



**Ministry of Higher Education and Scientific Research  
Scientific Supervision and Scientific Evaluation Apparatus  
Directorate of Quality Assurance and Academic Accreditation  
Accreditation Department**

**Academic Program and Course  
Description Guide**

**Animal production Department**

**Misan University  
College of Agriculture**

## Academic Program Description Form

**University Name:** Misan University

**Faculty/Institute:** College of Agriculture

**Scientific Department:** Department of Animal Production

**Academic or Professional Program Name:** Bachelor of Science in Agriculture

**Final Certificate Name:** Bachelor of Science in Agriculture / Animal Production

**Academic System:** courses

**Description Preparation Date:**

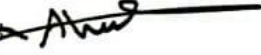
**File Completion Date:**

**Signature:** 

**Head of Department Name:**

Dr. Qusai Hattab

**Date:**

**Signature:** 

**Scientific Associate Name:**

Dr. Ahmed Malik Jimadh

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**



**Approval of the Dean**

Dr. Phurgham Sabih Karim

## **Introduction:**

**Academic programs and courses are the cornerstone of the higher education system, forming the basis for the development of students' skills and knowledge in various specialized fields. The description of the academic program and course of study provides a detailed framework outlining the educational objectives and academic content to be taught, as well as the criteria by which students' performance will be evaluated.**

**The description of the academic program also provides students with a comprehensive view of what they can expect from their academic career, from the prerequisites for entry into the program to the career opportunities available after graduation. Courses are addressed as core parts within this framework, where each course is defined by its objectives, content, and evaluation methods, helping students understand what will be taught and how to achieve academic success.**

**This guide includes a description of the academic program in light of the latest developments in the educational system in Iraq. In this regard, we can only emphasize the importance of writing a description of academic programs and courses to ensure the proper functioning of the educational process.**

### **1- Program Vision**

**The vision of the academic program is to provide high-quality education that enables students to acquire the knowledge and skills necessary to succeed in their professional and personal lives, develop scientific research that contributes to the progress of society, and strengthen cooperation and partnerships with academic and professional institutions locally and internationally.**

## 2- Program Mission

**Providing a distinguished and multidisciplinary education that keeps pace with global developments, contributes to the preparation of qualified graduates who possess the skills and knowledge necessary for the labor market, encourages scientific research and innovation, and promotes ethical values and social responsibility among students.**

### 3- Program Objectives:

1. Educating and training students on the latest practices in the field of livestock production.
2. Provide the necessary knowledge and skills to deal with animals and improve their productivity.
3. Promote scientific research in areas such as animal nutrition, care, and reproduction.
4. Develop programs to manage farms and improve productivity.
5. Enhance students' understanding of professional ethics in livestock production.
6. Encourage interaction with industry and the local community to improve livestock production applications.
7. Enhancing interaction with the natural environment and preserving livestock.
8. Provide experiential and applied educational opportunities for students in areas such as animal reproduction and care.

### 4- Program Accreditation

None

### 5- Other external influences

**Ministry of Higher Education and Scientific Research**

| <b>6- Program Structure</b>                                    |                          |                     |                   |                 |
|--|--------------------------|---------------------|-------------------|-----------------|
| <b>The structure of the Education Programme is as follows:</b> | <b>Number of Courses</b> | <b>Credit hours</b> | <b>Percentage</b> | <b>Reviews*</b> |
| <b>Organization Requirements</b>                               | <b>12</b>                | <b>22</b>           | <b>12.79</b>      | <b>Basic</b>    |
| <b>College Requirements</b>                                    | <b>22</b>                | <b>71</b>           | <b>41.27</b>      | <b>Basic</b>    |
| <b>Department Requirements</b>                                 | <b>27</b>                | <b>79</b>           | <b>45.94</b>      | <b>Basic</b>    |
| <b>summer training</b>   |                          |                     |                   | <b>Basic</b>    |
| <b>Other</b>   |                          |                     |                   |                 |

| 7- Program description |             |                                      |              |           |
|------------------------|-------------|--------------------------------------|--------------|-----------|
| Year/Level             | Course Code | Course Name                          | Credit Hours |           |
|                        |             |                                      | theoretical  | Practical |
| 1st Year               | PRPP151     | Principles of Plant Protection       | 2            | 3         |
|                        | PRPO152     | Principles of Poultry                | 2            | 3         |
|                        | PRAP153     | Principles of Animal Production      | 2            | 3         |
|                        | PLSU154     | Plane Surveying                      | 2            | 3         |
|                        | PRFI155     | Principles of Field Crops            | 2            | 3         |
|                        | PRSS156     | Principles of Soil Science           | 2            | 3         |
|                        | GEZO157     | Zoology                              | 2            | 3         |
|                        | Math        | Mathematics                          | 3            | /         |
|                        | PRST159     | Principles of Statistics             | 2            | 3         |
|                        | COMA101     | Computer Applications /1             | /            | 2         |
|                        | COMA102     | Computer Applications /2             | /            | 2         |
|                        | ORCH162     | Organic chemistry                    | 2            | 3         |
|                        | ANCH163     | Analytical Chemistry                 | 2            | 3         |
|                        | ARAL104     | Arabic Language / 1                  | 2            | /         |
| 2nd Year               | PRPD240     | Principles of dairy science          | 2            | 3         |
|                        | ARAL204     | Arabic Language /2                   | 2            | /         |
|                        | BACR206     | AL Baath Crimes                      | 2            | /         |
|                        | ENGL205     | English Language /2                  | 2            | /         |
|                        | COMA201     | Computer Applications /3             | /            | 2         |
|                        | GENT 242    | Genetics                             | 2            | 3         |
|                        | PRHS243     | Principles of Horticulture           | 2            | 3         |
|                        | PRIC244     | Principles of Ichthyology            | 2            | 3         |
|                        | FIPR245     | Fish Breeding and production         | 2            | 3         |
|                        | FOCR246     | Fodder and pasture crops             | 2            | 3         |
|                        | PRAC247     | Principles of Agriculture Economics  | 2            | /         |
|                        | PRAG248     | Principles of agricultural extension | 2            | /         |
|                        | ANME249     | Animal production mechanization      | 2            | 3         |
|                        | COMA202     | Computer Applications /4             | /            | 2         |
|                        | BICH251     | Biochemistry                         | 2            | 3         |
|                        | PRMB252     | Principles of Microbiology           | 2            | 3         |
| 3rd Year               | ANNU314     | Animal Nutrition                     | 2            | 3         |
|                        | POTE315     | Poultry Products Technology          | 2            | 3         |
|                        | POPH316     | Physiology Poultry                   | 2            | 3         |
|                        | REPH317     | Reproductive Physiology              | 2            | 3         |
|                        | FERA321     | Feed and Rations                     | 2            | 3         |
|                        | ANPH319     | Animal Physiology                    | 2            | 3         |
|                        | MEIN318     | Medical and Veterinary Insects       | 2            | 3         |
|                        | ANBE320     | Animal Environment and Behavior      | 2            | /         |
|                        | ANEC321     | Economics of Animal Production       | 3            | /         |

|          |         |                                    |   |   |
|----------|---------|------------------------------------|---|---|
|          | ANDI323 | Animal diseases                    | 2 | 3 |
|          | HAMA322 | Hatching and Hatches Management    | 2 | 3 |
|          | DEAE319 | Design and Analysis of Experiments | 2 | 3 |
| 4th Year | POPR441 | Poultry Management and Production  | 2 | 3 |
|          | BUPR442 | Buffalo production                 | 2 | / |
|          | SHPR443 | Sheep and Goats Production         | 2 | 3 |
|          | ENGL401 | English                            | 1 | / |
|          | PONU445 | Poultry Nutrition                  | 2 | 3 |
|          | GRPR439 | Graduation Project/1               | / | 3 |
|          | GRPR440 | Graduation Project/2               | / | 3 |
|          | MEPR446 | Meat Production                    | 2 | 3 |
|          | MESC447 | Meat Science                       | 2 | 3 |
|          | CAPR448 | Cattle Production                  | 2 | 3 |
|          | MOBI449 | Molecular Biology                  | 2 | 3 |
|          | PODI450 | Poultry diseases                   | 2 | 3 |
|          | PAMA451 | Pasture Managements                | 2 | 3 |
|          | POBR452 | Breeding poultry                   | 2 | 3 |

| 8- Expected learning outcomes of the program                    |  |
|---|--|
| Knowledge   |  |
| 1. Deep understanding of agricultural legislation and practices | Students learn about legislation and standards regulating the animal production industry, including food safety and animal welfare.            |
| 2. Knowledge of animal species and their ecosystems             | Deep understanding of different animal species and their natural environments, and how these factors affect their health and productivity.     |
| 3. Technology in Animal Production                              | The use and application of modern technology in improving animal productivity, such as artificial insemination and feed management techniques. |
| 4. Farm Management and Strategic Planning                       | Learn how to efficiently manage farms, including production planning, and manage human and financial resources.                                |
| 5. Assessment and Consultancy in Livestock Production           | Develop skills in performance evaluation and consulting to improve animal productivity and quality.  |
| 6. Scientific research and practical applications               | Developing capabilities in conducting scientific research and applying research results in practical work.                                     |
| 7. Sustainability and Sustainable Development                   | Understand the basics of sustainability in livestock production and how to apply sustainable practices in everyday work.                       |
| 8. Economic Analysis and Assessment                             | Develop skills in analyzing economic data  |



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|  | and evaluating the economic aspects of livestock production.  |
| <b>Skills</b>  |   |
| <b>Management and Leadership Skills</b>                  | Students' ability to efficiently manage farms and organize livestock production processes, including production planning and human resource management. |
| <b>Analytic skills.</b>                                  | Ability to analyze data and evaluate the performance of livestock production operations, and make strategic decisions based on data and analytics.      |
| <b>Communication skills</b>                              | Ability to communicate effectively with various stakeholder groups, including farmers, agricultural sector workers, and government agencies.            |
| <b>Innovation and creativity skills</b>                  | Ability to develop new and innovative solutions to improve animal productivity and enhance the effectiveness of agricultural operations.                |
| <b>research skills</b>                                   | Ability to design and implement scientific research in the fields of animal production, and apply research results in practical work.                   |
| <b>Negotiation and Problem Solving</b>                   | Ability to negotiate and solve complex problems facing livestock production processes effectively and innovatively.                                     |
| <b>Sustainability and Sustainable Development Skills</b> | Ability to apply sustainable agricultural practices and improve the environmental and economic performance of farms.                                    |
| <b>Technology skills</b>                                 | Ability to use technology and computing tools in improving and managing livestock production processes.   |
| <b>Ethics</b>  |   |
| <b>Respect and vital care</b>                            | Deep respect for animals and adherence to global biocare standards, with a focus on animal health and well-being.                                       |
| <b>2. Environmental sustainability</b>                   | Commitment to sustainable agricultural practices that preserve the environment and support the sustainable development of natural resources.            |
| <b>3. Integrity and Professional Ethics</b>              | Adhere to high ethical standards in all aspects of work in the field of livestock production, including research and dealing with customers.            |
| <b>Innovation and continuous development.</b>            | Seeking to innovate and improve agricultural processes through the application of modern technologies and new ideas.                                    |
| <b>Continuous Learning &amp; Development</b>             | Prepare for lifelong learning and develop   |

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|  | personal and professional skills to maintain enduring competitiveness and success.  |
| <b>Collaboration and Teamwork</b>                      | <b>Ability to work as part of a team and collaborate with colleagues and specialists in related fields to achieve common goals.</b>               |
| <b>7. Professionalism and Dedication</b>               | <b>Commitment to professionalism in all aspects, from dealing with customers to project management and dealing with crises.</b>                   |
| <b>8. Diversity and respect for different cultures</b> | <b>Appreciation and respect for cultural and social diversity and the ability to interact effectively with people from different backgrounds.</b> |

| <b>9- Teaching and Learning Strategies</b> |   |
|--|---|
| <b>Active Learning</b>                     | <b>By encouraging students to participate in interactive learning activities such as discussions and practical activities.</b>                      |
| <b>COLLABORATIVE LEARNING</b>              | <b>By organizing students in groups to work on joint projects and solve problems, which enhances their learning by interacting with each other.</b> |
| <b>Problem Learning</b>                    | <b>Present real problems and challenges that students have to solve using the acquired knowledge and skills.</b>                                    |
| <b>Self-learning</b>                       | <b>Enhancing students' abilities to develop their personal skills for learning and independence.</b>  |
| <b>Project-based learning</b>              | <b>Organizing practical projects from which students learn how to apply theoretical concepts in practical contexts.</b>                             |
| <b>Learning from experience</b>            | <b>Providing practical and experiential learning opportunities that enhance students' understanding of the subjects.</b>                            |
| <b>Technology in Learning</b>              | <b>Use technology to promote effective and engaging interaction and delivery of educational content.</b>  |
| <b>Comprehensive evaluation</b>            | <b>Use diverse and ongoing assessment methods to measure students' progress and understanding of topics.</b>  |

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| <b>10- Evaluation methods</b> |
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**Daily exams (cobs)**  
**Monthly exams**  
**Practical exams**  
**Practical and Theoretical Final Exams**  
**Assessment through summer training in government departments by providing the student with a detailed report of the knowledge and skills acquired during the training**

| <b>11- Faculty</b>         |                                |                               |  |  |                                     |                 |
|----------------------------|--------------------------------|-------------------------------|--|--|-------------------------------------|-----------------|
| <b>Faculty Members</b>     |                                |                               |  |  |                                     |                 |
| <b>Academic rank</b>       | <b>Specialization</b>          |                               | <b>Special Requirements/Skills (if applicable)</b> |  | <b>Number of the teaching staff</b> |                 |
|                            | <b>General</b>                 | <b>Special</b>                |  |  | <b>Staff</b>                        | <b>Lecturer</b> |
| <b>Assistant Professor</b> | <b>Plant protection</b>        | <b>Plant diseases</b>         |  |  | <b>1</b>                            |                 |
| <b>Assistant Professor</b> | <b>Fish and marine wealth</b>  | <b>Fish and marine wealth</b> |  |  | <b>1</b>                            |                 |
| <b>Lecturer</b>            | <b>Animal Production</b>       | <b>Animal Production</b>      |  |  | <b>1</b>                            |                 |
| <b>Lecturer</b>            | <b>gardening, horticulture</b> | <b>Horticulture and Palms</b> |  |  | <b>2</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Animal Production</b>       | <b>Animal Production</b>      |  |  | <b>3</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Biology</b>                 | <b>Microbiology</b>           |  |  | <b>1</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Biology</b>                 | <b>animal</b>                 |  |  | <b>1</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Field Crops</b>             | <b>Field Crops</b>            |  |  | <b>1</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Biology</b>                 | <b>Biology</b>                |  |  | <b>1</b>                            |                 |
| <b>Lecturer Assistant</b>  | <b>Computer engineering</b>    | <b>Information Technology</b> |  |  | <b>1</b>                            |                 |

| <b>Professional Development</b>           |
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| <b>Orientation of new faculty members</b> |

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| <b>Improving teaching methods, making them more effective, conducting research and serving the community</b> |   |
| <b>Professional development of teaching staff:</b>   |   |
| <b>Workshops and Training Courses</b>  | <b>Organized to update knowledge and skills in areas such as agricultural technology, farm management, and scientific research.</b>             |
| <b>Participate in many scientific conference and panels</b>  | <b>An opportunity to share experiences and knowledge with other livestock researchers.</b>  |
| <b>Supporting research and scientific projects</b>   | <b>Provide resources and funding to support advanced research in critical areas related to livestock production.</b>                            |
| <b>Distance Learning and Technology in Education</b>   | <b>Learn to use technology in education and research, including the use of distance learning platforms and modern technological tools.</b>      |
| <b>Supervision and Mentoring</b>   | <b>Supporting and guiding new faculty members and encouraging them to achieve academic and professional success.</b>                            |
| <b>Academic outreach and partnerships</b>  | <b>Enhancing cooperation with other universities and institutions at a local and international level to exchange knowledge and experiences.</b> |
| <b>Evaluation and development of academic programs</b>   | <b>Participate in the development and improvement of curricula to meet the needs of the labor market and society.</b>                           |
| <b>Scientific publishing and contribution to research</b>  | <b>Encourage members to publish in high-impact scientific journals and participate in joint research projects.</b>                              |

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| <b>12- Acceptance Criteria</b> |
| Central                        |

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| <b>13 - The most important sources of information about the program</b>   |
| <ol style="list-style-type: none"> <li>1. The website of the College of Agriculture and the University of Maysan.</li> <li>2. Misan University Guide.</li> <li>3. Central Library.</li> <li>4. The most important books and sources for the plant protection department.</li> <li>5. The Internet.</li> </ol> |

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|--|--|
| <b>14 - Program Development Plan</b>               |  |
| <b>Condition Assessment</b>                        | <b>Conduct a thorough evaluation of the current livestock production program, including an analysis of academic performance, a review of curricula and programs, and a survey of student and faculty opinions.</b> |
| <b>Setting priorities and strategic objectives</b> | <b>Identify specific objectives to be achieved through the development process, such as improving the quality of education, promoting scientific research, and enhancing interaction with</b>                      |

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|  | <b>industry.</b>  |
| <b>Curriculum development and updating</b>           | <b>Redesign and develop curricula to ensure they cover the latest knowledge and developments in livestock production.</b>   |
| <b>Promote research and innovation</b>               | <b>Provide support for student and faculty research, and promote research projects that contribute to the development of sustainable agricultural practices and innovation in livestock production.</b> |
| <b>Enhance interaction with industry and society</b> | <b>Develop strategic partnerships with livestock production industries and the local community to enhance applied learning and training opportunities on the ground.</b>                                |
| <b>Developing the skills of the teaching staff</b>   | <b>Provide training opportunities and workshops for faculty to improve teaching, research and management skills.</b>  |
| <b>Evaluation and monitoring: * *</b>                | <b>Establish a continuous system for evaluating program performance and following up on the achievement of strategic objectives, making adjustments where necessary to improve performance.</b>         |
| <b>Promotion and marketing</b>                       | <b>Develop marketing strategies to attract potential students and enhance the reputation of the academic program at the industry and community level.</b>   |
| <b>EXTERNAL EVALUATION</b>                           | <b>Seeking recognized academic accreditations to ensure the quality and professional standards of the livestock production program.</b>   |

## Program Skills Outline

|            |             |                                 |                   | Required program Learning outcomes |    |    |    |        |    |    |    |        |    |    |    |                |    |    |    |   |
|------------|-------------|---------------------------------|-------------------|------------------------------------|----|----|----|--------|----|----|----|--------|----|----|----|----------------|----|----|----|---|
| Year/Level | Course Code | Course Name                     | Basic or optional | Knowledge Objectives               |    |    |    | Skills |    |    |    | Ethics |    |    |    | General skills |    |    |    |   |
|            |             |                                 |                   | A1                                 | A2 | A3 | A4 | B1     | B2 | B3 | B4 | C1     | C2 | C3 | C4 | D1             | D2 | D3 | 4D |   |
| 1st level  | PRPP151     | Principles of Plant Protection  | Basic             | ✓                                  | ✓  | ✓  |    |        |    | ✓  | ✓  | ✓      | ✓  |    |    | ✓              | ✓  |    |    |   |
|            | PRPO152     | Principles of Poultry           | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | PRAP153     | Principles of Animal Production | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | PLSU154     | Plane Surveying                 | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | PRFI155     | Principles of Field Crops       | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | PRSS156     | Principles of Soil Science      | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | GEZO157     | Zoology                         | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |
|            | MATH159     | Mathematics                     | Basic             | ✓                                  | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓      | ✓  | ✓  | ✓  | ✓              | ✓  | ✓  | ✓  | ✓ |

|                  |                 |                                     |              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|-----------------|-------------------------------------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                  | <b>PRST159</b>  | <b>Principles of Statistics</b>     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>COMA101</b>  | <b>Computer Applications /1</b>     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>COMA102</b>  | <b>Computer Applications /2</b>     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ORCH162</b>  | <b>Organic chemistry</b>            | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ANCH163</b>  | <b>Analytical Chemistry</b>         | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| <b>2nd level</b> | <b>PRPD240</b>  | <b>Principles of dairy science</b>  | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ARAL204</b>  | <b>Arabic Language /2</b>           | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>BACR206</b>  | <b>AL Baath Crimes</b>              | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ENGL205</b>  | <b>English Language /2</b>          | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>COMA201</b>  | <b>Computer Applications /3</b>     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>GENT 242</b> | <b>Genetics</b>                     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>PRHS243</b>  | <b>Principles of Horticulture</b>   | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>PRIC244</b>  | <b>Principles of Ichthyology</b>    | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>FIPR245</b>  | <b>Fish Breeding and production</b> | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

|                  |                |   |              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|----------------|---|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                  | <b>FOCR246</b> | <b>Fodder and pasture crops</b>             | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>PRAC247</b> | <b>Principles of Agriculture Economics</b>  | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>PRAG248</b> | <b>Principles of agricultural extension</b> | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ANME249</b> | <b>Animal production mechanization</b>      | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| <b>3rd level</b> | <b>ANNU314</b> | <b>Animal Nutrition</b>                     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>POTE315</b> | <b>Poultry Products Technology</b>          | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>POPH316</b> | <b>Physiology Poultry</b>                   | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>REPH317</b> | <b>Reproductive Physiology</b>              | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>FERA321</b> | <b>Feed and Rations</b>                     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ANPH319</b> | <b>Animal Physiology</b>                    | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>MEIN318</b> | <b>Medical and Veterinary Insects</b>       | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ANBE320</b> | <b>Animal Environment and Behavior</b>      | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |



|                  |                |   |              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------|----------------|---|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                  | <b>ANEC321</b> | <b>Economics of Animal Production</b>     | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ANDI323</b> | <b>Animal diseases</b>                    | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>HAMA322</b> | <b>Hatching and Hatches Management</b>    | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>DEAE319</b> | <b>Design and Analysis of Experiments</b> | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| <b>4th level</b> | <b>POPR441</b> | <b>Poultry Management and Production</b>  | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>BUPR442</b> | <b>Buffalo production</b>                 | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>SHPR443</b> | <b>Sheep and Goats Production</b>         | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>ENGL401</b> | <b>English</b>                            | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>PONU445</b> | <b>Poultry Nutrition</b>                  | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>GRPR439</b> | <b>Graduation Project/1</b>               | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>GRPR440</b> | <b>Graduation Project/2</b>               | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>MEPR446</b> | <b>Meat Production</b>                    | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|                  | <b>MESC447</b> | <b>Meat Science</b>                       | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

|  |                |                          |              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|----------------|--------------------------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | <b>CAPR448</b> | <b>Cattle Production</b> | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | <b>MOBI449</b> | <b>Molecular Biology</b> | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | <b>PODI450</b> | <b>Poultry diseases</b>  | <b>Basic</b> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

### Course Description Form

| <b>1. Course Name:</b>   |                                   |  |                                    |  |                   |
|--|-----------------------------------|--|------------------------------------|--|-------------------|
| Organic Chemistry  |                                   |  |                                    |  |                   |
| <b>2. Course Code:</b>   |                                   |  |                                    |  |                   |
| ORCH162  |                                   |  |                                    |  |                   |
| <b>3. Semester / Year:</b>   |                                   |  |                                    |  |                   |
| The Second spring course / First year                                      |                                   |  |                                    |  |                   |
| <b>4. Description Preparation Date:</b>                                    |                                   |  |                                    |  |                   |
|  |                                   |  |                                    |  |                   |
| <b>5. Forms of Attendance:</b>   |                                   |  |                                    |  |                   |
| Mandatory (Theoretical / Practical)  |                                   |  |                                    |  |                   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b>       |                                   |  |                                    |  |                   |
|  |                                   |  |                                    |  |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b> |                                   |  |                                    |  |                   |
| Name: Ayat Jawdat Kathem   |                                   |  | Email: ayat.jawdat@uobasrah.edu.iq |  |                   |
| <b>8. Course Objectives</b>  |                                   |  |                                    |  |                   |
| Course Objectives  |                                   | Definition the student to Organic chemistry  |                                    |  |                   |
| <b>9. Teaching and Learning Strategies</b>                                 |                                   |  |                                    |  |                   |
| Strategies   |                                   | Theoretical lectures<br>Use the Curriculum book<br>Use the blackboard                                  |                                    |  |                   |
| <b>10. Course Structure</b>  |                                   |  |                                    |  |                   |
| Week   | Hours                             | Required Learning Outcomes   | Unit or subject name               | Learning method  | Evaluation method |
| 1  | 2 theoretical<br>+<br>3 Practical | Definition the student to Organic chemistry, Properties of the element carbon, Types of chemical bonds | Introduction of Organic Chemistry  | Using theoretical lectures and using the blackboard structures | quiz              |
| 2  | 2 theoretical<br>+<br>3 Practical | Definition the student to Hybridization  | Introduction of Organic Chemistry  | Using theoretical lectures and using the blackboard structures | quiz              |
| 3  | 2 theoretical<br>+<br>3 Practical | Definition the student to Alkanes , Name them , isomers, physical and chemical properties              | Saturated Hydrocarbons 'Alkanes'   | Using theoretical lectures and using the blackboard structures | quiz              |
| 4  | 2 theoretical<br>+<br>3 Practical | Preparation of alkanes, cycloalkanes   | Saturated Hydrocarbons 'Alkanes'   | Using theoretical lectures and using the blackboard            | quiz              |

|    |                                   |  |                                    |  |      |
|----|-----------------------------------|--|------------------------------------|--|------|
|    |                                   |  |                                    | structures   |      |
| 5  | 2 theoretical<br>+<br>3 Practical | Definition the student to Alkenes , Name them , isomers, physical and chemical properties    | unSaturated Hydrocarbons 'Alkenes' | Using theoretical lectures and using the blackboard structures | quiz |
| 6  | 2 theoretical<br>+<br>3 Practical | Preparation of alkenes   | unSaturated Hydrocarbons 'Alkenes' | Using theoretical lectures and using the blackboard structures | quiz |
| 7  | 2 theoretical<br>+<br>3 Practical | Definition the student to Dienes , name and preparation them                                 | unSaturated Hydrocarbons 'Alkenes' | Using theoretical lectures and using the blackboard structures | quiz |
| 8  | 2 theoretical<br>+<br>3 Practical | Definition the student to Alkynes , Name them , physical and chemical properties             | unSaturated Hydrocarbons 'AlKynes' | Using theoretical lectures and using the blackboard structures | quiz |
| 9  | 2 theoretical<br>+<br>3 Practical | Preparation of alkynes   | unSaturated Hydrocarbons 'AlKynes' | Using theoretical lectures and using the blackboard structures | quiz |
| 10 | 2 theoretical<br>+<br>3 Practical | Definition the student to Aromatic Comopounds , Name them , physical and chemical properties | Aromatic Comopounds                | Using theoretical lectures and using the blackboard structures | quiz |

### 11. Course Evaluation

The theoretical part (30) marks:  
Written exam (25) marks + quiz exams (5) marks.  
Practical part (20) marks:  
The first month: a written exam (20 marks).

