

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

| Module Information                 |                            |                               |                                                                                                                                                                                                                                          |
|------------------------------------|----------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| معلومات المادة الدراسية            |                            |                               |                                                                                                                                                                                                                                          |
| Module Title                       | <b>Concrete Technology</b> |                               | Module Delivery                                                                                                                                                                                                                          |
| Module Type                        | Core                       |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input checked="" type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0035                    |                               |                                                                                                                                                                                                                                          |
| ECTS Credits                       | 5                          |                               |                                                                                                                                                                                                                                          |
| SWL (hr/sem)                       | 125                        |                               |                                                                                                                                                                                                                                          |
| Module Level                       |                            | Semester of Delivery          |                                                                                                                                                                                                                                          |
| Administering Department           | CIVIL                      | College                       | Engineering                                                                                                                                                                                                                              |
| Module Leader                      | Iman kattoof harith        | e-mail                        | <a href="mailto:eman1988@wrec.uoqasim.edu.iq">eman1988@wrec.uoqasim.edu.iq</a>                                                                                                                                                           |
| Module Leader's Acad. Title        | Assets Professor           | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                    |
| Module Tutor                       | None                       | e-mail                        | None                                                                                                                                                                                                                                     |
| Peer Reviewer Name                 | None                       | e-mail                        | None                                                                                                                                                                                                                                     |
| Scientific Committee Approval Date | 01/06/2023                 | Version Number                | 1.0                                                                                                                                                                                                                                      |

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

| Module Aims, Learning Outcomes and Indicative Contents   |
|----------------------------------------------------------|
| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية |

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>Study and comprehend the general concepts of the physical and chemical composition of structural materials used in civil engineering works</li> </ul>                                                                                                                                                                                                                                                                              |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | After successful completion of this module, students should be able to: <ul style="list-style-type: none"> <li>The student learns about the quality of construction materials</li> <li>The student learns about the physical and chemical composition of structural materials.</li> </ul>                                                                                                                                                                                 |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | Indicative content includes the following:<br><b>Part A: Classification of material , Properties of material [8 hrs]</b><br><b>Part B: Mechanical properties of material clay Brick , Types of Brick according of material [12 hrs]</b><br><b>Part C: Types of Mortar Bonding Materials [ 21 hrs].</b><br><b>Part D:Manufactories of Lime , Manufactories of cement , [3 hrs]</b><br><b>Part E: Type of Material use covering the floors production of Tiles ,[3 hrs]</b> |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                     |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | 1) Learning Technologies on Campus using data show or TV screen.<br>2) White board.<br>3) Hand out lecture notes.<br>4) Hand out some kinds of pictures related to specific topics. |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب                          |     |                                                                           |      |
|--------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 63  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 5    |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 62  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 4.13 |
| <b>Total SWL (h/sem)</b><br>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           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                       | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                       | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                       | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment  | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                       | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment      |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus) |                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| المنهاج الاسبوعي النظري         |                                                                                                                                  |
|                                 | Material Covered                                                                                                                 |
| Week 1                          | Welcome to this course, syllabus, and expectations. Textbook. underline the importance and significance of engineering drawing   |
| Week 2                          | Classification and properties of construction materials                                                                          |
| Week 3                          | Mechanical properties of materials                                                                                               |
| Week 4                          | Exercise of mechanical properties                                                                                                |
| Week 5                          | Exercise of mechanical properties                                                                                                |
| Week 6                          | An understanding of Clayey brick and brick products used in civil engineering construction and the manufacturing stage           |
| Week 7                          | An understanding of Clayey brick and brick products used in civil engineering construction and the manufacturing stage           |
| Week 8                          | An understanding of gypsum and gypsum products used in civil Engineering construction and the common acceptance tests on gypsum. |
| Week 9                          | An understanding of gypsum and gypsum products used in civil Engineering construction and the common acceptance tests on gypsum. |
| Week 10                         | An understanding of lime used in civil engineering construction and the Common acceptance tests on lime                          |
| Week 11                         | An understanding of lime used in civil engineering construction and the Common acceptance tests on lime                          |
| Week 12                         | An understanding of Cement used in civil engineering construction and the Common acceptance tests on Cement                      |
| Week 13                         | An understanding of Cement used in civil engineering construction and the Common acceptance tests on Cement                      |
| Week 14                         | An understanding of the various types of tiles used in civil engineering construction and the                                    |

|                |                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|
|                | common acceptance tests on tile.                                                                                               |
| <b>Week 15</b> | An understanding of the various types of tiles used in civil engineering construction and the common acceptance tests on tile. |
| <b>Week 16</b> | <b>Preparatory week before the final Exam</b>                                                                                  |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المناهج الاسبوعي للمختبر |                                                                  |
|-------------------------------------------------------------------------|------------------------------------------------------------------|
|                                                                         | <b>Material Covered</b>                                          |
| <b>Week 1</b>                                                           | How can save yourself and your colleges and how can write Report |
| <b>Week 2</b>                                                           | Conduct tests on Bricks                                          |
| <b>Week 3</b>                                                           | Initial and Final Setting Time of Cement Paste                   |
| <b>Week 4</b>                                                           | Soundness of Cement                                              |
| <b>Week 5</b>                                                           | Compressive Strength of Cement                                   |
| <b>Week 6</b>                                                           | Fineness of Cement                                               |
| <b>Week 7</b>                                                           | Consistency of Cement Paste                                      |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>                                             |
| <b>Week 9</b>                                                           | Sieve Analysis of Coarse Aggregate                               |
| <b>Week 10</b>                                                          | Specific Gravity and Absorption                                  |
| <b>Week 11</b>                                                          | Density                                                          |
| <b>Week 12</b>                                                          | Shape and Surface Texture                                        |
| <b>Week 13</b>                                                          | Sieve Analysis of Fine Aggregate                                 |
| <b>Week 14</b>                                                          | Conduct tests on Cement                                          |
| <b>Week 15</b>                                                          | Slump Test                                                       |
| <b>Week 16</b>                                                          | Compacting Factor                                                |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                                              |                                  |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                 | <b>Text</b>                                                                                                                                                  | <b>Available in the Library?</b> |
| <b>Required Texts</b>                                           | <ul style="list-style-type: none"> <li>- Tests in Building Materials, Talib, A. &amp;, Abdul-Muni, S. 2011.</li> <li>- IQS- Iraqi Specifications.</li> </ul> | Yes                              |

|                          |                                                                                                                                                                                |    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|                          |                                                                                                                                                                                |    |
| <b>Recommended Texts</b> | <ul style="list-style-type: none"> <li>- Building Materials in Civil Engineering: H. Zhang, Second Edition, Woodhead Publishing, 2010.</li> <li>- BS Specifications</li> </ul> | No |
| <b>Websites</b>          |                                                                                                                                                                                |    |

| <b>Grading Scheme</b><br>مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                |                         |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                                                                                                                                                                                                                                                                                                                                                                                | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F</b> – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |           |                                       |
| <b>Note:</b> 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                       | <b>Engineering Surveying I</b> |                               | Module Delivery                                                                                                                                                                                                                                     |
| Module Type                        | Core                           |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input checked="" type="checkbox"/> Tutorial<br><input checked="" type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0033                        |                               |                                                                                                                                                                                                                                                     |
| ECTS Credits                       | 6                              |                               |                                                                                                                                                                                                                                                     |
| SWL (hr/sem)                       | 150                            |                               |                                                                                                                                                                                                                                                     |
| Module Level                       |                                | Semester of Delivery          |                                                                                                                                                                                                                                                     |
| Administering Department           | CIVIL                          | College                       | Engineering                                                                                                                                                                                                                                         |
| Module Leader                      | Aysar Jameel Abdalkadhum       | e-mail                        | <a href="mailto:Aysar@wrec.uoqasim.edu.iq">Aysar@wrec.uoqasim.edu.iq</a>                                                                                                                                                                            |
| Module Leader's Acad. Title        | Assets Professor               | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                               |
| Module Tutor                       | None                           | e-mail                        | None                                                                                                                                                                                                                                                |
| Peer Reviewer Name                 | None                           | e-mail                        | None                                                                                                                                                                                                                                                |
| Scientific Committee Approval Date | 01/06/2023                     | Version Number                | 1.0                                                                                                                                                                                                                                                 |

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

| Module Aims, Learning Outcomes and Indicative Contents   |
|----------------------------------------------------------|
| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية |

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>This course aims to introduce and develop the basic understanding of the principles of engineering surveying</li> </ul>                                                                                                                                                                                                                                |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>An ability to apply knowledge of engineering surveying, science and engineering</li> <li>An ability to design and conduct experiments, as well as to analyze and interpret data</li> <li>An ability to identify, formulate, and solve engineering problems..</li> </ul> |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Introduction, [8 hrs]<br/> <b>Part B:</b> Measurement distance by tape [12 hrs]<br/> <b>Part C:</b> Leveling [ 21 hrs].<br/> <b>Part D:</b> Sections [3 hrs]<br/> <b>Part E:</b> Directions. [3 hrs]</p>                                                                                                                  |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب                          |     |                                                                            |     |
|--------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 78  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 5   |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 72  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 4.8 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 150 |                                                                            |     |

| <b>Module Evaluation</b><br>تقييم المادة الدراسية |         |                |          |                   |
|---------------------------------------------------|---------|----------------|----------|-------------------|
|                                                   | Time/Nu | Weight (Marks) | Week Due | Relevant Learning |

|                      |                 | Number |                  |            | Outcome                       |
|----------------------|-----------------|--------|------------------|------------|-------------------------------|
| Formative assessment | Quizzes         | 2      | 15% (15)         | 5, 8       | LO # 2, 3, 4 and 6, 7         |
|                      | Assignments     | 2      | 10% (10)         | 6, 12      | LO # 3, 4, 5 and 9, 10 and 11 |
|                      | Projects / Lab. | 1      | 10% (10)         | Continuous |                               |
|                      | Report          | 1      | 5% (5)           | 13         | Continuous                    |
| Summative assessment | Midterm Exam    | 2 hr   | 10% (10)         | 10         | LO # 1-9                      |
|                      | Final Exam      | 3hr    | 50% (50)         | 16 or 17   | All                           |
| Total assessment     |                 |        | 100% (100 Marks) |            |                               |

### Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

|         | Material Covered                                                                                                                  |
|---------|-----------------------------------------------------------------------------------------------------------------------------------|
| Week 1  | Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.                 |
| Week 2  | Units-rounding off numbers-scale-significant figures-Setting out straight-line using tape only                                    |
| Week 3  | Error sources-Precision- Accuracy-Redundant measurements-Setting out angle by tape only                                           |
| Week 4  | random errors- probability normal distribution-mean and weighted mean weights- balance adjustment- Setting out a map by tape only |
| Week 5  | level types-refraction and curvature errors- Measure angle by tape only                                                           |
| Week 6  | Leveling methods adjustment leveling network- Tachometry method                                                                   |
| Week 7  | Distance measurement methods-taping- Two pegs test                                                                                |
| Week 8  | EDM- Differential Leveling                                                                                                        |
| Week 9  | Angle, Azimuth, and Bearing                                                                                                       |
| Week 10 | Angle measurement                                                                                                                 |
| Week 11 | Angle measurements and distance measurements                                                                                      |
| Week 12 | Profile cross section contour map                                                                                                 |
| Week 13 | Regular area- irregular area cross sections                                                                                       |
| Week 14 | Volume computation-mass haul diagram                                                                                              |
| Week 15 | Revision class                                                                                                                    |
| Week 16 | Preparatory week before the final Exam                                                                                            |

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

|  | Material Covered |
|--|------------------|
|--|------------------|



|                |                      |
|----------------|----------------------|
| <b>Week 1</b>  | None                 |
| <b>Week 2</b>  |                      |
| <b>Week 3</b>  |                      |
| <b>Week 4</b>  |                      |
| <b>Week 5</b>  |                      |
| <b>Week 6</b>  |                      |
| <b>Week 7</b>  |                      |
| <b>Week 8</b>  | <b>Mid-term Exam</b> |
| <b>Week 9</b>  |                      |
| <b>Week 10</b> |                      |
| <b>Week 11</b> |                      |
| <b>Week 12</b> |                      |
| <b>Week 13</b> |                      |
| <b>Week 14</b> |                      |
| <b>Week 15</b> |                      |
| <b>Week 16</b> |                      |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                               |                                  |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                 | <b>Text</b>                                                                                                                                   | <b>Available in the Library?</b> |
| <b>Required Texts</b>                                           | - Ghilani, C. D. and P. R. WOLF (2014). Elementary Surveying: An Introduction to Geomatics. New Jersey/ The United State of America, PEARSON. | No                               |
| <b>Recommended Texts</b>                                        | Nadolinets, L., et al. (2017). Surveying Instruments and Technology. New York, Taylor & Francis.                                              | No                               |
| <b>Websites</b>                                                 |                                                                                                                                               |                                  |

| <b>Grading Scheme</b><br>مخطط الدرجات |              |                |                  |                   |
|---------------------------------------|--------------|----------------|------------------|-------------------|
| <b>Group</b>                          | <b>Grade</b> | <b>التقدير</b> | <b>Marks (%)</b> | <b>Definition</b> |

|                                     |                         |                     |          |                                       |
|-------------------------------------|-------------------------|---------------------|----------|---------------------------------------|
| <b>Success Group<br/>(50 - 100)</b> | <b>A - Excellent</b>    | امتياز              | 90 - 100 | Outstanding Performance               |
|                                     | <b>B - Very Good</b>    | جيد جدا             | 80 - 89  | Above average with some errors        |
|                                     | <b>C - Good</b>         | جيد                 | 70 - 79  | Sound work with notable errors        |
|                                     | <b>D - Satisfactory</b> | متوسط               | 60 - 69  | Fair but with major shortcomings      |
|                                     | <b>E - Sufficient</b>   | مقبول               | 50 - 59  | Work meets minimum criteria           |
| <b>Fail Group<br/>(0 – 49)</b>      | <b>FX – Fail</b>        | راسب (قيد المعالجة) | (45-49)  | More work required but credit awarded |
|                                     | <b>F – Fail</b>         | 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                       | <b>Fluid Mechanics I</b> |                               | Module Delivery                                                                                                                                                                                                                                     |
| Module Type                        | Support                  |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input checked="" type="checkbox"/> Lab<br><input checked="" type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0034                  |                               |                                                                                                                                                                                                                                                     |
| ECTS Credits                       | 6                        |                               |                                                                                                                                                                                                                                                     |
| SWL (hr/sem)                       | 150                      |                               |                                                                                                                                                                                                                                                     |
| Module Level                       |                          | Semester of Delivery          |                                                                                                                                                                                                                                                     |
| Administering Department           | CIVIL                    | College                       | Engineering                                                                                                                                                                                                                                         |
| Module Leader                      | Ammar Ali Abd            | e-mail                        | <a href="mailto:ammarali@wrec.uoqasim.edu.iq">ammarali@wrec.uoqasim.edu.iq</a>                                                                                                                                                                      |
| Module Leader's Acad. Title        | Lecture                  | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                               |
| Module Tutor                       | None                     | e-mail                        | None                                                                                                                                                                                                                                                |
| Peer Reviewer Name                 | None                     | e-mail                        | None                                                                                                                                                                                                                                                |
| Scientific Committee Approval Date | 01/06/2023               | Version Number                | 1.0                                                                                                                                                                                                                                                 |

