) |
| | Online Assignments | 3 | 6% (6) | Continuous | (LO # 3-5) (LO # 6-10) |
| | Projects | 1 | 10% (10) | 13 | All |
| | Onsite assignment | 4 | 1% (1) | 4, 5, 10, 11 | LO # 3-9 |
| Summative assessment | Midterm Exam | 2 hr | 10% (10) | 7 | LO # 1-5 |
| | Final Exam | 3 hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Lab. Syllabus)

المنهاج السبوعي للمختبر

| | Material Covered |
|--------|--|
| Week 1 | Introduction to Autodesk AutoCAD <ul style="list-style-type: none">• Starting the Software• User Interface• Working with Commands• Cartesian Workspace• Opening an Existing Drawing File• Saving a Drawing File |
| Week 2 | Basic Drawing & Editing Commands <ul style="list-style-type: none">• Drawing Lines• Erasing Objects• Drawing Lines with Polar Tracking• Drawing Rectangles• Drawing Circles• Undo and Redo Actions |
| Week 3 | Projects - Creating a Simple Drawing <ul style="list-style-type: none">• Create a Simple Drawing• Create Simple Shapes |
| Week 4 | Drawing Precision in AutoCAD <ul style="list-style-type: none">• Using Running Object Snaps• Using Object Snap Overrides• Polar Tracking at Angles• Object Snap Tracking• Drawing with Snap and Grid |
| Week 5 | Making Changes in Your Drawing <ul style="list-style-type: none">• Selecting Objects for Editing• Moving Objects• Copying Objects• Rotating Objects• Scaling Objects• Mirroring Objects• Editing with Grips |
| Week 6 | Advanced Object Types <ul style="list-style-type: none">• Drawing Arcs• Drawing Polylines• Editing Polylines• Drawing Polygons• Drawing Ellipses |
| Week 7 | Advanced Editing Commands <ul style="list-style-type: none">• Trimming and Extending Objects• Stretching Objects• Creating Fillets and Chamfers |

| | |
|----------------|--|
| | <ul style="list-style-type: none"> • Offsetting Objects • Creating Arrays of Objects |
| Week 8 | Mid-term exam |
| Week 9 | Adding Dimensions <ul style="list-style-type: none"> •Dimensioning Concepts •Adding Linear Dimensions •Adding Radial and Angular Dimensions •Editing Dimensions Text <ul style="list-style-type: none"> •Working with Annotations •Adding Text in a Drawing •Modifying Multiline Text •Formatting Multiline Text •Adding Notes with Leaders to Your Drawing |
| Week 10 | Hatching <ul style="list-style-type: none"> •Hatching •Editing Hatches |
| Week 11 | 3D modeling. |
| Week 12 | Convert 2D To 3D. |
| Week 13 | Exercises drawing |
| Week 14 | Printing Your Drawing <ul style="list-style-type: none"> •Printing Layouts •Print and Plot Settings |
| Week 15 | Preparatory week before the final Exam |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|---|---------------------------|
| Required Texts | D. A. Madsen, D. P. Madsen, and J. E. Briesacher, Engineering Drawing and Design, 5th ed., Clifton Park, NY: Delmar Cengage Learning, 2011. | Yes |
| Recommended Texts | F. E. Giesecke, A. Mitchell, H. C. Spencer, I. L. Hill, and J. T. Dygdon, Technical Drawing with Engineering Graphics, 15th ed., Upper Saddle River, NJ: Pearson, 2016. | No |
| Websites | https://www.coursera.org/browse/physical-science-and-engineering | |

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 (فيد 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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| Module Information | | | |
|------------------------------------|----------------------|-------------------------------|---|
| معلومات المادة الدراسية | | | |
| Module Title | English Language 1 | | Module Delivery |
| Module Type | Basic | | <ul style="list-style-type: none">• <input checked="" type="checkbox"/> Theory• <input checked="" type="checkbox"/> Lecture• <input type="checkbox"/> Lab• <input type="checkbox"/> Tutorial• <input type="checkbox"/> Practical• <input type="checkbox"/> Seminar |
| Module Code | UOMU000002 | | |
| ECTS Credits | 2 | | |
| SWL (hr/sem) | 50 | | |
| Module Level | 1 | Semester of Delivery | |
| Administering Department | MIET | College | CETE |
| Module Leader | Amir Mohammed Khalaf | e-mail | amir.mohammed.khalaf@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | MSc |
| Module Tutor | | e-mail | |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