### 12. Learning and Teaching Resources

|  |  |
|--|--|
| Required textbooks (curricular books, if any)                      | Introduction of Organic Chemistry<br>Dr. Fadel Suleiman Kammouna |
| Main references (sources)  |  |
| Recommended books and references (scientific journals, reports...) |  |
| Electronic References, Websites                                    |  |

### Description of the academic program

| <b>Course name: Computer basics and office applications/1</b>   |       |                                   |  |  |  |
|---|-------|-----------------------------------|--|--|--|
| <b>Course code</b>  |       |                                   |  |  |  |
| <b>COMA101</b>  |       |                                   |  |  |  |
| <b>Semester/year :Spring Semester/year2024</b>  |       |                                   |  |  |  |
| <b>Date this description was prepared: 10/3/2024</b>  |       |                                   |  |  |  |
| <b>Available forms of attendance are in person</b>  |       |                                   |  |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>   |       |                                   |  |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>  |       |                                   |  |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>   |       |                                   | <b>Name : ABBAS LUAIBI OBAID</b>   |  |  |
| <b>Module Aims</b>  |       |                                   |  |  |  |
| Introducing the student to the basics of computers and types of computers Its classification, operating systems and objectives. As for the goals of the practical side It is to provide the student with skills in using operating and application programs and how to maintain computer security.  |       |                                   |  |  |  |
| <b>Teaching and learning strategies</b>   |       |                                   |  |  |  |
| 1- Explanation, clarification, and honing general and qualifying skills<br>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.<br>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.<br>4-Practical lessons in the laboratory<br>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development. |       |                                   |  |  |  |
| <b>Course structure</b>   |       |                                   |  |  |  |
| Week  | hours | required learning outcomes        | Name of the unit or topic  | Learning method  | Evaluation method                          |
| 1+2   | 4     | Chapter One:<br>Computer Basics   | <b>Chapter One:<br/>Computer Basics</b><br>1. The development of computer generations<br>2. Electronic computer<br>3. Data and information<br>4. Computer features<br>5. Areas of computer use | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 3+4   | 4     | Chapter One:<br>Computer Basics 1 | 1. Computer components<br>2. Types of computers<br>3. Classification of  | Practical lectures + direct presentation methods +                         | Daily, monthly and final tests and reports |

|       |   |   | computers   | dialogue and discussion  |  |
|-------|---|---|---|--|--|
| 5+6   | 4 | Chapter Two:<br>Computer components                         | Chapter Two:<br>Computer components<br>1. Computer components<br>2. The physical parts of the computer<br>3. Input devices<br>4. Output devices<br>5. Computer box  | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 7+8   | 4 | Chapter Two:<br>Computer components                         | 1. Software entity<br>2. Number systems<br>3. Your personal computer<br>4. Computer platform<br>5. Factors that must be taken into consideration when purchasing a computer   | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 9+10  | 4 | Chapter Three<br>(Computer security and licensing programs) | Chapter III<br>(Computer security and licensing programs)<br>1. Ethics of the electronic world<br>2. Forms of abuses in the world<br>Electronic<br>3. Computer security<br>4. Computer privacy<br>5. Computer software licenses<br>6. Types of licenses<br>7. Intellectual property | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 11+12 | 4 | Chapter Three<br>(Computer security and licensing programs) | 1. Electronic hacking<br>2. Types of electronic hacking<br>3. Sources of hacking<br>Electronic<br>4. The most security risks widespread<br>5. Malicious software<br>6. Computer viruses<br>7. Damages resulting from Viruses<br>8. Components of                                    | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|   |   |   |  |   |   |
|---|---|---|--|---|---|
|   |   |   | <b>viruses</b><br><b>9. Types of viruses</b><br><b>10. Necessary steps for protection</b><br><b>From viruses</b><br><b>11. Computer damage</b><br><b>On human health</b>   |   |   |
| 13+14   | 4 | the fourth chapter<br>Operating Systems | <b>the fourth chapter</b><br><b>Operating Systems</b><br><b>1. Definition of the operating system</b><br><b>2. Operating system functions</b><br><b>3. Objectives of the operating system</b><br><b>4. Operating system classification</b><br><b>5. Examples of some operating systems</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| 15  | 4 | the fourth chapter<br>Operating Systems | <b>1.Windows 7 operating system</b><br><b>2.Windows 7 installation requirements</b><br><b>3.Windows 7 features</b><br><b>4. Surface components</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc</b> |   |   |  |   |   |
| <b>Learning and teaching resources</b>  |   |   |  |   |   |
| <b>Required textbooks (methodology, book four)</b>  |   |   | <b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |   |   |
| <b>Main references (sources)</b>  |   |   | <b>1- Internet Ethics - A. M. Alawi Hind - Al-Shabsi Arab University Center</b><br><b>2- Ethics of dealing with technical and communication resources - Dr. Hussein bin Saeed bin Saif</b><br><b>3- Ethics of the virtual world - Dr. Louay Al-Zoubi 2013</b>  |   |   |
| <b>Recommended supporting books and references (scientific journals, reports....)</b>   |   |   |  |   |   |
| <b>Electronic references, Internet sites</b>  |   |   | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b> |   |   |

|  |   |
|--|---|
|  | Real-time communication protocols in the Internet -<br>.(RTP SIP), World of Technology website<br>ARPANET logical map,<br>.http://russbellew.com/Documents/Arpanet_sep_1974 |
|--|---|

### Description of the academic program

| <b>Course name: Computer basics and office applications/2</b>   |              |   |                                  |  |  |
|---|--------------|---|----------------------------------|--|--|
| <b>Course code</b>  |              |   |                                  |  |  |
| COMA102   |              |   |                                  |  |  |
| <b>Semester/year :Spring Semester/year2024</b>  |              |   |                                  |  |  |
| <b>Date this description was prepared: 10/3/2024</b>  |              |   |                                  |  |  |
| <b>Available forms of attendance are in person</b>  |              |   |                                  |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>   |              |   |                                  |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>  |              |   |                                  |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>   |              |   | <b>Name : ABBAS LUAIBI OBAID</b> |  |  |
| <b>Module Aims</b>  |              |   |                                  |  |  |
| 1- Guiding the student how to use the computer in a manner compatible with his cultural level<br>2- Directing the student how to deal with social sites   |              |   |                                  |  |  |
| <b>Teaching and learning strategies</b>   |              |   |                                  |  |  |
| 1- Explanation, clarification, and honing general and qualifying skills<br>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.<br>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.<br>4-Practical lessons in the laboratory<br>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development. |              |   |                                  |  |  |
| <b>Course structure</b>   |              |   |                                  |  |  |
| <b>Week</b>   | <b>hours</b> | <b>required learning outcomes</b>   | <b>Name of the unit or topic</b> | <b>Learning method</b>   | <b>Evaluation method</b>                   |
| 1+2   | 4            | Chapter One:<br>Operating the Word program<br>2010 File Burning,<br>Program Interfaces<br>Tapes Home tab, group<br>Horizon, line and paragraph...<br>Paragraph group and<br>Order group | word                             | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |



|     |   |  |             |  |  |
|-----|---|--|-------------|--|--|
|     |   | <p><b>And the View tab, the Views group</b><br/> <b>Documents, Show group, and Zoom group</b><br/> <b>Minimize the window, help instructions</b></p>   |             |  |  |
| 3+4 | 4 | <p><b>Chapter Two / Insert tab, Page group, and Table group, Table Tools tab, Table Design .....tab, and Skip tab</b><br/> <b>Graphics set, tools Image, set of links</b><br/> <b>Header and footer group, text group, and symbol group</b></p>  | word        | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |
| 5+6 | 3 | <p><b>Chapter Three/Additional tasks For Microsoft Word, the References and Tables of Contents tab, the Footnotes group, the References, Citations and Captions group, and the Indexing group....</b><br/> <b>Resource table set, tui b</b><br/> <b>Correspondence and group creation, merging</b><br/> <b>Correspondence</b><br/> <b>A group of writing and inserting fields</b><br/> <b>Preview results set</b><br/> <b>Review, proofread and language tab</b><br/> <b>And a comment group, a tracking group</b><br/> <b>Changes set and comparison set</b><br/> <b>And a protection group</b></p> | word        | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |
| 7   | 3 | <b>First exam</b>  |             |  |  |
| 8+9 | 4 | <p><b>Chapter Four</b><br/> <b>Powerpoint Run it</b><br/> <b>The program interfaces and the File tab</b><br/> <b>Open a presentation file and</b></p>  | Power point | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |

|   |   |   |             |   |   |
|---|---|---|-------------|---|---|
|   |   | save a new one Save a stock presentation as<br><b>Open and close an inventory presentation View and print slides on paper and the Home tab Page setup, theme and background set Slideshow tab h</b>   |             |   |   |
| 10+11   | 4 | <b>View tab and Views group Presentation and presentation set Main Show set and set Direction, color and grayscale Zoom in, zoom out and group Help window and instructions Chapter Five / Inserting and adding objects Motions, adding shapes and groups Drawing and investigating t</b>                           | Power point | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| 12+13   | 4 | <b>Inserts tab and Tables group And a set of photos Collection of illustrations and links A set of text and symbols Adding animations to slides and objects The Transitions tab and the Preview group A group is transferred to a slide Set the timing and movements tab A preview group and an animation group</b> | Power point | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| 14  | 4 | <b>Custom drivetrain and kit The timing is a comprehensive exam as a review and solution Book questions b</b>   | Power point | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| 15  | 3 | <b>Second exam</b>  |             |   |   |
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as</b> |   |   |             |   |   |

|   |  |
|---|--|
| <b>.daily preparation, daily, oral, monthly, written exams, reports, etc</b>          |  |
| <b>Learning and teaching resources</b>  |  |
| <b>Required textbooks (methodology, book four)</b>                                    | <b>Computer basics and office applications, Part Two/ Microsoft Office 2010</b><br><b>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |
| <b>Main references (sources)</b>  | <b>1.Microsoft PowerPoint 2010 Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis</b><br><b>3. PowerPoint 2010 AdvancedSlides, Animation and Layouts.</b><br><b>Stephen Moffat, The Mouse Training Company</b>  |
| <b>Recommended supporting books and references (scientific journals, reports....)</b> |  |
| <b>Electronic references, Internet sites</b>  | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b><br><b>Real-time communication protocols in the Internet - .(RTP SIP), World of Technology website</b><br><b>ARPANET logical map,</b><br><b>.<a href="http://russbellew.com/Documents/Arpanet_sep_1974">http://russbellew.com/Documents/Arpanet_sep_1974</a></b> |

### Course Description Form

|  |
|--|
| <b>1. Course Name: Principles of Field Crops - First Stage</b> |
| <b>2. Course Code:</b><br><b>PRFI155</b>                       |
| <b>3. Semester / Year: Second Semester</b>                     |
| <b>4. Description Preparation Date: 10/3/2024</b>              |

| <b>5. Forms of Attendance: Weekly</b>   |                          |   |  |                    |                   |
|---|--------------------------|---|--|--------------------|-------------------|
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours</b> |                          |   |  |                    |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>    |                          |   |  |                    |                   |
| Name: Ali Adnan Hassoun   |                          |   | Email: ali.adnan@uomisan.edu.iq  |                    |                   |
| <b>8. Course Objectives</b>   |                          |   |  |                    |                   |
| Course Objectives   |                          | <input type="checkbox"/> To study the main cereal crops in Iraq and the world.<br><input type="checkbox"/> To include the study of scientific methods used in cereal crop cultivation.<br><input type="checkbox"/> To study the suitable environmental conditions for each major field crop.<br><input type="checkbox"/> To identify the main methods to increase productivity for each field crop.<br><input type="checkbox"/> To study the problems related to pests and diseases of each field crop. |  |                    |                   |
| <b>9. Teaching and Learning Strategies</b>                                    |                          |   |  |                    |                   |
| Strategies  |                          | <input type="checkbox"/> The strategy is to familiarize the student with the main cereal crops prevalent in Iraq and the world.<br><input type="checkbox"/> To classify cereal crops according to their environmental needs.<br><input type="checkbox"/> To differentiate the importance of each crop based on usage.<br><input type="checkbox"/> To know the scientific methods used in planting each crop.<br><input type="checkbox"/> To evaluate each crop in terms of production and storage       |  |                    |                   |
| <b>10. Course Structure</b>   |                          |   |  |                    |                   |
| Week  | Hours                    | Required Learning Outcomes  | Unit or subject name   | Learning method    | Evaluation method |
| 1   | 2 theory,<br>3 practical | Principles of Field Crops   | Field crops: definition, evolution, origin   | Theory + Practical | Exams + Quizzes   |
| 2   | 2 theory,<br>3 practical | Principles of Field Crops   | Environmental factors in Iraq and the world and their relation to crop growth: location, terrain, climate, soil, water resources | Theory + Practical | Exams + Quizzes   |
| 3   | 2 theory,<br>3 practical | Principles of Field Crops   | Classification of field crops by life cycle  | Theory + Practical | Exams + Quizzes   |
| 4   | 2 theory,<br>3 practical | Principles of Field Crops   | Temperature: factors affecting temperature, its relation to crops, adaptation methods to mitigate temperature effects            | Theory + Practical | Exams + Quizzes   |
| 5   | 2 theory,<br>3 practical | Principles of Field Crops   | Light: importance of   | Theory + Practical | Exams + Quizzes   |

|   |                       |                           |   |                    |                 |
|---|-----------------------|---------------------------|---|--------------------|-----------------|
|   | practical             |                           | light for plants, plant adaptation to light, significance in seed germination                                 |                    |                 |
| 6   | 2 theory, 3 practical | Principles of Field Crops | Water: soil water content, crop water use efficiency, impact of water scarcity, water stress damage           | Theory + Practical | Exams + Quizzes |
| 7   | 2 theory, 3 practical | Principles of Field Crops | Monthly exam  | Theory + Practical | Exams + Quizzes |
| 8   | 2 theory, 3 practical | Principles of Field Crops | Soil: soil texture, structure, composition, organic matter, soil water and air, harmful salt effects on crops | Theory + Practical | Exams + Quizzes |
| 9   | 2 theory, 3 practical | Principles of Field Crops | Air: air pollution, wind effects on crop growth and soil  | Theory + Practical | Exams + Quizzes |
| 10  | 2 theory, 3 practical | Principles of Field Crops | Mutual benefit, competition, antagonism   | Theory + Practical | Exams + Quizzes |
| 11  | 2 theory, 3 practical | Principles of Field Crops | Seeds: importance, composition, maturity, dormancy, seed diagnosis and testing                                | Theory + Practical | Exams + Quizzes |
| 12  | 2 theory, 3 practical | Principles of Field Crops | Weeds and their control methods   | Theory + Practical | Exams + Quizzes |
| 13  | 2 theory, 3 practical | Principles of Field Crops | Crop rotations  | Theory + Practical | Exams + Quizzes |
| 14  | 2 theory, 3 practical | Principles of Field Crops | Major crops in the world and Iraq   | Theory + Practical | Exams + Quizzes |
| 15  | 2 theory, 3 practical | Principles of Field Crops | Monthly exam  | Theory + Practical | Exams + Quizzes |
| <b>11. Course Evaluation</b>  |                       |                           |   |                    |                 |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as |                       |                           |   |                    |                 |

|  |   |
|--|---|
| .homework, daily, oral, monthly, written exams, reports, etc       |   |
| <b>12. Learning and Teaching Resources</b>                         |   |
| Required textbooks (curricular books, if any)                      | Principles of Field Crops by Dr. Majid Mohsen Al-Ansari and Dr. Abdul Hamid Ahmed Al-Younis |
| Main references (sources)  | From textbooks, supplementary books, internet, and scientific research.                     |
| Recommended books and references (scientific journals, reports...) | Scientific journals in core specializations   |
| Electronic References, Websites                                    |   |

### Course Description Form

| <b>1. Course Name: Pasture management</b>                                    |                                 |  |                                 |                         |                   |
|--|---------------------------------|--|---------------------------------|-------------------------|-------------------|
| <b>2. Course Code:</b><br>PAMA451  |                                 |  |                                 |                         |                   |
| <b>3. Semester / Year: Fall Semester - First Course</b>                      |                                 |  |                                 |                         |                   |
| <b>4. Description Preparation Date: 10/3/2024</b>                            |                                 |  |                                 |                         |                   |
| <b>5. Forms of Attendance: weekly</b>  |                                 |  |                                 |                         |                   |
| <b>hours75 6. Number of Studying Hours (Total) / Number of Units (Total)</b> |                                 |  |                                 |                         |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>   |                                 |  |                                 |                         |                   |
| Name: Rasha Naji Abd   |                                 |  | Email: rashanaji@uomisan.edu.iq |                         |                   |
| <b>8. Course Objectives</b>  |                                 |  |                                 |                         |                   |
| Course Objectives  |                                 | <ul style="list-style-type: none"> <li>• The student is able to understand and comprehend the pasture management subject</li> <li>• Enables the student to know the most important ways to protect natural pastures</li> <li>• Familiarity with the most important types of natural pastures</li> <li>• • • Detection and knowledge of the palatability of pasture plants.</li> <li>• • • • The student can judge the quality of pasture plants</li> </ul> |                                 |                         |                   |
| <b>9. Teaching and Learning Strategies</b>                                   |                                 |  |                                 |                         |                   |
| Strategies   |                                 | The theoretical part of the lecture is interactive, brainstorming, • • • dialogue, and discussion. As for the practical part, there is an assignment to group work to reveal leadership skills, and assignment .of tasks and a report for each field visit   |                                 |                         |                   |
| <b>10. Course Structure</b>  |                                 |  |                                 |                         |                   |
| Week   | Hours                           | Required Learning Outcomes   | Unit or subject name            | Learning method         | Evaluation method |
| 1  | 2<br>Theoretical<br>Practical 3 | Pasture management   | The importance of pastures      | Theoretical + Practical | Exams + Cups      |
| 2  | 2<br>Theoretical<br>Practical 3 | Pasture management   | Vegetable .<br>clothing         | Theoretical + Practical | Exams + Cups      |

|    |                                 |                    |   |                         |              |
|----|---------------------------------|--------------------|---|-------------------------|--------------|
| 3  | 2<br>Theoretical<br>Practical 3 | Pasture management | Environmental factors and natural pastures  | Theoretical + Practical | Exams + Cups |
| 4  | 2<br>Theoretical<br>Practical 3 | Pasture management | Climatic factors.   | Theoretical + Practical | Exams + Cups |
| 5  | 2<br>Theoretical<br>Practical 3 | Pasture management | Pasture management and its relationship to soil and water conservation              | Theoretical + Practical | Exams + Cups |
| 6  | 2<br>Theoretical<br>Practical 3 | Pasture management | The role of . plants in maintaining soil and pastoral areas in Iraq and the world   | Theoretical + Practical | Exams + Cups |
| 7  | 2<br>Theoretical<br>Practical 3 | Pasture management | .Monthly exam   | Theoretical + Practical | Exams + Cups |
| 8  | 2<br>Theoretical<br>Practical 3 | Pasture management | Grazing and its various effects on fodder production, plant growth, and root growth | Theoretical + Practical | Exams + Cups |
| 9  | 2<br>Theoretical<br>Practical 3 | Pasture management | Animal load and its determining factors   | Theoretical + Practical | Exams + Cups |
| 10 | 2<br>Theoretical<br>Practical 3 | Pasture management | Exploitation of natural pastures  | Theoretical + Practical | Exams + Cups |
| 11 | 2<br>Theoretical<br>Practical 3 | Pasture management | Sources of exploitation of pastoral plants and the condition of natural pastures    | Theoretical + Practical | Exams + Cups |
| 12 | 2<br>Theoretical<br>Practical 3 | Pasture management | Livestock management and pasture redressing   | Theoretical + Practical | Exams + Cups |
| 13 | 2<br>Theoretical<br>Practical 3 | Pasture management | For natural and artificial coverings and harmful plants in pastures                 | Theoretical + Practical | Exams + Cups |
| 14 | 2<br>Theoretical<br>Practical 3 | Pasture management | Methods of taking pasture samples and estimating                                    | Theoretical + Practical | Exams + Cups |

|   |                                 |                    |   |                            |                 |
|---|---------------------------------|--------------------|---|----------------------------|-----------------|
|   |                                 |                    | pasture productivity  |                            |                 |
| 15  | 2<br>Theoretical<br>Practical 3 | Pasture management | Monthly exam  | Theoretical +<br>Practical | Exams +<br>Cups |
| <b>11. Course Evaluation</b>  |                                 |                    |   |                            |                 |
| Distribution of the grade out of 100 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |                                 |                    |   |                            |                 |
| <b>12. Learning and Teaching Resources</b>  |                                 |                    |   |                            |                 |
| Required textbooks (curricular books, if any)   |                                 |                    | Pasture management book<br>Al-Takriti<br>Ramadan, Taif Ahmed and Abbas Mahdi<br>Hassan (1976<br>(Al-Tamimi, Mahdi Abdel Latif (1987 |                            |                 |
| Main references (sources)   |                                 |                    |   |                            |                 |
| Recommended books and references (scientific journals, reports...)  |                                 |                    |   |                            |                 |
| Electronic References, Websites   |                                 |                    |   |                            |                 |

### Course Description Form

|  |  |
|--|--|
| <b>1- Course Name</b>  |  |
| Feed and Rations   |  |
| <b>2-CourseCode</b>  |  |
| FERA321  |  |
| <b>3-semester/ year</b>  |  |
| 2023 – 2024 (Spring Semester)  |  |
| <b>4-The date of preparing this description</b>                          |  |
| 25 April 2024  |  |
| <b>Available attendance forms</b>  |  |
|  |  |
| <b>6. Number of study hours (total) / number of units (total)</b>        |  |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |  |
| <b>Name of course administrator (if more than one name is mentioned)</b> |  |
| Name: M.Sc Ali Jassim Mohammed<br>Name : M.Sc Dounia Mohi Mohsen         |  |
| <b>Course Objectives</b>   |  |
| Objectives of the unit   | Preparing graduates who are able to know :<br>1- Theoretical and practical methods for the formation and synthesis of feed mixtures for agricultural animal husbandry projects.<br>2- Field work skills, and how to establish and prepare animal breeding projects.<br>3- Types of animal feed such as molasses and silag...<br>4- Feed mixtures, their types and importance in the productivity<br>5- Applying for external tests by local / regional / international bodies. |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |  |
| Strategy   | 1- Enabling students to analyze and think about topics related to the intellectual framework of fodder and relationships<br>2- Enabling students to analyze to identify non-traditional feed provided to animals   |



|                             |              | <p><b>3- Enabling students to analyze and think about how to provide environmental conditions that affect agricultural animals in terms of health and productivity .</b></p> <p><b>4- Enabling students to analyze to identify the best relationships prevailing in agricultural animal husbandry projects.</b></p> |  |   |                                    |
|-----------------------------|--------------|---|--|---|------------------------------------|
| <b>10. Course Structure</b> |              |   |  |   |                                    |
| <b>Fifteenth</b>            | <b>Hours</b> | <b>Intended Learning Outcomes</b>   | <b>Module / Course Name or</b>                                   | <b>Learning method</b>  | <b>Valuation Method</b>            |
| <b>1</b>                    | <b>5</b>     | <b>Introducing students to the appropriate leech for agricultural animals and its specifications</b>  | <b>Leech/Types of Leeches/ Specifications of Ideal Leeches</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>2</b>                    | <b>5</b>     | <b>Empowering students on how to form relationships to balance nutrients in them</b>  | <b>Steps for forming a bush</b>                                  | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>3</b>                    | <b>5</b>     | <b>Introducing students to the most important factors affecting the nutritional value of the leeches used in animal nutrition</b>   | <b>Factors affecting the nutritional value of feedstuffs</b>     | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>4</b>                    | <b>5</b>     | <b>Introducing students to the most important practical methods used to improve the nutritional value of feedstuffs used in feeding farm animals, especially ruminants</b>  | <b>Improving the nutritional value of low-quality feedstuffs</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>5</b>                    | <b>5</b>     |   | <b>Exam</b>  |   | <b>Daily and monthly</b>           |

|    |   |   |   |   |                             |
|----|---|---|---|---|-----------------------------|
|    |   |   |   |   | reports .                   |
| 6  | 5 | Introducing students to the sections and types of feed used in animal nutrition   | Classification of Fodder /Concentrate / Coarse                  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 7  | 5 | Introducing students to food additives, their types and their importance in terms of health and economic                | Food Additives  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 8  | 5 | Enabling students to manufacture and mix meals . as well as methods of preserving fodder                                | Feed Manufacturing/Silage Manufacturing/Threshing Manufacturing | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 9  | 5 | Introducing students to the most important points and general specifications that must be available in fodder materials | Feed Material Evaluation  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 10 | 5 |   | Exam  |   | Daily and monthly reports . |
| 11 | 5 | Introducing students to the animal's protein needs according to age and production                                      | Nutritional Needs/Protein Needs                                 | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 12 | 5 | Introducing students to the   | Energy needs/ needs for minerals and vitamins                   | 1- Theoretical  | Daily and monthly           |

|    |   |  |                                      |   |                             |
|----|---|--|--------------------------------------|---|-----------------------------|
|    |   | animal's needs of mineral elements and vitamins according to age and production .              |                                      | lectures.<br>2- Practical lectures. Displays Dialogue and Discussion                | reports .                   |
| 13 | 5 | Enabling students to know the needs of farm animals of nutrients and according to production . | Milk Cows Needs/Meat Cows Needs      | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 14 | 5 | Introducing students to the nutritional needs of sheep and goats.                              | Sheep Needs/Goat Needs               | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 15 | 5 | Enabling students to know the needs of work animals of nutrients                               | Business needs/wool production needs | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |

#### Course Evaluation

Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports ....