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

|                                                        |
|--------------------------------------------------------|
| Module Aims, Learning Outcomes and Indicative Contents |
|--------------------------------------------------------|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>The course will introduce fluid mechanics and establish its relevance in civil engineering.</li> <li>Recognition of and develop the knowledge about the fundamental hydraulic definitions and the</li> <li>principle fluid properties underlying the subject.</li> <li>Establish how these definitions and properties are utilized to solve the elementary hydrostatical and</li> <li>hydro dynamical problems that may face the civil engineer.</li> </ul> |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>Ability to apply knowledge of mathematics, science and engineering</li> <li>An ability to design and conduct experiments, as well as to analyze and interpret data</li> <li>An ability to identify, formulate, and solve engineering problems.</li> </ul>                                                                                                                    |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Fluid Properties [8 hrs]<br/> <b>Part B:</b> Fluid Static [12 hrs]<br/> <b>Part C:</b> Hydrostatic Force on Immersed Plane Surfaces [ 21 hrs].<br/> <b>Part D:</b> , Dimensional Analysis [3 hrs]<br/> <b>Part E:</b> Momentum Equation. [3 hrs]</p>                                                                                                                                                                           |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب                          |     |                                                                           |     |
|--------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 78  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 5   |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 72  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 4.8 |
| <b>Total SWL (h/sem)</b><br>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           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                       | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                       | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                       | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment  | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                       | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment      |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus) |                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| المناهج الاسبوعي النظري         |                                                                                                                                                                  |
|                                 | Material Covered                                                                                                                                                 |
| Week 1                          | Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.                                                |
| Week 2                          | Support and describe a fine define of the fluid, fluid mechanics, dimensions and units related with its study and comprehend its relevance to civil engineering. |
| Week 3                          | Fluid Static(Fuild Pressure and its Measurement Methods ,                                                                                                        |
| Week 4                          | Hydrostatic Force on Immersed Plane Surfaces, Hydrostatic Force on Immersed Curved Surfaces.                                                                     |
| Week 5                          | Relative Equilibrium Linear Acceleration                                                                                                                         |
| Week 6                          | Uniform Rotation about a Vertical Axis                                                                                                                           |
| Week 7                          | Dimensional Analysis                                                                                                                                             |
| Week 8                          | Dynamic Similitude                                                                                                                                               |
| Week 9                          | Kinematics of Fluid Flow (Flow Types)                                                                                                                            |
| Week 10                         | Continuity Equation                                                                                                                                              |
| Week 11                         | Energy Equation                                                                                                                                                  |
| Week 12                         | Momentum Equation                                                                                                                                                |
| Week 13                         | Calculate forces and moments for jets, vanes, nozzles and pipe sections.                                                                                         |
| Week 14                         | How can measure flow rate by wieres and flumes                                                                                                                   |
| Week 15                         | How can measure flow rate by wieres and flumes                                                                                                                   |
| Week 16                         | Preparatory week before the final Exam                                                                                                                           |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المناهج الاسبوعي للمختبر |                                                   |
|-------------------------------------------------------------------------|---------------------------------------------------|
|                                                                         | <b>Material Covered</b>                           |
| <b>Week 1</b>                                                           | DENSITY AND SPECIFIC GRAVITY                      |
| <b>Week 2</b>                                                           | VISCOSITY                                         |
| <b>Week 3</b>                                                           | SURFACE TENSION                                   |
| <b>Week 4</b>                                                           | CAPILLARITY                                       |
| <b>Week 5</b>                                                           | CENTER OF PRESSURE                                |
| <b>Week 6</b>                                                           | FLOW THROUGH A CIRCULAR ORIFICE                   |
| <b>Week 7</b>                                                           | TRAJECTORY OF A HORIZONTAL JET                    |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>                              |
| <b>Week 9</b>                                                           | TIME TO EMPTY A VESSEL                            |
| <b>Week 10</b>                                                          | IMPACT OF JETS                                    |
| <b>Week 11</b>                                                          | VERIFICATION OF BERNOULLI'S EQUATION              |
| <b>Week 12</b>                                                          | DEMONSTRATION OF LAMINAR AND TURBULENT FLOW       |
| <b>Week 13</b>                                                          | PIPE FLOW MEASUREMENT (FLOW THROUGH VENTURI TUBE) |
| <b>Week 14</b>                                                          | FRICTION LOSSES IN PIPES.                         |
| <b>Week 15</b>                                                          | MINOR LOSSES IN PIPES                             |
| <b>Week 16</b>                                                          | MINOR LOSSES IN PIPES                             |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                          |                                  |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                 | <b>Text</b>                                                                                                                              | <b>Available in the Library?</b> |
| <b>Required Texts</b>                                           | - <i>Engineering Fluid Mechanics</i> , Crowe, C. T., D. F. Elger, B. C. Williams and J. A. Roberson, John Wiley & Sons, New York, 2010.. | No                               |
| <b>Recommended Texts</b>                                        | <i>Elementary Fluid Mechanics</i> , Vennard, J. K., John Wiley & Sons, New York.                                                         | No                               |
| <b>Websites</b>                                                 |                                                                                                                                          |                                  |

| <b>Grading Scheme</b><br>مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                |                         |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                                                                                                                                                                                                                                                                                                                                                                                | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F</b> – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |           |                                       |
| <b>Note:</b> 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                       | Mathematics2 I      |                                                                                                                                                                                                                               | Module Delivery |
| Module Type                        | Support             | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |                 |
| Module Code                        | QCE0031             |                                                                                                                                                                                                                               |                 |
| ECTS Credits                       | 4                   |                                                                                                                                                                                                                               |                 |
| SWL (hr/sem)                       | 100                 |                                                                                                                                                                                                                               |                 |
| Module Level                       |                     |                                                                                                                                                                                                                               |                 |
| Administering Department           | CIVIL               | College                                                                                                                                                                                                                       | Engineering     |
| Module Leader                      |                     | e-mail                                                                                                                                                                                                                        |                 |
| Module Leader's Acad. Title        | Assistant Professor | Module Leader's Qualification                                                                                                                                                                                                 | Ph.D.           |
| Module Tutor                       | None                | e-mail                                                                                                                                                                                                                        | None            |
| Peer Reviewer Name                 | None                | e-mail                                                                                                                                                                                                                        | None            |
| Scientific Committee Approval Date | 01/06/2023          | Version Number                                                                                                                                                                                                                | 1.0             |

| Relation with other Modules       |         |          |      |
|-----------------------------------|---------|----------|------|
| العلاقة مع المواد الدراسية الأخرى |         |          |      |
| Prerequisite module               | QCE0021 | Semester | Two  |
| Co-requisites module              | None    | Semester | None |



| <b>Module Aims, Learning Outcomes and Indicative Contents</b><br><b>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br><b>أهداف المادة الدراسية</b>                                                                               | <ul style="list-style-type: none"> <li>The aim of this course is for students to learn to draw basic functions and how to derive them.</li> <li>Benefit from derivation in solving engineering applications,</li> <li>Benefit from integration in solving many engineering applications such as Area Between Curves, Volume of Solids of Revolution, Length of Plane Curves, Area of Surface of Revolution.</li> <li>In addition, learn to calculate conic sections.</li> </ul> |
| <b>Module Learning Outcomes</b><br><b>مخرجات التعلم للمادة الدراسية</b>                                                          | <ul style="list-style-type: none"> <li>After successful completion of this module, students should be able to:</li> <li>Ability to learn to graph basic functions.</li> <li>Ability to use calculus, in solving engineering applications.</li> <li>Mastery of mathematics to relate it to the stereoscopic geometry of a purpose the answer in descriptive engineering</li> <li>Ability to work as a team.</li> </ul>                                                           |
| <b>Indicative Contents</b><br><b>المحتويات الإرشادية</b>                                                                         | <p>Indicative content includes the following:</p> <p><b>Part A: Integration,[8 hrs]</b></p> <p><b>Part B: Area under the curve, [12 hrs]</b></p> <p><b>Part C: Trapezoidal and Simpsons rule, Volumes, Surface area,[ 21 hrs].</b></p> <p><b>Part D: Natural logarithm functions, Exponential functions, [3 hrs]</b></p> <p><b>Part E: Methods of integration, Improper integral. [3 hrs]</b></p>                                                                               |

| <b>Learning and Teaching Strategies</b><br><b>استراتيجيات التعلم والتعليم</b> |                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                             | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)<br>الحمل الدراسي للطالب                                 |     |                                                                            |       |
|--------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------|-------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 63  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 4     |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 37  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 2.466 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 100 |                                                                            |       |

| Module Evaluation<br>تقييم المادة الدراسية |                 |             |                  |            |                                |
|--------------------------------------------|-----------------|-------------|------------------|------------|--------------------------------|
|                                            |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
| Formative assessment                       | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                                            | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                                            | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                                            | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment                       | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                                            | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment                           |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري |                                                                                                                   |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|                                                            | Material Covered                                                                                                  |
| Week 1                                                     | Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data. |
| Week 2                                                     | Indefinite Integrals and Definite Integrals                                                                       |
| Week 3                                                     | Integral of Transcendental Functions.                                                                             |
| Week 4                                                     | Length of Plane Curves and Area of Surface of Revolution                                                          |
| Week 5                                                     | Integration by Parts and Integration by Trigonometric Substitutions.                                              |
| Week 6                                                     | Integration by Parts and Integration by Trigonometric Substitutions.                                              |
| Week 7                                                     | Integration of Rational Function by Partial Fractions and Integrating of the Roots.                               |

|                |                                                                                     |
|----------------|-------------------------------------------------------------------------------------|
| <b>Week 8</b>  | Integration of Rational Function by Partial Fractions and Integrating of the Roots. |
| <b>Week 9</b>  | Calculate Conic Sections                                                            |
| <b>Week 10</b> | Calculate Conic Sections                                                            |
| <b>Week 11</b> | Integration of Rational Function by Partial Fractions and Integrating of the Roots. |
| <b>Week 12</b> | Related rates changes, Extreme Values of Functions                                  |
| <b>Week 13</b> | Differentiation Rules and Derivatives of Trigonometric Functions                    |
| <b>Week 14</b> | Differentiation Rules and Derivatives of Trigonometric Functions                    |
| <b>Week 15</b> | Integration of Rational Function by Partial Fractions and Integrating of the Roots. |
| <b>Week 16</b> | <b>Preparatory week before the final Exam</b>                                       |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المنهاج الاسبوعي للمختبر |                         |
|-------------------------------------------------------------------------|-------------------------|
|                                                                         | <b>Material Covered</b> |
| <b>Week 1</b>                                                           | None                    |
| <b>Week 2</b>                                                           |                         |
| <b>Week 3</b>                                                           |                         |
| <b>Week 4</b>                                                           |                         |
| <b>Week 5</b>                                                           |                         |
| <b>Week 6</b>                                                           |                         |
| <b>Week 7</b>                                                           |                         |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>    |
| <b>Week 9</b>                                                           |                         |
| <b>Week 10</b>                                                          |                         |
| <b>Week 11</b>                                                          |                         |
| <b>Week 12</b>                                                          |                         |
| <b>Week 13</b>                                                          |                         |
| <b>Week 14</b>                                                          |                         |
| <b>Week 15</b>                                                          |                         |
| <b>Week 16</b>                                                          |                         |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس |                                                                                                                                                                                                                          |                           |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                          | Text                                                                                                                                                                                                                     | Available in the Library? |
| <b>Required Texts</b>                                    | <ul style="list-style-type: none"> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", eleven teen Edition, 2000.</li> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", fourteenth Edition, 2017</li> </ul> | No                        |
| <b>Recommended Texts</b>                                 | <ul style="list-style-type: none"> <li>- Haward, Bivens and Davis., "Calculus ", Pearson Education, Seven Edition, 2002.</li> <li>- James Stewart, "Calculus ", fifth Edition, 2020</li> </ul>                           | No                        |
| <b>Websites</b>                                          |                                                                                                                                                                                                                          |                           |

| Grading Scheme<br>مخطط الدرجات  |                         |                     |           |                                       |
|---------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                           | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b> | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                 | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                 | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                 | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                 | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>      | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                 | <b>F</b> – 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                       | <b>Structural Drawing</b> |                               | Module Delivery                                                                                                                                                                                                                          |                                                                                |
| Module Type                        | Basic                     |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input checked="" type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |                                                                                |
| Module Code                        | QCE0036                   |                               |                                                                                                                                                                                                                                          |                                                                                |
| ECTS Credits                       | 3                         |                               |                                                                                                                                                                                                                                          |                                                                                |
| SWL (hr/sem)                       | 75                        |                               |                                                                                                                                                                                                                                          |                                                                                |
| Module Level                       |                           | Semester of Delivery          |                                                                                                                                                                                                                                          |                                                                                |
| Administering Department           | CIVIL                     | College                       | Engineering                                                                                                                                                                                                                              |                                                                                |
| Module Leader                      | Iman kattoof harith       |                               | e-mail                                                                                                                                                                                                                                   | <a href="mailto:eman1988@wrec.uoqasim.edu.iq">eman1988@wrec.uoqasim.edu.iq</a> |
| Module Leader's Acad. Title        | Assistant Professor       | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                    |                                                                                |
| Module Tutor                       | None                      |                               | e-mail                                                                                                                                                                                                                                   | None                                                                           |
| Peer Reviewer Name                 | None                      |                               | e-mail                                                                                                                                                                                                                                   | None                                                                           |
| Scientific Committee Approval Date | 01/06/2023                | Version Number                | 1.0                                                                                                                                                                                                                                      |                                                                                |

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

|                                                        |
|--------------------------------------------------------|
| Module Aims, Learning Outcomes and Indicative Contents |
|--------------------------------------------------------|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>The student can draw geometric shapes, stereoscopic drawings, and sections, and he can read ready-made engineering drawings.</li> <li>The student will be able to draw geometric shapes using AutoCAD.</li> <li>The student imagines the final shape of the engineering drawing</li> <li>The student will be familiar with the tools of engineering drawing.</li> <li>The student is familiar with drawing geometric shapes (lines, circles, arcs).</li> <li>The student learns applications and exercises in vertical and stereo projection and drawing sections.</li> </ul> |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>The student will be familiar with the AutoCAD interface and its contents.</li> <li>The student will be familiar with the methods of drawing lines and geometric shapes using the computer.</li> <li>The student learns how to use drawing aids.</li> <li>The student learns about the modification commands represented by displacement, erasure, transfer, rotation, ..... etc.</li> </ul>                                                                                                    |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A: Principles previews, Lines in engineering drawing [8 hrs]</b></p> <p><b>Part B: Geometric operations. [12 hrs]</b></p> <p><b>Part C: Introductory lecture AutoCAD drawing program (a full explanation for the program interface), [ 21 hrs].</b></p> <p><b>Part D: Complete explanation of the program interface, identify the units of measurement and how to give commands [3 hrs]</b></p> <p><b>Part E: Dimension, Pectorial Drawing, Sections.[3 hrs]</b></p>                                                                                    |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب |
|-------------------------------------------------------|
|-------------------------------------------------------|

|                                                                                |    |                                                                            |     |
|--------------------------------------------------------------------------------|----|----------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 48 | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 4   |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 27 | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 1.8 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 75 |                                                                            |     |

| <b>Module Evaluation</b><br>تقييم المادة الدراسية |                        |                    |                       |                 |                                  |
|---------------------------------------------------|------------------------|--------------------|-----------------------|-----------------|----------------------------------|
|                                                   |                        | <b>Time/Number</b> | <b>Weight (Marks)</b> | <b>Week Due</b> | <b>Relevant Learning Outcome</b> |
| <b>Formative assessment</b>                       | <b>Quizzes</b>         | 2                  | 15% (15)              | 5 , 8           | LO # 2, 3,4 and 6, 7             |
|                                                   | <b>Assignments</b>     | 2                  | 10% (10)              | 6, 12           | LO # 3, 4 , 5 and 9, 10 and 11   |
|                                                   | <b>Projects / Lab.</b> | 1                  | 10% (10)              | Continuous      |                                  |
|                                                   | <b>Report</b>          | 1                  | 5% (5)                | 13              | Continuous                       |
| <b>Summative assessment</b>                       | <b>Midterm Exam</b>    | 2 hr               | 10% (10)              | 10              | LO # 1-9                         |
|                                                   | <b>Final Exam</b>      | 3hr                | 50% (50)              | 16 or 17        | All                              |
| <b>Total assessment</b>                           |                        |                    | 100% (100 Marks)      |                 |                                  |