| 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

Module Aims أهداف المادة الدراسية

1. The module aims of English Language (1) are designed to help learners at the beginner – pre-intermediate level develop their English language skills and achieve specific learning objectives, By the end of this course, students will:
2. Grammar Mastery: Develop a strong command of grammar rules, including possessive forms, question words, pronouns, prepositions, present simple, past simple, present continuous, past continuous, comparative and superlative adjectives, verb patterns, modal verbs (have/got to, should, must), time and conditional clauses, present perfect, past perfect, reported statements, and more.
3. Vocabulary Expansion: Expand their vocabulary in various contexts, covering numbers, family members, rooms and furniture, locations in and out of town, food and dining, parts of speech, synonyms, antonyms, and phrasal verbs.
4. Everyday English Proficiency: Develop practical language skills for everyday communication, including greetings, introductions, short answers, conversations, and expressions commonly used in daily life.
5. Reading Comprehension: Improve their reading comprehension skills through the analysis of diverse texts, including stories, articles, and informative content on a wide range of topics.
6. Writing Competence: Enhance their writing abilities by composing informal letters, using linking words, writing reviews of books or films, and crafting stories.
7. Critical Thinking and Analysis: Develop critical thinking skills by analyzing and discussing texts, comparing and contrasting information, and drawing conclusions from reading materials.
8. Cultural Awareness: Gain cultural insights through readings and discussions about various cultures and places around the world, fostering a broader worldview.
9. Effective Communication: Improve their ability to express ideas clearly and confidently in both spoken and written forms, making them effective communicators in English.
10. Language Assessment: Prepare for assessments, including a midterm exam, by reviewing and demonstrating their understanding of grammar, vocabulary, and reading comprehension.
11. Independent Learning: Develop independent learning skills, enabling them to continue improving their English language proficiency beyond the course.
12. Language Fluency: Work towards achieving fluency in English, allowing them to engage in conversations, express thoughts, and write coherently with ease.
13. Cultural Competency: Build cultural competence and sensitivity through exposure to diverse texts and discussions about different cultures and

| | |
|--|--|
| | <p>lifestyles.</p> <p>14. These course goals reflect the overarching objectives of the English class and provide a clear direction for student learning and language development throughout the 15-week course.</p> |
| <p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p> | <p>The learning outcomes for English (1) 15-week English class syllabus:</p> <ol style="list-style-type: none"> 1. Students will comprehend and discuss texts on different topics 2. Students will expand their vocabulary related to various topics 3. Students will acquire vocabulary related to Various topics 4. Students will be able to write letters , and reviews. 5. Students will be able to use possessive forms correctly in sentences, indicating ownership. 6. Students will master question words, pronouns, and prepositions. 7. Students will distinguish between present simple and past simple tenses. 8. Students will learn about the present continuous, present simple vs. continuous, and have & have got. 9. Students will study the past continuous and quantity and articles. 10. Students will understand comparative and superlative adjectives. 11. Students will focus on verb patterns, future intentions, and present perfect and past simple tenses. 12. Students will study modal verbs (have/got to, should, must). 13. Students will learn about time and conditional clauses. 14. Students will cover present perfect continuous, present perfect simple vs. continuous, past perfect for clarification, and reported statements. |
| <p>Indicative Contents المحتويات الإرشادية</p> | <p>Beginners book :</p> <p>Grammar : Possessive (CH1,2,4)</p> <p>Vocabulary – numbers –(CH1, 2, 5) -- the family (Ch4)</p> <p>Every day English-all (Ch1,3)</p> <p>Reading- where are they (Ch2) , The Chairty Walk, (Ch3) , My best Friend,(Ch4)(2 hours)</p> <p>Grammar : Question words (CH 7) – Pronouns (Ch7) – Prepositions (Ch8)</p> <p>Vocabulary – Rooms and Furniture –(CH8) – in and out of Town (Ch4), Saying Years (ch9)</p> <p>Every day English-all (Ch 9)</p> <p>Reading- A Postcard from San Fransisco (Ch7) , Vancouver , the best city in the world, (Ch8) , It is a Jacksin Pollock ,(Ch9)(2 hours)</p> <p>Grammar : Present Simple (Ch5,6)- Past Simple (Ch9,10)</p> <p>Vocabulary – shopping, food, in a restaurant (ch12)</p> <p>Every day English-all (Ch 14)</p> <p>Reading- The internet (Ch11) , You are what you eat (Ch12) , This week is different (Ch13) , Life’s big events (Ch14)(2 hours)</p> <p>Pre-intermediate book:</p> <p>Grammar : -</p> <p>Vocabulary – Parts of speech (ch1,3, 7)</p> <p>Every day English-Social expressions (Ch 1)</p> <p>Reading- People the great communicators (Ch1)</p> |