#### Learning and Teaching Resources

|   |   |
|---|---|
| Required textbooks (curricular books, if any) | McDonald, P., Edwards, R.A. and .1 Greenhalgh, J.F.D., 1987. Animal Nutrition. 4th Longman group (FE) Ltd. - Essex CM20 2JE, England.<br>Pond, W.G., Church D.C. and Pond, K.R., .2 1995. Basic Animal Nutrition and Feeding 4th Ed. John Wiley & Sons.             |
| Main References (Sources)                     | 1 animal-nutrition-7th-edition.pdf (wordpress.com)<br>2- Cultivation and use of fodder. Mahdi Abdul Latif Al-Tamimi .<br>3- Modern machines from the Internet and from specialized scientific fields and a magazine Agricultural Sciences - Iraq and the Library of |

|   |   |
|---|---|
|   | <b>Satisfaction .</b>   |
| <b>Recommended books and references (scientific journals, reports...)</b> | <b>animal-nutrition-7th-edition.pdf (wordpress.com)</b>                           |
| <b>E-References, Websites</b>   | <b>Agriculture   Free Full-Text   Animal Nutrition and Productions (mdpi.com)</b> |

### Course Description Form

|  |              |   |   |  |                             |
|--|--------------|---|---|--|-----------------------------|
| <b>1- Course Name</b>  |              |   |   |  |                             |
| Animal Nutrition   |              |   |   |  |                             |
| <b>2-CourseCode</b>  |              |   |   |  |                             |
| ANNU314  |              |   |   |  |                             |
| <b>3-semester/ year</b>  |              |   |   |  |                             |
| 2023 – 2024 (Fall Semester )   |              |   |   |  |                             |
| <b>4-The date of preparing this description</b>                          |              |   |   |  |                             |
| 25 April 2024  |              |   |   |  |                             |
| <b>Available attendance forms</b>  |              |   |   |  |                             |
|  |              |   |   |  |                             |
| <b>6. Number of study hours (total) / number of units (total)</b>        |              |   |   |  |                             |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |              |   |   |  |                             |
| <b>Name of course administrator (if more than one name is mentioned)</b> |              |   |   |  |                             |
| Name: Eng. Ali Jassim<br>Mohammed  |              |   |   |  |                             |
| <b>Course Objectives</b>   |              |   |   |  |                             |
| <b>Objectives of the unit</b>  |              | <b>Preparing graduates who are able to know :</b><br><b>1- How to digest, absorb and metabolize nutritional nutrients.</b><br><b>2- Field work skills, and how to establish and prepare animal breeding projects.</b><br><b>3- Types of animal feed such as molasses and silage...</b><br><b>5- The work of the digestive system in the animal .</b><br><b>5- Applying for external tests by local / regional / international bodies.</b> |   |  |                             |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |              |   |   |  |                             |
| <b>Strategy</b>  |              | <b>1- Enabling students to analyze and think about topics related to the intellectual framework of animal nutrition</b><br><b>2- Enabling students to analyze to identify the digestive system in simple and ruminant animals.</b><br><b>3- Enabling students to identify the main nutrients.</b><br><b>4- Enabling students to identify the structure of the body of animals and plants .</b>  |   |  |                             |
| <b>10. Course Structure</b>  |              |   |   |  |                             |
| <b>Fifteenth</b>   | <b>Hours</b> | <b>Intended Learning Outcomes</b>   | <b>Module / Course Name or</b>  | <b>Learning method</b>                   | <b>Valuation Method</b>     |
| 1  | 5            | Introducing students to the components of the animal and plant body and knowledge   | Food /Animal Body Composition/Plant Composition/Water Role and Needs in | 1- Theoretical lectures.<br>2- Practical | Daily and monthly reports . |

|          |          |   |  |   |                                    |
|----------|----------|---|--|---|------------------------------------|
|          |          | <b>of the main nutrients.</b>   | <b>Animal Body/Water Properties and Functions/ Energy .</b>  | <b>lectures. Displays Dialogue and Discussion</b>                                       |                                    |
| <b>2</b> | <b>5</b> | <b>Enabling students to know the digestive system and its work in ruminants</b>   | <b>Digestive processes in animals / digestive system /pseudo-ruminants / types of digestion / enzymes / qualities of enzymes /microbial digestion of carbohydrates /</b>   | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>3</b> | <b>5</b> | <b>Introducing students to the components of saliva, its work and its importance in ruminants</b>                             | <b>Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion</b>  | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>4</b> | <b>5</b> | <b>Introducing students to the components of saliva, its work and its importance in ruminants</b>                             | <b>Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion</b>  | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>5</b> | <b>5</b> | <b>Enabling students to know proteins, their properties, classification, enzymatic and microbial digestion and metabolism</b> | <b>Second:Proteins/ Classification of proteins/Amino acids/Properties of proteins in rumen/Enzymatic digestion of proteins/Third : Lipids Classification of lipids /Fat properties/ Digestion of lipids in rumen</b> |   | <b>Daily and monthly reports .</b> |
| <b>6</b> | <b>5</b> |   | <b>exam</b>  | <b>1- Theoretical lectures. 2- Practical lectures. Displays</b>                         | <b>Daily and monthly reports .</b> |

|           |          |   |   |   |                                    |
|-----------|----------|---|---|---|------------------------------------|
|           |          |   |   | <b>Dialogue and Discussion</b>  |                                    |
| <b>7</b>  | <b>5</b> | <b>Introducing students to inorganic elements and their importance in the life of the organism . As well as enabling students to know the animal's energy needs</b> | <b>Fourth: Inorganic elements/Essential or necessary inorganic elements/Fifth: Vitamins /Nutritional needs of various nutrients/First : Energy needs/Energy processing in the animal's body/ Total digested nutrients</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>8</b>  | <b>5</b> | <b>Enabling students to know the animal's protein needs</b>   | <b>Second: Protein Needs/Crude Protein/Real Protein/Biological Value/</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>Enabling students to know the types and numbers of microorganisms in the rumen of ruminants</b>  | <b>Microbiology in rumen / classification of bacteria/ nutrients needed by bacteria/cilia of rumen/other microorganisms</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> | <b>Introducing students to concentrated and coarse feed used in animal nutrition</b>  | <b>Feed and Feedstuffs/ First: Concentrated Feedstuffs/ Second :Coarse Feedstuffs</b>   |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> | <b>Enabling students to manufacture and mix meals . as well as methods of preserving fodder</b>   | <b>/ Type I: Green Coarse Feedstuffs / Type II :Silage/ Type III -Dry Coarse Feedstuffs /</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>12</b> | <b>5</b> |   | <b>exam</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue</b>                | <b>Daily and monthly reports .</b> |

|   |   |  |  |   |                             |
|---|---|--|--|---|-----------------------------|
|   |   |  |  | <b>and Discussion</b>   |                             |
| 13  | 5 | Introducing students to food additives, their types and their importance in terms of health and economic | Third: Food additives/ factors affecting the nutritional value of feedstuffs/nutritional problems related to the digestive tract of ruminants / bloating /acute indigestion/   | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 14  | 5 | Introducing students to the most important diseases that affect ruminants resulting from malnutrition .  | Simple indigestion/rumen acidity/milk fever/urea poisoning/ ketosis/rumen glut   | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 15  | 5 | Enabling students to know the types of pastures and how to exploit them                                  | Rangelands/Rangelands Types/Natural Rangeland Exploitation/ Overgrazing/Organized Grazing/Grazing Problems   | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| <b>Course Evaluation</b>  |   |  |  |   |                             |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |   |  |  |   |                             |
| <b>Learning and Teaching Resources</b>  |   |  |  |   |                             |
| Required textbooks (curricular books, if any)   |   |  | Feeding an animal . Translated by Saad Abdel Hussein Naji and Talal Youssef Boutros . Technical Institutes Foundation. 1985<br>Dietetics Written by Shaker Abdul Amir Al-Attar and Dr. Gamal Abdel Rahman Tawfiq 2014 . Faculty of Agriculture, University of Baghdad. |   |                             |
| Main References (Sources)   |   |  | 1 animal-nutrition-7th-edition.pdf (wordpress.com)<br>2- Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the library .  |   |                             |
| Recommended books and references (scientific journals, reports...)  |   |  | animal-nutrition-7th-edition.pdf (wordpress.com)   |   |                             |
| E-References, Websites  |   |  | Agriculture   Free Full-Text   Animal Nutrition and Productions (mdpi.com)   |   |                             |

## Course Description Form

| <b>1- Course Name</b>  |       |   |                         |   |                             |
|--|-------|---|-------------------------|---|-----------------------------|
| Reproductive Physiology  |       |   |                         |   |                             |
| <b>2-CourseCode</b>  |       |   |                         |   |                             |
| REPH317  |       |   |                         |   |                             |
| <b>3-semester/ year</b>  |       |   |                         |   |                             |
| 2023 – 2024 (Fall Semester )   |       |   |                         |   |                             |
| <b>4-The date of preparing this description</b>                          |       |   |                         |   |                             |
| 10/3/2024  |       |   |                         |   |                             |
| <b>Available attendance forms</b>  |       |   |                         |   |                             |
|  |       |   |                         |   |                             |
| <b>6. Number of study hours (total) / number of units (total)</b>        |       |   |                         |   |                             |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |       |   |                         |   |                             |
| <b>Name of course administrator (if more than one name is mentioned)</b> |       |   |                         |   |                             |
| Name: M.Sc Ali Jassim Mohammed   |       |   |                         |   |                             |
| <b>Course Objectives</b>   |       |   |                         |   |                             |
| <b>Objectives of the unit</b>  |       | <p>Preparing graduates who are able to know :</p> <ol style="list-style-type: none"> <li>1- Increasing the productivity of the animal from birth in theory and practice .</li> <li>2- Field work skills and how to establish and manage projects.</li> <li>3- The work of the reproductive system in the animal .</li> <li>4- Applying for external tests by local / regional / international bodies.</li> </ol>  |                         |   |                             |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |       |   |                         |   |                             |
| <b>Strategy</b>  |       | <ol style="list-style-type: none"> <li>1- Enabling students to analyze and think about topics related to the intellectual framework of reproductive philosophy</li> <li>2- Enabling students to analyze to identify the reproductive system in farm animals.</li> <li>3- Enabling students to analyze and think about topics related to providing appropriate environmental conditions for the stages of pregnancy and childbirth .</li> <li>4- Enabling students to obtain knowledge on how to use modern methods to raise the reproductive efficiency of animals .</li> </ol> |                         |   |                             |
| <b>10. Course Structure</b>  |       |   |                         |   |                             |
| Fifteenth  | Hours | Intended Learning Outcomes  | Module / Course Name or | Learning method   | Valuation Method            |
| 1  | 5     | The student should identify the male reproductive system, its anatomy , and its functions   | Reproductive Physiology | <ol style="list-style-type: none"> <li>1- Theoretical lectures.</li> <li>2- Practical lectures.</li> </ol> Displays Dialogue and Discussion | Daily and monthly reports . |



|   |   |   |                         |   |                             |
|---|---|---|-------------------------|---|-----------------------------|
| 2 | 5 | The student should know about the process of sperm formation  | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 3 | 5 | The student should know about the female reproductive system, its anatomy , and its functions   | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 4 | 5 | The student should be familiar with the process of egg formation  | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 5 | 5 |   | exam                    |   | Daily and monthly reports . |
| 6 | 5 | The student should identify the hormones regulating reproductive endocrine glands, hypothalamus , pituitary gland, pineal gland...etc.) | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 7 | 5 | The student learns about puberty and sexual maturity  | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue                | Daily and monthly reports . |

|           |          |   |                                |   |                                    |
|-----------|----------|---|--------------------------------|---|------------------------------------|
|           |          |   |                                | <b>and Discussion</b>   |                                    |
| <b>8</b>  | <b>5</b> | <b>The student should learn about the reproductive cycle in agricultural animals</b>                    | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>The student should know about the production of gametes (quanta) and transportation</b>              | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> | <b>The student should know about fertility and pregnancy</b>  | <b>Reproductive Physiology</b> |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> |   | <b>exam</b>                    | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>12</b> | <b>5</b> | <b>The student should know about pregnancy and childbirth</b>   | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>13</b> | <b>5</b> | <b>The student learns about artificial insemination (introduction , semen collection and artificial</b> | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.</b>                                  | <b>Daily and monthly reports .</b> |

|    |   |  |                         |   |                             |
|----|---|--|-------------------------|---|-----------------------------|
|    |   | insemination techniques)   |                         | Displays Dialogue and Discussion  |                             |
| 14 | 5 | The student should learn about managing and improving reproduction | Reproductive Physiology | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 15 | 5 |  | exam                    | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |

|   |  |
|---|--|
| <b>Course Evaluation</b>  |  |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |  |
| <b>Learning and Teaching Resources</b>  |  |
| Required textbooks (curricular books, if any)   | Physiology of Farm Animal Reproduction, University of Baghdad, 2011  |
| Main References (Sources)   | Physiology, Comparative Member Function Science, Friday Youth Foundation, 2009<br>A modern machine base from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the consensual library that is related to the material. |
| Recommended books and references (scientific journals, reports...)  |  |
| E-References, Websites  |  |

### Course Description Form

1. Course Name: Design and Analysis of Experiments – Third Stage

| <b>2. Course Code:</b>  |                          |   |                                    |                          |   |
|---|--------------------------|---|------------------------------------|--------------------------|---|
| DEAE319   |                          |   |                                    |                          |   |
| <b>3. Semester / Year: Semester-based – First Course</b>                      |                          |   |                                    |                          |   |
| <b>4. Description Preparation Date: 10/3/2024</b>                             |                          |   |                                    |                          |   |
| <b>5. Forms of Attendance: Weekly</b>   |                          |   |                                    |                          |   |
| <b>75 hours 6. Number of Studying Hours (Total) / Number of Units (Total)</b> |                          |   |                                    |                          |   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>    |                          |   |                                    |                          |   |
| Name: Ali Adnan Hassoni   |                          |   | Email: ali.adnan@uomisan.edu.iq    |                          |   |
| <b>8. Course Objectives</b>   |                          |   |                                    |                          |   |
| Course Objectives   |                          | Educate students on the fundamental principles of designing and analyzing experiments, emphasizing the importance of this subject in reinforcing the practical aspect of conducting scientific research. Students will learn about the main concepts of design such as experiments, experimental units, factors, treatments, replications, and experimental error, and how to choose the appropriate design for agricultural experiments to reach correct conclusions and decisions |                                    |                          |   |
| <b>9. Teaching and Learning Strategies</b>                                    |                          |   |                                    |                          |   |
| Strategies  |                          | The strategy is implemented through lectures, discussions, solving scientific and practical examples, daily and monthly exams, assignments, and brainstorming sessions.   |                                    |                          |   |
| <b>10. Course Structure</b>   |                          |   |                                    |                          |   |
| Week  | Hours                    | Required Learning Outcomes  | Unit or subject name               | Learning method          | Evaluation method   |
| 1   | 2 Theory,<br>3 Practical | Design of Completely Randomized Block Design (R.B.C.D)  | Design and Analysis of Experiments | Lectures and Discussions | Semester Exam, Daily Exam, Student Performance Evaluation, Homework |
| 2   | 2 Theory,<br>3 Practical | Significant differences according to the Least Significant  | Design and Analysis of Experiments | Lectures and Discussions |   |
| 3   | 2 Theory,<br>3 Practical | Estimation of missing data in R.B.C.D design  | Design and Analysis of Experiments | Lectures and Discussions |   |
| 4   | 2 Theory,<br>3 Practical | R.B.C.D design with more than one observation   | Design and Analysis of Experiments | Lectures and Discussions |   |
| 5   | 2 Theory,<br>3 Practical | Latin Square Design (L.S.D)   | Design and Analysis of Experiments | Lectures and Discussions |   |

|   |                                |   |   |                                 |  |  |
|---|--------------------------------|---|---|---------------------------------|--|--|
|   | <b>Practical</b>               |   |   |                                 | <b>Semester Exam, Daily Exam, Student Performance Evaluation, Homework</b> |  |
| 6   | 2<br>Theory,<br>3<br>Practical | <b>Dunnett's Comparison Test</b>                                      | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 7   | 2<br>Theory,<br>3<br>Practical | <b>Monthly Exam</b>   | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 8   | 2<br>Theory,<br>3<br>Practical | <b>Types of complex experiments and how to distinguish between</b>    | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 9   | 2<br>Theory,<br>3<br>Practical | <b>Factorial experiments with two factors in C.R.D design</b>         | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 10  | 2<br>Theory,<br>3<br>Practical | <b>Factorial experiments in R.B.C.D design</b>                        | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 11  | 2<br>Theory,<br>3<br>Practical | <b>Factorial experiments in Latin Square Design</b>                   | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 12  | 2<br>Theory,<br>3<br>Practical | <b>Monthly Exam</b>   | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 13  | 2<br>Theory,<br>3<br>Practical | <b>Split-plot experiments with two factors in C.R.D design</b>        | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 14  | 2<br>Theory,<br>3<br>Practical | <b>Split-plot experiments with two factors in R.B.C.D design</b>      | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| 15  | 2<br>Theory,<br>3<br>Practical | <b>Split-plot experiments with two factors in Latin Square Design</b> | <b>Design and Analysis of Experiments</b>   | <b>Lectures and Discussions</b> |  |  |
| <b>11. Course Evaluation</b>  |                                |   |   |                                 |  |  |
| <b>Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |                                |   |   |                                 |  |  |
| <b>12. Learning and Teaching Resources</b>  |                                |   |   |                                 |  |  |
| <b>Required textbooks (curricular books, if any)</b>  |                                |   | <b>"Design and Analysis of Agricultural Experiments" by Dr. Khasha Mahmoud Al-Rawi.</b> |                                 |  |  |
| <b>Main references (sources)</b>  |                                |   | <b>From textbooks, supplementary books, the internet, and scientific research</b>       |                                 |  |  |

|  |   |
|--|---|
| Recommended books and references (scientific journals, reports...) | "Design and Analysis of Agricultural Experiments" |
| Electronic References, Websites                                    |   |

### Course Description Form

| <b>1. Course Name: Principle of Horticulture</b>   |       |  |   |   |                   |
|--|-------|--|---|---|-------------------|
| <b>2. Course Code:</b><br>PRHS243  |       |  |   |   |                   |
| <b>3. Semester / Year: 2023- 2024</b>  |       |  |   |   |                   |
| <b>4. Description Preparation Date: 10/3/2024</b>  |       |  |   |   |                   |
| <b>5. Forms of Attendance:</b>   |       |  |   |   |                   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b><br>hours (2 theoretical + 3 practical) *15 weeks 75 |       |  |   |   |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b><br>Name: Dunya Mohi Mohsin                    |       |  |   |   |                   |
| <b>8. Course Objectives</b>  |       |  |   |   |                   |
| <b>Course Objectives</b>   |       | <ul style="list-style-type: none"> <li>-The student must be familiar with the science of fruits and palm trees and methods of their reproduction</li> <li>-The student must be familiar with the science of vegetable crops and their production methods</li> <li>-The student must be familiar with the science of ornamental plants and methods of their propagation</li> <li>-The student must be familiar with the science of garden engineering and methods of its implementation</li> <li>-He has knowledge of methods of breeding and improving horticultural plants</li> <li>- He has knowledge of other sciences, such as physiology, fruit storage, anatomy, and plant classification</li> </ul> |   |   |                   |
| <b>9. Teaching and Learning Strategies</b>   |       |  |   |   |                   |
| <b>Strategies</b>  |       | <ul style="list-style-type: none"> <li>-Explanation and clarification using methods</li> <li>-Direct dialogue with students by asking</li> <li>-Student collections, homework, and writing reports</li> <li>-Practical lessons in agricultural fields</li> <li>-Scientific trips to learn about the most important fodder crops grown in Iraq</li> <li>-Self-learning method</li> </ul>  |   |   |                   |
| <b>10. Course Structure</b>  |       |  |   |   |                   |
| Week   | Hours | Required Learning Outcomes   | Unit or subject name                        | Learning method                             | Evaluation method |
| 1  | 5     | Knowledge of the history and development of horticulture   | Introduction to the history of horticulture | Lecture, discussion, reports, laboratories, |                   |

|           |          |  |   |  |  |
|-----------|----------|--|---|--|--|
|           |          |  |   | <b>practical in the fields</b>   |  |
| <b>2</b>  | <b>5</b> | <b>Learn how horticultural crops reproduce</b>   | <b>Methods of reproduction of horticultural crops</b> | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>3</b>  | <b>5</b> | <b>Identifying deciduous fruit trees</b>   | <b>Types of deciduous fruit trees</b>                 | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>4</b>  | <b>5</b> | <b>Identify evergreen trees</b>  | <b>Types of evergreen trees</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>5</b>  | <b>5</b> | <b>Learn about summer vegetable crops</b>  | <b>Different families of plants</b>                   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>6</b>  | <b>5</b> | <b>Identify winter vegetable crops</b>   | <b>Different families of plants</b>                   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>7</b>  | <b>5</b> | <b>Learn about different summer ornamental plants</b>  | <b>Summer ornamental plants</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>8</b>  | <b>5</b> | <b>Learn about different winter ornamental plants</b>  | <b>winter ornamental plants</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>9</b>  | <b>5</b> | <b>To learn how to divide fruit trees according to environmental conditions as well as according to plant families</b> | <b>Fruit trees tropical and subtropical regions</b>   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>10</b> | <b>5</b> | <b>The student learns how</b>  | <b>Plant families of</b>                              | <b>Lecture,</b>  |  |

|   |          |   |  |  |  |
|---|----------|---|--|--|--|
|   |          | <b>to divide vegetable crops according to their families</b>                                      | <b>vegetable crops</b>   | <b>discussion, reports, laboratories, practical in the fields</b>  |  |
| <b>11</b>   | <b>5</b> | <b>The student learns about ornamental plants and methods of propagating and cultivating them</b> | <b>Ornamental plants and methods of propagation and cultivation</b>            | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>12</b>   | <b>5</b> | <b>The student learns how to create a plantation and multiply horticultural plants</b>            | <b>Establishing plantation and methods of propagating horticultural plants</b> | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>13</b>   | <b>5</b> | <b>The student will learn how to establish orchards and plant various fruit trees</b>             | <b>Establishing orchards and learning about tree pollination methods</b>       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>14</b>   | <b>5</b> | <b>The student learns to grow and propagate medicinal plants</b>                                  | <b>Cultivation and propagation of medicinal and aromatic plants</b>            | <b>Lecture, discussion, reports, laboratories, practical in the fields<br/>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>15</b>   | <b>5</b> | <b>Remind students of the summary of previous topics</b>  | <b>A quick review of previous topics</b>                                       | <b>Lecture, discussion, reports, laboratories, practical in the fields<br/>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>11. Course Evaluation</b>  |          |   |  |  |  |
| <b>Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |          |   |  |  |  |



| <b>12. Learning and Teaching Resources</b>                                |   |
|---|---|
| <b>Required textbooks (curricular books, if any)</b>                      | <b>Principles of horticulture / Dr. Jabbar Abbas Al-Dujaili, Dr. Iman Jaber Abdel Rasoul, Nisreen Khalil Abdel Aziz<br/>Principles of horticulture/Karim Saleh Abdul and Saad Zaghoul Al-Najjar</b> |
| <b>Main references (sources)</b>  | <b>Ornamental plants in Iraq/Dr. Sami and Nisreen Al-Najjar<br/>Deciduous fruit/Dr. Alaa Abdul Razzaq Al-Jumaili and others</b>   |
| <b>Recommended books and references (scientific journals, reports...)</b> | <b>Propagation of horticultural plants/Dr. Muhammad Abbas Salman<br/>Vegetable production/Dr. Adnan Nasser is wanted and others</b>   |
| <b>Electronic References, Websites</b>                                    |   |