| <b>Delivery Plan (Weekly Syllabus)</b><br>المنهاج الاسبوعي النظري |                                                                                                                                                                                                                 |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                   | <b>Material Covered</b>                                                                                                                                                                                         |
| <b>Week 1</b>                                                     | Welcome to this course, syllabus, and expectations. Textbook. underline the importance and significance of engineering drawing                                                                                  |
| <b>Week 2</b>                                                     | Draw and write a Kufic Letters Draw a parallel line to other line, bisecting the straight lines, bisect the angles, drawing an arc touches two intersecting lines, bisect the angles; an arc touches two lines. |
| <b>Week 3</b>                                                     | Draw different types of shapes gradient from simple to complicated shapes of decoration Draw projection of three dimension shape with inclined surfaces.                                                        |
| <b>Week 4</b>                                                     | Drawing the dimensions of projection views using specifications of dimensions. Drawing complete projections of complicated three dimensions shape                                                               |
| <b>Week 5</b>                                                     | Drawing Isometric of three dimension shape with planed and inclined surfaces using three projections only.                                                                                                      |
| <b>Week 6</b>                                                     | Drawing Isometric of three dimension shape with planed and inclined surfaces using three projections only.                                                                                                      |
| <b>Week 7</b>                                                     | Drawing Isometric of three dimension shape with planed and inclined surfaces using three projections only.                                                                                                      |

|                |                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------|
| <b>Week 8</b>  | Draw Isometric of three dimension shapes with cylindrical surfaces using three projections only. |
| <b>Week 9</b>  | Draw Isometric of three dimension shapes with dimensions.                                        |
| <b>Week 10</b> | Draw Isometric of three dimension shapes with dimensions.                                        |
| <b>Week 11</b> | Draw Isometric of three dimension shapes with dimensions.                                        |
| <b>Week 12</b> | Draw Isometric with different scale.                                                             |
| <b>Week 13</b> | Draw Isometric with different scale.                                                             |
| <b>Week 14</b> | Draw section with different views and locations.                                                 |
| <b>Week 15</b> | Draw Isometric using two projections only.                                                       |
| <b>Week 16</b> | <b>Preparatory week before the final Exam</b>                                                    |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المنهاج الاسبوعي للمختبر |                         |
|-------------------------------------------------------------------------|-------------------------|
|                                                                         | <b>Material Covered</b> |
| <b>Week 1</b>                                                           | Non                     |
| <b>Week 2</b>                                                           |                         |
| <b>Week 3</b>                                                           |                         |
| <b>Week 4</b>                                                           |                         |
| <b>Week 5</b>                                                           |                         |
| <b>Week 6</b>                                                           |                         |
| <b>Week 7</b>                                                           |                         |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>    |
| <b>Week 9</b>                                                           |                         |
| <b>Week 10</b>                                                          |                         |
| <b>Week 11</b>                                                          |                         |
| <b>Week 12</b>                                                          |                         |
| <b>Week 13</b>                                                          |                         |
| <b>Week 14</b>                                                          |                         |
| <b>Week 15</b>                                                          |                         |
| <b>Week 16</b>                                                          |                         |



| Learning and Teaching Resources |                                                                                 |                           |
|---------------------------------|---------------------------------------------------------------------------------|---------------------------|
| مصادر التعلم والتدريس           |                                                                                 |                           |
|                                 | Text                                                                            | Available in the Library? |
| <b>Required Texts</b>           | - Lectures of manual engineering drawing by Ass. Prof. Dr. Mohmad Abd Muslim.   | Yes                       |
| <b>Recommended Texts</b>        | - Fundamentals of 2017 AutoCAD by Ali Mahdi<br>- AutoCAD Tutorials by Fangfang. | No                        |
| <b>Websites</b>                 |                                                                                 |                           |

| Grading Scheme                                                                                                                                                                                                                                                                                                                                                                       |                         |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                                         |                         |                     |           |                                       |
| Group                                                                                                                                                                                                                                                                                                                                                                                | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F</b> – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |           |                                       |
| <b>Note:</b> 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                       | <b>Strength of Materials I</b> |                               | Module Delivery                                                                                                                                                                                                               |
| Module Type                        | Core                           |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0032                        |                               |                                                                                                                                                                                                                               |
| ECTS Credits                       | 4                              |                               |                                                                                                                                                                                                                               |
| SWL (hr/sem)                       | 100                            |                               |                                                                                                                                                                                                                               |
| Module Level                       |                                | Semester of Delivery          |                                                                                                                                                                                                                               |
| Administering Department           | CIVIL                          | College                       | Engineering                                                                                                                                                                                                                   |
| Module Leader                      | Fatimah Hameed Naser           | e-mail                        | fatimah_mamoori@wrec.uoqasim.edu.iq                                                                                                                                                                                           |
| Module Leader's Acad. Title        | Assets Professor               | Module Leader's Qualification | PhD                                                                                                                                                                                                                           |
| Module Tutor                       | None                           | e-mail                        | None                                                                                                                                                                                                                          |
| Peer Reviewer Name                 | None                           | e-mail                        | None                                                                                                                                                                                                                          |
| Scientific Committee Approval Date | 01/06/2023                     | Version Number                | 1.0                                                                                                                                                                                                                           |

| Relation with other Modules       |         |          |      |
|-----------------------------------|---------|----------|------|
| العلاقة مع المواد الدراسية الأخرى |         |          |      |
| Prerequisite module               | QCE0021 | Semester | Two  |
| Co-requisites module              | None    | Semester | None |

| <b>Module Aims, Learning Outcomes and Indicative Contents</b><br><b>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br><b>أهداف المادة الدراسية</b>                                                                               | The mechanics of materials teaches civil engineering students the basics for calculating the different types of internal stresses (normal and shear) and related deformation occurred in the body due to external effects. This course is needed for all subsequent structural design courses. In general, students get knowledge about all the subjected mentioned within the description of the two courses. The adopted syllabus is the base for the related subjects that the students will get during the third study stage. |
| <b>Module Learning Outcomes</b><br><b>مخرجات التعلم للمادة الدراسية</b>                                                          | After successful completion of this module, students should be able to: <ol style="list-style-type: none"> <li>1. An ability to apply knowledge of strength of materials, science and engineering.</li> <li>2. An ability to design and conduct experiments, as well as to analyze and interpret data.</li> <li>3. An ability to identify, formulate, and solve engineering problems .</li> </ol>                                                                                                                                 |
| <b>Indicative Contents</b><br><b>المحتويات الإرشادية</b>                                                                         | Indicative content includes the following:<br><b>Part A:</b> Fundamentals principles of mechanics and simple stresses [8 hrs]<br><b>Part B:</b> Simple strain and deformation of axially loaded members [12 hrs]<br><b>Part C:</b> Torsion [ 21 hrs].<br><b>Part D:</b> Shear Force and bending moment diagrams [3 hrs]<br><b>Part E:</b> Shear Force and bending moment diagrams [3 hrs]                                                                                                                                         |

| <b>Learning and Teaching Strategies</b><br><b>استراتيجيات التعلم والتعليم</b> |                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                             | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)                                                  |         |                                                                    |                   |
|-------------------------------------------------------------------------|---------|--------------------------------------------------------------------|-------------------|
| الحمل الدراسي للطالب                                                    |         |                                                                    |                   |
| Structured SWL (h/sem)<br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 63      | Structured SWL (h/w)<br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 4                 |
| Unstructured SWL (h/sem)<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 37      | Unstructured SWL (h/w)<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 2.466             |
| Total SWL (h/sem)<br>الحمل الدراسي الكلي للطالب خلال الفصل              | 100     |                                                                    |                   |
| Module Evaluation                                                       |         |                                                                    |                   |
| تقييم المادة الدراسية                                                   |         |                                                                    |                   |
|                                                                         | Time/Nu | Weight (Marks)                                                     | Week Due          |
|                                                                         |         |                                                                    | Relevant Learning |

|                      |                 | Number |                  |            | Outcome                       |
|----------------------|-----------------|--------|------------------|------------|-------------------------------|
| Formative assessment | Quizzes         | 2      | 15% (15)         | 5, 8       | LO # 2, 3, 4 and 6, 7         |
|                      | Assignments     | 2      | 10% (10)         | 6, 12      | LO # 3, 4, 5 and 9, 10 and 11 |
|                      | Projects / Lab. | 1      | 10% (10)         | Continuous |                               |
|                      | Report          | 1      | 5% (5)           | 13         | Continuous                    |
| Summative assessment | Midterm Exam    | 2 hr   | 10% (10)         | 10         | LO # 1-9                      |
|                      | Final Exam      | 3hr    | 50% (50)         | 16 or 17   | All                           |
| Total assessment     |                 |        | 100% (100 Marks) |            |                               |

| Delivery Plan (Weekly Syllabus) |                                                                                                                              |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| المنهاج الاسبوعي النظري         |                                                                                                                              |
|                                 | Material Covered                                                                                                             |
| Week 1                          | Welcome to this course, Textbook. Distribution of data, tabular presentation of data.                                        |
| Week 2                          | Fundamentals principles of mechanics and simple stresses ,                                                                   |
| Week 3                          | Plotting methods of shear and bending moment diagrams are studied according to two methods, equations and graphical methods. |
| Week 4                          | Plotting methods of shear and bending moment diagrams are studied according to two methods, equations and graphical methods. |
| Week 5                          | Plotting methods of shear and bending moment diagrams are studied according to two methods, equations and graphical methods. |
| Week 6                          | The simple strain represented by axial deformations for the determinate or indeterminate systems.                            |
| Week 7                          | The simple strain represented by axial deformations for the determinate or indeterminate systems.                            |
| Week 8                          | Simple strain and deformation of axially loaded members                                                                      |
| Week 9                          | Methods that used to determine the deflection in beams is given herein                                                       |
| Week 10                         | Methods that used to determine the deflection in beams is given herein                                                       |
| Week 11                         | Torsion                                                                                                                      |
| Week 12                         | Torsion                                                                                                                      |
| Week 13                         | Shear Force and bending moment diagrams .                                                                                    |
| Week 14                         | Shear Force and bending moment diagrams .                                                                                    |
| Week 15                         | Shear Force and bending moment diagrams .                                                                                    |
| Week 16                         | Preparatory week before the final Exam                                                                                       |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المنهاج الاسبوعي للمختبر |                                        |
|-------------------------------------------------------------------------|----------------------------------------|
|                                                                         | Material Covered                       |
| Week 1                                                                  | None                                   |
| Week 2                                                                  |                                        |
| Week 3                                                                  |                                        |
| Week 4                                                                  |                                        |
| Week 5                                                                  |                                        |
| Week 6                                                                  |                                        |
| Week 7                                                                  |                                        |
| Week 8                                                                  |                                        |
| Week 9                                                                  | Mid-term Exam                          |
| Week 10                                                                 |                                        |
| Week 11                                                                 |                                        |
| Week 12                                                                 |                                        |
| Week 13                                                                 |                                        |
| Week 14                                                                 |                                        |
| Week 15                                                                 |                                        |
| Week 16                                                                 | Preparatory week before the final Exam |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                                                                                       |                           |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                                 | Text                                                                                                                                                                                                  | Available in the Library? |
| Required Texts                                                  | 1. Egor Popov, "Introduction to Mechanics of Solids". 1968 by Prentice-Hall, Englewood Cliffs, New Jersey.<br>2. Englewood Cliffs, New Jersey.<br>3. Singer S., "Strength of Materials" Fourth ed." . | No                        |
| Recommended Texts                                               | <b>Optional Text:</b><br>"Gere" Mechanics of material<br>"Hibbler" Mechanics of material                                                                                                              | No                        |
| Websites                                                        |                                                                                                                                                                                                       |                           |

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



## "COURSE PORTFOLIO"

| Module Information                 |                      |                      |                                                                                                                                                                                                                               |             |
|------------------------------------|----------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| معلومات المادة الدراسية            |                      |                      |                                                                                                                                                                                                                               |             |
| Module Title                       | Technical Writing    |                      | Module Delivery                                                                                                                                                                                                               |             |
| Module Type                        | Secondary            |                      | <input checked="" type="checkbox"/> Theory<br><input type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |             |
| Module Code                        |                      |                      |                                                                                                                                                                                                                               |             |
| ECTS Credits                       | 2                    |                      |                                                                                                                                                                                                                               |             |
| SWL (hr/sem)                       | 50                   |                      |                                                                                                                                                                                                                               |             |
| Module Level                       | 2                    | Semester             | 1                                                                                                                                                                                                                             |             |
| Department                         | Civil Engineering    | College              | College of Engineering                                                                                                                                                                                                        |             |
| Module Leader                      | Khadija Abd Mohammed | E-mail               | Khadeja@wrec.uoqasim.edu.iq                                                                                                                                                                                                   |             |
| Module Leader's Acad. Title        | Assistant Lecturer   | Module Qualification | Leader's                                                                                                                                                                                                                      | Asst. Lect. |
| Module Tutor                       | Khadija Abd Mohammed | e-mail               | Khadeja@wrec.uoqasim.edu.iq                                                                                                                                                                                                   |             |
| Peer Reviewer Name                 | N.A.                 | e-mail               | N.A.                                                                                                                                                                                                                          |             |
| Scientific Committee Approval Date | 10/10/2024           | Version Number       | 1.0                                                                                                                                                                                                                           |             |

**Student Workload (SWL):** Structured SWL (h/w) (Two contact hours of lectures) + Unstructured SWL (h/w) .

| Student Workload (SWL)                      |    |                                           |     |
|---------------------------------------------|----|-------------------------------------------|-----|
| الحمل الدراسي للطالب                        |    |                                           |     |
| Structured SWL (h/sem)                      | 33 | Structured SWL (h/w)                      | 2.2 |
| الحمل الدراسي المنتظم للطالب خلال الفصل     |    | الحمل الدراسي المنتظم للطالب أسبوعياً     |     |
| Unstructured SWL (h/sem)                    | 17 | Unstructured SWL (h/w)                    | 1.1 |
| الحمل الدراسي غير المنتظم للطالب خلال الفصل |    | الحمل الدراسي غير المنتظم للطالب أسبوعياً |     |
| Total SWL (h/sem)                           | 50 |                                           |     |
| الحمل الدراسي الكلي للطالب خلال الفصل       |    |                                           |     |



