

**نموذج توصيف مقرر**  
**Course Description Form**

Name of College\Faculty :

اسم الكلية:

Name of Department:

اسم القسم العلمي:

|                                                                                                  |                              |                                                           |
|--------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------|
| Course Name                                                                                      | Aspects of Soil Microbiology | اسم المقرر                                                |
| Course No.                                                                                       | 0495-420                     | رقم المقرر                                                |
| No. of Credits                                                                                   | 4                            | عدد الوحدات                                               |
| Theoretical Hours                                                                                | 3                            | عدد الساعات النظرية                                       |
| Practical Hours                                                                                  | 1                            | عدد الساعات المحلية                                       |
| Course topics                                                                                    |                              | مواضيع المقرر                                             |
|                                                                                                  |                              |                                                           |
| Text book: (Name, Author , Year , Publisher)                                                     |                              | عنوان الكتاب : ( الاسم ، المؤلف ، سنة الطبع ، دار النشر ) |
| Paul, E. Soil Microbiology, Ecology and Biochemistry , 4th Edition, Academic Press, 2014.        |                              |                                                           |
| References: (Name , Author , Year . Publisher)                                                   |                              | عنوان المرجع : ( الاسم ، المؤلف ، سنة الطبع ، دار النشر ) |
| Paul, E., and Clark, F. E. Soil Microbiology and Biochemistry, 2nd Edition, Academic Press, 1996 |                              |                                                           |

|                                        |  |     |  |                |                |
|----------------------------------------|--|-----|--|----------------|----------------|
| 1. Prerequisites 0495-205 Bacteriology |  |     |  |                | متطلبات المقرر |
| 2. 0495-206 Mycology                   |  |     |  |                |                |
| 3. 0495-207 Microalgae and Protozoa    |  |     |  |                |                |
| Exams                                  |  | 20% |  | الاختبارات     |                |
| Quizzes                                |  | 5%  |  | امتحانات قصيرة |                |
| H.W.                                   |  | 5%  |  | واجبات         |                |

|         |                       |  |     |  |                          |                 |
|---------|-----------------------|--|-----|--|--------------------------|-----------------|
| Grading | Project (field study) |  | 30% |  | مشاريع ( دراسة ميدانية ) | آلية رصد المقرر |
|         | Final                 |  | 40% |  | الاختبار النهائي         |                 |
|         | 100%                  |  |     |  |                          |                 |

| أهداف مخرجات المقرر :                                                                             |                       |                                    |                                                    |       |       |
|---------------------------------------------------------------------------------------------------|-----------------------|------------------------------------|----------------------------------------------------|-------|-------|
| الرقم                                                                                             | أهداف مخرجات المقرر : | أمثله من المقرر لتحقيق هذه الأهداف | المستوى المطلوب من عضو هيئة التدريس لتحقيق الهدف : |       |       |
|                                                                                                   |                       |                                    | عالي                                               | متوسط | منخفض |
| 1                                                                                                 |                       |                                    |                                                    |       |       |
| 2                                                                                                 |                       |                                    |                                                    |       |       |
| 3                                                                                                 |                       |                                    |                                                    |       |       |
| 4                                                                                                 |                       |                                    |                                                    |       |       |
| 5                                                                                                 |                       |                                    |                                                    |       |       |
| الحقول                                                                                            |                       |                                    |                                                    |       |       |
| المهارات                                                                                          |                       |                                    |                                                    |       |       |
| منسق المقرر ( اسم عضو هيئة التدريس المشرف على توصيف المقرر ، توقيعه ، الختم و الرتبة الأكاديمية ) |                       |                                    |                                                    |       |       |
| تاريخ إعداد النموذج                                                                               |                       |                                    | / /                                                |       |       |

| Course objectives |                                                                                             |                                                                                                                                                                                      |                                             |        |     |
|-------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------|-----|
| No.               | Course Objectives (Learning Outcomes)                                                       | Example(s) of relevant (Topics and activities)                                                                                                                                       | Recommended Level to satisfy the objectives |        |     |
|                   |                                                                                             |                                                                                                                                                                                      | High                                        | Medium | Low |
| 1                 | Define Soil microbiology and brief description of the soil structure and habitat            | Definition of soil, History of soil microbiology, Components of Soil, (Mineral / Inorganic matter, Organic matter/components, Soil Water, Soil air (Soil gases), Soil microorganisms | ✓                                           |        |     |
| 2                 | Describe briefly major characteristics of soil bacteria, fungi, algae, protozoa and viruses | Soil microorganisms                                                                                                                                                                  | ✓                                           |        |     |



|                               |                                                                                            |                                                                                                            |   |   |  |
|-------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---|---|--|
| 3                             | Understand the taxonomical, physiological and environmental aspects of soil microorganisms | Soil Habitat<br>Role of Soil Microorganisms in Bioremediation, Biodegradation of Pesticides and Herbicides |   | ✓ |  |
| 4                             | Learn and describe the biogeochemical cycles of carbon, nitrogen, phosphorus and sulfur    | Role of micro-organisms in the cycles of various elements in nature                                        | ✓ |   |  |
| 5                             | Ecological Association/Interactions among Soil microorganisms                              | Ecological Association/Interactions among Soil Microorganisms<br>Microbial coexistence and competition     | ✓ |   |  |
| Fields                        |                                                                                            |                                                                                                            |   |   |  |
| Skills                        | Lab techniques: isolating different soil microorganisms                                    |                                                                                                            |   |   |  |
| Coordinator (Name and Rank) : |                                                                                            |                                                                                                            |   |   |  |
| Signature and stamp :         |                                                                                            |                                                                                                            |   |   |  |
| Date:                         | 3\ 11 \2025                                                                                |                                                                                                            |   |   |  |