#### Description of the academic program

|  |                                  |
|--|----------------------------------|
| <b>Course name: Computer basics and office applications/3</b>  |                                  |
| <b>COMA202</b>   |                                  |
| <b>Course code</b>   |                                  |
|  |                                  |
| <b>Semester/year :Spring Semester/year2024</b>   |                                  |
|  |                                  |
| <b>Date this description was prepared: 2/1/2024</b>  |                                  |
|  |                                  |
| <b>Available forms of attendance are in person</b>   |                                  |
|  |                                  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>  |                                  |
|  |                                  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>   |                                  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>  | <b>Name : ABBAS LUAIBI OBAID</b> |
| <b>Module Aims</b>   |                                  |
| <b>Explaining the basics of Excel<br/>Explain how to use equations and functions in Excel -<br/>Explaining how to prepare financial statements in Excel</b>  |                                  |
| <b>Teaching and learning strategies</b>  |                                  |
| <b>1- Explanation, clarification, and honing general and qualifying skills<br/>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.<br/>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.<br/>4-Practical lessons in the laboratory<br/>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.</b> |                                  |
| <b>Course structure</b>  |                                  |
|  |                                  |

| <b>Week</b> | <b>hours</b> | <b>required learning outcomes</b>   | <b>Name of the unit or topic</b> | <b>Learning method</b>   | <b>Evaluation method</b>                   |
|-------------|--------------|---|----------------------------------|--|--|
| 1+2         | 4            | Identify the program with explanation For bars, effective value and range<br>Cells, columns and rows<br>Know the MMV menu commands, which are save Save as mf, open and dark MMV.....etc  | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 3+4         | 4            | Know the page menu commands<br>The main ones are clipboard and font<br>Coordinating, merging and centering cells knowledge of number formatting and page menu commands<br>Home  | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 5+6         | 3            | Knowledge of styles, including formatting tables and cells, home page menu commands<br>Knowledge of editing, including smise Digital, linear and depth scanning<br>Formats and page menu commands Home<br>Knowledge of drawer list commands. Drawer list commands (Insert ) | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 7           | 3            | First exam  |                                  |  |  |
| 8+9         | 4            | Introduction to charts, their types, and how to create them and change their location. Charts<br>Knowledge of ready-made functions and how to include, use and verify them  | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 10+11       | 4            | Knowledge of sorting and filtering data and how to arrange data in ascending and descending order (data list commands).<br>Know how to put a password<br>For lush and how to hide and show  | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|   |          |  |              |   |   |
|---|----------|--|--------------|---|---|
|   |          | <b>Depths as well as presentation methods</b>  |              |   |   |
| <b>12+13</b>  | <b>4</b> | <b>Paper and handle formula bar<br/>Freezing rows and columns is a review list (Reviw) and view (View) commands Knowledge of the rules for writing mathematical formulas.<br/>Introduction to mathematical formulas</b>  | <b>Excel</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>14</b>   | <b>4</b> | <b>Knowing how to prepare financial statements and an introduction to operations<br/>Arithmetic</b>  | <b>Excel</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>15</b>   | <b>3</b> | <b>Second exam</b>   |              |   |   |
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc</b> |          |  |              |   |   |
| <b>Learning and teaching resources</b>  |          |  |              |   |   |
| <b>Required textbooks (methodology, book four)</b>  |          | <b>Computer basics and office applications, Part Third/ Microsoft Office 2010<br/>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed<br/>2-Professor Dr. Ziad Muhammad Abboud<br/>3-Professor Dr. Muhammad Nasser Al-Tarfi<br/>4-Professor Dr. Safaa Abbas Al-Mamouri<br/>2- International Information Network, the Internet</b>   |              |   |   |
| <b>Main references (sources)</b>  |          | <b>1.Microsoft EXCEEL 2010 Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis<br/>Stephen Moffat, The Mouse Training Company</b>  |              |   |   |
| <b>Recommended supporting books and references (scientific journals, reports....)</b>   |          |  |              |   |   |
| <b>Electronic references, Internet sites</b>  |          | <b>Library Genesis<br/>:websites<br/>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a><br/><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security<br/><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet<br/>Real-time communication protocols in the Internet -</b> |              |   |   |

|  |  |
|--|--|
|  | .(RTP SIP), World of Technology website<br>ARPANET logical map,<br><a href="http://russbellew.com/Documents/Arpanet_sep_1974">http://russbellew.com/Documents/Arpanet_sep_1974</a> |
|--|--|

### Description of the academic program

|  |              |  |   |  |  |
|--|--------------|--|---|--|--|
| <b>Course name: Computer basics and office applications/4</b>  |              |  |   |  |  |
| <b>Course code</b>   |              |  |   |  |  |
| <b>COMA202</b>   |              |  |   |  |  |
| <b>Semester/year :Spring Semester/year2024</b>   |              |  |   |  |  |
| <b>Date this description was prepared: 10/3/2024</b>   |              |  |   |  |  |
| <b>Available forms of attendance are in person</b>   |              |  |   |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>  |              |  |   |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>   |              |  |   |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>  |              |  | <b>Name : ABBAS LUAIBI OBAID</b>                      |  |  |
| <b>Module Aims</b>   |              |  |   |  |  |
| <ul style="list-style-type: none"> <li>• For the student to become familiar with the history of computer networks and the Internet</li> <li>• Introducing the student to the importance of computer networks and the Internet</li> <li>• Introducing the student to the basics of computer networks and the Internet</li> <li>• Introducing the student to browsing and searching on the Internet</li> <li>• Introducing the student to electronic messages and conversations</li> <li>• Introducing the student to the ethics of the Internet world</li> </ul>  |              |  |   |  |  |
| <b>Teaching and learning strategies</b>  |              |  |   |  |  |
| <p>1- Explanation, clarification, and honing general and qualifying skills</p> <p>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.</p> <p>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.</p> <p>4-Practical lessons in the laboratory</p> <p>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.</p> |              |  |   |  |  |
| <b>Course structure</b>  |              |  |   |  |  |
| <b>Week</b>  | <b>hours</b> | <b>required learning outcomes</b>  | <b>Name of the unit or topic</b>                      | <b>Learning method</b>   | <b>Evaluation method</b>                   |
| 1+2  | 4            | Chapter One:<br>Introduction to networks,<br>definition of computer networks, benefits of computer | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|     |   |  |   |  |  |
|-----|---|--|---|--|--|
|     |   | <p><b>networks</b><br/> <b>Types of computer networks, classification of networks (according to connection method, according to engineering design, according to type of service, according to network scope)</b></p>  |   |  |  |
| 3+4 | 4 | <p><b>The World Wide Web (ways to connect to the Internet, Internet protocols, device addresses (IP), website addresses (web pages)...) Data transfer rate / Internet and Extranet / Cloud computing / Cloud computing applications, components of cloud computing, types of cloud computing Benefits and disadvantages of cloud computing</b></p> | <p><b>Basics of networks and office applications, Part Four</b></p> | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |
| 5+6 | 3 | <p><b>Chapter Two (Browsing and searching the Internet, web browsers, the Internet Explorer browser, components of the Internet Explorer interface) Additional tasks in the browser, searching on the Internet, using search engines, advanced search, searching by customizing the</b></p>  | <p><b>Basics of networks and office applications, Part Four</b></p> | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |

|       |   |  |   |  |  |
|-------|---|--|---|--|--|
|       |   | search field, types of sites.  |   |  |  |
| 7     | 3 | First exam   |   |  |  |
| 8+9   | 4 | Chapter Three (Electronic messages and conversations, introduction, e-mail, e-mail features, creating a new e-mail account Log in to email, Microsoft Outlook,   | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 10+11 | 4 | Skype chat program, the necessary steps to download the Skype chat program, the process of installing the Skype chat program, Learn about the components of the Skype chat program, the menu bar in the Skype chat program, other parts of the Skype chat program, additional tasks in the Skype chat program. | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 12+13 | 4 | Chapter Four: Ethics of the Internet world, Internet law and types of infringements in the digital space, technology ethics, etiquette and ethics of dealing with the Internet, The effects of negative use of the Internet on life and society,   | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|   |          |   |  |   |   |
|---|----------|---|--|---|---|
|   |          | <b>information and Internet security, information security,</b>   |  |   |   |
| <b>14</b>   | <b>4</b> | <b>Weaknesses in the Internet, security problems, computer vulnerability, computer and information protection</b> | <b>Basics of networks and office applications, Part Four</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>15</b>   | <b>3</b> | <b>Second exam</b>  |  |   |   |
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc</b> |          |   |  |   |   |
| <b>Learning and teaching resources</b>  |          |   |  |   |   |
| <b>Required textbooks (methodology, book four)</b>  |          |   | <b>Computer basics and office applications, Part fourth/ Microsoft Office 2010</b><br><b>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>  |   |   |
| <b>Main references (sources)</b>  |          |   | <b>1. Computer basics and office applications, Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis</b><br><b>Stephen Moffat, The Mouse Training Company</b>  |   |   |
| <b>Recommended supporting books and references (scientific journals, reports....)</b>   |          |   |  |   |   |
| <b>Electronic references, Internet sites</b>  |          |   | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b><br><b>Real-time communication protocols in the Internet - .(RTP SIP), World of Technology website</b><br><b>ARPANET logical map,</b><br><b>.<a href="http://russbellew.com/Documents/Arpanet_sep_1974">http://russbellew.com/Documents/Arpanet_sep_1974</a></b> |   |   |

### Course Description Form

|   |
|---|
| <b>1- Course Name</b>                       |
| <b>Management and production of poultry</b> |

| <b>2-CourseCode</b>  |              |  |  |   |                             |
|--|--------------|--|--|---|-----------------------------|
| POPR441  |              |  |  |   |                             |
| <b>3-semester/ year</b>  |              |  |  |   |                             |
| 2023 – 2024 (Fall Semester )   |              |  |  |   |                             |
| <b>4-The date of preparing this description</b>                          |              |  |  |   |                             |
| 10/3/2024  |              |  |  |   |                             |
| <b>Available attendance forms</b>  |              |  |  |   |                             |
|  |              |  |  |   |                             |
| <b>6. Number of study hours (total) / number of units (total)</b>        |              |  |  |   |                             |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |              |  |  |   |                             |
| <b>Name of course administrator (if more than one name is mentioned)</b> |              |  |  |   |                             |
| Name: M.Sc Ali Jassim Mohammed   |              |  |  |   |                             |
| <b>Course Objectives</b>   |              |  |  |   |                             |
| <b>Objectives of the unit</b>  |              | Preparing graduates who are able to know :<br>1- How to establish breeding and management projects for poultry birds.<br>2- Field work skills, and how to create and prepare projects for raising chicken and poultry .<br>3- How to make feed mixes used in poultry projects.<br>4- Applying for external tests by local / regional / international bodies. |  |   |                             |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |              |  |  |   |                             |
| <b>Strategy</b>  |              | 1- Enabling students to analyze and think about topics related to the intellectual framework of the subject of poultry management and production.<br>2- Enabling students to analyze to identify the topics related to measuring productivity .<br>3- Enabling students to identify the optimal use of fodder materials available in the market .            |  |   |                             |
| <b>10. Course Structure</b>  |              |  |  |   |                             |
| <b>Fifteenth</b>   | <b>Hours</b> | <b>Intended Learning Outcomes</b>  | <b>Module / Course Name or</b>   | <b>Learning method</b>  | <b>Valuation Method</b>     |
| 1  | 5            | Introducing students to the general concept of managing poultry projects   | Poultry science and the concept of managing poultry projects.  | Theoretical lectures.<br>Practical lectures.<br>Displays<br>Dialogue and Discussion       | Daily and monthly reports . |
| 2  | 5            | The student should learn about the importance of poultry projects  | Importance of poultry projects<br>Egg and meat production projects                                       | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 3  | 5            | Enabling students to know the internal organs of the chicken and its functions,(male and female digestive and reproductive   | The internal organs of the chicken and its functions,(male and female digestive and reproductive and egg | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and            | Daily and monthly reports . |



|   |   | systems and the components of the egg.   | components)                                    | Discussion  |                             |
|---|---|--|--|---|-----------------------------|
| 4 | 5 | The student should learn about the types of poultry houses and breeding supplies   | Types of poultry houses and breeding supplies. | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 5 | 5 | The student should be familiar with hatching and hatching management ( selection of hatching egg specifications, treatment of hatching eggs before and during hatching , stages of embryonic development,types of hatching,factors affecting fertility and hatching rates, hatching problems)  | Hatching and Hatch Management                  | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 6 | 5 | The student should be familiar with the management and production of meat broilers ( types of modern breeds and their specifications, nursing and caring for broilers, raising and caring for meat broilers, breeding systems, feeding meat broilers and types of ties ,marketing meat broilers, meat preparation operations in slaughterhouses) | Management and production of meat poultry      | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 7 | 5 | The student should know about the management and production of laying hens ( types of modern breeds and their specifications, nursing and care of laying hens, breeding  | Management and production of laying hens       | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |

|    |   |   |  |   |                             |
|----|---|---|--|---|-----------------------------|
|    |   | systems, feeding laying hens during the stages of growth and production , calculations of egg production rates) |  |   |                             |
| 8  | 5 | Enabling students to know the compulsory qalash (its methods and benefits)                                      | Mandatory straws   | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 9  | 5 | Enabling students to know the management of mothers' herds (mothers of meat and eggs)                           | Management of maternal herds (broiler and egg mothers)     | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 10 | 5 | The student should learn about raising turkey, ducks and almonds .  | Raising turkeys, ducks and almonds .                       | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 11 | 5 | The student should be familiar with the management of poultry fields in hot weather .                           | Manage poultry fields in hot climates .                    | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 12 | 5 | The student should get acquainted with the management of fodder factories and fodder preparation                | Management of fodder factories and preparation of fodder . | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 13 | 5 | Enabling students to know poultry disease and methods of prevention and treatment .                             | Poultry disease and methods of prevention and treatment .  | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 14 | 5 | The student should identify the records and their types in the  | Records and their types in poultry fields.                 | 1- Theoretical lectures.<br>2- Practical  | Daily and monthly reports . |

|   |   |  |      |   |                                   |
|---|---|--|------|---|-----------------------------------|
|   |   | poultry fields.  |      | lectures.<br>Displays<br>Dialogue and<br>Discussion |                                   |
| 15  | 5 |  | exam |   | Daily and<br>monthly<br>reports . |
| <b>Course Evaluation</b>  |   |  |      |   |                                   |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |   |  |      |   |                                   |
| <b>Learning and Teaching Resources</b>  |   |  |      |   |                                   |
| Required textbooks (curricular books, if any)   |   | Al-Zubaidi , Suhaib Saad Alwan (1986), Poultry Management, University of Basra .   |      |   |                                   |
| Main References (Sources)   |   | A modern machine base from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the consensual library that is related to the material. |      |   |                                   |
| Recommended books and references (scientific journals, reports...)  |   | Handbook of Poultry   VetBooks   |      |   |                                   |
| E-References, Websites  |   | Poultry Science<br>Poultry (almerja.com)   |      |   |                                   |

### Course Description Form

|  |  |
|--|--|
| <b>1- Course Name</b>  |  |
| Feed poultry   |  |
| <b>2-CourseCode</b>  |  |
| POBN445  |  |
| <b>3-semester/ year</b>  |  |
| 2023 – 2024 (Fall Semester )   |  |
| <b>4-The date of preparing this description</b>                          |  |
| 10/3/2024  |  |
| <b>Available attendance forms</b>  |  |
|  |  |
| <b>6. Number of study hours (total) / number of units (total)</b>        |  |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |  |
| <b>Name of course administrator (if more than one name is mentioned)</b> |  |
| Name: M.Sc Ali Jassim Mohammed   |  |
| <b>Course Objectives</b>   |  |
| <b>Objectives of the unit</b>  | Preparing graduates who are able to know :<br>1- How to digest, absorb and metabolize nutritional nutrients.<br>2- Field work skills, and how to create and prepare projects for raising chicken and poultry .<br>3- How to make feed mixes used in poultry projects.<br>5- The work of the digestive system in the animal .<br>5- Applying for external tests by local / regional / international bodies. |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |  |

|                 |   |
|-----------------|---|
| <b>Strategy</b> | <p>1- Enabling students to analyze and think about topics related to the intellectual framework of poultry feeding.</p> <p>2- Enabling students to analyze to identify the digestive system and its work in poultry birds.</p> <p>3- Enabling students to identify the main nutrients.</p> <p>4- Enabling students to identify the best ways to synthesize feed mixes.</p> <p>5-Enabling students to identify the optimal use of fodder materials available in the market .</p> |
|-----------------|---|

**10. Course Structure**

| Fifteenth | Hours | Intended Learning Outcomes  | Module / Course Name or  | Learning method  | Valuation Method            |
|-----------|-------|---|--|--|-----------------------------|
| 1         | 5     | Introducing students to energy, its components, sections, importance and the factors affecting it .   | Energy sources<br>.Split it up<br>.Influences  | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays Dialogue and Discussion | Daily and monthly reports . |
| 2         | 5     | The student should identify the proteins, their types, classification, their importance for birds, and the impact of increasing and decreasing them . | Proteins – their types and classification<br>The effect of their increase and decrease | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays Dialogue and Discussion | Daily and monthly reports . |
| 3         | 5     | Introducing students to the most important factors affecting protein utilization.   | Proteins and factors affecting their utilization                                       | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays Dialogue and Discussion | Daily and monthly reports . |
| 4         | 5     | Enabling students to know the vitamins and their importance for the bird and its sections and the factors affecting them .                            | Vitamins - their classification and factors affecting their needs                      | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays Dialogue and            | Daily and monthly reports . |

|           |          |  |  |   |                                    |
|-----------|----------|--|--|---|------------------------------------|
|           |          |  |  | <b>Discussion</b>   |                                    |
| <b>5</b>  | <b>5</b> | <b>Introducing students to inorganic elements and their importance to birds and provoking their increase and decrease .</b>        | <b>Minerals, their classification, the effect of their increase and decrease</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>6</b>  | <b>5</b> | <b>Introducing students to the nutrients , the importance of water for the bird and its sources .</b>                              | <b>Water is its importance, functions, sources and quality</b>                   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>7</b>  | <b>5</b> |  | <b>Monthly Exam</b>  |   | <b>Daily and monthly reports .</b> |
| <b>8</b>  | <b>5</b> | <b>Enabling students to know the digestive system and its work in poultry birds, types of digestion , and nutrient metabolism.</b> | <b>Digestion and Metabolism - Digestive System - Its Functions</b>               | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>Introducing students to the end products of digestion of nutrients , and the factors affecting digestion .</b>                  | <b>End-products of digestion - factors affecting digestion</b>                   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> | <b>Introducing students to the feed used in feeding poultry birds, their sources and types .</b>                                   | <b>Primary fodder materials, their sources and types</b>                         |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> | <b>Introducing students to food</b>  | <b>Vitamins, minerals and</b>  | <b>1- Theoretical</b>   | <b>Daily and monthly</b>           |

|  |          |   |  |   |                                    |
|--|----------|---|--|---|------------------------------------|
|  |          | <b>additives, their types and their importance in terms of health and economic</b>  | <b>feed additives</b>  | <b>lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b>                | <b>reports .</b>                   |
| <b>12</b>  | <b>5</b> | <b>Enabling students to know the feed concentrates and mixtures used in poultry nutrition and its production requirements</b> | <b>Feed concentrates, mixtures and their production requirements</b>                       | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>13</b>  | <b>5</b> | <b>Introducing students to the fodder factory, its departments and its importance in animal production projects.</b>          | <b>Feed Production and Manufacturing Feed Factory Its Importance and Sections</b>          | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>14</b>  | <b>5</b> | <b>Introduce students to periodic maintenance of the feed factory and methods of synthesizing feed mixtures.</b>              | <b>Laboratory Maintenance Formation and Synthesis of Relationships and Quality Control</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>15</b>  | <b>5</b> |   | <b>Second Month Exam</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>Course Evaluation</b>   |          |   |  |   |                                    |
| <b>Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports ....</b> |          |   |  |   |                                    |

| <b>Learning and Teaching Resources</b>                                    |   |
|---|---|
| <b>Required textbooks (curricular books, if any)</b>                      | Al Yaseen. Ali Abdul Khaliq , Abdul Abbas , Mohammed Hassan (2010), Poultry Feeding, University of Baghdad , Faculty of Agriculture . Al-Kassar, Ali Mahmoud Jawad , Ammar Hussein , Ali Saif (2021). Poultry feed and chemical analysis. University of Kufa . Faculty of Agriculture |
| <b>Main References (Sources)</b>  | 1 - Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq and the library of satisfaction, which is related to the feeding of poultry birds.  |
| <b>Recommended books and references (scientific journals, reports...)</b> | Handbook of Poultry Nutrition   VetBooks<br>Poultry Nutrition   MDPI Books  |
| <b>E-References, Websites</b>   | Poultry Science   |