**Relation with other Modules: -**

| 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

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COURSE DESCRIPTION:</b>                  | It is pertinent to note that writing is a technical and complex language skill that requires a person's deliberate effort to gather and process information through graphic representations. Therefore, this course is devoted to develop and improve students' writing skill by selecting topics that qualify students to write sentences semantically and syntactically correct.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Module Aims</b><br>أهداف المادة الدراسية | <p>In this course, the student will learn:</p> <ol style="list-style-type: none"> <li>1- to express his ideas, information, feelings and experiences through graphic symbols.</li> <li>2- to mix different sentence structures to reduce repetition and add emphasis to important points in the text.</li> <li>3- fill their writing with silent attention as well as giving emphasis to certain parts of the sentence by using the Punctuation marks</li> <li>4- join two related ideas of equal importance.</li> <li>5- join two related ideas of unequal importance.</li> <li>6- to use the capital letters to let the reader know a sentence beginning, to show important words in a title, and to signal proper names and official titles.</li> <li>7- to organize and structure the information in an essay or research paper.</li> <li>8- the accuracy and clarity in writing .</li> <li>9- write accurately , clearly, and stylistically correct.</li> </ol> |
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |





|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <b>At the completion of the course, students are expected to be able to:</b> <ol style="list-style-type: none"><li>1. Identify and discuss writing stages.</li><li>2. Identify the qualities of good writing.</li><li>3. Write sentences semantically and grammatically correct.</li><li>4. Understanding the types of sentences.</li><li>5. Express their thought and ideas clearly while writing.</li><li>6. Adding more detail or information to a sentence.</li><li>7. Improving the writing skill by adding different types of sentences.</li><li>8. Forming complex sentences.</li><li>9. Writing more coherent paragraphs</li><li>10. Helping the reader to clearly understand the message that is being conveyed.</li><li>11. Avoiding suddenly shifting the topic, tense, or person.</li><li>12. Identify the words that should be capitalized. .</li><li>13. Write only what needs to be written.</li><li>14. Write effectively and powerfully.</li><li>15. Identifying certain parts of the sentence by using the Punctuation marks</li></ol> |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <ol style="list-style-type: none"><li>1. Moh. Hafidz, M.Pd,(2010)Basic Academic Writing. Bangkalan</li><li>2. Biber,D.,Jahansson,S.,Leech,G.,Conrad,S.,&amp;Edward,F.(1999).Longman Grammar of Spoken and Witten English. Pearson Education Limited.</li><li>3. Seaton, A.(2007).Basic English Grammar for English Language Learners. Saddleback Educational Publishing.</li><li>4. American Psychological Association.(2010). Publication Manual of American Psychological Association. Library of Congress Cataloging-in-Publication Data.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Ministry of Higher Education and Scientific Research**  
**Al-Qasim Green University/ College of Engineering**  
**Civil Engineering Department**



| Week | Topics Covered                       | Learning Outcomes | Notes |
|------|--------------------------------------|-------------------|-------|
| 1    | Writing Process                      | 1, 2              |       |
| 2    | Sentence Variety                     | 4,7               |       |
| 3    | Sentence Variety                     | 4,7               |       |
| 4    | Coordination and Subordination       | 4, 7, 8           |       |
| 5    | Capitalization                       | 11                |       |
| 6    | Subject-Verb agreement               | 3, 11             |       |
| 7    | What is the paragraph                | 9, 10, 14         |       |
| 8    | Exam                                 |                   |       |
| 9    | Punctuation Marks                    | 15                |       |
| 10   | Punctuation Marks                    | 15                |       |
| 11   | Coherence and cohesion in writing    | 9                 |       |
| 12   | Writing Style                        | 3, 5, 6           |       |
| 13   | Writing Style                        | 3,5,6             |       |
| 14   | Strategies to Improve Writing Style. | 11, 13, 14        |       |
| 15   | Strategies to Improve Writing Style. | 11, 13, 14        |       |
|      |                                      |                   |       |

**Learning Outcomes and Assessment Methods**

| Topics Covered  | Learning Outcomes | Strategies for Achieving Outcomes | Assessment Methods   |
|-----------------|-------------------|-----------------------------------|----------------------|
| Writing Process | 1,2               | Theoretical Lectures              | quizzes, discussions |



|                                          |          |                      |                                         |
|------------------------------------------|----------|----------------------|-----------------------------------------|
|                                          |          |                      | during lectures                         |
| <b>Sentence Variety</b>                  | 1,2      | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Sentence Variety</b>                  | 4,7      | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Coordination and Subordination</b>    | 4,7,8    | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Capitalization</b>                    | 11       | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Subject-Verb agreement</b>            | 3, 11    | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>What is the paragraph</b>             | 9,10, 14 | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Exam</b>                              |          |                      |                                         |
| <b>Punctuation Marks</b>                 | 15       | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Punctuation Marks</b>                 | 15       | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Coherence and cohesion in writing</b> | 9        | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Writing Style</b>                     | 3, 5,6   | Theoretical Lectures | quizzes, discussions<br>during lectures |
| <b>Writing Style</b>                     | 3,5,6    | Theoretical Lectures | quizzes, discussions                    |

# Ministry of Higher Education and Scientific Research

## Al-Qasim Green University/ College of Engineering

### Civil Engineering Department



|                                     |            |                      |                                      |
|-------------------------------------|------------|----------------------|--------------------------------------|
|                                     |            |                      | during lectures                      |
| Strategies to Improve Writing Style | 11, 13, 14 | Theoretical Lectures | quizzes, discussions during lectures |
| Strategies to Improve Writing Style | 11,13, 14  | Theoretical Lectures | quizzes, discussions during lectures |

Exam

### Module Evaluation:-

| Module Evaluation          |                             |             |                  |            |                           |
|----------------------------|-----------------------------|-------------|------------------|------------|---------------------------|
| تقييم المادة الدراسية      |                             |             |                  |            |                           |
|                            |                             | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome |
| Formative assessment (40%) | Quizzes                     | ٢           | 20% (20)         | ٣,٧, 10    | ALL                       |
|                            | Assignments & H.W.          | 6           | 5% (10)          | 2,6,9,12   | ALL                       |
|                            | Discussions During Lectures | 5           | 5% (10)          | Continuous | ALL                       |
| Summative assessment (60%) | Midterm Exam (10%)          | 2hr         | 10% (10)         | 12         | ALL                       |
|                            | Final Exam (50%)            | 3hr         | 50% (50)         | 16         | ALL                       |
| Total assessment           |                             |             | 100% (100 Marks) |            |                           |

(SWL= SSWL +USWL) توزيع الساعات المجدولة و الغير مجدولة

| Activity types | Structured SWL  | Un structured USWL | No. of weeks | Time Factor | SWL (hr) |
|----------------|-----------------|--------------------|--------------|-------------|----------|
| Class          | Class Lecturers |                    | 15           | 2           | 30       |

# Ministry of Higher Education and Scientific Research

## Al-Qasim Green University/ College of Engineering

### Civil Engineering Department



|                             |                      |                             |    |   |    |
|-----------------------------|----------------------|-----------------------------|----|---|----|
| Lab.                        |                      |                             |    |   |    |
| Tutorial                    |                      |                             |    |   |    |
| Self Study                  |                      | Self Study                  | 10 | 1 | 10 |
| Quizzes                     |                      | Preparation for the Quizzes | 2  | 3 | 6  |
| discussions during lectures |                      |                             | 6  | 1 | 6  |
| Projects / Lab.             | Project Work         |                             | 6  | 1 | 6  |
|                             |                      | Preparation for the Project | 2  | 1 | 2  |
| Seminar                     | Presenting a Seminar |                             | 1  | 4 | 4  |
|                             |                      | Preparation for the Project | 0  | 0 |    |
| Assignments, Homework       |                      | Preparation for the H.W.    | 1  | 8 | 8  |
| Report                      |                      | Preparation for the Report  | 1  | 3 | 3  |
| Midterm Exam (10%)          |                      | Preparation for the Exam.   |    |   |    |
|                             | Evaluation           |                             |    |   |    |
| Final Exam (50%)            |                      | Preparation for the Exam.   | 10 | 1 | 10 |
|                             | Evaluation           |                             | 1  | 3 | 3  |
|                             |                      | Total SWL (hr/ Semester)    |    |   | 50 |
|                             |                      | ECTS                        |    |   | 2  |

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

| Module Information                 |                              |                                                                                                                                                                                                                               |                                                                                                |
|------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| معلومات المادة الدراسية            |                              |                                                                                                                                                                                                                               |                                                                                                |
| Module Title                       | Mathematics I                |                                                                                                                                                                                                                               | Module Delivery                                                                                |
| Module Type                        | Support                      | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |                                                                                                |
| Module Code                        | QCE0031                      |                                                                                                                                                                                                                               |                                                                                                |
| ECTS Credits                       | 4                            |                                                                                                                                                                                                                               |                                                                                                |
| SWL (hr/sem)                       | 100                          |                                                                                                                                                                                                                               |                                                                                                |
| Module Level                       |                              |                                                                                                                                                                                                                               |                                                                                                |
| Administering Department           | CIVIL                        | College                                                                                                                                                                                                                       | Engineering                                                                                    |
| Module Leader                      | Basim Mohammed Melgat (PhD.) | e-mail                                                                                                                                                                                                                        | <a href="mailto:Dr.Basimmohammed@wrec.uoqasim.edu.iq">Dr.Basimmohammed@wrec.uoqasim.edu.iq</a> |
| Module Leader's Acad. Title        | Assistant Professor          | Module Leader's Qualification                                                                                                                                                                                                 | Ph.D.                                                                                          |
| Module Tutor                       | None                         | e-mail                                                                                                                                                                                                                        | None                                                                                           |
| Peer Reviewer Name                 | None                         | e-mail                                                                                                                                                                                                                        | None                                                                                           |
| Scientific Committee Approval Date | 01/06/2023                   | Version Number                                                                                                                                                                                                                | 1.0                                                                                            |

| Relation with other Modules       |         |          |      |
|-----------------------------------|---------|----------|------|
| العلاقة مع المواد الدراسية الأخرى |         |          |      |
| Prerequisite module               | QCE0021 | Semester | Two  |
| Co-requisites module              | None    | Semester | None |

| <b>Module Aims, Learning Outcomes and Indicative Contents</b><br><b>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br><b>أهداف المادة الدراسية</b>                                                                               | <ul style="list-style-type: none"> <li>The aim of this course is for students to learn to draw basic functions and how to derive them.</li> <li>Benefit from derivation in solving engineering applications,</li> <li>Benefit from integration in solving many engineering applications such as Area Between Curves, Volume of Solids of Revolution, Length of Plane Curves, Area of Surface of Revolution.</li> <li>In addition, learn to calculate conic sections.</li> </ul> |
| <b>Module Learning Outcomes</b><br><b>مخرجات التعلم للمادة الدراسية</b>                                                          | <ul style="list-style-type: none"> <li>After successful completion of this module, students should be able to:</li> <li>Ability to learn to graph basic functions.</li> <li>Ability to use calculus, in solving engineering applications.</li> <li>Mastery of mathematics to relate it to the stereoscopic geometry of a purpose the answer in descriptive engineering</li> <li>Ability to work as a team.</li> </ul>                                                           |
| <b>Indicative Contents</b><br><b>المحتويات الإرشادية</b>                                                                         | <p>Indicative content includes the following:</p> <p><b>Part A: Integration,[8 hrs]</b></p> <p><b>Part B: Area under the curve, [12 hrs]</b></p> <p><b>Part C: Trapezoidal and Simpsons rule, Volumes, Surface area,[ 21 hrs].</b></p> <p><b>Part D: Natural logarithm functions, Exponential functions, [3 hrs]</b></p> <p><b>Part E: Methods of integration, Improper integral. [3 hrs]</b></p>                                                                               |

| <b>Learning and Teaching Strategies</b><br><b>استراتيجيات التعلم والتعليم</b> |                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                             | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)<br>الحمل الدراسي للطالب                                 |     |                                                                            |       |
|--------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------|-------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 63  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 4     |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 37  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 2.466 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 100 |                                                                            |       |

| Module Evaluation<br>تقييم المادة الدراسية |                 |             |                  |            |                                |
|--------------------------------------------|-----------------|-------------|------------------|------------|--------------------------------|
|                                            |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
| Formative assessment                       | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                                            | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                                            | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                                            | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment                       | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                                            | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment                           |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus)<br>المناهج الأسبوعي النظري |                                                |
|------------------------------------------------------------|------------------------------------------------|
|                                                            | Material Covered                               |
| Week 1                                                     | Matrices                                       |
| Week 2                                                     | Matrix algebra                                 |
| Week 3                                                     | Transpose, Determinate and Inversion of Matrix |
| Week 4                                                     | Transpose, Determinate and Inversion of Matrix |
| Week 5                                                     | Solution of $Ax=B$                             |
| Week 6                                                     | Vectors                                        |
| Week 7                                                     | Dot and cross Product                          |
| Week 8                                                     | Line and Plane in Space                        |



|                |                                                   |
|----------------|---------------------------------------------------|
| <b>Week 9</b>  | Polar Coordinates                                 |
| <b>Week 10</b> | Equation Relation Polar and Cartesian Coordinates |
| <b>Week 11</b> | Graphing in polar Coordinates                     |
| <b>Week 12</b> | Application of Polar Coordinates                  |
| <b>Week 13</b> | Sequence and Series                               |
| <b>Week 14</b> | Series Test                                       |
| <b>Week 15</b> | Power Series                                      |
| <b>Week 16</b> | <b>Tylor and Maclaurin Series</b>                 |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المناهج الاسبوعي للمختبر |                                                   |
|-------------------------------------------------------------------------|---------------------------------------------------|
|                                                                         | <b>Material Covered</b>                           |
| <b>Week 1</b>                                                           | Matrix algebra                                    |
| <b>Week 2</b>                                                           | Transpose, Determinate and Inversion of Matrix    |
| <b>Week 3</b>                                                           | Transpose, Determinate and Inversion of Matrix    |
| <b>Week 4</b>                                                           | Solution of $Ax=B$                                |
| <b>Week 5</b>                                                           | Vectors                                           |
| <b>Week 6</b>                                                           | Dot and cross Product                             |
| <b>Week 7</b>                                                           | Line and Plane in Space                           |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>                              |
| <b>Week 9</b>                                                           | Equation Relation Polar and Cartesian Coordinates |
| <b>Week 10</b>                                                          | Graphing in polar Coordinates                     |
| <b>Week 11</b>                                                          | Application of Polar Coordinates                  |
| <b>Week 12</b>                                                          | Sequence and Series                               |
| <b>Week 13</b>                                                          | Series Test                                       |
| <b>Week 14</b>                                                          | Power Series                                      |
| <b>Week 15</b>                                                          | <b>Tylor and Maclaurin Series</b>                 |
| <b>Week 16</b>                                                          | Equation Relation Polar and Cartesian Coordinates |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس |                                                                                                                                                                                                                          |                           |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                          | Text                                                                                                                                                                                                                     | Available in the Library? |
| <b>Required Texts</b>                                    | <ul style="list-style-type: none"> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", eleven teen Edition, 2000.</li> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", fourteenth Edition, 2017</li> </ul> | No                        |
| <b>Recommended Texts</b>                                 | <ul style="list-style-type: none"> <li>- Haward, Bivens and Davis., "Calculus ", Pearson Education, Seven Edition, 2002.</li> <li>- James Stewart, "Calculus ", fifth Edition, 2020</li> </ul>                           | No                        |
| <b>Websites</b>                                          |                                                                                                                                                                                                                          |                           |

| Grading Scheme<br>مخطط الدرجات  |                         |                     |           |                                       |
|---------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                           | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b> | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                 | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                 | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                 | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                 | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>      | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                 | <b>F</b> – 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                       | <b>Computer Language</b> |                               | Module Delivery                                                                                                                                                                                                                          |
| Module Type                        | Basic                    |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input checked="" type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0015                  |                               |                                                                                                                                                                                                                                          |
| ECTS Credits                       | 3                        |                               |                                                                                                                                                                                                                                          |
| SWL (hr/sem)                       | 100                      |                               |                                                                                                                                                                                                                                          |
| Module Level                       |                          | Semester of Delivery          |                                                                                                                                                                                                                                          |
| Administering Department           | CIVIL                    | College                       | Engineering                                                                                                                                                                                                                              |
| Module Leader                      |                          | e-mail                        |                                                                                                                                                                                                                                          |
| Module Leader's Acad. Title        | Lecture                  | Module Leader's Qualification |                                                                                                                                                                                                                                          |
| Module Tutor                       | None                     | e-mail                        | None                                                                                                                                                                                                                                     |
| Peer Reviewer Name                 | None                     | e-mail                        | None                                                                                                                                                                                                                                     |
| Scientific Committee Approval Date | 01/06/2023               | Version Number                | 1.0                                                                                                                                                                                                                                      |