Writing- A letter to a pen friend (informal) (Ch1) (2 hours)
Grammar : - Present continuous – Present simple vs. continuous- have & have got (ch2)
Vocabulary –
Every day English- Making conversation (Ch 2)
Reading- Living in the USA (Ch2)
Writing- Linking words (Ch2,3) (2 hours)
Grammar : - Past continuous (ch3) – Quantity and Articles (Ch4)
Vocabulary –
Every day English-
Reading- The burglar’s friend – The thief, his mother and 2 billion – Sherlock Holmes the three students (Ch3)
Writing (2 hours)
Grammar : - comparative and superlative adj (ch6)
Vocabulary – synonyms and antonyms (ch6)
Every day English-
Reading- Markets around the world (Ch4)
Writing (2 hours)
Grammar :
Vocabulary:
Every day English:
Reading- Hollywood Kids (Ch5) – A tale of two millionaires (ch6)
Writing (2 hours)
Grammar : Verb Patterns (Ch5) – Future intentions (Ch5)- Present Perfect and Past simple (ch7)
Vocabulary:
Every day English:
Reading:
Writing: Relative clauses (ch6,7) (2 hours)
Grammar : have (got)to, should, must (ch8)
Vocabulary: -
Every day English: Short Answers (ch7) – At the doctor’s (ch8)
Reading- Celebrity interview from Hi (Ch7)
Writing (2 hours)
Grammar : Time and conditional clauses (ch9)
Vocabulary: -
Every day English: In a hotel (ch9)
Reading- Problem page (Ch8)
Writing- Formal letter (ch8) (2 hours)
Grammar :
Vocabulary: -
Every day English: Exclamation (ch11) – saying goodbye (ch14)
Reading- The world’s first megalopolis (Ch9)
Writing- writing a review of a book or a film (ch11) (2 hours)
Grammar :
Vocabulary: Phrasal verbs (ch12)- word formation (ch3)
Every day English: Social expressions (ch12)
Reading- Super volcano (Ch12)
Writing- writing a story (ch14) (2 hours)
Grammar : present perfect continuous (ch13) - Present perfect simple vs continuous

(ch13)- Past perfect for clarification (ch14) – Reported statement (ch14)

Vocabulary:

Every day English:

Reading- A funny way to earn a living (Ch13)

Writing (2 hours)

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

The learning and teaching strategies for the English Language (Beginner) module may include:

1. Interactive Language Practice: Engage learners in communicative activities that promote active participation and language practice. This can include pair work, group discussions, role-plays, and language games.
2. Authentic Materials: Incorporate authentic materials such as videos, audio recordings, and reading texts that reflect real-life language use. This helps learners develop their listening, speaking, reading, and writing skills in authentic contexts.
3. Task-Based Learning: Design tasks and projects that require learners to use the target language to accomplish specific goals or solve problems. This promotes meaningful language use and encourages critical thinking and problem-solving skills.
4. Visual Aids and Multimedia: Utilize visual aids, charts, diagrams, and multimedia resources to support language learning and comprehension. Visuals can enhance understanding, aid in vocabulary acquisition, and provide context for language use.
5. Error Correction and Feedback: Provide timely and constructive feedback on learners' language production to help them identify and correct errors. Encourage self-correction and peer correction to foster a supportive learning environment.

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب ل 15 اسبوع

| | | | |
|--|----|--|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل | 33 | Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعي | 2 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل | 17 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعي | 1 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل | 50 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|----------------------|--------------------|-------------|------------------|------------|---------------------------|
| Formative assessment | Quizzes | 2 | 10% (10) | 3, 12 | LO #1-6 and 1,2,4,10-12 |
| | Online Assignments | 2 | 10% (10) | 4, 10 | LO # 1-7 and 1-11 |
| | Projects | 2 | 10% (10) | continuous | 1-14 |
| | Onsite assignment | 5 | 10% (10) | continuous | 1-14 |
| Summative assessment | Midterm Exam | 2 hours | 10% (10) | 7 | LO # 1-9 |
| | Final Exam | 3 hours | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي للنظري

