

# University of Mosul

جامعة الموصل  
كلية العلوم البيئية  
قسم تقانات البيئة



*First Cycle – Bachelor's degree (B.Sc.) – Science\ Environmental Technologies*

بكالوريوس علوم -تقانة بيئية



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### 1. Mission & Vision Statement

#### *Vision Statement*

The vision of the department is to prepare specialized competencies capable of effectively contributing to environmental protection, achieving sustainable development, and enabling graduates to compete in the labor market.

#### *Mission Statement*

The mission of the department is to prepare specialized and qualified academic cadres in the field of environmental protection technologies and resource management by providing high-quality education based on technical analysis of environmental problems.

### 2. Program Specification

|                 |                       |                       |           |
|-----------------|-----------------------|-----------------------|-----------|
| Programme code: | BSc-ENVTEC            | ECTS                  | 240       |
| Duration:       | 4 levels, 8 Semesters | Method of Attendance: | Full Time |

The department grants a bachelor's degree in environmental technologies, and there are no postgraduate programs in the department yet. Obtaining the initial certificate takes place after skipping the four academic levels, through attending lectures, participating in classroom activities, preparing laboratory reports, participating in systematic training programs, and succeeding in tests

and examinations. It takes place throughout the four levels of academic journey, knowing that the academic system in the department is following the bologna process.

### **3. Program Goals**

- 1) Providing graduates with cognitive skills in the fields of environmental technologies, their suitability for the labor market, and enabling them to apply these skills.
- 2) Developing students' technical skills in the fields of scientific research and postgraduate studies, enabling them to describe environmental problems and develop appropriate solutions.
- 3) Developing academic environmental capabilities and awareness-raising teamwork.
- 4) Instilling environmental values and education that contribute to serving the community.
- 5) Employing practical skills in the fields of environmental technologies to meet labor market needs.
- 6) Providing graduates with knowledge of sustainability technologies and methods for their practical application.
- 7) Providing graduates with skills in environmental management and cost accounting.

### **4. Student Learning Outcomes**

The learning outcomes of the department for the primary study in the field of environmental technologies can be summarized in the following points:

1. Provide students with a broad understanding of the major.
2. To provide students with a sound foundation in the fundamentals and principles of environmental design and technical engineering analysis.
3. Meeting the needs and aspirations of individuals and the labor market by working to match technical education with these needs.
4. Graduate high-quality students with the understanding, knowledge, skill, and personal qualities to carry out careers in the field of environmental technologies as well as in the field of scientific research.
5. Enable students to apply theoretical skills in the field of work.
6. Enable students to undertake technical engineering projects in the field of specialization and in accordance with the academic program.
7. Providing an educational environment that meets the academic requirements to enable graduates of the department to join scientific institutions of environmental sciences / environmental engineering technologies.
8. Enable students to complete their studies within the prescribed period according to international standards, and then enroll in postgraduate studies.

## 5. Academic Staff

| Title                  | Name                              | No. |
|------------------------|-----------------------------------|-----|
| Department Head        | Asst. Prof. Hazim Jumaa Mahmood   | .1  |
| Department Coordinator | Asst. Lecturer Omar Khair Aldin   | .2  |
| Asst. Prof.            | Asst. Prof. Dr. Eman Abdulmunaim  | .3  |
| Asst. Prof.            | Asst. Prof.Dr. Rasha Khalid       | .4  |
| Asst. Prof.            | Asst. Prof.Dr. Abdulsattar Jubair | .5  |
| Asst. Prof.            | Asst. Prof. Mohammed Fakhr Aldin  | .6  |
| Asst. Prof.            | Asst. Prof. Raid Mahmood Faisal   | .7  |
| Lecturer               | Dr. Tahseen Ali                   | .8  |
| Lecturer               | Dr. Mayadaa Ahmed Ibrahim         | .9  |
| Lecturer               | Dr. Hassan Hassan Jasim           | .10 |
| Lecturer               | Diana Noraldin Mustafa            | .11 |
| Lecturer               | Roaa Mudhafar Younis              | .12 |
| Lecturer               | Muthaina Abdulla Mustafa          | .13 |
| Lecturer               | Wissam Saeed Abd                  | .14 |
| Asst. lecturer         | Hasan Jamal                       | .15 |
| Asst. lecturer         | Maan Hashim Mahmood               | .16 |
| Asst. lecturer         | Burkan Mutasim                    | .17 |
| Asst. lecturer         | Hamsa Burhan                      | .18 |
| Asst. lecturer         | Abdulla Abdulsatar                | .19 |
| Asst. lecturer         | Farah Khazaal                     | .20 |
| Asst. lecturer         | Ahmed Abdulrazaq                  | .21 |
| Asst. lecturer         | Raghad Hazim                      | .22 |
| Asst. lecturer         | Lina Nawfal                       | .23 |
| Asst. lecturer         | Mustafa Amer                      | .24 |
| Asst. lecturer         | Hanan Riad                        | .25 |
| Asst. lecturer         | Muhanad Qasim                     | .26 |
| Asst. lecturer         | Mohammed Saadallah                | .27 |
| Asst. lecturer         | Asmaa Muaid                       | .28 |
| Asst. lecturer         | Basma Ghazwan                     | .29 |
| Asst. lecturer         | Abeer Salih                       | .30 |
| Asst. lecturer         | Zahraa Mohammed                   | .31 |
| Asst. lecturer         | Ous Nawfal                        | .32 |