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

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <p>The objectives of these courses are to introduce Computer language to civil engineering</p> <ul style="list-style-type: none"> <li>Undergraduate students and to familiarize the students with statistic terminology</li> <li>Concepts commonly encountered in engineering practices and applications</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>Understand fundamental concepts in networking, security, AI, and e-commerce.</li> <li>Apply troubleshooting and AI technologies to practical challenges.</li> <li>Analyses societal and ethical implications of AI advancements</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Networking and Security Basics: Explore the fundamentals of networks, components, security basics, and threats., [١٠ hrs]</p> <p><b>Part B:</b> E-Commerce and Computer Troubleshooting: Learn about electronic banking services and basic troubleshooting techniques for hardware and software [١٠ hrs]</p> <p><b>Part C:</b> Introduction to AI: Understand AI definitions, history, characteristics, benefits, challenges, and ethical considerations. [١٠ hrs].</p> <p><b>Part D:</b> AI in Modern Applications: Discover AI-driven tools in smartphones and industries like healthcare, marketing, and robotics. [١٠ hrs]</p> <p><b>Part E:</b> AI and Society Analyses the societal and ethical impacts of AI and explore future trends and technologies. [٥ hrs]</p> |

## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

|                   |                                                                                                                                                                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b> | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Student Workload (SWL)

### الحمل الدراسي للطالب

|                                                                                |     |                                                                           |       |
|--------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|-------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 48  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 3     |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 52  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.466 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 100 |                                                                           |       |

| Module Evaluation     |                 |             |                  |            |                                |
|-----------------------|-----------------|-------------|------------------|------------|--------------------------------|
| تقييم المادة الدراسية |                 |             |                  |            |                                |
|                       |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
| Formative assessment  | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                       | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                       | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                       | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment  | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                       | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment      |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus) |                                                                                                                                                                            |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| المنهاج الاسبوعي النظري         |                                                                                                                                                                            |
| Weeks                           | Material Covered                                                                                                                                                           |
| Week 1                          | Security and Networking: What is a network? Types of networks. Basic network components.                                                                                   |
| Week 2                          | Security and Networking (Cont.): Network Security Basics. Understanding network threats.                                                                                   |
| Week 3                          | E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking |
| Week 4                          | Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter.                                                     |
| Week 5                          | Computer Troubleshooting (Cont.): Basic troubleshooting techniques and tools for diagnosing and resolving issues.                                                          |
| Week 6                          | Introduction to AI: Definition of AI, History Techniques and Approaches. of AI, History of AI, AI technique and approach                                                   |
| Week 7                          | Introduction to AI(Cont.): Key Characteristics of AI, Benefits of AI, Challenges and Ethical considerations.                                                               |
| Week 8                          | The Role of AI in Modern Smartphones: AI-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa).                                                   |
| Week 9                          | The Role of AI in Modern Smartphones (Cont.): Adaptive Learning, Real-Time Translation Services.                                                                           |
| Week 10                         | Applications and Tools of AI: Overview of AI Applications in Various Industries, Education and Healthcare.                                                                 |
| Week 11                         | Applications and Tools of AI (Cont.): Transportation, Marketing and Advertising.                                                                                           |
| Week 12                         | Applications and Tools of AI(Cont.): Finance, Robotics and Automation Technologies                                                                                         |
| Week 13                         | AI and Society: How AI affects social, AI and international relations, AI and the future of humanity.                                                                      |
| Week 14                         | Ethical Challenges in AI: AI ethics, privacy and surveillance, the impact of AI on the job                                                                                 |

|                |                                                                                  |
|----------------|----------------------------------------------------------------------------------|
|                | market.                                                                          |
| <b>Week 15</b> | The Future of AI: Future trends in AI, recent research and emerging technologies |

| <b>Learning and Teaching Resources</b><br><b>مصادر التعلم والتدريس</b> |                                                                                                                                                                                                                                                                                                               |                                  |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                        | <b>Text</b>                                                                                                                                                                                                                                                                                                   | <b>Available in the Library?</b> |
| <b>Required Texts</b>                                                  | ١. Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020)<br>٢. Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", 16th Edition (2020).<br>3. Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition(٢٠٢٤) | Yes                              |
| <b>Recommended Texts</b>                                               | الخضر على الخضر بحث, "أساسيات الحاسوب" ٢٠١٦<br>الدكتور عادل عبد النور . "مدخل إلى عالم الذكاء الاصطناعي" ٢٠٠٥                                                                                                                                                                                                 | No                               |
| <b>Websites</b>                                                        |                                                                                                                                                                                                                                                                                                               |                                  |

| <b>Grading Scheme</b><br><b>مخطط الدرجات</b>                                                                                                                                                                                                                                                                                                                                         |                         |                     |                  |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|------------------|---------------------------------------|
| <b>Group</b>                                                                                                                                                                                                                                                                                                                                                                         | <b>Grade</b>            | <b>التقدير</b>      | <b>Marks (%)</b> | <b>Definition</b>                     |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A - Excellent</b>    | امتياز              | 90 - 100         | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B - Very Good</b>    | جيد جدا             | 80 - 89          | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C - Good</b>         | جيد                 | 70 - 79          | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D - Satisfactory</b> | متوسط               | 60 - 69          | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E - Sufficient</b>   | مقبول               | 50 - 59          | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX – Fail</b>        | راسب (قيد المعالجة) | (45-49)          | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F – Fail</b>         | راسب                | (0-44)           | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |                  |                                       |
| <b>Note:</b> 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                       | <b>Engineering Surveying II</b> |                               | Module Delivery                                                                                                                                                                                                                                     |
| Module Type                        | Core                            |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input checked="" type="checkbox"/> Tutorial<br><input checked="" type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0043                         |                               |                                                                                                                                                                                                                                                     |
| ECTS Credits                       | 6                               |                               |                                                                                                                                                                                                                                                     |
| SWL (hr/sem)                       | 150                             |                               |                                                                                                                                                                                                                                                     |
| Module Level                       |                                 | Semester of Delivery          |                                                                                                                                                                                                                                                     |
| Administering Department           | CIVIL                           | College                       | Engineering                                                                                                                                                                                                                                         |
| Module Leader                      | Aysar Jameel Abdalkadhum        | e-mail                        | <a href="mailto:Aysar@wrec.uoqasim.edu.iq">Aysar@wrec.uoqasim.edu.iq</a>                                                                                                                                                                            |
| Module Leader's Acad. Title        | Assets Professor                | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                               |
| Module Tutor                       | None                            | e-mail                        | None                                                                                                                                                                                                                                                |
| Peer Reviewer Name                 | None                            | e-mail                        | None                                                                                                                                                                                                                                                |
| Scientific Committee Approval Date | 01/06/2023                      | Version Number                | 1.0                                                                                                                                                                                                                                                 |

| Relation with other Modules       |         |          |       |
|-----------------------------------|---------|----------|-------|
| العلاقة مع المواد الدراسية الأخرى |         |          |       |
| Prerequisite module               | QCE0033 | Semester | Three |
| Co-requisites module              | None    | Semester | None  |

|                                                        |
|--------------------------------------------------------|
| Module Aims, Learning Outcomes and Indicative Contents |
|--------------------------------------------------------|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية         |                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>This course aims to introduce and develop the basic understanding of the principles of engineering surveying</li> </ul>                                                                                                                                                                                                                                |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>An ability to apply knowledge of engineering surveying, science and engineering</li> <li>An ability to design and conduct experiments, as well as to analyze and interpret data</li> <li>An ability to identify, formulate, and solve engineering problems..</li> </ul> |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Theodolite and Total Station [8 hrs]<br/> <b>Part B:</b> Areas [12 hrs]<br/> <b>Part C:</b> Curves [ 21 hrs].<br/> <b>Part D:</b> Tachometry [3 hrs]<br/> <b>Part E:</b> Topography , Earth working. [3 hrs]</p>                                                                                                          |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب                          |     |                                                                           |     |
|--------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 78  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 5   |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 72  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 4.8 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 150 |                                                                           |     |

| <b>Module Evaluation</b><br>تقييم المادة الدراسية |
|---------------------------------------------------|
|---------------------------------------------------|



|                      |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
|----------------------|-----------------|-------------|------------------|------------|--------------------------------|
| Formative assessment | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                      | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                      | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                      | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                      | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment     |                 |             | 100% (100 Marks) |            |                                |

### Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

|         | Material Covered                                                                                                  |
|---------|-------------------------------------------------------------------------------------------------------------------|
| Week 1  | Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data. |
| Week 2  | Digital mapping and surface models                                                                                |
| Week 3  | Setting out construction map using theodolite and tape                                                            |
| Week 4  | Setting out construction map using Total Station                                                                  |
| Week 5  | level types-refraction and curvature errors- Measure angle by tape only                                           |
| Week 6  | Leveling methods adjustment leveling network- Tachometry method                                                   |
| Week 7  | Distance measurement methods-taping- Two pegs test                                                                |
| Week 8  | EDM- Differential Leveling                                                                                        |
| Week 9  | Angle, Azimuth, and Bearing                                                                                       |
| Week 10 | Angle measurement                                                                                                 |
| Week 11 | Angle measurements and distance measurements                                                                      |
| Week 12 | Profile cross section contour map                                                                                 |
| Week 13 | Regular area- irregular area cross sections                                                                       |
| Week 14 | Volume computation-mass haul diagram                                                                              |
| Week 15 | Revision class                                                                                                    |
| Week 16 | Preparatory week before the final Exam                                                                            |

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

|         | Material Covered |
|---------|------------------|
| Week 1  | None             |
| Week 2  |                  |
| Week 3  |                  |
| Week 4  |                  |
| Week 5  |                  |
| Week 6  |                  |
| Week 7  |                  |
| Week 8  | Mid-term Exam    |
| Week 9  |                  |
| Week 10 |                  |
| Week 11 |                  |
| Week 12 |                  |
| Week 13 |                  |
| Week 14 |                  |
| Week 15 |                  |
| Week 16 |                  |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس |                                                                                                                                               |                           |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                          | Text                                                                                                                                          | Available in the Library? |
| Required Texts                                           | - Ghilani, C. D. and P. R. WOLF (2014). Elementary Surveying: An Introduction to Geomatics. New Jersey/ The United State of America, PEARSON. | No                        |
| Recommended Texts                                        | Nadolinet, L., et al. (2017). Surveying Instruments and Technology. New York, Taylor & Francis.                                               | No                        |
| Websites                                                 |                                                                                                                                               |                           |

| Grading Scheme<br>مخطط الدرجات |       |         |       |            |
|--------------------------------|-------|---------|-------|------------|
| Group                          | Grade | التقدير | Marks | Definition |

|                                     |                         |                     | (%)      |                                       |
|-------------------------------------|-------------------------|---------------------|----------|---------------------------------------|
| <b>Success Group<br/>(50 - 100)</b> | <b>A - Excellent</b>    | امتياز              | 90 - 100 | Outstanding Performance               |
|                                     | <b>B - Very Good</b>    | جيد جدا             | 80 - 89  | Above average with some errors        |
|                                     | <b>C - Good</b>         | جيد                 | 70 - 79  | Sound work with notable errors        |
|                                     | <b>D - Satisfactory</b> | متوسط               | 60 - 69  | Fair but with major shortcomings      |
|                                     | <b>E - Sufficient</b>   | مقبول               | 50 - 59  | Work meets minimum criteria           |
| <b>Fail Group<br/>(0 - 49)</b>      | <b>FX – Fail</b>        | راسب (قيد المعالجة) | (45-49)  | More work required but credit awarded |
|                                     | <b>F – Fail</b>         | 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                       | <b>Fluid Mechanics II</b> |                               | Module Delivery                                                                                                                                                                                                                                     |
| Module Type                        | Support                   |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input checked="" type="checkbox"/> Lab<br><input checked="" type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0045                   |                               |                                                                                                                                                                                                                                                     |
| ECTS Credits                       | 6                         |                               |                                                                                                                                                                                                                                                     |
| SWL (hr/sem)                       | 150                       |                               |                                                                                                                                                                                                                                                     |
| Module Level                       |                           | Semester of Delivery          |                                                                                                                                                                                                                                                     |
| Administering Department           | CIVIL                     | College                       | Engineering                                                                                                                                                                                                                                         |
| Module Leader                      | Ammar Ali Abd             | e-mail                        | <a href="mailto:ammarali@wrec.uoqasim.edu.iq">ammarali@wrec.uoqasim.edu.iq</a>                                                                                                                                                                      |
| Module Leader's Acad. Title        | Professor                 | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                                               |
| Module Tutor                       | None                      | e-mail                        | None                                                                                                                                                                                                                                                |
| Peer Reviewer Name                 | None                      | e-mail                        | None                                                                                                                                                                                                                                                |
| Scientific Committee Approval Date | 01/06/2023                | Version Number                | 1.0                                                                                                                                                                                                                                                 |

| Relation with other Modules       |         |          |       |
|-----------------------------------|---------|----------|-------|
| العلاقة مع المواد الدراسية الأخرى |         |          |       |
| Prerequisite module               | QCE0034 | Semester | Three |
| Co-requisites module              | None    | Semester | None  |

|                                                        |
|--------------------------------------------------------|
| Module Aims, Learning Outcomes and Indicative Contents |
|--------------------------------------------------------|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>The course will introduce fluid mechanics and establish its relevance in civil engineering.</li> <li>Recognition of and develop the knowledge about the fundamental hydraulic definitions and the</li> <li>principle fluid properties underlying the subject.</li> <li>Establish how these definitions and properties are utilized to solve the elementary hydrostatical and</li> <li>hydro dynamical problems that may face the civil engineer.</li> </ul> |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>Ability to apply knowledge of mathematics, science and engineering</li> <li>An ability to design and conduct experiments, as well as to analyze and interpret data</li> <li>An ability to identify, formulate, and solve engineering problems.</li> </ul>                                                                                                                    |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Losses in Pipes [8 hrs]<br/> <b>Part B:</b> Pipes in Series [12 hrs]<br/> <b>Part C:</b> Pipes in Parallel [ 21 hrs].<br/> <b>Part D:</b> Open Channel Flow Equations [3 hrs]<br/> <b>Part E:</b> Critical Flow and Its Applications, Pumps Hydraulic. [3 hrs]</p>                                                                                                                                                             |

| <b>Learning and Teaching Strategies</b><br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                      | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| <b>Student Workload (SWL)</b><br>الحمل الدراسي للطالب                          |     |                                                                           |     |
|--------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 78  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعيا       | 5   |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 72  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 4.8 |
| <b>Total SWL (h/sem)</b><br>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           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                       | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                       | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                       | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment  | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                       | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment      |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus) |                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| المنهاج الاسبوعي النظري         |                                                                                                                                                                  |
|                                 | Material Covered                                                                                                                                                 |
| Week 1                          | Welcome to this course, syllabus, and expectations. Textbook. Distribution of data, tabular presentation of data.                                                |
| Week 2                          | Losses in Pipes                                                                                                                                                  |
| Week 3                          | Pipes in Series                                                                                                                                                  |
| Week 4                          | Pipes in Parallel , Branching Pipes                                                                                                                              |
| Week 5                          | Pipes Network , Open Channel Flow ,                                                                                                                              |
| Week 6                          | Support and describe a fine define of the fluid, fluid mechanics, dimensions and units related with its study and comprehend its relevance to civil engineering. |
| Week 7                          | Fluid Static(Ffluid Pressure and its Measurement Methods ,                                                                                                       |
| Week 8                          | Hydrostatic Force on Immersed Plane Surfaces, Hydrostatic Force on Immersed Curved Surfaces.                                                                     |
| Week 9                          | Open Channel Flow Equations ,.                                                                                                                                   |
| Week 10                         | Critical Flow and Its Applications                                                                                                                               |
| Week 11                         | Energy Equation                                                                                                                                                  |
| Week 12                         | Momentum Equation                                                                                                                                                |
| Week 13                         | Calculate forces and moments for jets, vanes, nozzles and pipe sections.                                                                                         |
| Week 14                         | How can measure flow rate by wieres and flumes                                                                                                                   |
| Week 15                         | Pumps Hydraulic                                                                                                                                                  |