| | Material Covered |
|--------|---|
| Week 1 | Grammar : Possessive (CH1,2,4) Vocabulary – numbers –(CH1, 2, 5) -- the family (Ch4) Every day English- all (Ch1,3) Reading- where are they (Ch2) , The Charity Walk, (Ch3) , My best Friend,(Ch4) |
| Week 2 | Grammar : Question words (CH 7) – Pronouns (Ch7) – Prepositions (Ch8) Vocabulary – Rooms and Furniture –(CH8) – in and out of Town (Ch4), Saying Years (ch9) Every day English- all (Ch 9) Reading- A Postcard from San Fransisco (Ch7) , Vancouver , the best city in the world (Ch8) , It is a Jacksin Pollock (Ch9) |
| Week 3 | Grammar : Present Simple (Ch5,6)- Past Simple (Ch9,10) Vocabulary – shopping, food, in a restaurant (ch12) Every day English- all (Ch 14) Reading- The internet (Ch11) , You are what you eat (Ch12) , This week is different (Ch13) , Life's big events (Ch14) |
| Week 4 | Vocabulary – Parts of speech (ch1,3, 7) Every day English- all (Ch 1) Reading- People the great communicators (Ch1) Writing- A letter to a pen friend (informal) (Ch1) |
| Week 5 | Grammar : - Present continuous – Present simple vs. continuous- have & have got (ch2) Every day English- Making conversation (Ch 2) Reading- Living in the USA (Ch2) Writing- Linking words (Ch2,3) |

| | |
|----------------|---|
| Week 6 | Grammar : - Past continuous (ch3) – Quantity and Articles (Ch4) Reading- The burglar’s friend – The thief, his mother and 2 billion – Sherlock Holmes the three students (Ch3) |
| Week 7 | Midterm |
| Week 8 | Grammar: - comparative and superlative adj (ch6) Vocabulary – synonyms and antonyms (ch6) Reading- Markets around the world(Ch4) |
| Week 9 | Reading- Hollywood Kids (Ch5) – A tale of two millionaires (ch6) |
| Week 10 | Grammar : Verb Patterns (Ch5) – Future intentions (Ch5)- Present Perfect and Past simple (ch7) Writing: Relative clauses (ch6,7) |
| Week 11 | Grammar : have (got)to, should, must (ch8) Every day English: Short Answers (ch7) – At the doctor’s (ch8) Reading- Celebrity interview from Hi (Ch7) |
| Week 12 | Grammar : Time and conditional clauses (ch9) Every day English: In a hotel (ch9) Reading- Problem page (Ch8) Writing- Formal letter (ch8) |
| Week 13 | Every day English: Exclamation (ch11) – saying goodbye (ch14) Reading- The world’s first megalopolis (Ch9) Writing- writing a review of a book or a film (ch11) |
| Week 14 | Vocabulary: Phrasal verbs (ch12)- word formation (ch3) Every day English: Social expressions (ch12) Reading- Super volcano (Ch12) Writing- writing a story (ch14) |
| Week 15 | Grammar : present perfect continuous (ch13) - Present perfect simple vs continuous (ch13)- Past perfect for clarification (ch14) – Reported statement (ch14) Reading- A funny way to earn a living (Ch13) |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|--|---------------------------|
| Required Texts | 1- Soars, J., Soars, L. (2014). New Headway Plus: Beginner Student's Book. United Kingdom: Oxford University Press. 2- Soars, J., Soars, L. (2006). New Headway Plus: Preintermediate. United Kingdom: Oxford University Press. | Yes |
| Recommended Texts | 1- Audio CDs or Online Audio: Recordings of listening exercises, dialogues, and pronunciation practice. 2- Beginner workbook 3- Pre-intermediate Workbook | No |
| Websites | | |

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 (فيد 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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

| | | | |
|---|----------------------------|--|--|
| Module Title | Democracy and Human Rights | Module Delivery | |
| Module Type | Basic | <input checked="" type="checkbox"/> Theory | |
| Module Code | UOMU000004 | <input type="checkbox"/> Lecture | |
| ECTS Credits | 2 | <input type="checkbox"/> Lab | |
| SWL (hr/sem) | 50 | <input type="checkbox"/> Tutorial | |
| | | <input type="checkbox"/> Practical | |
| | | <input type="checkbox"/> Seminar | |
| Module Level | 1 | Semester of Delivery | 1 |
| Administering Department | MITE | College | CETE |
| Module Leader | Ali Khazaal Khalid | e-mail | ali.khazaal.khalid@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | MSC |
| Module Tutor | | e-mail | ali.khazaal.khalid@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | 1.0 |