### Course Description Form

|  |  |
|--|--|
| <b>1. Course Name: Pasture management</b>  |  |
| <b>2. Course Code:</b><br>PAMA451  |  |
| <b>3. Semester / Year: Fall Semester - First Course</b>  |  |
| <b>4. Description Preparation Date : 10/3/2024</b>   |  |
| <b>5. Forms of Attendance: weekly</b>  |  |
| <b>hours75 6. Number of Studying Hours (Total) / Number of Units (Total)</b>   |  |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b><br>Name: Rasha Naji Abd   Email: rashanaji@uomisan.edu.iq |  |
| <b>8. Course Objectives</b>  |  |
| <b>Course Objectives</b>   | <ul style="list-style-type: none"> <li>• The student is able to understand and comprehend the pasture management subject</li> <li>• Enables the student to know the most important ways to protect natural pastures</li> <li>• Familiarity with the most important types of natural pastures</li> <li>• • • Detection and knowledge of the palatability of pasture plants.</li> <li>• • • • The student can judge the quality of pasture plants</li> </ul> |
| <b>9. Teaching and Learning Strategies</b>   |  |
| <b>Strategies</b>  | The theoretical part of the lecture is interactive, brainstorming, • • • dialogue, and discussion. As for the practical part, there is an assignment to group work to reveal leadership skills, and assignment .of tasks and a report for each field visit   |
| <b>10. Course Structure</b>  |  |

| <b>Week</b> | <b>Hours</b>                    | <b>Required Learning Outcomes</b> | <b>Unit or subject name</b>   | <b>Learning method</b>  | <b>Evaluation method</b> |
|-------------|---------------------------------|-----------------------------------|---|-------------------------|--------------------------|
| 1           | 2<br>Theoretical<br>Practical 3 | Pasture management                | The importance of pastures  | Theoretical + Practical | Exams + Cups             |
| 2           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Vegetable . clothing  | Theoretical + Practical | Exams + Cups             |
| 3           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Environmental factors and natural pastures  | Theoretical + Practical | Exams + Cups             |
| 4           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Climatic factors.   | Theoretical + Practical | Exams + Cups             |
| 5           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Pasture management and its relationship to soil and water conservation              | Theoretical + Practical | Exams + Cups             |
| 6           | 2<br>Theoretical<br>Practical 3 | Pasture management                | The role of . plants in maintaining soil and pastoral areas in Iraq and the world   | Theoretical + Practical | Exams + Cups             |
| 7           | 2<br>Theoretical<br>Practical 3 | Pasture management                | .Monthly exam   | Theoretical + Practical | Exams + Cups             |
| 8           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Grazing and its various effects on fodder production, plant growth, and root growth | Theoretical + Practical | Exams + Cups             |
| 9           | 2<br>Theoretical<br>Practical 3 | Pasture management                | Animal load and its determining factors   | Theoretical + Practical | Exams + Cups             |
| 10          | 2<br>Theoretical<br>Practical 3 | Pasture management                | Exploitation of natural pastures  | Theoretical + Practical | Exams + Cups             |
| 11          | 2<br>Theoretical<br>Practical 3 | Pasture management                | Sources of exploitation of pastoral plants and the condition of natural pastures    | Theoretical + Practical | Exams + Cups             |
| 12          | 2<br>Theoretical<br>Practical 3 | Pasture management                | Livestock management and pasture redressing   | Theoretical + Practical | Exams + Cups             |
| 13          | 2                               | Pasture management                | For natural and   | Theoretical +           | Exams +                  |



|   |                                 |                    |   |                            |                 |
|---|---------------------------------|--------------------|---|----------------------------|-----------------|
|   | Theoretical<br>Practical 3      |                    | artificial coverings and harmful plants in pastures   | Practical                  | Cups            |
| 14  | 2<br>Theoretical<br>Practical 3 | Pasture management | Methods of taking pasture samples and estimating pasture productivity   | Theoretical +<br>Practical | Exams +<br>Cups |
| 15  | 2<br>Theoretical<br>Practical 3 | Pasture management | Monthly exam  | Theoretical +<br>Practical | Exams +<br>Cups |
| <b>11. Course Evaluation</b>  |                                 |                    |   |                            |                 |
| Distribution of the grade out of 100 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |                                 |                    |   |                            |                 |
| <b>12. Learning and Teaching Resources</b>  |                                 |                    |   |                            |                 |
| Required textbooks (curricular books, if any)   |                                 |                    | Pasture management book<br>Al-Takriti<br>Ramadan, Taif Ahmed and Abbas Mahdi<br>Hassan (1976<br>(Al-Tamimi, Mahdi Abdel Latif (1987 |                            |                 |
| Main references (sources)   |                                 |                    |   |                            |                 |
| Recommended books and references (scientific journals, reports...)  |                                 |                    |   |                            |                 |
| Electronic References, Websites   |                                 |                    |   |                            |                 |

### Course Description Form

|   |
|---|
| <b>1. Course Name: Avian Physiology</b>               |
| <b>2. Course Code:</b><br>POPH316                     |
| <b>3. Semester / Year: The second spring semester</b> |
| <b>4. Description Preparation Date:</b>               |
| <b>5. Forms of Attendance: Compact</b>                |

| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b>       |              |   |                             |   |                          |
|--|--------------|---|-----------------------------|---|--------------------------|
|  |              |   |                             |   |                          |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b> |              |   |                             |   |                          |
| <b>Name: Zainab Zedan, Hamid Majeed</b>                                    |              |   | <b>Email:</b>               |   |                          |
| <b>8. Course Objectives</b>  |              |   |                             |   |                          |
| <b>Course Objectives</b>   |              | The student acquires knowledge about the various physiological functions of poultry birds.  |                             |   |                          |
|  |              | The student is educated about fundamental tools for examining basic aspects of body anatomy.  |                             |   |                          |
|  |              | Identify how the body's systems work and the influences based on their operation.   |                             |   |                          |
| <b>9. Teaching and Learning Strategies</b>                                 |              |   |                             |   |                          |
| <b>Strategies</b>  |              | Explanation and clarification<br>The lecture method<br>Student groups<br>Practical lessons in the field<br>Method of self-learning and writing scientific reports |                             |   |                          |
| <b>10. Course Structure</b>  |              |   |                             |   |                          |
| <b>Week</b>  | <b>Hours</b> | <b>Required Learning Outcomes</b>   | <b>Unit or subject name</b> | <b>Learning method</b>                                  | <b>Evaluation method</b> |
| 1  |              | Body fluids and blood in birds.   | Avian Physiology            | Explanation, presentation of the form, and lecture      | Exam                     |
| 2  |              | The heart, blood circulation, and nervous control over it.  | Avian Physiology            | Explanation, presentation of the form, and lecture      | Exam                     |
| 3  |              | Bird nervous system (central nervous system)  | Avian Physiology            | Explanation, presentation of the form, and lecture      | Exam                     |
| 4  |              | Bird nervous system (peripheral nervous system)   | Avian Physiology            | Explanation, presentation Exam of the form, and lecture | Exam                     |
| 5  |              | The respiratory system of birds (its components, gas exchange mechanism)  | Avian Physiology            | Explanation, presentation of the form, and lecture      | Exam                     |
| 6  |              | The urinary system of birds (its components, functions, renal filtration)   | Avian Physiology            | Explanation, presentation of the form, and lecture      | Exam                     |
| 7  |              | The urinary system of birds (salt glands and factors affecting their  | Avian Physiology            | Explanation, presentation of the form,                  | Exam                     |

|    |  |  |                  |  |      |
|----|--|--|------------------|--|------|
|    |  | secretions, urine, its properties, and nitrogen content)   |                  | and lecture  |      |
| 8  |  | Thermoregulation device  | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 9  |  | Digestive system (mouth, pharynx, esophagus, crop, glandular stomach, spasmodic stomach, small intestine, auricle, rectum, Cloaca) | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 10 |  | Digestive system (glands of the digestive system, regulation of food intake by nervous control)                                    | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 11 |  | The digestive system (secretion, digestion, absorption, and speed of passage of food through the digestive canal)                  | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 12 |  | Endocrine system   | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 13 |  | Reproduction in male birds (sexual organs, sperm formation process)  | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 14 |  | Reproduction in birds (artificial insemination, factors affecting fertility, male sex hormones)                                    | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |
| 15 |  | Reproduction in females (components of the female system and its functions, female sex glands)                                     | Avian Physiology | Explanation, presentation of the form, and lecture | Exam |

### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Main references (sources)

Recommended books and references (scientific journals, reports...)

Electronic References, Websites

## Course Description Form

| <b>1. Course Name: Principle of Horticulture</b>   |  |  |   |   |                   |
|--|--|--|---|---|-------------------|
| <b>2. Course Code:</b><br>PRHS243  |  |  |   |   |                   |
| <b>3. Semester / Year: 2023- 2024</b>  |  |  |   |   |                   |
| <b>4. Description Preparation Date: 24- 4 - 2024</b>   |  |  |   |   |                   |
| <b>5. Forms of Attendance:</b>   |  |  |   |   |                   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b><br>hours (2 theoretical + 3 practical) *15 weeks 75 |  |  |   |   |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b><br>Name: Dunya Mohi Mohsin                    |  |  |   |   |                   |
| <b>8. Course Objectives</b>  |  |  |   |   |                   |
| <b>Course Objectives</b>   | <ul style="list-style-type: none"> <li>-The student must be familiar with the science of fruits and palm trees and methods of their reproduction</li> <li>-The student must be familiar with the science of vegetable crops and their production methods</li> <li>-The student must be familiar with the science of ornamental plants and methods of their propagation</li> <li>-The student must be familiar with the science of garden engineering and methods of its implementation</li> <li>-He has knowledge of methods of breeding and improving horticultural plants</li> <li>- He has knowledge of other sciences, such as physiology, fruit storage, anatomy, and plant classification</li> </ul> |  |   |   |                   |
| <b>9. Teaching and Learning Strategies</b>   |  |  |   |   |                   |
| <b>Strategies</b>  | <ul style="list-style-type: none"> <li>-Explanation and clarification using methods</li> <li>-Direct dialogue with students by asking</li> <li>-Student collections, homework, and writing reports</li> <li>-Practical lessons in agricultural fields</li> <li>-Scientific trips to learn about the most important fodder crops grown in Iraq</li> <li>-Self-learning method</li> </ul>  |  |   |   |                   |
| <b>10. Course Structure</b>  |  |  |   |   |                   |
| Week   | Hours  | Required Learning Outcomes                               | Unit or subject name                        | Learning method                             | Evaluation method |
| 1  | 5  | Knowledge of the history and development of horticulture | Introduction to the history of horticulture | Lecture, discussion, reports, laboratories, |                   |

|           |          |  |   |  |  |
|-----------|----------|--|---|--|--|
|           |          |  |   | <b>practical in the fields</b>   |  |
| <b>2</b>  | <b>5</b> | <b>Learn how horticultural crops reproduce</b>   | <b>Methods of reproduction of horticultural crops</b> | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>3</b>  | <b>5</b> | <b>Identifying deciduous fruit trees</b>   | <b>Types of deciduous fruit trees</b>                 | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>4</b>  | <b>5</b> | <b>Identify evergreen trees</b>  | <b>Types of evergreen trees</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>5</b>  | <b>5</b> | <b>Learn about summer vegetable crops</b>  | <b>Different families of plants</b>                   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>6</b>  | <b>5</b> | <b>Identify winter vegetable crops</b>   | <b>Different families of plants</b>                   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>7</b>  | <b>5</b> | <b>Learn about different summer ornamental plants</b>  | <b>Summer ornamental plants</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>8</b>  | <b>5</b> | <b>Learn about different winter ornamental plants</b>  | <b>winter ornamental plants</b>                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>9</b>  | <b>5</b> | <b>To learn how to divide fruit trees according to environmental conditions as well as according to plant families</b> | <b>Fruit trees tropical and subtropical regions</b>   | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>10</b> | <b>5</b> | <b>The student learns how</b>  | <b>Plant families of</b>                              | <b>Lecture,</b>  |  |

|   |          |   |  |  |  |
|---|----------|---|--|--|--|
|   |          | <b>to divide vegetable crops according to their families</b>                                      | <b>vegetable crops</b>   | <b>discussion, reports, laboratories, practical in the fields</b>  |  |
| <b>11</b>   | <b>5</b> | <b>The student learns about ornamental plants and methods of propagating and cultivating them</b> | <b>Ornamental plants and methods of propagation and cultivation</b>            | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>12</b>   | <b>5</b> | <b>The student learns how to create a plantation and multiply horticultural plants</b>            | <b>Establishing plantation and methods of propagating horticultural plants</b> | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>13</b>   | <b>5</b> | <b>The student will learn how to establish orchards and plant various fruit trees</b>             | <b>Establishing orchards and learning about tree pollination methods</b>       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b>   |  |
| <b>14</b>   | <b>5</b> | <b>The student learns to grow and propagate medicinal plants</b>                                  | <b>Cultivation and propagation of medicinal and aromatic plants</b>            | <b>Lecture, discussion, reports, laboratories, practical in the fields<br/>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>15</b>   | <b>5</b> | <b>Remind students of the summary of previous topics</b>  | <b>A quick review of previous topics</b>                                       | <b>Lecture, discussion, reports, laboratories, practical in the fields<br/>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>11. Course Evaluation</b>  |          |   |  |  |  |
| <b>Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |          |   |  |  |  |

| <b>12. Learning and Teaching Resources</b>                                |   |
|---|---|
| <b>Required textbooks (curricular books, if any)</b>                      | <b>Principles of horticulture / Dr. Jabbar Abbas Al-Dujaili, Dr. Iman Jaber Abdel Rasoul, Nisreen Khalil Abdel Aziz<br/>Principles of horticulture/Karim Saleh Abdul and Saad Zaghoul Al-Najjar</b> |
| <b>Main references (sources)</b>  | <b>Ornamental plants in Iraq/Dr. Sami and Nisreen Al-Najjar<br/>Deciduous fruit/Dr. Alaa Abdul Razzaq Al-Jumaili and others</b>   |
| <b>Recommended books and references (scientific journals, reports...)</b> | <b>Propagation of horticultural plants/Dr. Muhammad Abbas Salman<br/>Vegetable production/Dr. Adnan Nasser is wanted and others</b>   |
| <b>Electronic References, Websites</b>                                    |   |

### Course Description Form

|  |   |
|--|---|
| <b>1. Course Name: Forage and Pastures Crops</b>   |   |
| <b>2. Course Code:</b><br>PRFI155  |   |
| <b>3. Semester / Year:</b><br>2023- 2024   |   |
| <b>4. Description Preparation Date:</b><br>24- 4 - 2024  |   |
| <b>5. Forms of Attendance:</b>   |   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b><br>75 hours (2 theoretical + 3 practical) *15 weeks |   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b><br>Name:Dunya Mohi Mohsin                     |   |
| <b>8. Course Objectives</b>  |   |
| <b>Course Objectives</b>   | <ul style="list-style-type: none"> <li>- The course seeks to identify the importance of forage crops and methods of cultivation, management, and cutting</li> <li>-It includes knowledge of the types of forage crops and their places of origin</li> <li>- Knowledge of the processes related to soil service, such as plowing, smoothing, leveling, dividing the land, and irrigation channels</li> <li>- Knowledge of the processes related to serving the crop, such as cultivation methods, appropriate seed quantities, fertilization, and appropriate mowing and cutting times.</li> <li>- Study of feed mixtures, their types and their importance in animal productivity</li> <li>- Knowing the types of feed provided to animals, such as hay and silage</li> </ul> |

| <b>9. Teaching and Learning Strategies</b> |              |  |                             |  |                          |
|--|--------------|--|-----------------------------|--|--------------------------|
| <b>Strategies</b>                          |              | <ul style="list-style-type: none"> <li>-Explanation and clarification</li> <li>-Lecture method</li> <li>-Student groups</li> <li>-Practical lessons in agricultural fields</li> <li>-Scientific trips to learn about the most important fodder crops grown in Iraq</li> <li>-Self-learning method</li> </ul> |                             |  |                          |
| <b>10. Course Structure</b>                |              |  |                             |  |                          |
| <b>Week</b>                                | <b>Hours</b> | <b>Required Learning Outcomes</b>  | <b>Unit or subject name</b> | <b>Learning method</b>                             | <b>Evaluation method</b> |
| 1  | 5            | A historical overview of forage crops and some important terms for forage crops  | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 2  | 5            | The importance of forage crops and the division and classification of forage crops   | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 3  | 5            | Economic importance and agricultural management of legumes   | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 4  | 5            | The economic importance and agricultural management of the Egyptian clover crop  | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 5  | 5            | Economic importance and agricultural management chicking vetches, Medic  | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 6  | 5            | The economic importance and agricultural management of forage crops: cowpea, vetch, and bird foot trefoil  | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 7  | 5            | Economic importance and agricultural management of fenugreek, mung and soybean crops   | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 8  | 5            | The economic importance and agricultural management of cereal crops, including barley and oats   | Forage crops                | Explanation, presentation of the model and lecture | Exam                     |
| 9  | 5            | The economic   | Forage crops                | Explanation,                                       | Exam                     |



|   |          |  |   |   |             |
|---|----------|--|---|---|-------------|
|   |          | <b>importance and agricultural management of maize and Sorghum crops</b>               |   | <b>presentation of the model and lecture</b>              |             |
| <b>10</b>   | <b>5</b> | <b>The economic importance and agricultural management of millet crops Sudan grass</b> | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>11</b>   | <b>5</b> | <b>Feed mixtures - types - advantages and benefits</b>                                 | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>12</b>   | <b>5</b> | <b>Breeding forage crops</b>   | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>13</b>   | <b>5</b> | <b>Feed manufacturing - hay</b>  | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>14</b>   | <b>5</b> | <b>Feed manufacturing - silage</b>   | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>15</b>   | <b>5</b> | <b>Mechanization of fodder crop production</b>   | <b>Forage crops</b>   | <b>Explanation, presentation of the model and lecture</b> | <b>Exam</b> |
| <b>11. Course Evaluation</b>  |          |  |   |   |             |
| <b>Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |          |  |   |   |             |
| <b>12. Learning and Teaching Resources</b>  |          |  |   |   |             |
| <b>Required textbooks (curricular books, if any)</b>  |          |  | <b>Fodder crops and pastures. Dr.. Ramadan Ahmed Al-Takriti and Dr. Tawakkol Younis .Rizk and Dr. Hikmat Askar Rumi</b><br><b>Recent articles from the Internet and from specialized scientific fields, the Iraqi Journal of Agricultural Sciences, and the virtual library</b><br><b>1-The field crops _ principles and a practice</b><br><b>2- Agronomy journal.</b><br><b>3- Websites, Articles, FAO reports</b> |   |             |
| <b>Main references (sources)</b>  |          |  | <b>Field crop production d. Abdul Majeed Al .Ansari</b><br><b>Cultivation and exploitation of fodder d. Mahdi .Abdul Latif Al Tamimi</b><br><b>.Fodder crops d. Nasser Hussein Safar</b><br><b>Recent articles from the Internet and from specialized scientific fields and magazines</b><br><b>Agricultural Sciences - Iraqi Virtual Library</b>   |   |             |

|  |  |
|--|--|
|  | Forage crops, Agriculture Canada                   |
| Recommended books and references (scientific journals, reports...) | Iraqi academic scientific journals                 |
| Electronic References, Websites                                    | crop Science Society Of America Library<br>Genesis |

### Course Description Form

|  |   |
|--|---|
| <b>1. Course Name: Principles of animal production</b>   |   |
| <b>2. Course Code: - PRAP153</b>   |   |
| <b>3. Semester / Year: Spring Semester / Year 2024</b>   |   |
| <b>4. Description Preparation Date: 1-2-2024</b>   |   |
| <b>5. Forms of Attendance: Attendance</b>  |   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total):-<br/>5 hours (2 theoretical and 3 practical) Number of units (3.5)</b> |   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>   |   |
| <b>Name: Duaa Ali Hussein</b>  | <b>Email:</b>   |
| <b>8. Course Objectives</b>  |   |
| <b>Course Objectives</b>   | <p><b>:Graduating students who are able to</b></p> <p><b>The importance of the science of animal production principles, which deals with the details of the economic importance of livestock and global .and local livestock species, their management and care</b></p> <p><b>Study the types and importance of other farm animals such as buffalo, .sheep and goats, their management and care</b></p> <p><b>Identify the feeding systems and feeds for farm animals.. Know reproduction and artificial insemination in livestock</b></p>  |
| <b>9. Teaching and Learning Strategies</b>   |   |
| <b>Strategies</b>  | <p><b>This course is designed to suit first-year students in the Animal Production Department. In order to achieve the desired goal of studying this course, it seeks to introduce students to the importance of animal production and its relationship to other sciences and the most important breeds of cows, buffaloes and sheep and how to design pens for each type in addition to learning about caring for newborn calves and methods of lactation as well as learning how to establish successful breeding projects for poultry or cows and other farm animals. - Enabling students to think and analyze to identify the role of management (the role of the human factor or the breeder himself) successful in animal fields of various types</b></p> |

| <b>10. Course Structure</b> |              |   |   |   |   |
|-----------------------------|--------------|---|---|---|---|
| <b>Week</b>                 | <b>Hours</b> | <b>Required Learning Outcomes</b>   | <b>Unit or subject name</b>   | <b>Learning method</b>  | <b>Evaluation method</b>                      |
| 1                           | 5            | Introducing students to general information about animal production and its economic and nutritional importance | Factors affecting the productive efficiency of farm animals                       | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 2                           | 5            | Explaining and clarifying the obstacles facing livestock and .ways to improve it                                | Obstacles facing animal production in Iraq and ways to improve them               | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 3                           | 5            | Introducing students to livestock, its types and how to care for it   | Cattle classification - Global dairy cows - their management and care             | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 4                           | 5            | Introducing students to dual-purpose cows and local and international sheep and goat breeds                     | Dual-purpose cows - Iraqi cows - Global sheep breeds                              | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 5                           | 5            | Introducing students to how to establish and care for a flock of sheep and goats                                | Establishing and managing a flock of sheep and goats                              | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 6                           | 5            | Introducing students to the specifications of global and local buffalo and its different breeds                 | Buffalo - For buffalo - General characteristics - Physiological - characteristics | Lectures and practical + theoretical presentation methods + dialogue and discussion | Daily, monthly, final tests and daily reports |
| 7                           | 5            | Introducing students to   | Domestic birds -  | Lectures and  | Daily,  |

|           |          |   |   |  |  |
|-----------|----------|---|---|--|--|
|           |          | <b>the importance of poultry projects and meat and egg production</b>   | <b>Economic importance of poultry projects</b>                    | <b>practical + theoretical presentation methods + dialogue and discussion</b>              | <b>monthly, final tests and daily reports</b>        |
| <b>8</b>  | <b>5</b> | <b>Introducing students to the feed materials for farm animals and how to prepare feed</b>  | <b>Nutrition, feed and methods of preparing feed</b>              | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>9</b>  | <b>5</b> | <b>Explaining and clarifying health programs for animals, and how to prevent diseases</b>   | <b>Health care for farm animals</b>                               | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>10</b> | <b>5</b> | <b>A detailed explanation of the importance of raising calves and heifers and providing the necessary needs for their upbringing</b>                    | <b>The importance of raising calves and heifers in cow fields</b> | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>11</b> | <b>5</b> | <b>Introducing students to the reproductive system of cows and the importance of the reproductive process, and how to raise reproductive efficiency</b> | <b>Physiology of reproduction and artificial insemination</b>     | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>12</b> | <b>5</b> | <b>Introducing students to raising and improving animals and the importance of breeding and selection</b>   | <b>Genetic improvement in poultry</b>                             | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>13</b> | <b>5</b> | <b>A detailed explanation of the importance of the equine family and how to manage and care for them</b>  | <b>Agricultural animals - their management and care</b>           | <b>Lectures and practical + theoretical presentation methods + dialogue and discussion</b> | <b>Daily, monthly, final tests and daily reports</b> |
| <b>14</b> | <b>5</b> | <b>Introducing students to</b>  | <b>Factors affecting</b>  | <b>Lectures and</b>  | <b>Daily,</b>  |

|  |  |   |   |  |  |
|--|--|---|---|--|--|
|  |  | the factors affecting production efficiency and how to improve it   | the productive efficiency of farm animals | practical + theoretical presentation methods + dialogue and discussion | monthly, final tests and daily reports |
| 15   |  | Review for the final exam   |   |  |  |
| <b>11. Course Evaluation</b>   |  |   |   |  |  |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |  |   |   |  |  |
| <b>12. Learning and Teaching Resources</b>   |  |   |   |  |  |
| Required textbooks (curricular books, if any)  |  | اساسيات الانتاج الحيواني تأليف أ. د. أحمد سليمان محمود و أ. د. محمود رياض المهدي (2013)   |   |  |  |
| Main references (sources)  |  | 1 - مبادئ الإنتاج الحيواني تأليف د. مظفر نافع الصانغ - د. طه جاسم الطه - د. صهيب سعيد علوان الزبيدي (1987) ( الكتاب المنهجي - 2 ) ادارة الطيور الداجنة تأليف د. صهيب سعيد علوان ( - 1986 مطبعة جامعة البصرة - 3 .انتاج دواجن ترجمة د. مصلح حسين- 4 .تكنولوجيا منتجات الدواجن تأليف د. حمدي عبد العزيز الفياض ، د. سعد عبد الحسين ناجي ( 1989 ) , الطبعة الأولى، مديرية مطبعة التعليم العالي - بغداد - العراق. |   |  |  |
| Recommended books and references (scientific journals, reports...)   |  | ابحاث تصنيفية ورسائل جامعية مختلفة تربية وانتاج الطيور الداجنة -المعلومات المتوفرة على شبكة الانترنت ذات العالقة - . المعلومات المتوفرة في الدوريات المحلية والعربية والعالمية والتي لها صلة بالمادة.   |   |  |  |
| Electronic References, Websites  |  | <a href="https://nicehatchincubators.com/theprinciples-of-poultry-husbandry/">https://nicehatchincubators.com/theprinciples-of-poultry-husbandry/</a><br><a href="https://www.britannica.com/topic/poultryfarming">https://www.britannica.com/topic/poultryfarming</a>  |   |  |  |

### Course Description Form

|  |
|--|
| <b>1. Course Name: Technology of poultry products</b>                |
| <b>2. Course Code:</b><br>POTE315                                    |
| <b>3. Semester / Year: The second spring semester</b>                |
| <b>4. Description Preparation Date:</b>                              |
| <b>5. Forms of Attendance: Compact</b>                               |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b> |

| <b>7. Course Administrator's Name (mention all, if more than one name)</b> |              |   |                                |  |                          |
|--|--------------|---|--------------------------------|--|--------------------------|
| Name: Zainab zedan , Hasaneen Najm   |              |   | Email:                         |  |                          |
| <b>8. Course Objectives</b>  |              |   |                                |  |                          |
| <b>Course Objectives</b>   |              | <p>The student becomes familiar with poultry products.<br/>         Acquire the knowledge of producing eggs, poultry meat, and biofuel using poultry waste.<br/>         Identify the chemical composition and nutritional value of poultry products.<br/>         Recognize the circumstances that impact poultry products.<br/>         Understand the methods for promoting poultry products and distributing them to customers.<br/>         Identify how to preserve and store poultry products.</p> |                                |  |                          |
| <b>9. Teaching and Learning Strategies</b>                                 |              |   |                                |  |                          |
| <b>Strategies</b>  |              | <p>Explanation and clarification<br/>         Lecture method<br/>         Student groups<br/>         Practical lessons in the field<br/>         Scientific trips to follow up on poultry projects in Iraq</p>   |                                |  |                          |
| <b>10. Course Structure</b>  |              |   |                                |  |                          |
| <b>Week</b>  | <b>Hours</b> | <b>Required Learning Outcomes</b>   | <b>Unit or subject name</b>    | <b>Learning method</b>                             | <b>Evaluation method</b> |
| 1  | 2            | The situation of poultry production in Iraq and the Arab world, the importance of expanding poultry production, the situation of egg production, and the situation of poultry meat production.  | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam                     |
| 2  | 2            | Types of poultry projects, measuring the specific weight of the egg.  | Technology of poultry products |  | Exam                     |
| 3  | 2            | The nutritional value of eggs, the composition of the egg, eggs in human nutrition, factors affecting the nutritional value of eggs, the glycerol contents of the egg, measuring the percentage of shell weight.  | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam                     |
| 4  | 2            | Chemistry of eggs and egg products, egg shells and membranes, egg whites, egg yolks, shell color.   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam                     |
| 5  | 2            | Egg microbiology, contamination of the egg  | Technology of poultry products | Explanation, presentation                          | Exam                     |

|    |   |   |                                |  |      |
|----|---|---|--------------------------------|--|------|
|    |   | before and after laying, the ability of the egg to resist microorganisms, changes caused by the egg's microorganisms, factors affecting the shell.  |                                | of the form, and lecture                           |      |
| 6  | 2 | Egg storage and marketing, changes that occur in eggs during storage, methods of preserving and storing eggs, marketing liquid eggs, measuring the whiteness of eggs.   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 7  | 2 | Poultry meat production, preparing broilers, receiving and incubating chicks, commercial breeds of broilers, standard rates for the economic characteristics of broilers and factors affecting them, egg index scale. | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 8  | 2 | Chemical and nutritional properties of poultry meat, composition of poultry meat, factors affecting the chemical composition of poultry meat, Hu unit scale   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 9  | 2 | Processes for preparing poultry meat for consumption, types of poultry birds used in meat production, processes for preparing poultry meat, cutting poultry carcasses, quality of yolks                               | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 10 | 2 | Quality of poultry meat and methods of preserving it, grading live poultry and characteristics adopted in grading, grading carcasses, maintaining quality, yolk shape   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |

|    |   |   |                                |  |      |
|----|---|---|--------------------------------|--|------|
| 11 | 2 | Cold storage, refrigeration requirements, freezing meat, freezing requirements in poultry slaughterhouses, methods used in freezing poultry meat, changes in the nutritional value of poultry meat during storage, yolk color and factors affecting it. | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 12 | 2 | Microbiology of poultry meat, methods for measuring yolk color  | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 13 | 2 | Flavor and tenderness of poultry meat   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 14 | 2 | Bloody and fleshy spots   | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |
| 15 | 2 | The effect of cooking methods on the flavor and tenderness of poultry meat and its nutritional values, egg .grading and inspection  | Technology of poultry products | Explanation, presentation of the form, and lecture | Exam |

#### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

#### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Main references (sources)

Recommended books and references (scientific journals, reports...)