|                                                                         |                                                   |
|-------------------------------------------------------------------------|---------------------------------------------------|
| <b>Week 16</b>                                                          | <b>Preparatory week before the final Exam</b>     |
| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المنهاج الاسبوعي للمختبر |                                                   |
|                                                                         | <b>Material Covered</b>                           |
| <b>Week 1</b>                                                           | DENSITY AND SPECIFIC GRAVITY                      |
| <b>Week 2</b>                                                           | VISCOSITY                                         |
| <b>Week 3</b>                                                           | SURFACE TENSION                                   |
| <b>Week 4</b>                                                           | CAPILLARITY                                       |
| <b>Week 5</b>                                                           | CENTER OF PRESSURE                                |
| <b>Week 6</b>                                                           | FLOW THROUGH A CIRCULAR ORIFICE                   |
| <b>Week 7</b>                                                           | TRAJECTORY OF A HORIZONTAL JET                    |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>                              |
| <b>Week 9</b>                                                           | TIME TO EMPTY A VESSEL                            |
| <b>Week 10</b>                                                          | IMPACT OF JETS                                    |
| <b>Week 11</b>                                                          | VERIFICATION OF BERNOULLI'S EQUATION              |
| <b>Week 12</b>                                                          | DEMONSTRATION OF LAMINAR AND TURBULENT FLOW       |
| <b>Week 13</b>                                                          | PIPE FLOW MEASUREMENT (FLOW THROUGH VENTURI TUBE) |
| <b>Week 14</b>                                                          | FRICTION LOSSES IN PIPES.                         |
| <b>Week 15</b>                                                          | MINOR LOSSES IN PIPES                             |
| <b>Week 16</b>                                                          | MINOR LOSSES IN PIPES                             |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                          |                                  |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                 | <b>Text</b>                                                                                                                              | <b>Available in the Library?</b> |
| <b>Required Texts</b>                                           | - <i>Engineering Fluid Mechanics</i> , Crowe, C. T., D. F. Elger, B. C. Williams and J. A. Roberson, John Wiley & Sons, New York, 2010.. | No                               |
| <b>Recommended Texts</b>                                        | <b>Elementary Fluid Mechanics</b> , Vennard, J. K., John Wiley & Sons, New York.                                                         | No                               |

|                 |  |
|-----------------|--|
| <b>Websites</b> |  |
|-----------------|--|

| <b>Grading Scheme</b><br>مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                |                         |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                                                                                                                                                                                                                                                                                                                                                                                | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A</b> - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F</b> – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |           |                                       |
| <b>Note:</b> 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                       | <b>Human Rights</b> |                               | Module Delivery                                                                                                                                                                                                               |
| Module Type                        | Support             |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0037             |                               |                                                                                                                                                                                                                               |
| ECTS Credits                       | 2                   |                               |                                                                                                                                                                                                                               |
| SWL (hr/sem)                       | 50                  |                               |                                                                                                                                                                                                                               |
| Module Level                       |                     | Semester of Delivery          |                                                                                                                                                                                                                               |
| Administering Department           | CIVIL               | College                       | Engineering                                                                                                                                                                                                                   |
| Module Leader                      |                     | e-mail                        |                                                                                                                                                                                                                               |
| Module Leader's Acad. Title        | Assistant Professor | Module Leader's Qualification | Ph.D.                                                                                                                                                                                                                         |
| Module Tutor                       | None                | e-mail                        | None                                                                                                                                                                                                                          |
| Peer Reviewer Name                 | None                | e-mail                        | None                                                                                                                                                                                                                          |
| Scientific Committee Approval Date | 01/06/2023          | Version Number                | 1.0                                                                                                                                                                                                                           |

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

| Module Aims, Learning Outcomes and Indicative Contents |
|--------------------------------------------------------|
|--------------------------------------------------------|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية         |                                                                                                                                                                                                                                       |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ul style="list-style-type: none"> <li>• تعليم الطلبة المبادئ الأساسية في الديمقراطية وحقوق الإنسان وتوفير رؤية للأطر القانونية المتعلقة بها ووسائل التعبير عن الرأي، والأسس الأيديولوجية للديمقراطية ومبادئ حقوق الإنسان.</li> </ul> |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <ul style="list-style-type: none"> <li>• شرح مفردات المنهج وتوضيحها للطلبة.</li> <li>• إسقاط النظريات والأفكار المتعلقة بالمادة على الواقع الاجتماعي</li> </ul>                                                                       |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <ul style="list-style-type: none"> <li>• Indicative content includes the following:</li> <li>• التطور التاريخي لحقوق الإنسان</li> <li>• حقوق الإنسان في القانون الدولي</li> </ul>                                                     |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم |                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                               | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)<br>الحمل الدراسي للطلاب                                 |    |                                                                           |      |
|--------------------------------------------------------------------------------|----|---------------------------------------------------------------------------|------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطلاب خلال الفصل       | 33 | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطلاب أسبوعيا       | 2    |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطلاب خلال الفصل | 17 | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطلاب أسبوعيا | 1.13 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطلاب خلال الفصل              | 50 |                                                                           |      |

| Module Evaluation<br>تقييم المادة الدراسية |
|--------------------------------------------|
|--------------------------------------------|

|                      |                        | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
|----------------------|------------------------|-------------|------------------|------------|--------------------------------|
| Formative assessment | Quizzes                | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                      | Assignments            | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                      | Projects / <b>Lab.</b> | 1           | 10% (10)         | Continuous |                                |
|                      | Report                 | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment | Midterm Exam           | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                      | Final Exam             | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment     |                        |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus) |                                                               |
|---------------------------------|---------------------------------------------------------------|
| المنهاج الاسبوعي النظري         |                                                               |
|                                 | Material Covered                                              |
| Week 1                          | سرد تاريخي لتعليم الطلبة التطور التاريخي لحقوق الإنسان        |
| Week 2                          | تعليم الطلبة مفردات حقوق الإنسان في القانون لدولي             |
| Week 3                          | تعليم الطلبة مفردات حقوق الإنسان في القانون لدولي             |
| Week 4                          | تعليم الطلبة صور الديمقراطية                                  |
| Week 5                          | تعليم الطلبة صور الديمقراطية                                  |
| Week 6                          | تعليم الطلبة الديمقراطية غير المباشرة (النيابية أو التمثيلية) |
| Week 7                          | تعليم الطلبة الديمقراطية غير المباشرة (النيابية أو التمثيلية) |
| Week 8                          | تعليم الطلبة الحكومة بين حرية الإنسان وضرورة الدول            |
| Week 9                          | تعليم الطلبة الحكومة بين حرية الإنسان وضرورة الدول            |
| Week 10                         | تعليم الطلبة الحكومة بين حرية الإنسان وضرورة الدول            |
| Week 11                         | تعليم الطلبة الحكومة بين حرية الإنسان وضرورة الدول            |
| Week 12                         | تعليم الطلبة الحكومة بين حرية الإنسان وضرورة الدول            |
| Week 13                         | تعليم المرأة حقوق المرأة والمشكلات التي تعترض ذلك             |
| Week 14                         | تعليم المرأة حقوق المرأة والمشكلات التي تعترض ذلك             |
| Week 15                         | تعليم المرأة حقوق المرأة والمشكلات التي تعترض ذلك             |
| Week 16                         | Preparatory week before the final Exam                        |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المناهج الاسبوعي للمختبر |                  |
|-------------------------------------------------------------------------|------------------|
|                                                                         | Material Covered |
| Week 1                                                                  | None             |
| Week 2                                                                  |                  |
| Week 3                                                                  |                  |
| Week 4                                                                  |                  |
| Week 5                                                                  |                  |
| Week 6                                                                  |                  |
| Week 7                                                                  |                  |
| Week 8                                                                  | Mid-term Exam    |
| Week 9                                                                  |                  |
| Week 10                                                                 |                  |
| Week 11                                                                 |                  |
| Week 12                                                                 |                  |
| Week 13                                                                 |                  |
| Week 14                                                                 |                  |
| Week 15                                                                 |                  |
| Week 16                                                                 |                  |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                    |                           |
|-----------------------------------------------------------------|----------------------------------------------------|---------------------------|
|                                                                 | Text                                               | Available in the Library? |
| Required Texts                                                  | الدستور العراقي الصادر عام 2005                    | No                        |
| Recommended Texts                                               | الإنسان وحقوق الديمقراطية حول متفرقة مؤلفات مجموعة | No                        |
| Websites                                                        |                                                    |                           |

| <b>Grading Scheme</b><br>مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                |                         |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------|---------------------------------------|
| Group                                                                                                                                                                                                                                                                                                                                                                                | Grade                   | التقدير             | Marks (%) | Definition                            |
| <b>Success Group (50 - 100)</b>                                                                                                                                                                                                                                                                                                                                                      | <b>A</b> - Excellent    | امتنياز             | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>B</b> - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>C</b> - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>D</b> - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>E</b> - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| <b>Fail Group (0 – 49)</b>                                                                                                                                                                                                                                                                                                                                                           | <b>FX</b> – Fail        | راسب (قيد المعالجة) | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                                      | <b>F</b> – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                         |                     |           |                                       |
| <b>Note:</b> 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                       | <b>Strength of Materials II</b> |                               | Module Delivery                                                                                                                                                                                                               |
| Module Type                        | Core                            |                               | <input type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        | QCE0042                         |                               |                                                                                                                                                                                                                               |
| ECTS Credits                       | 4                               |                               |                                                                                                                                                                                                                               |
| SWL (hr/sem)                       | 100                             |                               |                                                                                                                                                                                                                               |
| Module Level                       |                                 | Semester of Delivery          |                                                                                                                                                                                                                               |
| Administering Department           | CIVIL                           | College                       | Engineering                                                                                                                                                                                                                   |
| Module Leader                      | Fatimah Hameed Naser            | e-mail                        | fatimah_mamoori@wrec.uoqasim.edu.iq                                                                                                                                                                                           |
| Module Leader's Acad. Title        | Assets Professor                | Module Leader's Qualification | PhD                                                                                                                                                                                                                           |
| Module Tutor                       | None                            | e-mail                        | None                                                                                                                                                                                                                          |
| Peer Reviewer Name                 | None                            | e-mail                        | None                                                                                                                                                                                                                          |
| Scientific Committee Approval Date | 01/06/2023                      | Version Number                | 1.0                                                                                                                                                                                                                           |

| Relation with other Modules       |         |          |       |
|-----------------------------------|---------|----------|-------|
| العلاقة مع المواد الدراسية الأخرى |         |          |       |
| Prerequisite module               | QCE0032 | Semester | Three |
| Co-requisites module              | None    | Semester | None  |

| <b>Module Aims, Learning Outcomes and Indicative Contents</b><br><b>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br><b>أهداف المادة الدراسية</b>                                                                               | <p>The mechanics of materials teaches civil engineering students the basics for calculating the different types of internal stresses (normal and shear) and related deformation occurred in the body due to external effects. This course is needed for all subsequent structural design courses.</p> <p>In general, students get knowledge about all the subjects mentioned within the description of the two courses. The adopted syllabus is the base for the related subjects that the students will get during the third study stage.</p> |
| <b>Module Learning Outcomes</b><br><b>مخرجات التعلم للمادة الدراسية</b>                                                          | <p>After successful completion of this module, students should be able to:</p> <ol style="list-style-type: none"> <li>1. An ability to apply knowledge of strength of materials, science and engineering.</li> <li>2. An ability to design and conduct experiments, as well as to analyze and interpret data.</li> <li>3. An ability to identify, formulate, and solve engineering problems .</li> </ol>                                                                                                                                       |
| <b>Indicative Contents</b><br><b>المحتويات الإرشادية</b>                                                                         | <p>Indicative content includes the following:</p> <p><b>Part A:</b> Stresses in beams , [8 hrs]</p> <p><b>Part B:</b> Compound stresses and transformation of stresses and strains [12 hrs]</p> <p><b>Part C:</b> Deflection of Beams [ 21 hrs].</p> <p><b>Part D:</b> Columns [3 hrs]</p> <p><b>Part E:</b> Columns [3 hrs]</p>                                                                                                                                                                                                               |

| <b>Learning and Teaching Strategies</b><br><b>استراتيجيات التعلم والتعليم</b> |                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                             | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)                      |     |                                          |       |
|---------------------------------------------|-----|------------------------------------------|-------|
| الحمل الدراسي للطالب                        |     |                                          |       |
| Structured SWL (h/sem)                      | 63  | Structured SWL (h/w)                     | 4     |
| الحمل الدراسي المنتظم للطالب خلال الفصل     |     | الحمل الدراسي المنتظم للطالب أسبوعيا     |       |
| Unstructured SWL (h/sem)                    | 37  | Unstructured SWL (h/w)                   | 2.466 |
| الحمل الدراسي غير المنتظم للطالب خلال الفصل |     | الحمل الدراسي غير المنتظم للطالب أسبوعيا |       |
| Total SWL (h/sem)                           | 100 |                                          |       |
| الحمل الدراسي الكلي للطالب خلال الفصل       |     |                                          |       |
| Module Evaluation                           |     |                                          |       |
| تقييم المادة الدراسية                       |     |                                          |       |

|                      |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
|----------------------|-----------------|-------------|------------------|------------|--------------------------------|
| Formative assessment | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                      | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                      | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                      | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                      | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment     |                 |             | 100% (100 Marks) |            |                                |

| <b>Delivery Plan (Weekly Syllabus)</b><br>المنهاج الاسبوعي النظري |                                                                                                                              |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
|                                                                   | Material Covered                                                                                                             |
| <b>Week 1</b>                                                     | Welcome to this course, Textbook. Distribution of data, tabular presentation of data.                                        |
| <b>Week 2</b>                                                     | Stresses in beams                                                                                                            |
| <b>Week 3</b>                                                     | Stresses in beams                                                                                                            |
| <b>Week 4</b>                                                     | Compound stresses and transformation of stresses and strains                                                                 |
| <b>Week 5</b>                                                     | Plotting methods of shear and bending moment diagrams are studied according to two methods, equations and graphical methods. |
| <b>Week 6</b>                                                     | Deflection of Beams                                                                                                          |
| <b>Week 7</b>                                                     | The simple strain represented by axial deformations for the determinate or indeterminate systems.                            |
| <b>Week 8</b>                                                     | Simple strain and deformation of axially loaded members                                                                      |
| <b>Week 9</b>                                                     | Methods that used to determine the deflection in beams is given herein                                                       |
| <b>Week 10</b>                                                    | Methods that used to determine the deflection in beams is given herein                                                       |
| <b>Week 11</b>                                                    | Columns .                                                                                                                    |
| <b>Week 12</b>                                                    | Columns .                                                                                                                    |
| <b>Week 13</b>                                                    | Shear Force and bending moment diagrams .                                                                                    |
| <b>Week 14</b>                                                    | Shear Force and bending moment diagrams .                                                                                    |
| <b>Week 15</b>                                                    | Shear Force and bending moment diagrams .                                                                                    |
| <b>Week 16</b>                                                    | <b>Preparatory week before the final Exam</b>                                                                                |



| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المناهج الاسبوعي للمختبر |                                        |
|-------------------------------------------------------------------------|----------------------------------------|
|                                                                         | Material Covered                       |
| Week 1                                                                  | None                                   |
| Week 2                                                                  |                                        |
| Week 3                                                                  |                                        |
| Week 4                                                                  |                                        |
| Week 5                                                                  |                                        |
| Week 6                                                                  |                                        |
| Week 7                                                                  |                                        |
| Week 8                                                                  |                                        |
| Week 9                                                                  | Mid-term Exam                          |
| Week 10                                                                 |                                        |
| Week 11                                                                 |                                        |
| Week 12                                                                 |                                        |
| Week 13                                                                 |                                        |
| Week 14                                                                 |                                        |
| Week 15                                                                 |                                        |
| Week 16                                                                 | Preparatory week before the final Exam |

| <b>Learning and Teaching Resources</b><br>مصادر التعلم والتدريس |                                                                                                                                                                   |                           |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                                 | Text                                                                                                                                                              | Available in the Library? |
| Required Texts                                                  | 1. Egor Popov, "Introduction to Mechanics of Solids". 1968 by Prentice-Hall, Englewood Cliffs, New Jersey.<br>2. Singer S., "Strength of Materials" Fourth ed." . | No                        |
| Recommended Texts                                               | Optional Text:<br>"Gere" Mechanics of material<br>"Hibbler" Mechanics of material                                                                                 | No                        |
| Websites                                                        |                                                                                                                                                                   |                           |