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

| | |
|---|--|
| <p>Module Aims</p> <p>أهداف المادة الدراسية</p> | <ol style="list-style-type: none"> 1. ال تطور التاريخي لحقوق النسان: دراسة التطور التاريخي لفهم حقوق النسان من الحضارات القديمة إلى العصور الحديثة. 2. حقوق النسان في الشرائع السماوي ة: التركيز على حقوق النسان في السلم وكيف تم تضمينها في الشريعة السلمية. 3. اعتراف إقليمي بحقوق النسان: فحص اعتراف القاليم الوروبي، المريكي، الفريقي، السلمي، والعربي بحقوق النسان. 4. دور المنظمات غير الحكومية: دراسة دور المنظمات مثل اللجنة الدولية للصليب الحمر ومنظمة العفو الدولية في حماية حقوق النسان. 5. الطار القانوني الدولي والإقليمي: التركيز على المواثيق الدولية والإقليمية، مثل اعلان العالمي لحقوق النسان. 6. تحليل حقوق النسان في التشريعات الوطنية: دراسة كيفية ترجمة حقوق النسان في التشريعات الوطنية، مع التركيز على الدستور العراقي. 7. تصنيف حقوق النسان وضماناتها: فهم مختلف أشكال حقوق النسان والضمانات الدستورية والقضائية والسياسية لحمايتها. |
| <p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p> | <ol style="list-style-type: none"> 1. القدرة على وصف وتحليل التطور التاريخي لحقوق النسان منذ الحضارات القديمة حتى العصور الحديثة. 2. القدرة على فحص حقوق النسان في حضارة وادي الرافدين وغيرها لفهم التأثير الثقافي على تطورها. 3. تفسير حقوق النسان في السلم وفهم كيف تم تضمينها في الشريعة السلمية. 4. القدرة على تحليل تطور حقوق النسان اللى العصور الوسطى والحديثة. 5. الفهم الشامل اعتراف القاليم الوروبي، المريكي، الفريقي، السلمي، والعرب بحقوق النسان. 6. القدرة على تقييم دور منظمات مثل اللجنة الدولية للصليب الحمر ومنظمة العفو الدولية في حماية حقوق النسان. 7. القدرة على دراسة وتحليل المواثيق الدولية والإقليمية، بما في ذلك اعلان العالمي لحقوق النسان. 8. القدرة على فحص كيف تم ترجمة حقوق النسان في التشريعات الوطنية، مع التركيز على مثال الدستور العراقي. 9. القدرة على تصنيف حقوق النسان إلى أشكال فردية وجماعية، وأجيال مثل الحقوق المدنية والسياسية واقتصادية واجتماعية . 10. القدرة على تحليل الضمانات الدستورية والقضائية والسياسية لحقوق النسان على الصعيدين الوطني والدولي والإقليمي. |
| <p>Indicative Contents</p> <p>المحتويات الإرشادية</p> | <p>فهم التاريخ التطوري لحقوق النسان (3 س) تحليل حقوق النسان في الحضارات القديمة (3 س) فهم حقوق النسان في الشرائع السماوية (3 س) تحليل حقوق النسان في العصور الوسطى والحديثة (3 س) فهم اعتراف الإقليمي بحقوق النسان (3 س)</p> |

تقدير دور المنظمات غير الحكومية (3 س) فهم الطار
القانوني لحقوق النسان (3 س)
تحليل حقوق النسان في التشريعات الوطنية (3 س) فهم أشكال
وأجبال حقوق النسان (3 س)
تحليل ضمانات حقوق النسان (3 س)

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

تشجيع الطلب على المشاركة في مناقشات تفاعلية حول تطور حقوق النسان عبر التاريخ. مشروعات بحثية:
توجيه الطلب في إعداد مشروعات بحثية تستكشف تطور حقوق النسان في فترات تاريخية محددة. استخدام التكنولوجيا:
تضمين وسائل تكنولوجية لتعزيز تفاعل الطلب وتقديم المعلومات بشكل أكثر تفاعلية. ورش العمل والتمثيل العملي:
إجراء ورش عمل تفاعلية وأنشطة تمثيل لفهم أعمق لمفاهيم حقوق النسان. تقديم تقييم مستمر:
تقديم تقييم مستمر لفحص تقدم الطلب وفهمهم لتطور حقوق النسان على مر العصور.