Electronic References, Websites

### Course Description Form

1. Course Name: Principles of Genetics

2. Course Code: :- GENE235

3. Semester / Year: Spring Semester / Year 2024

4. Description Preparation Date: 1-2-2024



| <b>5. Forms of Attendance: Attendance</b>  |              |  |   |   |                                |
|--|--------------|--|---|---|--------------------------------|
| <b>6. Number of Studying Hours (Total) / Number of Units (Total):-<br/>5 hours (2 theoretical and 3 practical) Number of units (3.5)</b> |              |  |   |   |                                |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>   |              |  |   |   |                                |
| <b>Name: M.M. Duaa Ali Hussein<br/>M.M. Hamid Majeed</b>   |              |  | <b>Email:</b>                           |   |                                |
| <b>8. Course Objectives</b>  |              |  |   |   |                                |
| <b>Course Objectives</b>   |              | <b>Graduating students who are able to:</b> <ul style="list-style-type: none"> <li>- Work in the field of genetic characterization of farm animals</li> <li>- Work on studying farm animal breeds</li> <li>- The possibility of preserving them and enhancing their economic characteristics</li> <li>- Help students understand the curriculum and vocabulary of the lesson</li> <li>- Animal genetics curriculum and learn about the history of genetics</li> <li>- Introduce livestock projects and focus on the genetic aspects in the country</li> <li>- Practical practice of the most important animal genetics projects and conduct test crosses for a number of farm animals</li> </ul> |   |   |                                |
| <b>9. Teaching and Learning Strategies</b>   |              |  |   |   |                                |
| <b>Strategies</b>  |              | <b>This course is designed to suit the second year students in the Animal Production Department. In order to achieve the desired goal of studying this course, genetics studies the biodiversity in farm animals and the effect of genetic factors on different animals and studies how similar and different animal species are in terms of phenotypic and genetic characteristics</b>  |   |   |                                |
| <b>10. Course Structure</b>  |              |  |   |   |                                |
| <b>Week</b>  | <b>Hours</b> | <b>Required Learning Outcomes</b>  | <b>Unit or subject name</b>             | <b>Learning method</b>                    | <b>Evaluation method</b>       |
| <b>1</b>   | <b>5</b>     | <b>Introducing students to information about general genetics and the history of genetics</b>  | <b>General Introduction to Genetics</b> | <b>Lectures Theoretical and practical</b> | <b>Daily and monthly tests</b> |
| <b>2</b>   | <b>5</b>     | <b>Studying the definition of nucleic acids and methods of their synthesis and division</b>  | <b>Nucleic Acids</b>                    | <b>Lectures Theoretical and practical</b> | <b>Daily and monthly tests</b> |
| <b>3</b>   | <b>5</b>     | <b>Introducing students to Mendel's laws (the law of segregation and independent segregation)</b>  | <b>Mendelian Inheritance</b>            | <b>Lectures Theoretical and practical</b> | <b>Daily and monthly tests</b> |

|   |   |   |   |                                    |                         |
|---|---|---|---|------------------------------------|-------------------------|
| 4   | 5 | Introducing students to the phenotypic traits of the animal   | Types of Dominance                      | Lectures Theoretical and practical | Daily and monthly tests |
| 5   | 5 | Explaining and clarifying the effect of the gene on the appearance of several phenotypic traits in the same species   | Multiple Alleles                        | Lectures Theoretical and practical | Daily and monthly tests |
| 6   | 5 | Introducing students to some phenotypic traits affected by the sex of the living organism   | Sex-Determined Traits                   | Lectures Theoretical and practical | Daily and monthly tests |
| 7   | 5 | Introducing students to the term genetic interference and the meaning of lethal alleles and the most important diseases that they can cause to humans and animals | Genetic interference and lethal alleles | Lectures Theoretical and practical | Daily and monthly tests |
| 8   | 5 | Introducing students to the characteristics of genetic material during division   | Complete linkage                        | Lectures Theoretical and practical | Daily and monthly tests |
| 9   | 5 | Introducing students to the state of crossing over during growth  | Genetic crossing over                   | Lectures Theoretical and practical | Daily and monthly tests |
| 10  | 5 | Explaining quantitative inheritance and determining mapping distances in diploid organisms  | Chromosome maps                         | Lectures Theoretical and practical | Daily and monthly tests |
| 11  | 5 | Introducing students to the term genetic replication  | Gene duplication and its laws           | Lectures Theoretical and practical | Daily and monthly tests |
| 12  | 5 | Explaining the effect of the mother and cytoplasmic inheritance   | Cytoplasmic inheritance                 | Lectures Theoretical and practical | Daily and monthly tests |
| 13  | 5 | Introducing students to the meaning of the genetic code, gene expression and genetic control over protein synthesis   | Gene expression                         | Lectures Theoretical and practical | Daily and monthly tests |
| 14  | 5 | Explaining the difference in chromosomal structure  | Chromosomes                             | Lectures Theoretical and practical | Daily and monthly tests |
| 15  | 5 | Introducing students to genetic mutations, their types and the reasons for their occurrence   | Genetic mutations                       | Lectures Theoretical and practical | Daily and monthly tests |
| <b>11. Course Evaluation</b>  |   |   |   |                                    |                         |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as |   |   |   |                                    |                         |

|   |   |
|---|---|
| <b>.homework, daily, oral, monthly, written exams, reports, etc</b>       |   |
| <b>12. Learning and Teaching Resources</b>                                |   |
| <b>Required textbooks (curricular books, if any)</b>                      | عدنان حسن محمد ( 1982 ) أساسيات في الوراثة . دار الكتب للطباعة والنشر .الموصل.<br>-1 خالد حامد حسن (2017) اساسيات علم الوراثة. مطبعة جامعة ديالى. جمهورية العراق.<br>-2 شبكة المعلومات الدولية الانترنت   |
| <b>Main references (sources)</b>  | . <b>Breeding and Genetics</b><br>Muir , W.M. and S.E., Aggrey (203) Poultry -<br>.Genetics , Breeding and Biotechnology<br>Principles of Genetics , Editors : D.P.,Snustad<br>. ( and M.J.,Simmons ( 2000<br>Interactive concepts in Biology . Tenth Edition<br>.Version (4.0) CD<br>شبكة المعلومات الدولية الانترنت |
| <b>Recommended books and references (scientific journals, reports...)</b> | المجلات العلمية الاكاديمية العراقية<br>J. of Heredity   |
| <b>Electronic References, Websites</b>                                    | Library Genesis   |

### Course Description Form

|  |                                       |
|--|---------------------------------------|
| <b>1. Course Name:</b>   | Organic Chemistry                     |
| <b>2. Course Code:</b>   | ORCH162                               |
| <b>3. Semester / Year:</b>   | The Second spring course / First year |
| <b>4. Description Preparation Date:</b>                                    |                                       |
| <b>5. Forms of Attendance:</b>   | Mandatory (Theoretical / Practical)   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b>       |                                       |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b> |                                       |

| <b>Name: Ayat Jawdat Kathem</b>            |  | <b>Email: ayat.jawdat@uobasrah.edu.iq</b>   |   |   |                          |
|--|--|---|---|---|--------------------------|
| <b>8. Course Objectives</b>                |  |   |   |   |                          |
| <b>Course Objectives</b>                   |  | <b>Definition the student to Organic chemistry</b>  |   |   |                          |
| <b>9. Teaching and Learning Strategies</b> |  |   |   |   |                          |
| <b>Strategies</b>                          |  | <b>Theoretical lectures<br/>Use the Curriculum book<br/>Use the blackboard</b>                                |   |   |                          |
| <b>10. Course Structure</b>                |  |   |   |   |                          |
| <b>Week</b>                                | <b>Hours</b>                                   | <b>Required Learning Outcomes</b>   | <b>Unit or subject name</b>               | <b>Learning method</b>  | <b>Evaluation method</b> |
| <b>1</b>                                   | <b>2 theoretical<br/>+<br/>3<br/>Practical</b> | <b>Definition the student to Organic chemistry, Properties of the element carbon, Types of chemical bonds</b> | <b>Introduction of Organic Chemistry</b>  | <b>Using theoretical lectures and using the blackboard structures</b> | <b>quiz</b>              |
| <b>2</b>                                   | <b>2 theoretical<br/>+<br/>3<br/>Practical</b> | <b>Definition the student to Hybridization</b>  | <b>Introduction of Organic Chemistry</b>  | <b>Using theoretical lectures and using the blackboard structures</b> | <b>quiz</b>              |
| <b>3</b>                                   | <b>2 theoretical<br/>+<br/>3<br/>Practical</b> | <b>Definition the student to Alkanes , Name them , isomers, physical and chemical properties</b>              | <b>Saturated Hydrocarbons 'AlKanes'</b>   | <b>Using theoretical lectures and using the blackboard structures</b> | <b>quiz</b>              |
| <b>4</b>                                   | <b>2 theoretical<br/>+<br/>3<br/>Practical</b> | <b>Preparation of alkanes, cycloalkanes</b>   | <b>Saturated Hydrocarbons 'AlKanes'</b>   | <b>Using theoretical lectures and using the blackboard structures</b> | <b>quiz</b>              |
| <b>5</b>                                   | <b>2 theoretical<br/>+<br/>3<br/>Practical</b> | <b>Definition the student to Alkenes , Name them , isomers, physical and chemical properties</b>              | <b>unSaturated Hydrocarbons 'AlKenes'</b> | <b>Using theoretical lectures and using the blackboard structures</b> | <b>quiz</b>              |

|    |                                   |  |                                    |  |      |
|----|-----------------------------------|--|------------------------------------|--|------|
| 6  | 2 theoretical<br>+<br>3 Practical | Preparation of alkenes   | unSaturated Hydrocarbons 'AlKenes' | Using theoretical lectures and using the blackboard structures | quiz |
| 7  | 2 theoretical<br>+<br>3 Practical | Definition the student to Dienes , name and preparation them                                 | unSaturated Hydrocarbons 'AlKenes' | Using theoretical lectures and using the blackboard structures | quiz |
| 8  | 2 theoretical<br>+<br>3 Practical | Definition the student to Alkynes , Name them , physical and chemical properties             | unSaturated Hydrocarbons 'AlKynes' | Using theoretical lectures and using the blackboard structures | quiz |
| 9  | 2 theoretical<br>+<br>3 Practical | Preparation of alkynes   | unSaturated Hydrocarbons 'AlKynes' | Using theoretical lectures and using the blackboard structures | quiz |
| 10 | 2 theoretical<br>+<br>3 Practical | Definition the student to Aromatic Comopounds , Name them , physical and chemical properties | Aromatic Comopounds                | Using theoretical lectures and using the blackboard structures | quiz |

### 11. Course Evaluation

The theoretical part (30) marks:  
Written exam (25) marks + quiz exams (5) marks.  
Practical part (20) marks:  
The first month: a written exam (20 marks).

### 12. Learning and Teaching Resources

|  |  |
|--|--|
| Required textbooks (curricular books, if any)                      | Introduction of Organic Chemistry<br>Dr. Fadel Suleiman Kammouna |
| Main references (sources)  |  |
| Recommended books and references (scientific journals, reports...) |  |
| Electronic References, Websites                                    |  |

### Description of the academic program

| <b>Course name: Computer basics and office applications/1</b>   |       |                                   |  |  |  |
|---|-------|-----------------------------------|--|--|--|
| <b>Course code</b>  |       |                                   |  |  |  |
| <b>COMA101</b>  |       |                                   |  |  |  |
| <b>Semester/year :Spring Semester/year2024</b>  |       |                                   |  |  |  |
| <b>Date this description was prepared: 2/1/2024</b>   |       |                                   |  |  |  |
| <b>Available forms of attendance are in person</b>  |       |                                   |  |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>   |       |                                   |  |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>  |       |                                   |  |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>   |       |                                   | <b>Name : ABBAS LUAIBI OBAID</b>   |  |  |
| <b>Module Aims</b>  |       |                                   |  |  |  |
| Introducing the student to the basics of computers and types of computers Its classification, operating systems and objectives. As for the goals of the practical side It is to provide the student with skills in using operating and application programs and how to maintain computer security.  |       |                                   |  |  |  |
| <b>Teaching and learning strategies</b>   |       |                                   |  |  |  |
| 1- Explanation, clarification, and honing general and qualifying skills<br>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.<br>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.<br>4-Practical lessons in the laboratory<br>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development. |       |                                   |  |  |  |
| <b>Course structure</b>   |       |                                   |  |  |  |
| Week  | hours | required learning outcomes        | Name of the unit or topic  | Learning method  | Evaluation method                          |
| 1+2   | 4     | Chapter One:<br>Computer Basics   | <b>Chapter One:<br/>Computer Basics</b><br>1. The development of computer generations<br>2. Electronic computer<br>3. Data and information<br>4. Computer features<br>5. Areas of computer use | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 3+4   | 4     | Chapter One:<br>Computer Basics 1 | 1. Computer components<br>2. Types of computers<br>3. Classification of  | Practical lectures + direct presentation methods +                         | Daily, monthly and final tests and reports |

|              |          |   |   |   |   |
|--------------|----------|---|---|---|---|
|              |          |   | <b>computers</b>  | <b>dialogue and discussion</b>  |   |
| <b>5+6</b>   | <b>4</b> | <b>Chapter Two: Computer components</b>                         | <b>Chapter Two: Computer components</b><br><b>1. Computer components</b><br><b>2. The physical parts of the computer</b><br><b>3. Input devices</b><br><b>4. Output devices</b><br><b>5. Computer box</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>7+8</b>   | <b>4</b> | <b>Chapter Two: Computer components</b>                         | <b>1. Software entity</b><br><b>2. Number systems</b><br><b>3. Your personal computer</b><br><b>4. Computer platform</b><br><b>5. Factors that must Take this into consideration when purchasing a computer</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>9+10</b>  | <b>4</b> | <b>Chapter Three (Computer security and licensing programs)</b> | <b>Chapter III (Computer security and licensing programs)</b><br><b>1. Ethics of the electronic world</b><br><b>2. Forms of abuses in the world Electronic</b><br><b>3. Computer security</b><br><b>4. Computer privacy</b><br><b>5. Computer software licenses</b><br><b>6. Types of licenses</b><br><b>7. Intellectual property</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>11+12</b> | <b>4</b> | <b>Chapter Three (Computer security and licensing programs)</b> | <b>1. Electronic hacking</b><br><b>2. Types of electronic hacking</b><br><b>3. Sources of hacking Electronic</b><br><b>4. The most security risks widespread</b><br><b>5. Malicious software</b><br><b>6. Computer viruses</b><br><b>7. Damages resulting from Viruses</b><br><b>8. Components of</b>                                 | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |

|   |   |   |  |   |   |
|---|---|---|--|---|---|
|   |   |   | <b>viruses</b><br><b>9. Types of viruses</b><br><b>10. Necessary steps for protection</b><br><b>From viruses</b><br><b>11. Computer damage</b><br><b>On human health</b>   |   |   |
| 13+14   | 4 | the fourth chapter<br>Operating Systems | <b>the fourth chapter</b><br><b>Operating Systems</b><br><b>1. Definition of the operating system</b><br><b>2. Operating system functions</b><br><b>3. Objectives of the operating system</b><br><b>4. Operating system classification</b><br><b>5. Examples of some operating systems</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| 15  | 4 | the fourth chapter<br>Operating Systems | <b>1.Windows 7 operating system</b><br><b>2.Windows 7 installation requirements</b><br><b>3.Windows 7 features</b><br><b>4. Surface components</b>   | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc</b> |   |   |  |   |   |
| <b>Learning and teaching resources</b>  |   |   |  |   |   |
| <b>Required textbooks (methodology, book four)</b>  |   |   | <b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |   |   |
| <b>Main references (sources)</b>  |   |   | <b>1- Internet Ethics - A. M. Alawi Hind - Al-Shabsi Arab University Center</b><br><b>2- Ethics of dealing with technical and communication resources - Dr. Hussein bin Saeed bin Saif</b><br><b>3- Ethics of the virtual world - Dr. Louay Al-Zoubi 2013</b>  |   |   |
| <b>Recommended supporting books and references (scientific journals, reports....)</b>   |   |   |  |   |   |
| <b>Electronic references, Internet sites</b>  |   |   | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b> |   |   |



|  |   |
|--|---|
|  | Real-time communication protocols in the Internet -<br>. (RTP SIP), World of Technology website<br>ARPANET logical map,<br><a href="http://russbellew.com/Documents/Arpanet_sep_1974">.http://russbellew.com/Documents/Arpanet_sep_1974</a> |
|--|---|

### Description of the academic program

| <b>Course name: Computer basics and office applications/2</b>  |              |   |                                  |  |  |
|--|--------------|---|----------------------------------|--|--|
| <b>Course code</b>   |              |   |                                  |  |  |
| <b>COMA102</b>   |              |   |                                  |  |  |
| <b>Semester/year :Spring Semester/year2024</b>   |              |   |                                  |  |  |
| <b>Date this description was prepared: 2/1/2024</b>  |              |   |                                  |  |  |
| <b>Available forms of attendance are in person</b>   |              |   |                                  |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>  |              |   |                                  |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>   |              |   |                                  |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>  |              |   | <b>Name : ABBAS LUAIBI OBAID</b> |  |  |
| <b>Module Aims</b>   |              |   |                                  |  |  |
| <p>1- Guiding the student how to use the computer in a manner compatible with his cultural level<br/>2- Directing the student how to deal with social sites</p>  |              |   |                                  |  |  |
| <b>Teaching and learning strategies</b>  |              |   |                                  |  |  |
| <p>1- Explanation, clarification, and honing general and qualifying skills<br/>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.<br/>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.<br/>4-Practical lessons in the laboratory<br/>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.</p> |              |   |                                  |  |  |
| <b>Course structure</b>  |              |   |                                  |  |  |
| <b>Week</b>  | <b>hours</b> | <b>required learning outcomes</b>   | <b>Name of the unit or topic</b> | <b>Learning method</b>   | <b>Evaluation method</b>                   |
| 1+2  | 4            | Chapter One:<br>Operating the Word program<br>2010 File Burning,<br>Program Interfaces<br>Tapes Home tab, group<br>Horizon, line and paragraph...<br>Paragraph group and<br>Order group | word                             | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|     |   |  |             |  |  |
|-----|---|--|-------------|--|--|
|     |   | <p><b>And the View tab, the Views group</b><br/> <b>Documents, Show group, and Zoom group</b><br/> <b>Minimize the window, help instructions</b></p>   |             |  |  |
| 3+4 | 4 | <p><b>Chapter Two / Insert tab, Page group, and Table group, Table Tools tab, Table Design .....tab, and Skip tab</b><br/> <b>Graphics set, tools Image, set of links</b><br/> <b>Header and footer group, text group, and symbol group</b></p>  | word        | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |
| 5+6 | 3 | <p><b>Chapter Three/Additional tasks For Microsoft Word, the References and Tables of Contents tab, the Footnotes group, the References, Citations and Captions group, and the Indexing group....</b><br/> <b>Resource table set, tui b</b><br/> <b>Correspondence and group creation, merging</b><br/> <b>Correspondence</b><br/> <b>A group of writing and inserting fields</b><br/> <b>Preview results set</b><br/> <b>Review, proofread and language tab</b><br/> <b>And a comment group, a tracking group</b><br/> <b>Changes set and comparison set</b><br/> <b>And a protection group</b></p> | word        | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |
| 7   | 3 | <b>First exam</b>  |             |  |  |
| 8+9 | 4 | <p><b>Chapter Four</b><br/> <b>Powerpoint Run it</b><br/> <b>The program interfaces and the File tab</b><br/> <b>Open a presentation file and</b></p>  | Power point | <p><b>Practical lectures + direct presentation methods + dialogue and discussion</b></p> | <p><b>Daily, monthly and final tests and reports</b></p> |

|  |   |  |             |  |  |
|--|---|--|-------------|--|--|
|  |   | save a new one Save a stock presentation as Open and close an inventory presentation View and print slides on paper and the Home tab Page setup, theme and background set Slideshow tab h  |             |  |  |
| 10+11  | 4 | View tab and Views group Presentation and presentation set Main Show set and set Direction, color and grayscale Zoom in, zoom out and group Help window and instructions Chapter Five / Inserting and adding objects Motions, adding shapes and groups Drawing and investigating t                           | Power point | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 12+13  | 4 | Inserts tab and Tables group And a set of photos Collection of illustrations and links A set of text and symbols Adding animations to slides and objects The Transitions tab and the Preview group A group is transferred to a slide Set the timing and movements tab A preview group and an animation group | Power point | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 14   | 4 | Custom drivetrain and kit The timing is a comprehensive exam as a review and solution Book questions b   | Power point | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 15   | 3 | Second exam  |             |  |  |
| Distribution of the grade out of 100 according to the tasks assigned to the student, such as |   |  |             |  |  |

|   |  |
|---|--|
| <b>.daily preparation, daily, oral, monthly, written exams, reports, etc</b>          |  |
| <b>Learning and teaching resources</b>  |  |
| <b>Required textbooks (methodology, book four)</b>                                    | <b>Computer basics and office applications, Part Two/ Microsoft Office 2010</b><br><b>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |
| <b>Main references (sources)</b>  | <b>1.Microsoft PowerPoint 2010 Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis</b><br><b>3. PowerPoint 2010 AdvancedSlides, Animation and Layouts.</b><br><b>Stephen Moffat, The Mouse Training Company</b>  |
| <b>Recommended supporting books and references (scientific journals, reports....)</b> |  |
| <b>Electronic references, Internet sites</b>  | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b><br><b>Real-time communication protocols in the Internet - .(RTP SIP), World of Technology website</b><br><b>ARPANET logical map,</b><br><b>.<a href="http://russbellew.com/Documents/Arpanet_sep_1974">http://russbellew.com/Documents/Arpanet_sep_1974</a></b> |