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



## "COURSE PORTFOLIO"

|                                                      |                     |                                      |                                                                                                                                                                                                                               |
|------------------------------------------------------|---------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Information</b><br>معلومات المادة الدراسية |                     |                                      |                                                                                                                                                                                                                               |
| <b>Module Title</b>                                  | اللغة العربية       |                                      | <b>Module Delivery</b>                                                                                                                                                                                                        |
| <b>Module Type</b>                                   | Basic               |                                      | <input checked="" type="checkbox"/> Theory<br><input type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| <b>Module Code</b>                                   |                     |                                      |                                                                                                                                                                                                                               |
| <b>ECTS Credits</b>                                  | 2                   |                                      |                                                                                                                                                                                                                               |
| <b>SWL (hr/sem)</b>                                  | 50                  |                                      |                                                                                                                                                                                                                               |
| <b>Module Level</b>                                  | 1                   | <b>Semester</b>                      | 1                                                                                                                                                                                                                             |
| <b>Department</b>                                    | Civil Engineering   | <b>College</b>                       | College of Engineering                                                                                                                                                                                                        |
| <b>Module Leader</b>                                 | Hawraa azeez oleiwi | <b>E-mail</b>                        | <a href="mailto:hawrra.alqaim@wrec.uoqasim.edu.iq">hawrra.alqaim@wrec.uoqasim.edu.iq</a>                                                                                                                                      |
| <b>Module Leader's Acad. Title</b>                   | Assist Professor    | <b>Module Leader's Qualification</b> | Ph.D.                                                                                                                                                                                                                         |
| <b>Module Tutor</b>                                  | N.A.                | <b>e-mail</b>                        | N.A.                                                                                                                                                                                                                          |
| <b>Peer Reviewer Name</b>                            | N.A.                | <b>e-mail</b>                        | N.A.                                                                                                                                                                                                                          |
| <b>Scientific Committee Approval Date</b>            | 01/06/2023          | <b>Version Number</b>                | 1.0                                                                                                                                                                                                                           |

**Student Workload (SWL):** Structured SWL (h/w) (Two contact hours of lectures) + Unstructured SWL (h/w) .

| Student Workload (SWL)<br>الحمل الدراسي للطالب                                 |    |                                                                            |     |
|--------------------------------------------------------------------------------|----|----------------------------------------------------------------------------|-----|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 33 | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 2.2 |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 17 | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 1.1 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 50 |                                                                            |     |



**Relation with other Modules: -**

| 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

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COURSE DESCRIPTION:</b>                                       | تهتم هذه المادة بتدريس قواعد اللغة العربية وآدابها ومعاني الالفاظ ومدلولاتها تنمي حسن استعانتهم بمعاجم اللغة والألفاظ تهتم بتحسين الصورة الجمالية للغة العربية                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <p>١- أن يتعرف الطالب أهم معاني المصطلح النحوي .</p> <p>٢- أن يتعرف الطالب دور الكلمة داخل الجملة ويفقه العلاقة داخل مكونات الجملة .</p> <p>٣- أن يتعرف الطلبة أنواع الجملة في اللغة العربية .</p> <p>٤- أن يفهم الطلبة ان اللغة العربية هي لغة منتمية الى اللغة الاصل هي لغة القران الكريم</p> <p>٥- أن يفهم الطلبة معنى الذائقة الأدبية ويحسن اختيار اللفظة المناسبة</p>                                                                                                                                                                                                       |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <p>١- أن يفرق الطلبة بين موضوعات اللغة العربية الامر الذي ينتج كلا متكاملًا سواء على صعيد القواعد أو الإملاء أو الادب من أجل تعبير سليم .</p> <p>٢- أن يتمرن الطلبة على التحدث باللغة العربية الفصحى وتنمية قابلياتهم الخطابية للإفادة منها في حياتهم العلمية والعملية وذلك من خلال دراسة النص القرآني لتقويم ألسنتهم واستلهم العبر من القصص التي وردت في بعض السور القرآنية .</p> <p>٣- أن يعتاد الطلبة تذوق الخطاب الأدبي ليرتقوا بذائقتهم وهم يعدون أو يطلعون على مختلف أنواع الخطاب .</p> <p>٤- أن يتعرف الطلبة طرائق التمييز بين اساليب التعبير ، واختيار الأولى بينها.</p> |
| <b>Indicative Contents</b>                                       | المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقابلية التوظيف والتطور                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

**Ministry of Higher Education and Scientific Research**  
**Al-Qasim Green University/ College of Engineering**  
**Civil Engineering Management Department**



|                     |                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------|
| المحتويات الإرشادية | <p>الشخصي).</p> <p>١- الموهبة .</p> <p>٢- المتابعة</p> <p>٣- تحديد العمل (المكتبة والدراسة الميدانية ) .</p> |
|---------------------|--------------------------------------------------------------------------------------------------------------|

**COURSE SCHEDULE:-**

| Week             | hours | Topics Covered         | Learning Outcomes |
|------------------|-------|------------------------|-------------------|
| <b>Topic I</b>   |       |                        |                   |
| 1                | 8     | المفاعيل               | 1,3               |
| <b>Topic II</b>  |       |                        |                   |
| 2,3              | 15    | الفاعل                 | 2, 3,6            |
| <b>Topic III</b> |       |                        |                   |
| 4                | 8     | نائب الفاعل            | 1,2               |
| <b>Topic IV</b>  |       |                        |                   |
| 5                | 8     | بناء الفعل للمجهول     | 4,5               |
| <b>Topic V</b>   |       |                        |                   |
| 6,7              | 15    | التثوين                | 4,5               |
| <b>Topic VI</b>  |       |                        |                   |
| 8,9              | 8     | البدل                  | 4,5               |
| 10               | 7     | كتابة التاء في العربية | 4,5,6             |



| Topic VIII |   |                                  |       |
|------------|---|----------------------------------|-------|
| 11         | 8 | الحروف التي تكتب ولا تُلَفِّظ    | 4, 5  |
| 12         | 6 | مختارات من الادب الاندلسي        | 4, 5  |
| 13         | 8 | تحليل نص شعري لمحمد الحرزي       | 4, 5  |
| 14         | 8 | تحليل نص شعري لمعروف الرصافي     | 4, 5  |
| 15         | 8 | القصص القرآني دراسة في سورة يوسف | 4,5,6 |
| Final Exam |   |                                  |       |

### Learning Outcomes and Assessment Methods

| Topics Covered | Learning Outcomes | Strategies for Achieving Outcomes                                                                              | Assessment Methods                                               |
|----------------|-------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
|                | 1,3               | Problem Based Learning, Critical thinking questions, Theoretical Lectures, tutorials, Small Group Discussions, | quizzes, HomeWorks , discussions during lectures, Written Exams. |
|                | 2,3,6             | Problem Based Learning, Critical thinking questions, Theoretical Lectures, tutorials, Small Group Discussions, | quizzes, HomeWorks, discussions during lectures, Written Exams.  |
|                | 1,2               | Problem Based Learning, Critical thinking questions, Theoretical Lectures, tutorials, Small Group Discussions, | quizzes, HomeWorks, discussions during lectures, Written Exams.  |
|                | 4,5               | Theoretical Lectures, Small Group Discussions,                                                                 | quizzes, discussions during lectures,                            |
|                | 4, 5              | Theoretical Lectures, Small Group Discussions,                                                                 | quizzes, discussions during lectures,                            |
|                | 4,5,6             | Theoretical Lectures, Small Group Discussions,                                                                 | quizzes, discussions during lectures,                            |
|                | 4,5,6             | Theoretical Lectures, Small Group Discussions,                                                                 | quizzes, discussions during lectures,                            |



**Module Evaluation:-**

| Module Evaluation<br>تقييم المادة الدراسية |                             |             |                  |            |                           |
|--------------------------------------------|-----------------------------|-------------|------------------|------------|---------------------------|
|                                            |                             | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome |
| Formative assessment<br>(40%)              | Quizzes                     | ٣           | 30% (30)         | ٣,٧, 10    | ALL                       |
|                                            | Assignments & H.W.          | 4           | 5% (5)           | 2,6,9,12   | ALL                       |
|                                            | Discussions During Lectures | 5           | 5% (5)           | Continuous | ALL                       |
| Summative assessment<br>(60%)              | Midterm Exam (10%)          | 2hr         | 10% (10)         | 12         | ALL                       |
|                                            | Final Exam (50%)            | 3hr         | 50% (50)         | 16         | ALL                       |
| Total assessment                           |                             |             | 100% (100 Marks) |            |                           |

توزيع الساعات المجدولة و الغير مجدولة (SWL= SSWL +USWL)

| Activity types              | Structured SWL       | Un structured USWL          | No. of weeks | Time Factor | SWL (hr) |
|-----------------------------|----------------------|-----------------------------|--------------|-------------|----------|
| Class                       | Class Lecturers      |                             | 15           | 2           | 30       |
| Lab.                        |                      |                             |              |             |          |
| Tutorial                    |                      |                             |              |             |          |
| Self Study                  |                      | Self Study                  | 15           | 2           | 30       |
| Quizzes                     |                      | Preparation for the Quizzes | 3            | 4           | 12       |
| discussions during lectures |                      |                             | 5            | 1           | 5        |
| Projects / Lab.             | Project Work         |                             | 0            | 0           | 0        |
|                             |                      | Preparation for the Project | 0            | 0           | 0        |
| Seminar                     | Presenting a Seminar |                             | 0            | 0           | 0        |
|                             |                      | Preparation for the Project |              |             |          |
| Assignments, Homework       |                      | Preparation for the H.W.    | 6            | 2           | 12       |
| Report                      |                      | Preparation for the Report  | 0            | 0           | 0        |
| Midterm Exam (10%)          |                      | Preparation for the Exam.   | 1            | 5           | 5        |
|                             | Evaluation           |                             | 1            | 1           | 1        |
| Final Exam (50%)            |                      | Preparation for the Exam.   |              |             |          |
|                             | Evaluation           |                             | 1            | 3           | 3        |

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|  |  |                          |    |
|--|--|--------------------------|----|
|  |  | Total SWL (hr/ Semester) | 50 |
|  |  | ECTS                     | 2  |





### "COURSE PORTFOLIO"

| Module Information                 |                            |                               |                                                                                                                                                                                                                               |
|------------------------------------|----------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| معلومات المادة الدراسية            |                            |                               |                                                                                                                                                                                                                               |
| Module Title                       | جرائم نظام البعث في العراق |                               | Module Delivery                                                                                                                                                                                                               |
| Module Type                        | Basic                      |                               | <input checked="" type="checkbox"/> Theory<br><input type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |
| Module Code                        |                            |                               |                                                                                                                                                                                                                               |
| ECTS Credits                       | ٢                          |                               |                                                                                                                                                                                                                               |
| SWL (hr/sem)                       | ٥٠                         |                               |                                                                                                                                                                                                                               |
| Module Level                       | 2                          | Semester                      | 4                                                                                                                                                                                                                             |
| Department                         | Civil Engineering          | College                       | College of Engineering                                                                                                                                                                                                        |
| Module Leader                      | Nadaa Mohamed asfor        | E-mail                        | Nidaa_mohammed@wrec.uoqasim.edu.iq                                                                                                                                                                                            |
| Module Leader's Acad. Title        | Asst. Lecturer             | Module Leader's Qualification | MSC.                                                                                                                                                                                                                          |
| Module Tutor                       | N.A.                       | e-mail                        | N.A.                                                                                                                                                                                                                          |
| Peer Reviewer Name                 | N.A.                       | e-mail                        | N.A.                                                                                                                                                                                                                          |
| Scientific Committee Approval Date |                            | Version Number                | 1.0                                                                                                                                                                                                                           |

**Student Workload (SWL):** Structured SWL (h/w) (Two contact hours of lectures) + Unstructured SWL (h/w) .

| Student Workload (SWL)   |    |                        |     |
|--------------------------|----|------------------------|-----|
| Structured SWL (h/sem)   | ٣٣ | Structured SWL (h/w)   | ٢.2 |
| Unstructured SWL (h/sem) | 17 | Unstructured SWL (h/w) | ١.1 |
| Total SWL (h/sem)        | ٥٠ |                        |     |

**Relation with other Modules: -**



## 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

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COURSE DESCRIPTION:</b>                                       | تهتم هذه المادة بتدريس الجرائم الشنيعة التي اقترفها نظام البعث في العراق. فقد جثم نظام البعث البائد على صدر العراق والعراقيين زهاء أربعة عقود يستقي سياسة تسلطه من رِضا عِثاة الطغاة جُثِّب التاريخ كـ(قابيل، والنمرود، و فرعون، وأبي لهب، والحجاج، ويزيد، وهولاكو وغيرهم) بما يتناسب ونشأة رأسه الطاغية وعدو الانسانية (صدام حسين) المقبور، فذاق ويلات هذا النظام كل من انتهج سبيل الحق وحب الوطن.                                                                                                                                                                                                                                |
| <b>Module Aims</b><br>أهداف المادة الدراسية                      | <ol style="list-style-type: none"> <li>1- أن يفهم الطالب مفهوم الجريمة.</li> <li>2- أن يتعرف الطالب على أقسام الجريمة وأنواعها.</li> <li>3- أن يتعرف الطالب على الجرائم التي ارتكبتها نظام البعث بحق العراق والعراقيين.</li> <li>4- أن يتعرف الطالب على انتهاكات حقوق الانسان التي قام بها نظام البعث.</li> <li>5- أن يتعرف الطالب على الجرائم النفسية والاجتماعية التي قام بها نظام البعث وأثارها على الشعب العراقي.</li> <li>6- أن يتعرف الطالب على الجرائم البيئية التي قام بها نظام البعث وما خلفته من أثار بحق الشعب العراقي.</li> <li>7- أن يتعرف الطالب على أحداث جرائم المقابر الجماعية التي قام بها نظام البعث</li> </ol> |
| <b>Module Learning Outcomes</b><br>مخرجات التعلم للمادة الدراسية | <ol style="list-style-type: none"> <li>1- أن يُعرف الطالب مفهوم الجريمة وفق علم القانون وعلم الاجتماع وعلم النفس ووفق علم الشريعة الاسلامية.</li> <li>2- أن يميز الطالب بين أقسام الجرائم وأنواعها.</li> <li>3- أن تكون لدى الطالب الرؤية الواضحة والكاملة لحقبة نظام البعث وفي العراق.</li> <li>4- اطلاع الطالب على الثورات والانتفاضات التي قام بها الشعب العراقي ضد الحكم وما واجهته من قمع وقتل وزج في السجون.</li> </ol>                                                                                                                                                                                                      |
| <b>Indicative Contents</b><br>المحتويات الإرشادية                | <ol style="list-style-type: none"> <li>1- جرائم نظام البعث في العراق، مقرر دراس للجامعات الحكومية والاهلية كافة.</li> <li>2- قوانين الاحتلال الحربي، حقوق السكان والمدنيين في المناطق المحتلة وحماياتها، ، الإدارة السياسية، إحسان هندي</li> <li>3- أرشيف مؤسسة السجناء السياسيين.</li> <li>4- أرشيف مؤسسة الشهداء.</li> <li>5- أرشيف المركز العراقي لتوثيق جرائم التطرف في العتبة العباسية المقدسة.</li> <li>6- المسؤولية الدولية عن ارتكاب جريمة الابادة الجماعية، أيمن عبد العزيز سلامة.</li> <li>7- جغرافية أهوار ومستنقعات جنوب العراق، حسن الخياط.</li> </ol>                                                                |



٨- موسوعة البيئة العراقية، سليم مطر.