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

| | | | |
|--|----|---|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل | 33 | Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا | 2 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل | 17 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا | 1 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل | 50 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|-----------------------------|---------------------|-------------|------------------|----------|---------------------------|
| Formative assessment | Quizzes | 2 | 10% (10) | 5, 9 | LO #1, 2, 3, LO # 6, 7 |
| | Assignments | 2 | 10% (10) | 6, 13 | LO # 4 and LO#9 |
| | Seminar | 1 | 10% (10) | 12 | LO# 5, 6, 7, 8 |
| | Report | 1 | 10% (10) | 14 | LO# 8, 9, 10 |
| Summative assessment | Midterm Exam | 2hr | 10% (10) | 7 | LO # 1-7 |
| | Final Exam | 3hr | 50% (50) | 16 | All |
| Total assessment | | | 100% (100 Marks) | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

| | |
|---|-------------------|
| التطور التاريخي لحقوق اعنسان حقوق اعنسان في الحضارات القديمة (حضارة وادي الرافدين، والحضارات القديمة الارى) | السبوع الاول |
| حقوق اعنسان في الشرائع السماوية مع التركيز على حقوق اعنسان في اعسلم. حقوق اعنسان في العصور الوسطى والحديثة. | السبوع الثاني |
| اعتراف اعقليمي بحقوق اعنسان على الصعيد الوري المريكى، الفريقي، السلمى، العربى | السبوع الثالث |
| المنظمات غير الحكومية ودورها في حقوق اعنسان (اللجنة الدولية للصليب احمر، منظمة العفو الدولية، منظمة مراقبة حقوق اعنسان المنظمة العربية لحقوق اعنسان) | السبوع الرابع |
| حقوق اعنسان في المواثيق الدولية واعليمية والتشريعات الوطنية. حقوق اعنسان في المواثيق الدولية (اعلان العالمى لحقوق اعنسان العهدين الدوليين الخاصين بحقوق اعنسان) | السبوع الخامس |
| حقوق اعنسان في المواثيق اعليمية (اعنفاقية الورية لحقوق اعنسان اعنفاقية اعمرىكية لحقوق اعنسان الميثاق الفريقي لحقوق اعنسان الميثاق العربى لحقوق اعنسان) | السبوع السادس |
| امتحان منتصف الفصل الدراسى | السبوع السابع |
| حقوق اعنسان في التشريعات الوطنية (الدستور العراقى) | السبوع الثامن |
| اشكال واجبال حقوق اعنسان: (اشكال حقوق اعنسان الحقوق الفردية، الحقوق الجماعية اجبال حقوق اعنسان اجبال اعول الحقوق المدنية والسياسية)، (الجيل الثاني الحقوق اعنفاقية واعنفاقية)، (الجيل الثالث: حقوق اعنسان الحديثة، الوعى المانى والبيئى) | السبوع التاسع |
| ضمانات حقوق اعنسان وحمايتها على الصعيد الوطنى الضمانات الدستورية والقضائية والسياسية | السبوع العاشر |
| ضمانات حقوق اعنسان وحمايتها على الصعيد اعليمى والدولى (دور اعم المتحدة، دور المنظمات اعليمية جريمة البادة الجماعية). | السبوع الحادى عشر |
| تصنيف الحريات العامة الحريات الساسية والفردية حرية اعمن والشعور باعظمتان حرية الذهاب واعياب، الحرية الشخصية. | السبوع الثاني عشر |
| الحريات الفكرية والثقافية حرية الراى حرية المعنقد حرية التعليم حرية الصحافة حرية التجمع حرية تشكيل الجمعيات. | السبوع الثالث عشر |
| الحريات اعنفاقية واعنفاقية حرية العمل، حرية التملك حرية التجارة والصناعة. | السبوع الرابع عشر |
| الستعداد للمتحان النهائى | السبوع الخامس عشر |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|---|---------------------------|
| Required Texts | 1. " حقوق النسان في العالم العربي: القضايا والتحديات"، تأليف: علي حجازي وجمال شعت. الطبعة: الطبعة الثانية، العام. 2017 : 2. مبادئ حقوق النسان: المفاهيم والقضايا الحديثة"، تأليف: أحمد المجالي " .وغسان حمدان. الطبعة: الطبعة الول، العام2019 : | Yes |
| Recommended Texts | 3. "حقوق النسان والديمقراطية"، تأليف: مصطفى كامل محمود. الطبعة: الطبعة الول، العام: 2015. 4. "تاريخ حقوق النسان في العصور القديمة والوسطى"، تأليف: نبيل رزق. الطبعة: الطبعة الثالثة، العام: 2012. 5. "حقوق النسان في العراق: الواقع والتحديات"، تأليف: سعدا عباس. الطبعة: الطبعة الول، العام: 2014. 6. "حقوق النسان في العراق: المفهوم والتطور"، تأليف: عبد الكريم "السامرائي الطبعة: الولى، العام: 2018. "حقوق النسان في العراق: بين التحديات والفاق" تأليف: محمد السامرائي ولقاء الحر بي. الطبعة: الطبعة الول، العام: 2020 . | No |
| Websites | The Collage E-Library | |

