Course Description Form

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| 1. Course Name: Seed Physiology
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| 1. Course Code:
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| 1. Semester / Year: Spring semester / 2023-2024
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| 1. Description Preparation Date: Sep. 15th, 2023
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| 1. Available Attendance Forms: Mandatory / Attendance
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| 1. Number of Credit Hours (Total) / Number of Units (Total): 64 / 3
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| 1. Course administrator's name (mention all, if more than one name)
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| Name: Jalal Hameed Hamza Email: j.hamza@coagri.uobaghdad.edu.iqName: Mustafa Jamal RasheedEmail: mustafa@coagri.uobaghdad.edu.iqName: Adawiya Sajid MustafaEmail: adawiya@coagri.uobaghdad.edu.iq |
| 1. Course Objectives
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| The ability to work in the agricultural field a seed physiology and technology2. Preparing a staff capable of providing advice and information to relevant institutions and ministries3. Preparing scientific researchers in the field of seed technology | 4. Graduating students who have the ability to develop and continue learning inside and outside the country5. Increasing the spirit of competition among students in order to obtain job opportunities or apply for postgraduate studies |
| 1. Teaching and Learning Strategies
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| \*Using the direct descriptive and practical teaching method and providing the lectures and references related to the subject.\*Using means of illustration such as drawing and pictures, and bringing available tools and devices to the lecture with a comprehensive explanation of their uses and how it works.\*Implementing simple experiments with limited duration and providing a detailed explanation of the results of those experiments \*Urging students to visit the library and assigning them to prepare reports on topics related to the subject’s vocabulary and presenting them using PowerPoint and displaying them using Data Show, while holding a discussion in the presence of all students to ensure general interest.\*Organizing a scientific trip for students to the General Authority for Agricultural Research, examining and certifying seeds so that the students can see the departments and laboratories of the Authority and hold a lecture with the assistance of the scientific staff in those laboratories. |

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| 1. Course Structure
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| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
| The theoretical part and practical part |
| 1 | 4 | Knowledge, intellectual skills and operational process | Seed formation and development | Lecture/practical application | Quiz |
| 2 | 4 | = | Lecture/practical application | Quiz |
| 3 | 4 | = | Seed chemistry | Lecture/practical application | Quiz |
| 4 | 4 | = | Lecture/practical application | Quiz |
| 5 | 4 | = | Seed germination | Lecture/practical application | 1st Exam |
| 6 | 4 | = | Lecture/practical application | Quiz |
| 7 | 4 | = | Lecture/practical application | Quiz |
| 8 | 4 | = | First month exam | Lecture/practical application | Reports |
| 9 | 4 | = | Seed vitality tests | Lecture/practical application | Quiz |
| 10 | 4 | = | Lecture/practical application | 2nd Exam |
| 11 | 4 | = | Seed vigour and vitality | Lecture/practical application | Discussions |
| 12 | 4 | = | Seed survival and deterioration | Lecture/practical application | Quiz |
| 13 | 4 | = | Seed tests | Lecture/practical application | Attendance |
| 14 | 4 | = | Lecture/practical application | Discussions |
| 15 | 4 | = | Second month exam | Lecture/practical application | Discussions |
| 16 | 4 | = | Seed physiology research | report | Discussions |

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| 1. Course Evaluation
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| \*Conducting daily and monthly written and oral tests on the subject of the study subject.\*Adopting the practical test to increase students’ skills in the field of specialization.\* Allocating a percentage of grades for the student’s participation in scientific discussion during the lesson and for scientific reports and research.\*Evaluating students’ activity through practical tests. |
| 1. Learning and Teaching Resources
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| Required textbooks (curricular books, if any) |  |
| Main references (sources) | - محمد ، عبد العظيم كاظم ومؤيد احمد اليونس. 1991. أساسيات فسيولوجيا النبات. الجزء الثالث. وزارة التعليم العالي والبحث العلمي. جامعة بغداد. كلية الزراعة. دار الحكمة للطباعة والنشر. ع ص: 1328.- Handbook of Seed Physiology: Applications to Agriculture. <https://www.hzu.edu.in/uploads/2020/10/Handbook-of-Seed-Physiology-Applications-to-Agriculture.pdf>- Desai, B. B. 2004. Seeds Handbook; Bilogy, Production, Processing, and Storage. 2nd edn. Marcel Dekker, Inc. New York, USA. ISBN: 0-8247-4800-X. pp. 787. |
| Recommended books and references (scientific journals, reports...) | - اسماعيل ، احمد محمد علي. 1997. انبات البذور. جامعة قطر. كلية العلوم قسم النبات. ع ص: 639.- Dissertation, thesis and papers. |
| Electronic References, Websites | <https://ar.wikipedia.org/wiki><https://www.seedtest.org/en/home.html><http://www.aosaseed.com/annual_meeting> |