٩- المقابر الجماعية شعب تحت التراب، عباس عطية القرشي.

### COURSE SCHEDULE:-

| Week              | hours | Topics Covered                                                                  | Learning Outcomes |
|-------------------|-------|---------------------------------------------------------------------------------|-------------------|
| <b>Topic I</b>    |       |                                                                                 |                   |
| 1                 |       | مفهوم الجريمة وأقسامها                                                          | 1,3               |
| <b>Topic II</b>   |       |                                                                                 |                   |
| 2                 |       | القرارات الصادرة من المحكمة الجنائية العليا                                     | 2, 3,6            |
| 3                 |       | القرارات الصادرة من المحكمة الجنائية العليا                                     | 2,3,6             |
| <b>Topic III</b>  |       |                                                                                 |                   |
| 4                 |       | الجرائم النفسية وآثارها                                                         | 1,2               |
| <b>Topic IV</b>   |       |                                                                                 |                   |
| 5                 |       | الجرائم الاجتماعية وآثارها                                                      | 4,5               |
| <b>Topic V</b>    |       |                                                                                 |                   |
| 6                 |       | انتهاكات القوانين العراقية                                                      | 4,5               |
| 7                 |       | انتهاكات القوانين العراقية                                                      | 4,5               |
| <b>Topic VI</b>   |       |                                                                                 |                   |
| 8                 |       | صور انتهاكات حقوق الانسان                                                       | 4,5               |
| 9                 |       | صور انتهاكات حقوق الانسان                                                       | 4,5               |
| 10                |       | الانتهاكات السياسية والعسكرية لنظام البعث                                       | 4,5,6             |
| <b>Topic VIII</b> |       |                                                                                 |                   |
| 11                |       | الجرائم البيئية لنظام البعث في العراق (التلوث الحربي والاشعاعي وانفجار الالغام) | 4, 5              |
| 12                |       | تدمير المدن والقرى (سياسة الارض المحروقة)، قصف العتبات المقدسة، معركة نهر جاسم  | 4, 5              |
| 13                |       | حرق آبار النفط، تجفيف الاهوار، تجريف البساتين                                   | 4, 5              |
| 14                |       | جرائم المقابر الجماعية                                                          | 4, 5              |
| 15                |       | التصنيف الزمني لمقابر الإبادة الجماعية في العراق للمدة ١٩٦٣ – ٢٠٠٣م             | 4,5,6,7           |



**Final Exam**

**Learning Outcomes and Assessment Methods**

| Topics Covered | Learning Outcomes | Strategies for Achieving Outcomes                             | Assessment Methods                                              |
|----------------|-------------------|---------------------------------------------------------------|-----------------------------------------------------------------|
| 1              | 1,3               | Problem Based Learning, Critical thinking questions.          | discussions during lectures                                     |
| 2              | 2,3,6,7           | Theoretical Lectures, tutorials.                              | discussions during lectures.                                    |
| 3              | 1,2               | Critical thinking questions, Theoretical Lectures, tutorials. | Quizzes, Home works                                             |
| 4              | 4,5,7             | Theoretical Lectures, Small Group Discussions.                | Quizzes, Major reports, discussions during lectures, Home works |
| 5              | 4, 5              | Theoretical Lectures, Discussions,                            | Quizzes, Home works                                             |
| 6              | 4,5,6,7           | Theoretical Lectures, Small Group Discussions.                | Quizzes, Home works                                             |
| 7              | 4,5,6,7           | Theoretical Lectures, Discussions.                            | Quizzes, Home works                                             |

**Module Evaluation:-**

| <b>Module Evaluation</b><br>تقييم المادة الدراسية |                                    |             |                  |                |                           |
|---------------------------------------------------|------------------------------------|-------------|------------------|----------------|---------------------------|
|                                                   |                                    | Time/Number | Weight (Marks)   | Week Due       | Relevant Learning Outcome |
| <b>Formative assessment (40%)</b>                 | <b>Quizzes</b>                     | 3           | 10% (10)         | ٣,٧, 10        | ALL                       |
|                                                   | <b>Lab work</b>                    | 4           | 10% (10)         | 2,6,9,12       | ALL                       |
|                                                   | <b>Discussions During Lectures</b> | 5           | 10% (10)         | Continuou<br>s | ALL                       |
| <b>Summative assessment (60%)</b>                 | <b>Midterm Exam (10%)</b>          | 2hr         | 10% (10)         | 12             | ALL                       |
|                                                   | <b>Final Exam (50%)</b>            | 3hr         | 50% (50)         | 16             | ALL                       |
| <b>Total assessment</b>                           |                                    |             | 100% (100 Marks) |                |                           |



توزيع الساعات المجدولة و الغير مجدولة (SWL= SSWL +USWL)

| Activity types              | Structured SWL       | Un structured USWL          | No. of weeks | Time Factor | SWL (hr) |
|-----------------------------|----------------------|-----------------------------|--------------|-------------|----------|
| Class                       | 78                   | 72                          | 15           | 2           | 30       |
| Lab.                        |                      |                             | 15           | 2           | 30       |
| Tutorial                    |                      |                             | 15           | 1           | 15       |
| Self Study                  |                      | Self Study                  | 15           | 2           | 30       |
| Quizzes                     |                      | Preparation for the Quizzes | 1            | 2           | 2        |
| discussions during lectures |                      |                             | 6            | 1           | 6        |
| Projects / Lab.             | Project Work         |                             | 0            | 0           | 0        |
|                             |                      | Preparation for the Project | 0            | 0           | 0        |
| Seminar                     | Presenting a Seminar |                             | 2            | 2           | 4        |
|                             |                      | Preparation for the Project |              |             |          |
| Assignments, Homework       |                      | Preparation for the H.W.    | 3            | 1           | 3        |
| Report                      |                      | Preparation for the Report  | 5            | 3           | 15       |
| Midterm Exam (10%)          |                      | Preparation for the Exam.   | 1            | 1           | 10       |
|                             | Evaluation           |                             | 1            | 1           | 1        |
| Final Exam (50%)            |                      | Preparation for the Exam.   | 3            | 1           | 3        |
|                             | Evaluation           |                             |              |             |          |
|                             |                      | Total SWL (hr/ Semester)    |              |             | 150      |
|                             |                      | ECTS                        |              |             | 6        |

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

| Module Information                 |                           |                      |                                                                                                                                                                                                                                          |                                                                                    |
|------------------------------------|---------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| معلومات المادة الدراسية            |                           |                      |                                                                                                                                                                                                                                          |                                                                                    |
| Module Title                       | <b>Mathematics II</b>     |                      | Module Delivery                                                                                                                                                                                                                          |                                                                                    |
| Module Type                        | Support                   |                      | <input checked="" type="checkbox"/> Theory<br><input checked="" type="checkbox"/> Lecture<br><input type="checkbox"/> Lab<br><input type="checkbox"/> Tutorial<br><input type="checkbox"/> Practical<br><input type="checkbox"/> Seminar |                                                                                    |
| Module Code                        | QCE0031                   |                      |                                                                                                                                                                                                                                          |                                                                                    |
| ECTS Credits                       | 4                         |                      |                                                                                                                                                                                                                                          |                                                                                    |
| SWL (hr/sem)                       | 100                       |                      |                                                                                                                                                                                                                                          |                                                                                    |
| Module Level                       |                           | Semester of Delivery |                                                                                                                                                                                                                                          |                                                                                    |
| Administering Department           | CIVIL                     | College              | Engineering                                                                                                                                                                                                                              |                                                                                    |
| Module Leader                      | Ahmed Hassan Ashor (MSC.) |                      | e-mail                                                                                                                                                                                                                                   | <a href="mailto:ahmedashor@wrec.uoqasim.edu.iq">ahmedashor@wrec.uoqasim.edu.iq</a> |
| Module Leader's Acad. Title        | Assistant lecturer        |                      | Module Leader's Qualification                                                                                                                                                                                                            | MSC.                                                                               |
| Module Tutor                       | None                      |                      | e-mail                                                                                                                                                                                                                                   | None                                                                               |
| Peer Reviewer Name                 | None                      |                      | e-mail                                                                                                                                                                                                                                   | None                                                                               |
| Scientific Committee Approval Date |                           | Version Number       | 1.0                                                                                                                                                                                                                                      |                                                                                    |

| Relation with other Modules       |         |  |          |      |
|-----------------------------------|---------|--|----------|------|
| العلاقة مع المواد الدراسية الأخرى |         |  |          |      |
| Prerequisite module               | QCE0021 |  | Semester | Two  |
| Co-requisites module              | None    |  | Semester | None |

| <b>Module Aims, Learning Outcomes and Indicative Contents</b><br><b>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Module Aims</b><br><b>أهداف المادة الدراسية</b>                                                                               | <ul style="list-style-type: none"> <li>• Provide students with a comprehensive understanding of multivariable calculus concepts essential for civil engineering applications.</li> <li>• Develop the ability to effectively apply partial derivatives and integrals to solve complex engineering problems.</li> <li>• Facilitate mastery of transitioning between Cartesian and polar coordinate systems for practical and theoretical purposes.</li> <li>• Enhance proficiency in graphing and interpreting functions within polar coordinate frameworks.</li> </ul> |
| <b>Module Learning Outcomes</b><br><b>مخرجات التعلم للمادة الدراسية</b>                                                          | <p>After successful completion of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>• Solve problems involving functions of several variables and partial derivatives.</li> <li>• Apply the chain rule and constrained variables in mathematical computations.</li> <li>• Compute double and triple integrals, including applications in polar coordinates.</li> <li>• Analyze and interpret areas, lengths, and volumes using polar and Cartesian coordinate systems.</li> </ul>                                                   |
| <b>Indicative Contents</b><br><b>المحتويات الإرشادية</b>                                                                         | <p>Indicative content includes the following:</p> <p><b>Part A: Exploration of functions of multiple variables, partial derivatives, and chain rule applications, [15 hrs]</b></p> <p><b>Part B: Comprehensive study of multiple integrals and double integrals, [15 hrs]</b></p> <p><b>Part C: Detailed examination of polar coordinates and their practical applications, [1½ hrs]</b></p> <p><b>Part D: Advanced exploration of engineering applications involving multiple integrals, [½ hrs]</b></p>                                                             |

| <b>Learning and Teaching Strategies</b><br><b>استراتيجيات التعلم والتعليم</b> |                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategies</b>                                                             | <ol style="list-style-type: none"> <li>1) Learning Technologies on Campus using data show or TV screen.</li> <li>2) White board.</li> <li>3) Hand out lecture notes.</li> <li>4) Hand out some kinds of pictures related to specific topics.</li> </ol> |

| Student Workload (SWL)<br>الحمل الدراسي للطالب                                 |     |                                                                            |       |
|--------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------|-------|
| <b>Structured SWL (h/sem)</b><br>الحمل الدراسي المنتظم للطالب خلال الفصل       | 63  | <b>Structured SWL (h/w)</b><br>الحمل الدراسي المنتظم للطالب أسبوعياً       | 4     |
| <b>Unstructured SWL (h/sem)</b><br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 37  | <b>Unstructured SWL (h/w)</b><br>الحمل الدراسي غير المنتظم للطالب أسبوعياً | 2.466 |
| <b>Total SWL (h/sem)</b><br>الحمل الدراسي الكلي للطالب خلال الفصل              | 100 |                                                                            |       |

| Module Evaluation<br>تقييم المادة الدراسية |                 |             |                  |            |                                |
|--------------------------------------------|-----------------|-------------|------------------|------------|--------------------------------|
|                                            |                 | Time/Number | Weight (Marks)   | Week Due   | Relevant Learning Outcome      |
| Formative assessment                       | Quizzes         | 2           | 15% (15)         | 5 , 8      | LO # 2, 3,4 and 6, 7           |
|                                            | Assignments     | 2           | 10% (10)         | 6, 12      | LO # 3, 4 , 5 and 9, 10 and 11 |
|                                            | Projects / Lab. | 1           | 10% (10)         | Continuous |                                |
|                                            | Report          | 1           | 5% (5)           | 13         | Continuous                     |
| Summative assessment                       | Midterm Exam    | 2 hr        | 10% (10)         | 10         | LO # 1-9                       |
|                                            | Final Exam      | 3hr         | 50% (50)         | 16 or 17   | All                            |
| Total assessment                           |                 |             | 100% (100 Marks) |            |                                |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري |                                                   |
|------------------------------------------------------------|---------------------------------------------------|
|                                                            | Material Covered                                  |
| Week 1                                                     | Function of several variables                     |
| Week 2                                                     | Limits and Continuity for Multivariable Functions |
| Week 3                                                     | Partial derivatives                               |
| Week 4                                                     | Partial derivatives with constrained variables    |
| Week 5                                                     | The chain rule                                    |
| Week 6                                                     | Application on Partial derivatives                |
| Week 7                                                     | Multiple Integrals                                |
| Week 8                                                     | Double integrals                                  |



|                |                                                   |
|----------------|---------------------------------------------------|
| <b>Week 9</b>  | Polar Coordinates                                 |
| <b>Week 10</b> | Equation Relation Polar and Cartesian Coordinates |
| <b>Week 11</b> | Graphing in polar Coordinates                     |
| <b>Week 12</b> | Area and length in polar coordinates              |
| <b>Week 13</b> | Application of Polar Coordinates                  |
| <b>Week 14</b> | Triple integrals                                  |
| <b>Week 15</b> | Application on Multiple Integrals                 |
| <b>Week 16</b> | <b>Preparatory week before the final Exam</b>     |

| <b>Delivery Plan (Weekly Lab. Syllabus)</b><br>المنهاج الاسبوعي للمختبر |                         |
|-------------------------------------------------------------------------|-------------------------|
|                                                                         | <b>Material Covered</b> |
| <b>Week 1</b>                                                           | None                    |
| <b>Week 2</b>                                                           |                         |
| <b>Week 3</b>                                                           |                         |
| <b>Week 4</b>                                                           |                         |
| <b>Week 5</b>                                                           |                         |
| <b>Week 6</b>                                                           |                         |
| <b>Week 7</b>                                                           |                         |
| <b>Week 8</b>                                                           | <b>Mid-term Exam</b>    |
| <b>Week 9</b>                                                           |                         |
| <b>Week 10</b>                                                          |                         |
| <b>Week 11</b>                                                          |                         |
| <b>Week 12</b>                                                          |                         |
| <b>Week 13</b>                                                          |                         |
| <b>Week 14</b>                                                          |                         |
| <b>Week 15</b>                                                          |                         |
| <b>Week 16</b>                                                          |                         |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس |                                                                                                                                                                                                                          |                           |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                          | Text                                                                                                                                                                                                                     | Available in the Library? |
| <b>Required Texts</b>                                    | <ul style="list-style-type: none"> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", eleven teen Edition, 2000.</li> <li>- Finney, Weir, C.W. and Giordano, "Tomas Calculus", fourteenth Edition, 2017</li> </ul> | No                        |
| <b>Recommended Texts</b>                                 | <ul style="list-style-type: none"> <li>- Haward, Bivens and Davis., "Calculus ", Pearson Education, Seven Edition, 2002.</li> <li>- James Stewart, "Calculus ", fifth Edition, 2020</li> </ul>                           | No                        |
| <b>Websites</b>                                          |                                                                                                                                                                                                                          |                           |

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