# Course Description Form Soli Ecology and Meteorology

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| 1. Course Name: |
| **Soli Ecology and Meteorology** |
| 2. Course Code: |
| **SOEM210** |
| 3. Semester / Year: |
| **Second semester/ 2024-2025** |
| 4. Description Preparation Date: |
| 15/01/2025 |
| 5. Available Attendance Forms: |
| **Full time (theoretical lecture and practical lecture) weekly** |
| 6. Number of Credit Hours (Total) / Number of Units (Total) |
| **5 hours (2 hours theoretical and 3 hours practical per week) for 14 weeks, numb of units 3.5 units** |
| 7. Course administrator's name (mention all, if more than one name) |
| **Name: Dr.Osama Ghazi Ismaeel**<br>**Email : osamaghaze@uodiyala.edu.iq** |
| 8. Course Objectives |

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| **Course Objectives** | 1- Study of Ecology, Ecosystem and Environmenal factors Physical Properties of the soil<br>2- Biotic and Abiotic components<br>3-Soil<br>4- Temperature, moisture, Light and Rain<br>5- Frost and Wind<br>6- Pollution , Desertification and Global Warming |

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| 9. Teaching and Learning Strategies |

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| **Strategy** | In-person lectures for 15 weeks, including two monthly exams, daily exams, and scientifi reports |

10. Course Structure

| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
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| **1** | **2** | The environment and its relationship with humans | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | Daily, monthly and final exams and daily reports |

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| **2** | 2 | The environment and its relationship with humans | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **3** | 2 | Eceology and Ecosystem | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **4** | 2 | Climate , Climate cycle , Soil climate | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **5** | 2 | Energy radiation Temperature Winds Atmospheric pressure | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **6** | 2 | Water, the relationship of water to plants, humidity | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **7** | 2 | fog and Evaporation | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **8** | 2 | Environmenal Properties fo the soil | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **9** | 2 | Soil Moisture Content | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **10** | 2 | Soil air and aeration | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **11** | 2 | Soil Structure | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |

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| **12** | 2 | Soil texture | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **13** | 2 | Vegetation | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **14** | 2 | Pollution | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **15** | 2 | Human role in the environment | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **practical part** | | | | | |
| **1** | **3** | Eceology and environment factor | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **2** | **3** | Temperature measuring devices | | | **Daily, monthly and final exams and daily reports** |
| **3** | **3** | Solar radiation measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **4** | **3** | Humidity measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **5** | **3** | Rain measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |

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| **6** | **3** | Winds measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **7** | **3** | Atmospheric pressure measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **8** | **3** | Evaporation and measuring devices | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **9** | **3** | Devices for measuring soil properties | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **10** | **3** | Natural plant environments in the world and Iraq | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **11** | **3** | Desertification in the Iraq and world | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **12** | **3** | Aquatic ecosystem | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **13** | **3** | Vegetation in Iraq and the world | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |

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| **14** | **3** | field experiment | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |
| **15** | **3** | visit to a weather station | **Soli Ecology and Meteorology** | **Lecture Dialogue & discussion Brainstorming** | **Daily, monthly and final exams and daily reports** |

## 11. Course Evaluation

Examination Monthly & daily exams with discussion questions inside the lecture.
The degree of participation in the questions related to the subject.

## 12. Learning and Teaching Resources

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| Required textbooks (curricular books, if any | |
| Main references (sources) | |
| Recommended books and references (scientific journals, reports…) | Iraqi academic scientific journals |
| Electronic References, Websites | Soil Science Society of America<br>Library Genesis |