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

| | | | |
|---|--------------------|--|--------------------------|
| Module Title | Medical Chemistry | Module Delivery | |
| Module Type | Support | <input checked="" type="checkbox"/> Theory | |
| Module Code | UOMU024017 | <input type="checkbox"/> Lecture | |
| ECTS Credits | 7 | <input checked="" type="checkbox"/> Lab | |
| SWL (hr/sem) | 175 | <input checked="" type="checkbox"/> Tutorial | |
| | | <input type="checkbox"/> Practical | |
| | | <input type="checkbox"/> Seminar | |
| Module Level | 1 | Semester of Delivery | 1 |
| Administering Department | MIET | College | CETE |
| Module Leader | Isaa Farhan | e-mail | isaa.farhan@uomus.edu.iq |
| Module Leader's Acad. Title | Assistant Lecturer | Module Leader's Qualification | Dr |
| Module Tutor | Issa Farhan | e-mail | isaa.farhan@uomus.edu.iq |
| Peer Reviewer Name | | e-mail | |
| Scientific Committee Approval Date | 19/11/2023 | Version Number | |

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

| | | | |
|-----------------------------|---|-----------------|---|
| Prerequisite module | - | Semester | - |
| Co-requisites module | - | Semester | - |

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims

أهداف المادة الدراسية

- 1- To write and balance chemical equation which many calculations depend on.
- 2- To convert chemical formula to components composition percent or to conclude empirical formula depending upon composition percent.
- 3- To predict about the economic pathway for specific reaction to happen depending upon stoichiometric calculations of balanced chemical equations.
- 4- To Know how to prepare buffers with different ranges of pH using acids with suitable dissociation constant of acid.
- 5- To understand the effect of common ions on equilibrium of reversible reactions.
- 6- To focus on theoretical working principles of spectrophotometric instruments.
- 7- to discuss the importance of isotopes in diseases treatment and diagnosis.

At ending of course, the student will:

- 1- Able to give chemical compounds their systematic names and to write their chemical formulae.
- 2- Know how to calculate concentrations of chemicals and to express them in various concentration terms. In addition to convert one term to another.
- 3- Calculate the compound composition percent according to chemical formula or know empirical formula depending on compounds composition percent.
- 4- Write chemical equations of different reactions and balance them and predict the limiting reactant in addition to the expected weight of products.
- 5- Estimate the reaction direction according to calculation of equilibrium constant of reversible reactions.
- 6- Know how to prepare buffers and how buffer work?
- 7- Understand importance and wide application of slightly soluble salts.
- 8- Perform the statistical treatment of analytical results and source of errors.
- 9- Recognize the importance of galvanic cells in current generation and role of electrolytic cells in metallic electroplating.
- 10- Consider zero, 1st and 2nd laws of thermodynamic processes, and evaluate thermodynamic functions of work, enthalpy, heat, internal energy and giving judgment of spontaneous process or not by entropy and Gibbs free energy.
- 11- List the components of photometric determination techniques, in addition to principals of their works.
- 12- Identify the photometric instrumentations such as FIS, FT-IR spectrophotometer, and mass spectrophotometry.
- 13- Emphasize the vital role of isotopes in diagnosis and diseases treatment.

| | |
|---|---|
| Indicative Contents المحتويات الإرشادية | Isotopes, Chemical formula, Units conversion (5 hr) Normality, Formality, Molarity, Molality, Mole fraction, Mill equivalent, ppm, ppb, mass percent, mass/vol percent. (10 hr) Stoichiometry (4 hr) Chemical equilibrium (4hr) dissociation constant (5 hr) pH (4 hr) Buffers (5 hr) common ion (4 hr) Solubility product constant (4 hr) Statistical treatment, average, range, standard deviation, variance, Absolute error, relative error. (6 hr) Redox reactions, Electrochemistry, electrolytes, Nernst equation, cell potential (6 hr). 1 st law of thermodynamic, Reversible and irreversible process, Heat capacities, adiabatic process, Isothermal processes (6 hr). 2nd law of thermodynamic, entropy, Gibbs free energy (4 hr). Photochemistry, electromagnetic spectrum, Beer Lambert law (6 hr). IR Spectrophotometer, mass spectroscopy, FIS, FES (6 hr). Potentiometer, conductive meter, pH-meter (5 hr). |
|---|---|