### Course Description Form

|   |  |
|---|--|
| <b>1. Course Name: Principles of Field Crops - First Stage</b>                |  |
| <b>2. Course Code:</b><br><b>PRFI155</b>                                      |  |
| <b>3. Semester / Year: Second Semester</b>                                    |  |
| <b>4. Description Preparation Date: 20/09/2023</b>                            |  |
| <b>5. Forms of Attendance: Weekly</b>   |  |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours</b> |  |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>    |  |
| <b>Name: Ali Adnan Hassoun</b>  | <b>Email: <a href="mailto:ali.adnan@uomisan.edu.iq">ali.adnan@uomisan.edu.iq</a></b> |
| <b>8. Course Objectives</b>   |  |

|                          |   |
|--------------------------|---|
| <b>Course Objectives</b> | <input type="checkbox"/> To study the main cereal crops in Iraq and the world.<br><input type="checkbox"/> To include the study of scientific methods used in cereal crop cultivation.<br><input type="checkbox"/> To study the suitable environmental conditions for each major field crop.<br><input type="checkbox"/> To identify the main methods to increase productivity for each field crop.<br><input type="checkbox"/> To study the problems related to pests and diseases of each field crop. |
|--------------------------|---|

### 9. Teaching and Learning Strategies

|                   |   |
|-------------------|---|
| <b>Strategies</b> | <input type="checkbox"/> The strategy is to familiarize the student with the main cereal crops prevalent in Iraq and the world.<br><input type="checkbox"/> To classify cereal crops according to their environmental needs.<br><input type="checkbox"/> To differentiate the importance of each crop based on usage.<br><input type="checkbox"/> To know the scientific methods used in planting each crop.<br><input type="checkbox"/> To evaluate each crop in terms of production and storage |
|-------------------|---|

### 10. Course Structure

| Week | Hours                 | Required Learning Outcomes | Unit or subject name   | Learning method    | Evaluation method |
|------|-----------------------|----------------------------|--|--------------------|-------------------|
| 1    | 2 theory, 3 practical | Principles of Field Crops  | Field crops: definition, evolution, origin   | Theory + Practical | Exams + Quizzes   |
| 2    | 2 theory, 3 practical | Principles of Field Crops  | Environmental factors in Iraq and the world and their relation to crop growth: location, terrain, climate, soil, water resources | Theory + Practical | Exams + Quizzes   |
| 3    | 2 theory, 3 practical | Principles of Field Crops  | Classification of field crops by life cycle  | Theory + Practical | Exams + Quizzes   |
| 4    | 2 theory, 3 practical | Principles of Field Crops  | Temperature: factors affecting temperature, its relation to crops, adaptation methods to mitigate temperature effects            | Theory + Practical | Exams + Quizzes   |
| 5    | 2 theory, 3 practical | Principles of Field Crops  | Light: importance of light for plants, plant adaptation to light, significance in seed germination                               | Theory + Practical | Exams + Quizzes   |
| 6    | 2 theory, 3 practical | Principles of Field Crops  | Water: soil water content, crop  | Theory + Practical | Exams + Quizzes   |

|  |                       |                           |   |                    |                 |
|--|-----------------------|---------------------------|---|--------------------|-----------------|
|  | practical             |                           | water use efficiency, impact of water scarcity, water stress damage   |                    |                 |
| 7  | 2 theory, 3 practical | Principles of Field Crops | Monthly exam  | Theory + Practical | Exams + Quizzes |
| 8  | 2 theory, 3 practical | Principles of Field Crops | Soil: soil texture, structure, composition, organic matter, soil water and air, harmful salt effects on crops | Theory + Practical | Exams + Quizzes |
| 9  | 2 theory, 3 practical | Principles of Field Crops | Air: air pollution, wind effects on crop growth and soil  | Theory + Practical | Exams + Quizzes |
| 10   | 2 theory, 3 practical | Principles of Field Crops | Mutual benefit, competition, antagonism   | Theory + Practical | Exams + Quizzes |
| 11   | 2 theory, 3 practical | Principles of Field Crops | Seeds: importance, composition, maturity, dormancy, seed diagnosis and testing                                | Theory + Practical | Exams + Quizzes |
| 12   | 2 theory, 3 practical | Principles of Field Crops | Weeds and their control methods   | Theory + Practical | Exams + Quizzes |
| 13   | 2 theory, 3 practical | Principles of Field Crops | Crop rotations  | Theory + Practical | Exams + Quizzes |
| 14   | 2 theory, 3 practical | Principles of Field Crops | Major crops in the world and Iraq   | Theory + Practical | Exams + Quizzes |
| 15   | 2 theory, 3 practical | Principles of Field Crops | Monthly exam  | Theory + Practical | Exams + Quizzes |
| <b>11. Course Evaluation</b>   |                       |                           |   |                    |                 |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |                       |                           |   |                    |                 |
| <b>12. Learning and Teaching Resources</b>   |                       |                           |   |                    |                 |
| Required textbooks (curricular books, if any)  |                       |                           | Principles of Field Crops by Dr. Majid Mohsen Al-Ansari and Dr. Abdul Hamid Ahmed Al-Younis                   |                    |                 |
| Main references (sources)  |                       |                           | From textbooks, supplementary books, internet, and scientific research.                                       |                    |                 |

|  |   |
|--|---|
| Recommended books and references (scientific journals, reports...) | Scientific journals in core specializations |
| Electronic References, Websites                                    |   |

### Course Description Form

| <b>1. Course Name: Pasture management</b>                                    |                                 |  |  |                         |                   |
|--|---------------------------------|--|--|-------------------------|-------------------|
| <b>2. Course Code:</b><br>PAMA451  |                                 |  |  |                         |                   |
| <b>3. Semester / Year: Fall Semester - First Course</b>                      |                                 |  |  |                         |                   |
| <b>4. Description Preparation Date:</b>                                      |                                 |  |  |                         |                   |
| <b>5. Forms of Attendance: weekly</b>  |                                 |  |  |                         |                   |
| <b>hours75 6. Number of Studying Hours (Total) / Number of Units (Total)</b> |                                 |  |  |                         |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>   |                                 |  |  |                         |                   |
| Name: M.M. Rasha Naji Abd  |                                 |  | Email: rashanaji@uomisan.edu.iq            |                         |                   |
| <b>8. Course Objectives</b>  |                                 |  |  |                         |                   |
| Course Objectives  |                                 | <ul style="list-style-type: none"> <li>• The student is able to understand and comprehend the pasture management subject</li> <li>• Enables the student to know the most important ways to protect natural pastures</li> <li>• Familiarity with the most important types of natural pastures</li> <li>• • • Detection and knowledge of the palatability of pasture plants.</li> <li>• • • • The student can judge the quality of pasture plants</li> </ul> |  |                         |                   |
| <b>9. Teaching and Learning Strategies</b>                                   |                                 |  |  |                         |                   |
| Strategies   |                                 | The theoretical part of the lecture is interactive, brainstorming, • • • dialogue, and discussion. As for the practical part, there is an assignment to group work to reveal leadership skills, and assignment .of tasks and a report for each field visit   |  |                         |                   |
| <b>10. Course Structure</b>  |                                 |  |  |                         |                   |
| Week   | Hours                           | Required Learning Outcomes   | Unit or subject name                       | Learning method         | Evaluation method |
| 1  | 2<br>Theoretical<br>Practical 3 | Pasture management   | The importance of pastures                 | Theoretical + Practical | Exams + Cups      |
| 2  | 2<br>Theoretical<br>Practical 3 | Pasture management   | Vegetable . clothing                       | Theoretical + Practical | Exams + Cups      |
| 3  | 2<br>Theoretical<br>Practical 3 | Pasture management   | Environmental factors and natural pastures | Theoretical + Practical | Exams + Cups      |
| 4  | 2<br>Theoretical<br>Practical 3 | Pasture management   | Climatic factors.                          | Theoretical + Practical | Exams + Cups      |
| 5  | 2                               | Pasture management   | Pasture                                    | Theoretical +           | Exams +           |

|                              |  |                           |  |                                    |                         |
|------------------------------|--|---------------------------|--|------------------------------------|-------------------------|
|                              | <b>Theoretical<br/>Practical 3</b>       |                           | <b>management and its relationship to soil and water conservation</b>                      | <b>Practical</b>                   | <b>Cups</b>             |
| <b>6</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>The role of . plants in maintaining soil and pastoral areas in Iraq and the world</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>7</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>.Monthly exam</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>8</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Grazing and its various effects on fodder production, plant growth, and root growth</b> | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>9</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Animal load and its determining factors</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>10</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Exploitation of natural pastures</b>  | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>11</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Sources of exploitation of pastoral plants and the condition of natural pastures</b>    | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>12</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Livestock management and pasture redressing</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>13</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>For natural and artificial coverings and harmful plants in pastures</b>                 | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>14</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Methods of taking pasture samples and estimating pasture productivity</b>               | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>15</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Monthly exam</b>  | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>11. Course Evaluation</b> |  |                           |  |                                    |                         |



|  |  |
|--|--|
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |  |
| <b>12. Learning and Teaching Resources</b>   |  |
| <b>Required textbooks (curricular books, if any)</b>   | <b>Pasture management book<br/>Al-Takriti<br/>Ramadan, Taif Ahmed and Abbas Mahdi<br/>Hassan (1976<br/>(Al-Tamimi, Mahdi Abdel Latif (1987</b> |
| <b>Main references (sources)</b>   |  |
| <b>Recommended books and references (scientific journals, reports...)</b>  |  |
| <b>Electronic References, Websites</b>   |  |

### Course Description Form

|  |  |
|--|--|
| <b>1- Course Name</b>  |  |
| <b>Feed and Rations</b>  |  |
| <b>2-CourseCode</b>  |  |
| <b>FERA321</b>   |  |
| <b>3-semester/ year</b>  |  |
| <b>2023 – 2024 (Spring Semester)</b>                                     |  |
| <b>4-The date of preparing this description</b>                          |  |
| <b>25 April 2024</b>   |  |
| <b>Available attendance forms</b>  |  |
|  |  |
| <b>6. Number of study hours (total) / number of units (total)</b>        |  |
| <b>75 hours (2 theoretical + 3 practical) *15 weeks</b>                  |  |
| <b>Name of course administrator (if more than one name is mentioned)</b> |  |
| <b>Name: M.Sc Ali Jassim Mohammed</b>                                    |  |
| <b>Name : M.Sc Dounia Mohi Mohsen</b>                                    |  |
| <b>Course Objectives</b>   |  |
| <b>Objectives of the unit</b>  | <b>Preparing graduates who are able to know :</b><br><b>1- Theoretical and practical methods for the formation and synthesis of feed mixtures for agricultural animal husbandry projects.</b><br><b>2- Field work skills, and how to establish and prepare animal breeding projects.</b><br><b>3- Types of animal feed such as molasses and silag...</b><br><b>4- Feed mixtures, their types and importance in the productivity of yuan</b><br><b>.</b><br><b>5- Applying for external tests by local / regional / international bodies.</b> |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |  |
| <b>Strategy</b>  | <b>1- Enabling students to analyze and think about topics related to the</b>   |

|  |   |
|--|---|
|  | <p>intellectual framework of fodder and relationships</p> <p>2- Enabling students to analyze to identify non-traditional feed provided to animals</p> <p>3- Enabling students to analyze and think about how to provide environmental conditions that affect agricultural animals in terms of health and productivity .</p> <p>4- Enabling students to analyze to identify the best relationships prevailing in agricultural animal husbandry projects.</p> |
|--|---|

**10. Course Structure**

| <b>Fifteenth</b> | <b>Hours</b> | <b>Intended Learning Outcomes</b>  | <b>Module / Course Name or</b>                                   | <b>Learning method</b>  | <b>Valuation Method</b>            |
|------------------|--------------|--|--|---|------------------------------------|
| <b>1</b>         | <b>5</b>     | <b>Introducing students to the appropriate leech for agricultural animals and its specifications</b>   | <b>Leech/Types of Leeches/ Specifications of Ideal Leeches</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>2</b>         | <b>5</b>     | <b>Empowering students on how to form relationships to balance nutrients in them</b>   | <b>Steps for forming a bush</b>                                  | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>3</b>         | <b>5</b>     | <b>Introducing students to the most important factors affecting the nutritional value of the leeches used in animal nutrition</b>                                | <b>Factors affecting the nutritional value of feedstuffs</b>     | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>4</b>         | <b>5</b>     | <b>Introducing students to the most important practical methods used to improve the nutritional value of feedstuffs used in feeding farm animals, especially</b> | <b>Improving the nutritional value of low-quality feedstuffs</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |

|           |          |  |  |   |                                    |
|-----------|----------|--|--|---|------------------------------------|
|           |          | <b>ruminants</b>   |  |   |                                    |
| <b>5</b>  | <b>5</b> |  | <b>Exam</b>  |   | <b>Daily and monthly reports .</b> |
| <b>6</b>  | <b>5</b> | <b>Introducing students to the sections and types of feed used in animal nutrition</b>   | <b>Classification of Fodder /Concentrate / Coarse</b>                  | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>7</b>  | <b>5</b> | <b>Introducing students to food additives, their types and their importance in terms of health and economic</b>                | <b>Food Additives</b>  | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>8</b>  | <b>5</b> | <b>Enabling students to manufacture and mix meals . as well as methods of preserving fodder</b>                                | <b>Feed Manufacturing/Silage Manufacturing/Threshing Manufacturing</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>Introducing students to the most important points and general specifications that must be available in fodder materials</b> | <b>Feed Material Evaluation</b>  | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> |  | <b>Exam</b>  |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> | <b>Introducing students to the animal's protein needs according to age and production</b>                                      | <b>Nutritional Needs/Protein Needs</b>                                 | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and</b>            | <b>Daily and monthly reports .</b> |

|    |   |  |  |   |                                    |
|----|---|--|--|---|------------------------------------|
|    |   |  |  | <b>Discussion</b>   |                                    |
| 12 | 5 | <b>Introducing students to the animal's needs of mineral elements and vitamins according to age and production .</b> | <b>Energy needs/ needs for minerals and vitamins</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| 13 | 5 | <b>Enabling students to know the needs of farm animals of nutrients and according to production .</b>                | <b>Milk Cows Needs/Meat Cows Needs</b>               | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| 14 | 5 | <b>Introducing students to the nutritional needs of sheep and goats.</b>   | <b>Sheep Needs/Goat Needs</b>                        | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| 15 | 5 | <b>Enabling students to know the needs of work animals of nutrients</b>  | <b>Business needs/wool production needs</b>          | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |

#### **Course Evaluation**

**Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports ....**

#### **Learning and Teaching Resources**

|  |   |
|--|---|
| <b>Required textbooks (curricular books, if any)</b> | <b>McDonald, P., Edwards, R.A. and .1 Greenhalgh, J.F.D., 1987. Animal Nutrition. 4th Longman group (FE) Ltd. - Essex CM20 2JE, England.<br/>Pond, W.G., Church D.C. and Pond, K.R., .2 1995. Basic Animal Nutrition and Feeding 4th Ed. John Wiley &amp; Sons.</b> |
|--|---|

|                                  |   |
|----------------------------------|---|
| <b>Main References (Sources)</b> | <b>1 animal-nutrition-7th-edition.pdf (wordpress.com)<br/>2- Cultivation and use of fodder. Mahdi Abdul Latif Al-Tamimi .</b> |
|----------------------------------|---|

|   |  |
|---|--|
|   | <b>3- Modern machines from the Internet and from specialized scientific fields and a magazine Agricultural Sciences - Iraq and the Library of Satisfaction .</b> |
| <b>Recommended books and references (scientific journals, reports...)</b> | animal-nutrition-7th-edition.pdf (wordpress.com)   |
| <b>E-References, Websites</b>   | Agriculture   Free Full-Text   Animal Nutrition and Productions (mdpi.com)   |

### Course Description Form

|  |   |
|--|---|
| <b>1- Course Name</b>  |   |
| Animal Nutrition   |   |
| <b>2-CourseCode</b>  |   |
| ANNU314  |   |
| <b>3-semester/ year</b>  |   |
| 2023 – 2024 (Fall Semester )   |   |
| <b>4-The date of preparing this description</b>                          |   |
| 25 April 2024  |   |
| <b>Available attendance forms</b>  |   |
|  |   |
| <b>6. Number of study hours (total) / number of units (total)</b>        |   |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |   |
| <b>Name of course administrator (if more than one name is mentioned)</b> |   |
| <b>Name: Eng. Ali Jassim<br/>Mohammed</b>                                |   |
| <b>Course Objectives</b>   |   |
| <b>Objectives of the unit</b>  | <b>Preparing graduates who are able to know :</b><br><b>1- How to digest, absorb and metabolize nutritional nutrients.</b><br><b>2- Field work skills, and how to establish and prepare animal breeding projects.</b><br><b>3- Types of animal feed such as molasses and silage...</b><br><b>5- The work of the digestive system in the animal .</b><br><b>5- Applying for external tests by local / regional / international bodies.</b> |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |   |
| <b>Strategy</b>  | <b>1- Enabling students to analyze and think about topics related to the intellectual framework of animal nutrition</b>   |

|                             |              |  | <p>2- Enabling students to analyze to identify the digestive system in simple and ruminant animals.</p> <p>3- Enabling students to identify the main nutrients.</p> <p>4- Enabling students to identify the structure of the body of animals and plants .</p> |   |                             |
|-----------------------------|--------------|--|---|---|-----------------------------|
| <b>10. Course Structure</b> |              |  |   |   |                             |
| <b>Fifteenth</b>            | <b>Hours</b> | <b>Intended Learning Outcomes</b>  | <b>Module / Course Name or</b>  | <b>Learning method</b>  | <b>Valuation Method</b>     |
| 1                           | 5            | Introducing students to the components of the animal and plant body and knowledge of the main nutrients. | Food /Animal Body Composition/Plant Composition/Water Role and Needs in Animal Body/Water Properties and Functions/ Energy .  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 2                           | 5            | Enabling students to know the digestive system and its work in ruminants                                 | Digestive processes in animals / digestive system /pseudo-ruminants / types of digestion / enzymes / qualities of enzymes /microbial digestion of carbohydrates /   | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 3                           | 5            | Introducing students to the components of saliva, its work and its importance in ruminants               | Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 4                           | 5            | Introducing students to the components of saliva, its work and its importance in ruminants               | Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion  | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 5                           | 5            | Enabling students to know proteins,  | Second:Proteins/ Classification of  |   | Daily and monthly           |

|          |          |   |   |   |                                    |
|----------|----------|---|---|---|------------------------------------|
|          |          | <b>their properties, classification, enzymatic and microbial digestion and metabolism</b>   | <b>proteins/Amino acids/Properties of proteins /Metabolism of proteins in rumen/Enzymatic digestion of proteins/Third : Lipids Classification of lipids /Fat properties/ Digestion of lipids in rumen</b>                 |   | <b>reports .</b>                   |
| <b>6</b> | <b>5</b> |   | <b>exam</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>7</b> | <b>5</b> | <b>Introducing students to inorganic elements and their importance in the life of the organism . As well as enabling students to know the animal's energy needs</b> | <b>Fourth: Inorganic elements/Essential or necessary inorganic elements/Fifth: Vitamins /Nutritional needs of various nutrients/First : Energy needs/Energy processing in the animal's body/ Total digested nutrients</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>8</b> | <b>5</b> | <b>Enabling students to know the animal's protein needs</b>   | <b>Second: Protein Needs/Crude Protein/Real Protein/Biological Value/</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b> | <b>5</b> | <b>Enabling students to know the types and numbers of microorganisms in the rumen of ruminants</b>  | <b>Microbiology in rumen / classification of bacteria/ nutrients needed by bacteria/cilia of rumen/other microorganisms</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and</b>            | <b>Daily and monthly reports .</b> |

|           |          |   |   | <b>Discussion</b>   |                                    |
|-----------|----------|---|---|---|------------------------------------|
| <b>10</b> | <b>5</b> | <b>Introducing students to concentrated and coarse feed used in animal nutrition</b>                            | <b>Feed and Feedstuffs/ First: Concentrated Feedstuffs/ Second :Coarse Feedstuffs</b>   |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> | <b>Enabling students to manufacture and mix meals . as well as methods of preserving fodder</b>                 | <b>/ Type I: Green Coarse Feedstuffs / Type II :Silage/ Type III -Dry Coarse Feedstuffs /</b>   | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>12</b> | <b>5</b> |   | <b>exam</b>   | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>13</b> | <b>5</b> | <b>Introducing students to food additives, their types and their importance in terms of health and economic</b> | <b>Third: Food additives/ factors affecting the nutritional value of feedstuffs/nutritional problems related to the digestive tract of ruminants / bloating /acute indigestion/</b> | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>14</b> | <b>5</b> | <b>Introducing students to the most important diseases that affect ruminants resulting from malnutrition .</b>  | <b>Simple indigestion/rumen acidity/milk fever/urea poisoning/ ketosis/rumen glut</b>   | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>15</b> | <b>5</b> | <b>Enabling students to know the types of pastures and how to exploit</b>                                       | <b>Rangelands/Rangelands Types/Natural Rangeland Exploitation/</b>  | <b>1- Theoretical lectures. 2-</b>  | <b>Daily and monthly reports .</b> |



|   |  |  |  |  |  |
|---|--|--|--|--|--|
|   |  | them   | Overgrazing/Organized Grazing/Grazing Problems | Practical lectures. Displays Dialogue and Discussion |  |
| <b>Course Evaluation</b>  |  |  |  |  |  |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |  |  |  |  |  |
| <b>Learning and Teaching Resources</b>  |  |  |  |  |  |
| Required textbooks (curricular books, if any)   |  | Feeding an animal . Translated by Saad Abdel Hussein Naji and Talal Youssef Boutros . Technical Institutes Foundation. 1985<br>Dietetics Written by Shaker Abdul Amir Al-Attar and Dr. Gamal Abdel Rahman Tawfiq 2014 . Faculty of Agriculture, University of Baghdad. |  |  |  |
| Main References (Sources)   |  | 1 animal-nutrition-7th-edition.pdf (wordpress.com)<br>2- Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the library .  |  |  |  |
| Recommended books and references (scientific journals, reports...)  |  | animal-nutrition-7th-edition.pdf (wordpress.com)   |  |  |  |
| E-References, Websites  |  | Agriculture   Free Full-Text   Animal Nutrition and Productions (mdpi.com)   |  |  |  |

### Course Description Form

|  |  |
|--|--|
| <b>1- Course Name</b>  |  |
| Reproductive Physiology  |  |
| <b>2-CourseCode</b>  |  |
| REPH317  |  |
| <b>3-semester/ year</b>  |  |
| 2023 – 2024 (Fall Semester )   |  |
| <b>4-The date of preparing this description</b>                          |  |
| 25 April 2024  |  |
| <b>Available attendance forms</b>  |  |
|  |  |
| <b>6. Number of study hours (total) / number of units (total)</b>        |  |
| 75 hours (2 theoretical + 3 practical) *15 weeks                         |  |
| <b>Name of course administrator (if more than one name is mentioned)</b> |  |
| Name: M.Sc Ali Jassim Mohammed   |  |
| <b>Course Objectives</b>   |  |
| Objectives of the unit   | <p>Preparing graduates who are able to know :</p> <ol style="list-style-type: none"> <li>1- Increasing the productivity of the animal from birth in theory and practice .</li> <li>2- Field work skills and how to establish and manage projects.</li> <li>3- The work of the reproductive system in the animal .</li> <li>4- Applying for external tests by local / regional / international</li> </ol> |

|  |         |
|--|---------|
|  | bodies. |
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**TEACHING AND LEARNING STRATEGIES**

|                 |  |
|-----------------|--|
| <b>Strategy</b> | <p><b>1- Enabling students to analyze and think about topics related to the intellectual framework of reproductive philosophy</b></p> <p><b>2- Enabling students to analyze to identify the reproductive system in farm animals.</b></p> <p><b>3- Enabling students to analyze and think about topics related to providing appropriate environmental conditions for the stages of pregnancy and childbirth .</b></p> <p><b>4- Enabling students to obtain knowledge on how to use modern methods to raise the reproductive efficiency of animals .</b></p> |
|-----------------|--|

