# Course Description Form

| |
|---|
| 1. Course Name: |
| Engineering geology |
| 2. Course Code: |
| |
| 3. Semester / Year: |
| Semester |
| 4. Description Preparation Date: |
| 30/3/2024 |
| 5. Available Attendance Forms: |
| Only attendance |
| 6. Number of Credit Hours (Total) / Number of Units (Total) |
| 60hours |
| 7. Course administrator's name (mention all, if more than one name) |
| Name: Esraa A. Mandhour<br>Email: esra.mandhour@sci.utq.edu.iq |

8. Course Objectives

| | |
|---|---|
| **Course Objectives** | **Understand the basic principles engineering geology and applications** |

9. Teaching and Learning Strategies

| | |
|---|---|
| **Strategy** | 1- Educational strategy, collaborative conce planning.<br>2- Brainstorming education strategy.<br>3- Education Strategy Notes Series |

10. Course Structure

| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>13<br>14<br>15<br>Holi<br>16<br>17<br>18<br>19<br>20<br>21<br>22<br>23<br>24<br>25<br>26<br>27<br>28<br>29 | 2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical<br>2theoretical+2prac<br>tical | students should be able to understand the basic principles of engineering geology and their applications in civil engineering<br>The student learns about the physical and engineering properties of rocks and soil and learns about soil conditions and how they are determined laboratory<br>The student learns about engineering behavior and soil behavior<br>Knowing how to choose appropriate locations for dams, tunnels, roads and bridges.<br>The student learns about the importance of exploring engineering sites<br>Learn about the principles of geophysical methods and their applications in engineering projects | Engineering geology, the relationship of engineering geology and civil engineering<br>Rocks, soil: classification, the physical properties of rocks and soil<br>Mechanical properties of rocks and soil<br>classification of soil: grain size distribution<br>classification of soil: Atterberg limits<br>Geology of dams and reservoirs<br>**exam**<br>Tunnel geology<br>Building materials<br>Roads and bridges<br>Earth movements, their types, and their impact on engineering projects<br>Site investigations<br>Geophysical methods in engineering geology<br>**exam** | Explaining theoretical practical conc through lectu and using meth to learn the b principles practical aspect engineering geology. | Exams thro weekly q exams, mon written exa reports, resea and end-of-year ex |

## 11. Course Evaluation

The distribution of grades is as follows: 35 marks for monthly and daily exams and reports for the theoretical aspect and 15 marks for monthly and daily exams for the practical aspect.

## 12. Learning and Teaching Resources

| | |
|---|---|
| Required textbooks (curricular books, if any | مقداد حسين علي، د.باسم رشدي حجاب و د. سنان الجسار.1991.الجيولوجيا الهندسية، جامعة بغداد. |
| Main references (sources) | ة ثابت، رياض حامد الدباغ ويوسف عمرو. 1979. مبادئ الجيولوجيا الهندسية، جامعة الموصل.<br>مجيد عبود الطائي. 1989. الجيولوجيا الهندسية. جامعة البصرة.<br>ر رمو فتوحي، كنانة محمد ثابت، وسنان الجسار. 1990. الجيولوجيا الهندسية، جامعة الموصل. |

| | |
|---|---|
| | ن، ن. الجيولوجيا الهندسية وميكانيك الصخور. ترجمة د. كنانة محمد ، د. محمد علاء الدين حمدي، د. زهير رمو فتوحي، جامعة الموصل. 1988. |
| Recommended books and references (scientific journals, reports...) | |
| Electronic References, Websites | |