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

| | |
|-------------------|--|
| Strategies | homework assignments, written exam, Quizzes, seminars, reports, practical tests and Online tests |
|-------------------|--|

Student Workload (SWL)

الحمل الدراسي للطلاب

| | | | |
|--|-----|--|---|
| Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل | 94 | Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً | 6 |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل | 81 | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً | 5 |
| Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل | 175 | | |

Module Evaluation

تقييم المادة الدراسية

| | | Time/Number | Weight (Marks) | Week Due | Relevant Learning Outcome |
|-------------------------|--------------------|----------------------|----------------|--|--|
| Formative assessment | Quizzes | 15min/ 2 times | 20% (20) | 5 th , 12 th | LO# 1 st – 5 th LO# 10 th – 12 th |
| | Online Assignments | 5min/ 2 times | 10% (10) | 6 th ,13 th | LO# 1 st LO# 10 th |
| | Lab. | Each lab/ 5 times | 5% (5) | 3 rd , 4 th , 5 th , 6 th , 7 th | LO# 1 st -2 nd , LO# 3 rd LO# 4 th LO# 5 th LO# 6 th – 7 th |
| | Seminar | 10min/ One time | 5% (5) | 6 th | LO# 2 nd – 5 th |
| Summative assessment | Midterm Exam | 180 min/ one time | 10% | 8 th | LO# 1 st – 10 th |
| | Final Exam | 240min/ one time | 50% | 16 th | |
| Total assessment | | | 100% | | |

Delivery Plan (Weekly Syllabus)

المنهاج السبوعي النظري

| | Material Covered |
|---------|--|
| Week 1 | Introduction, Units conversion, Isotopes, Chemical formula and chemical equation |
| Week 2 | Methods of expressing analytical concentrations: Normality, Formality, Molarity, Molality, Mole fraction, Mill equivalent, ppm, ppb, wt. and vol. percent ratio. |
| Week 3 | Stoichiometry |
| Week 4 | Chemical equilibrium |
| Week 5 | Acid-Base dissociation constant |
| Week 6 | pH-scale, buffer solution+ Solubility of precipitations, common ion effect |
| Week 7 | Mid-term Exam |
| Week 8 | Errors & statistical treatment of analytical data sources of errors, types of errors, average mode, range, average derivation, standard deviation, relative standard deviation, variance, method of expressing accuracy, Absolute error, relative error. |
| Week 9 | Redox reactions, balancing of redox equation |
| Week 10 | Electrochemistry: electrochemical cells, types of electrodes, electrolytes, Nernst equation, cell potential |

| | |
|----------------|--|
| Week 11 | Thermodynamic, Zero and first law of thermodynamic, Reversible and irreversible expansion, Heat capacities, adiabatic expansion, Isothermal processes. |
| Week 12 | Second law of thermodynamic: spontaneous processes, entropy and Gibbs free energy. |
| Week 13 | Photochemistry (spectrophotometer analysis), Regions of electromagnetic spectrum, Absorption and emission of electromagnetic spectrum, Beer Lambert law, instrumentations components of spectrophotometer. |
| Week 14 | IR Spectrophotometer, mass spectroscopy, flame ionization spectrophotometry. |
| Week 15 | Potentiometer, conductive meter, pH-meter and some other applications of chemical sensors+ Preparatory week before the final Exam |

Delivery Plan (Weekly Lab. Syllabus)

المنهاج السبوعي للمختبر

| | Material Covered |
|---------------|--|
| Week 1 | Principals of qualitative analysis. |
| Week 2 | Qualitative analysis of cations of 1 st and 2 nd groups. |
| Week 3 | Qualitative analysis of cations of 3 rd and fifth groups. |
| Week 4 | Introduction to Quantitative (volumetric) analysis and types of standard substance in titration, principles and calculations of titration. |
| Week 5 | How to prepare solution of primary standard materials and to standardize secondary standard substance of HCl, (acid-base titration) |
| Week 6 | Standardization secondary standard substance of NaOH and its application by determination of vinegar acidity. |
| Week 7 | Determination of residual chloride in tape water by titration against silver nitrate (precipitation titration). |

Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|--------------------------|--|---------------------------|
| Required Texts | | |
| Recommended Texts | <p>1- ESSENTIALS OF GENERAL CHEMISTRY By EBBING GABBON RAGSDALE</p> <p>2- CHEMICAL PRINCIPLES By Steven S Zumdahl - 4th edition</p> | No |

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.