|                |                  |     |
|----------------|------------------|-----|
| Asst. lecturer | Alaa Jasim       | .33 |
| Asst. lecturer | Omar Abduljabbar | .34 |
| Asst. lecturer | Rihab Waad       | .35 |

## 6. Credits, Grading and GPA

### Credits

University of Mosul is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

### Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

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

### Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

$$CGPA = [ (1^{st} \text{ module score} \times ECTS) + (2^{nd} \text{ module score} \times ECTS) + ..... ] / 240$$

## 7. Curriculum/Modules

### Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

| Code            | Module                   | SSWL | USSWL | ECTS        | Type     | Pre-request |
|-----------------|--------------------------|------|-------|-------------|----------|-------------|
| <b>ENVT101</b>  | <b>General Physics</b>   | 104  | 71    | <b>7.00</b> | <b>C</b> |             |
| <b>ENVT102</b>  | <b>General Chemistry</b> | 102  | 98    | <b>8.00</b> | <b>C</b> |             |
| <b>ENVT103</b>  | <b>General Biology</b>   | 95   | 80    | <b>7.00</b> | <b>C</b> |             |
| <b>ENVT104</b>  | <b>Mathematics</b>       | 106  | 44    | <b>6.00</b> | <b>C</b> |             |
| <b>UoM13215</b> | <b>English language</b>  | 33   | 17    | <b>2.00</b> | <b>B</b> |             |

### Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

| Code           | Module                            | USSWL     | SSWL      | ECTS        | Type     | Pre-request |
|----------------|-----------------------------------|-----------|-----------|-------------|----------|-------------|
| <b>ENVT105</b> | <b>Geology</b>                    | <b>72</b> | 78        | <b>6.00</b> | <b>C</b> |             |
| <b>ENVT106</b> | <b>Analytical Chemistry</b>       | 82        | 93        | <b>7.00</b> | <b>C</b> |             |
| <b>ENVT107</b> | <b>Environmental Science</b>      | <b>37</b> | <b>63</b> | <b>4.00</b> | <b>C</b> |             |
| <b>ENVT108</b> | <b>Mathematics II</b>             | 57        | 93        | <b>6.00</b> | <b>C</b> |             |
| <b>UOM103</b>  | <b>Computer Science</b>           | <b>12</b> | <b>63</b> | <b>3.00</b> | <b>B</b> |             |
| <b>UOM101</b>  | <b>Arabic Language</b>            | <b>17</b> | <b>33</b> | <b>2.00</b> | <b>B</b> |             |
| <b>UOM104</b>  | <b>Democracy and Human Rights</b> | <b>17</b> | <b>33</b> | <b>2.00</b> | <b>B</b> |             |

### Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

| Code           | Module                   | SSWL      | USSWL     | ECTS     | Type     | Pre-request |
|----------------|--------------------------|-----------|-----------|----------|----------|-------------|
| <b>ENVT212</b> | <b>Hydrology 1</b>       | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT209</b> | <b>Fluids Mechanic 1</b> | <b>78</b> | <b>72</b> | <b>6</b> | <b>C</b> |             |

|                |                                               |           |           |          |          |  |
|----------------|-----------------------------------------------|-----------|-----------|----------|----------|--|
| <b>ENVT211</b> | <b>Environmental Statistics</b>               | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |  |
| <b>ENVT213</b> | <b>Soil Physics</b>                           | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |  |
| <b>UOM210</b>  | <b>Environmental Chemistry 1</b>              | <b>78</b> | <b>72</b> | <b>6</b> | <b>C</b> |  |
| <b>UOM2012</b> | <b>Arabic Language 2</b>                      | <b>33</b> | <b>17</b> | <b>2</b> | <b>B</b> |  |
| <b>UOM2050</b> | <b>The Crimes of the Baath Regime in Iraq</b> | <b>33</b> | <b>17</b> | <b>2</b> | <b>B</b> |  |

**Semester 4 | 30 ECTS | 1 ECTS = 25 hrs**

| Code           | Module                           | SSWL      | USSWL     | ECTS     | Type     | Pre-request |
|----------------|----------------------------------|-----------|-----------|----------|----------|-------------|
| <b>ENVT214</b> | <b>Fluids Mechanic 2</b>         | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT215</b> | <b>Hydrology 2</b>               | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>UOM2032</b> | <b>Computer science 2</b>        | <b>63</b> | <b>12</b> | <b>3</b> | <b>B</b> |             |
| <b>ENVT218</b> | <b>Engineering Analysis</b>      | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT216</b> | <b>Environmental Chemistry 2</b> | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT217</b> | <b>Environmental Geology</b>     | <b>78</b> | <b>47</b> | <b>5</b> | <b>C</b> |             |
| <b>UOM2022</b> | <b>English language 2</b>        | <b>33</b> | <b>17</b> | <b>2</b> | <b>B</b> |             |

**Semester 5 | 30 ECTS | 1 ECTS = 25 hrs**

| Code           | Module                                         | SSWL      | USSWL     | ECTS     | Type     | Pre-request |
|----------------|------------------------------------------------|-----------|-----------|----------|----------|-------------|
| <b>ENVT319</b> | <b>Water Supply and Treatment</b>              | <b>78</b> | <b>72</b> | <b>6</b> | <b>C</b> |             |
| <b>ENVT320</b> | <b>Remote Sensing</b>                          | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT321</b> | <b>Thermodynamic</b>                           | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |             |
| <b>ENVT322</b> | <b>Soil Pollution</b>                          | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |             |
| <b>ENVT323</b> | <b>Management and Treatment of Solid Waste</b> | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |             |
| <b>ENVT324</b> | <b>Occupational Safety and Health</b>          | <b>33</b> | <b>17</b> | <b>2</b> | <b>C</b> |             |
| <b>ENVT325</b> | <b>Water Quality</b>                           | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |             |

**Semester 5 | 30 ECTS | 1 ECTS = 25 hrs**

| Code           | Module                                   | SSWL      | USSWL     | ECTS     | Type     | Pre-request |
|----------------|------------------------------------------|-----------|-----------|----------|----------|-------------|
| <b>ENVT326</b> | <b>Environmental Chemical Techniques</b> | <b>78</b> | <b>72</b> | <b>6</b> | <b>C</b> |             |

|                |                                       |           |           |          |          |  |
|----------------|---------------------------------------|-----------|-----------|----------|----------|--|
| <b>ENVT327</b> | <b>Geographic Information Systems</b> | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |  |
| <b>ENVT328</b> | <b>Biochemistry</b>                   | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |  |
| <b>ENVT329</b> | <b>Air Pollution</b>                  | <b>90</b> | <b>35</b> | <b>5</b> | <b>C</b> |  |
| <b>ENVT330</b> | <b>Environmental Sustainability</b>   | <b>63</b> | <b>12</b> | <b>3</b> | <b>C</b> |  |
| <b>ENVT331</b> | <b>Water Reuse</b>                    | <b>63</b> | <b>12</b> | <b>3</b> | <b>C</b> |  |
| <b>ENVT332</b> | <b>Environmental Microbiology</b>     | <b>63</b> | <b>37</b> | <b>4</b> | <b>C</b> |  |

## 8. **Contact**

Program Manager:

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