**10. Course Structure**

| <b>Fifteenth</b> | <b>Hours</b> | <b>Intended Learning Outcomes</b>  | <b>Module / Course Name or</b> | <b>Learning method</b>  | <b>Valuation Method</b>            |
|------------------|--------------|--|--------------------------------|---|------------------------------------|
| <b>1</b>         | <b>5</b>     | <b>The student should identify the male reproductive system, its anatomy , and its functions</b>     | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>2</b>         | <b>5</b>     | <b>The student should know about the process of sperm formation</b>                                  | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>3</b>         | <b>5</b>     | <b>The student should know about the female reproductive system, its anatomy , and its functions</b> | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>4</b>         | <b>5</b>     | <b>The student should be familiar with the process of egg formation</b>                              | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2-</b>  | <b>Daily and monthly reports .</b> |

|           |          |  |                                |   |                                    |
|-----------|----------|--|--------------------------------|---|------------------------------------|
|           |          |  |                                | <b>Practical lectures. Displays Dialogue and Discussion</b>                             |                                    |
| <b>5</b>  | <b>5</b> |  | <b>exam</b>                    |   | <b>Daily and monthly reports .</b> |
| <b>6</b>  | <b>5</b> | <b>The student should identify the hormones regulating reproductive endocrine glands, hypothalamus , pituitary gland, pineal gland...etc.)</b> | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>7</b>  | <b>5</b> | <b>The student learns about puberty and sexual maturity</b>  | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>8</b>  | <b>5</b> | <b>The student should learn about the reproductive cycle in agricultural animals</b>   | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>The student should know about the production of gametes (quanta) and transportation</b>   | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> | <b>The student should know about fertility</b>   | <b>Reproductive Physiology</b> |   | <b>Daily and monthly</b>           |

|           |          |  |                                |   |                                    |
|-----------|----------|--|--------------------------------|---|------------------------------------|
|           |          | <b>and pregnancy</b>   |                                |   | <b>reports .</b>                   |
| <b>11</b> | <b>5</b> |  | <b>exam</b>                    | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>12</b> | <b>5</b> | <b>The student should know about pregnancy and childbirth</b>  | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>13</b> | <b>5</b> | <b>The student learns about artificial insemination (introduction , semen collection and artificial insemination techniques)</b> | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>14</b> | <b>5</b> | <b>The student should learn about managing and improving reproduction</b>  | <b>Reproductive Physiology</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>15</b> | <b>5</b> |  | <b>exam</b>                    | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |

| <b>Course Evaluation</b>   |  |
|--|--|
| <b>Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports ....</b> |  |
| <b>Learning and Teaching Resources</b>   |  |
| <b>Required textbooks (curricular books, if any)</b>   | <b>Physiology of Farm Animal Reproduction, University of Baghdad, 2011</b>   |
| <b>Main References (Sources)</b>   | <b>Physiology, Comparative Member Function Science, Friday Youth Foundation, 2009<br/>A modern machine base from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the consensual library that is related to the material.</b> |
| <b>Recommended books and references (scientific journals, reports...)</b>  |  |
| <b>E-References, Websites</b>  |  |

### **Course Description Form**

|   |  |
|---|--|
| <b>1. Course Name: Design and Analysis of Experiments – Third Stage</b>       |  |
| <b>2. Course Code:</b>  |  |
| <b>3. Semester / Year: Semester-based – First Course</b>                      |  |
| <b>4. Description Preparation Date: 20/9/2023</b>                             |  |
| <b>5. Forms of Attendance: Weekly</b>   |  |
| <b>75 hours 6. Number of Studying Hours (Total) / Number of Units (Total)</b> |  |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>    |  |
| <b>Name: Ali Adnan Hassoni</b>  | <b>Email: ali.adnan@uomisan.edu.iq</b>   |
| <b>8. Course Objectives</b>   |  |
| <b>Course Objectives</b>  | <b>Educate students on the fundamental principles of designing and analyzing experiments, emphasizing the importance of this subject in reinforcing the practical aspect of conducting scientific research. Students will learn about the main concepts of design such as experiments, experimental units, factors, treatments, replications, and experimental error, and how to choose the appropriate design for agricultural experiments to reach correct conclusions and decisions</b> |
| <b>9. Teaching and Learning Strategies</b>                                    |  |

|                   |  |
|-------------------|--|
| <b>Strategies</b> | <b>The strategy is implemented through lectures, discussions, solving scientific and practical examples, daily and monthly exams, assignments, and brainstorming sessions.</b> |
|-------------------|--|

### 10. Course Structure

| Week | Hours                    | Required Learning Outcomes                                  | Unit or subject name               | Learning method          | Evaluation method   |
|------|--------------------------|---|------------------------------------|--------------------------|---|
| 1    | 2 Theory,<br>3 Practical | Design of Completely Randomized Block Design (R.B.C.D)      | Design and Analysis of Experiments | Lectures and Discussions | Semester Exam, Daily Exam, Student Performance Evaluation, Homework |
| 2    | 2 Theory,<br>3 Practical | Significant differences according to the Least Significant  | Design and Analysis of Experiments | Lectures and Discussions |   |
| 3    | 2 Theory,<br>3 Practical | Estimation of missing data in R.B.C.D design                | Design and Analysis of Experiments | Lectures and Discussions |   |
| 4    | 2 Theory,<br>3 Practical | R.B.C.D design with more than one observation               | Design and Analysis of Experiments | Lectures and Discussions |   |
| 5    | 2 Theory,<br>3 Practical | Latin Square Design (L.S.D)                                 | Design and Analysis of Experiments | Lectures and Discussions |   |
| 6    | 2 Theory,<br>3 Practical | Dunnett's Comparison Test                                   | Design and Analysis of Experiments | Lectures and Discussions |   |
| 7    | 2 Theory,<br>3 Practical | Monthly Exam  | Design and Analysis of Experiments | Lectures and Discussions |   |
| 8    | 2 Theory,<br>3 Practical | Types of complex experiments and how to distinguish between | Design and Analysis of Experiments | Lectures and Discussions | Semester Exam, Daily Exam, Student Performance Evaluation, Homework |
| 9    | 2 Theory,<br>3 Practical | Factorial experiments with two factors in C.R.D design      | Design and Analysis of Experiments | Lectures and Discussions |   |
| 10   | 2 Theory,<br>3 Practical | Factorial experiments in R.B.C.D design                     | Design and Analysis of Experiments | Lectures and Discussions |   |
| 11   | 2 Theory,<br>3 Practical | Factorial experiments in Latin Square Design                | Design and Analysis of Experiments | Lectures and Discussions |   |

|    |                                |  |                                    |                          |  |
|----|--------------------------------|--|------------------------------------|--------------------------|--|
|    | <b>Practical</b>               |  |                                    |                          |  |
| 12 | 2<br>Theory,<br>3<br>Practical | Monthly Exam   | Design and Analysis of Experiments | Lectures and Discussions |  |
| 13 | 2<br>Theory,<br>3<br>Practical | Split-plot experiments with two factors in C.R.D design        | Design and Analysis of Experiments | Lectures and Discussions |  |
| 14 | 2<br>Theory,<br>3<br>Practical | Split-plot experiments with two factors in R.B.C.D design      | Design and Analysis of Experiments | Lectures and Discussions |  |
| 15 | 2<br>Theory,<br>3<br>Practical | Split-plot experiments with two factors in Latin Square Design | Design and Analysis of Experiments | Lectures and Discussions |  |

### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

### 12. Learning and Teaching Resources

|  |  |
|--|--|
| Required textbooks (curricular books, if any)                      | "Design and Analysis of Agricultural Experiments" by Dr. Khasha Mahmoud Al-Rawi. |
| Main references (sources)  | From textbooks, supplementary books, the internet, and scientific research       |
| Recommended books and references (scientific journals, reports...) | "Design and Analysis of Agricultural Experiments"                                |
| Electronic References, Websites                                    |  |

### Course Description Form

|  |  |
|--|--|
| <b>1. Course Name: Principle of Horticulture</b>   |  |
| <b>2. Course Code:</b><br>PRHS243  |  |
| <b>3. Semester / Year: 2023- 2024</b>  |  |
| <b>4. Description Preparation Date: 24- 4 - 2024</b>   |  |
| <b>5. Forms of Attendance:</b>   |  |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b><br>hours (2 theoretical + 3 practical) *15 weeks 75 |  |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b><br>Name: Dunya Mohi Mohsin                    |  |
| <b>8. Course Objectives</b>  |  |

|                          |  |
|--------------------------|--|
| <b>Course Objectives</b> | <ul style="list-style-type: none"> <li>-The student must be familiar with the science of fruits and palm trees and methods of their reproduction</li> <li>-The student must be familiar with the science of vegetable crops and their production methods</li> <li>-The student must be familiar with the science of ornamental plants and methods of their propagation</li> <li>-The student must be familiar with the science of garden engineering and methods of its implementation</li> <li>-He has knowledge of methods of breeding and improving horticultural plants</li> <li>- He has knowledge of other sciences, such as physiology, fruit storage, anatomy, and plant classification</li> </ul> |
|--------------------------|--|

### 9. Teaching and Learning Strategies

|                   |   |
|-------------------|---|
| <b>Strategies</b> | <ul style="list-style-type: none"> <li>-Explanation and clarification using methods</li> <li>-Direct dialogue with students by asking</li> <li>-Student collections, homework, and writing reports</li> <li>-Practical lessons in agricultural fields</li> <li>-Scientific trips to learn about the most important fodder crops grown in Iraq</li> <li>-Self-learning method</li> </ul> |
|-------------------|---|

### 10. Course Structure

| Week | Hours | Required Learning Outcomes                               | Unit or subject name                           | Learning method   | Evaluation method |
|------|-------|--|--|---|-------------------|
| 1    | 5     | Knowledge of the history and development of horticulture | Introduction to the history of horticulture    | Lecture, discussion, reports, laboratories, practical in the fields |                   |
| 2    | 5     | Learn how horticultural crops reproduce                  | Methods of reproduction of horticultural crops | Lecture, discussion, reports, laboratories, practical in the fields |                   |
| 3    | 5     | Identifying deciduous fruit trees                        | Types of deciduous fruit trees                 | Lecture, discussion, reports, laboratories, practical in the fields |                   |
| 4    | 5     | Identify evergreen trees                                 | Types of evergreen trees                       | Lecture, discussion, reports, laboratories, practical in the fields |                   |
| 5    | 5     | Learn about summer vegetable crops                       | Different families of plants                   | Lecture, discussion, reports, laboratories,                         |                   |



|           |          |  |  |  |  |
|-----------|----------|--|--|--|--|
|           |          |  |  | <b>practical in the fields</b>   |  |
| <b>6</b>  | <b>5</b> | <b>Identify winter vegetable crops</b>   | <b>Different families of plants</b>  | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>7</b>  | <b>5</b> | <b>Learn about different summer ornamental plants</b>  | <b>Summer ornamental plants</b>  | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>8</b>  | <b>5</b> | <b>Learn about different winter ornamental plants</b>  | <b>winter ornamental plants</b>  | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>9</b>  | <b>5</b> | <b>To learn how to divide fruit trees according to environmental conditions as well as according to plant families</b> | <b>Fruit trees tropical and subtropical regions</b>                            | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>10</b> | <b>5</b> | <b>The student learns how to divide vegetable crops according to their families</b>                                    | <b>Plant families of vegetable crops</b>                                       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>11</b> | <b>5</b> | <b>The student learns about ornamental plants and methods of propagating and cultivating them</b>                      | <b>Ornamental plants and methods of propagation and cultivation</b>            | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>12</b> | <b>5</b> | <b>The student learns how to create a plantation and multiply horticultural plants</b>                                 | <b>Establishing plantation and methods of propagating horticultural plants</b> | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>13</b> | <b>5</b> | <b>The student will learn how to establish orchards and plant various fruit trees</b>                                  | <b>Establishing orchards and learning about tree pollination methods</b>       | <b>Lecture, discussion, reports, laboratories, practical in the fields</b> |  |
| <b>14</b> | <b>5</b> | <b>The student learns to</b>   | <b>Cultivation and</b>   | <b>Lecture,</b>  |  |

|    |   |   |  |  |  |
|----|---|---|--|--|--|
|    |   | grow and propagate medicinal plants               | propagation of medicinal and aromatic plants | discussion, reports, laboratories, practical in the fields<br>Lecture, discussion, reports, laboratories, practical in the fields          |  |
| 15 | 5 | Remind students of the summary of previous topics | A quick review of previous topics            | Lecture, discussion, reports, laboratories, practical in the fields<br>Lecture, discussion, reports, laboratories, practical in the fields |  |

#### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

#### 12. Learning and Teaching Resources

|  |   |
|--|---|
| Required textbooks (curricular books, if any)                      | Principles of horticulture / Dr. Jabbar Abbas Al-Dujaili, Dr. Iman Jaber Abdel Rasoul, Nisreen Khalil Abdel Aziz<br>Principles of horticulture/Karim Saleh Abdul and Saad Zaghoul Al-Najjar |
| Main references (sources)  | Ornamental plants in Iraq/Dr. Sami and Nisreen Al-Najjar<br>Deciduous fruit/Dr. Alaa Abdul Razzaq Al-Jumaili and others   |
| Recommended books and references (scientific journals, reports...) | Propagation of horticultural plants/Dr. Muhammad Abbas Salman<br>Vegetable production/Dr. Adnan Nasser is wanted and others   |
| Electronic References, Websites                                    |   |

#### Description of the academic program

|   |
|---|
| <b>Course name: Computer basics and office applications/3</b> |
| <b>Course code</b>  |
| <b>COMA201</b>  |
| <b>Semester/year :Spring Semester/year2024</b>                |
|   |

| <b>Date this description was prepared: 2/1/2024</b>  |              |  |                                  |  |  |
|--|--------------|--|----------------------------------|--|--|
| <b>Available forms of attendance are in person</b>   |              |  |                                  |  |  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>  |              |  |                                  |  |  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>   |              |  |                                  |  |  |
| <b>Email : abbas.alrajhe@uomisan.edu.iq</b>  |              |  | <b>Name : ABBAS LUAIBI OBAID</b> |  |  |
| <b>Module Aims</b>   |              |  |                                  |  |  |
| <b>Explaining the basics of Excel</b><br><b>Explain how to use equations and functions in Excel -</b><br><b>Explaining how to prepare financial statements in Excel</b>  |              |  |                                  |  |  |
| <b>Teaching and learning strategies</b>  |              |  |                                  |  |  |
| <b>1- Explanation, clarification, and honing general and qualifying skills</b><br><b>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.</b><br><b>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.</b><br><b>4-Practical lessons in the laboratory</b><br><b>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.</b> |              |  |                                  |  |  |
| <b>Course structure</b>  |              |  |                                  |  |  |
| <b>Week</b>  | <b>hours</b> | <b>required learning outcomes</b>  | <b>Name of the unit or topic</b> | <b>Learning method</b>   | <b>Evaluation method</b>                   |
| 1+2  | 4            | Identify the program with explanation For bars, effective value and range<br>Cells, columns and rows<br>Know the MMV menu commands, which are save<br>Save as mf, open and dark<br>MMV.....etc | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 3+4  | 4            | Know the page menu commands<br>The main ones are clipboard and font<br>Coordinating, merging and centering cells knowledge of number formatting and page menu commands<br>Home                 | Excel                            | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 5+6  | 3            | Knowledge of styles, including formatting tables and cells, home page menu commands<br>Knowledge of editing,   | Excel                            | Practical lectures + direct presentation methods +                         | Daily, monthly and final tests and reports |

|  |   |   |       |  |  |
|--|---|---|-------|--|--|
|  |   | including smise Digital, linear and depth scanning Formats and page menu commands Home Knowledge of drawer list commands. Drawer list commands (Insert )  |       | dialogue and discussion  |  |
| 7  | 3 | First exam  |       |  |  |
| 8+9  | 4 | Introduction to charts, their types, and how to create them and change their location. Charts Knowledge of ready-made functions and how to include, use and verify them   | Excel | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 10+11  | 4 | Knowledge of sorting and filtering data and how to arrange data in ascending and descending order (data list commands). Know how to put a password For lush and how to hide and show Depths as well as presentation methods | Excel | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 12+13  | 4 | Paper and handle formula bar Freezing rows and columns is a review list (Reviw) and view (View) commands Knowledge of the rules for writing mathematical formulas. Introduction to mathematical formulas                    | Excel | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 14   | 4 | Knowing how to prepare financial statements and an introduction to operations Arithmetic  | Excel | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 15   | 3 | Second exam   |       |  |  |
| Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc |   |   |       |  |  |
| Learning and teaching resources  |   |   |       |  |  |

|   |  |
|---|--|
| <b>Required textbooks (methodology, book four)</b>                                    | <b>Computer basics and office applications, Part Third/ Microsoft Office 2010</b><br><b>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b><br><b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |
| <b>Main references (sources)</b>  | <b>1.Microsoft EXCEEL 2010 Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis</b><br><b>Stephen Moffat, The Mouse Training Company</b>  |
| <b>Recommended supporting books and references (scientific journals, reports....)</b> |  |
| <b>Electronic references, Internet sites</b>  | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b><br><b>Real-time communication protocols in the Internet - .(RTP SIP), World of Technology website</b><br><b>ARPANET logical map,</b><br><b><a href="http://russbellew.com/Documents/Arpanet_sep_1974">.http://russbellew.com/Documents/Arpanet_sep_1974</a></b> |

#### Description of the academic program

|   |                                  |
|---|----------------------------------|
| <b>Course name: Computer basics and office applications/4</b>   |                                  |
|   |                                  |
| <b>Course code</b>  |                                  |
| <b>COMA202</b>  |                                  |
| <b>Semester/year :Spring Semester/year2024</b>  |                                  |
|   |                                  |
| <b>Date this description was prepared: 2/1/2024</b>   |                                  |
|   |                                  |
| <b>Available forms of attendance are in person</b>  |                                  |
|   |                                  |
| <b>Total number of study hours / total number of units (30) (2) theoretical hours</b>   |                                  |
|   |                                  |
| <b>Name of the course administrator (if more than one name is mentioned)</b>  |                                  |
| <b>Email : <a href="mailto:abbas.alrajhe@uomisan.edu.iq">abbas.alrajhe@uomisan.edu.iq</a></b>   | <b>Name : ABBAS LUAIBI OBAID</b> |
| <b>Module Aims</b>  |                                  |
| <ul style="list-style-type: none"> <li>• For the student to become familiar with the history of computer networks and the Internet</li> <li>• Introducing the student to the importance of computer networks and the Internet</li> <li>• Introducing the student to the basics of computer networks and the Internet</li> </ul> |                                  |

| <ul style="list-style-type: none"> <li>• Introducing the student to browsing and searching on the Internet</li> <li>• Introducing the student to electronic messages and conversations</li> <li>• Introducing the student to the ethics of the Internet world</li> </ul>   |       |   |   |  |  |
|--|-------|---|---|--|--|
| <b>Teaching and learning strategies</b>  |       |   |   |  |  |
| <p>1- Explanation, clarification, and honing general and qualifying skills</p> <p>2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information.</p> <p>3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups.</p> <p>4-Practical lessons in the laboratory</p> <p>5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development.</p> |       |   |   |  |  |
| <b>Course structure</b>  |       |   |   |  |  |
| Week   | hours | required learning outcomes  | Name of the unit or topic                             | Learning method  | Evaluation method                          |
| 1+2  | 4     | <p><b>Chapter One: Introduction to networks, definition of computer networks, benefits of computer networks</b></p> <p>Types of computer networks, classification of networks (according to connection method, according to engineering design, according to type of service, according to network scope)</p> | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 3+4  | 4     | <p>The World Wide Web (ways to connect to the Internet, Internet protocols, device addresses (IP), website addresses (web pages)...) Data transfer rate / Internet and Extranet / Cloud computing / Cloud computing</p>   | Basics of networks and office applications, Part Four | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |

|              |          |  |  |   |   |
|--------------|----------|--|--|---|---|
|              |          | <b>applications, components of cloud computing, types of cloud computing Benefits and disadvantages of cloud computing</b>   |  |   |   |
| <b>5+6</b>   | <b>3</b> | <b>Chapter Two (Browsing and searching the Internet, web browsers, the Internet Explorer browser, components of the Internet Explorer interface) Additional tasks in the browser, searching on the Internet, using search engines, advanced search, searching by customizing the search field, types of sites.</b> | <b>Basics of networks and office applications, Part Four</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>7</b>     | <b>3</b> | <b>First exam</b>  |  |   |   |
| <b>8+9</b>   | <b>4</b> | <b>Chapter Three (Electronic messages and conversations, introduction, e-mail, e-mail features, creating a new e-mail account Log in to email, Microsoft Outlook,</b>  | <b>Basics of networks and office applications, Part Four</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |
| <b>10+11</b> | <b>4</b> | <b>Skype chat program, the necessary steps to download the Skype chat program, the process of installing the Skype chat program, Learn</b>   | <b>Basics of networks and office applications, Part Four</b> | <b>Practical lectures + direct presentation methods + dialogue and discussion</b> | <b>Daily, monthly and final tests and reports</b> |

|  |   |   |   |  |  |
|--|---|---|---|--|--|
|  |   | about the components of the Skype chat program, the menu bar in the Skype chat program, other parts of the Skype chat program, additional tasks in the Skype chat program.  |   |  |  |
| 12+13  | 4 | Chapter Four: Ethics of the Internet world, Internet law and types of infringements in the digital space, technology ethics, etiquette and ethics of dealing with the Internet, The effects of negative use of the Internet on life and society, information and Internet security, information security, | Basics of networks and office applications, Part Four   | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 14   | 4 | Weaknesses in the Internet, security problems, computer vulnerability, computer and information protection  | Basics of networks and office applications, Part Four   | Practical lectures + direct presentation methods + dialogue and discussion | Daily, monthly and final tests and reports |
| 15   | 3 | Second exam   |   |  |  |
| Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc |   |   |   |  |  |
| Learning and teaching resources  |   |   |   |  |  |
| Required textbooks (methodology, book four)  |   |   | <b>Computer basics and office applications, Part fourth/ Microsoft Office 2010</b><br><b>Ministry of Higher Education and Scientific Research</b><br><br><b>Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed</b> |  |  |



|   |  |
|---|--|
|   | <b>2-Professor Dr. Ziad Muhammad Abboud</b><br><b>3-Professor Dr. Muhammad Nasser Al-Tarfi</b><br><b>4-Professor Dr. Safaa Abbas Al-Mamouri</b><br><b>2- International Information Network, the Internet</b>   |
| <b>Main references (sources)</b>  | <b>1. Computer basics and office applications, Step by Step(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.y Anderson, Guy Hart-Davis Stephen Moffat, The Mouse Training Company</b>  |
| <b>Recommended supporting books and references (scientific journals, reports....)</b> |  |
| <b>Electronic references, Internet sites</b>  | <b>Library Genesis</b><br><b>:websites</b><br><b>History of the development of computer networks, - objective website: <a href="http://mawdoo3.com">http://mawdoo3.com</a></b><br><b><a href="http://youstaff.blogspot.com">http://youstaff.blogspot.com</a>: Information and Internet security</b><br><b><a href="http://geeklesstech.com">http://geeklesstech.com</a> : Internet Law Laws for - using the Internet</b><br><b>Real-time communication protocols in the Internet - .(RTP SIP), World of Technology website</b><br><b>ARPANET logical map,</b><br><b><a href="http://russbellew.com/Documents/Arpanet_sep_1974">.http://russbellew.com/Documents/Arpanet_sep_1974</a></b> |

### Course Description Form

|  |  |
|--|--|
| <b>1- Course Name</b>  |  |
| <b>Management and production of poultry</b>                              |  |
| <b>2-CourseCode</b>  |  |
| <b>POPR441</b>   |  |
| <b>3-semester/ year</b>  |  |
| <b>2023 – 2024 (Fall Semester )</b>                                      |  |
| <b>4-The date of preparing this description</b>                          |  |
| <b>8 February 2024</b>   |  |
| <b>Available attendance forms</b>  |  |
|  |  |
| <b>6. Number of study hours (total) / number of units (total)</b>        |  |
| <b>75 hours (2 theoretical + 3 practical) *15 weeks</b>                  |  |
| <b>Name of course administrator (if more than one name is mentioned)</b> |  |
| <b>Name: M.Sc Ali Jassim Mohammed</b>                                    |  |
| <b>Course Objectives</b>   |  |
| <b>Objectives of the unit</b>  | <b>Preparing graduates who are able to know :</b><br><b>1- How to establish breeding and management projects for poultry birds.</b><br><b>2- Field work skills, and how to create and prepare projects for raising chicken and poultry .</b><br><b>3- How to make feed mixes used in poultry projects.</b> |

|   | <b>4- Applying for external tests by local / regional / international bodies.</b>  |  |   |   |                                    |
|---|--|--|---|---|------------------------------------|
| <b>TEACHING AND LEARNING STRATEGIES</b> |  |  |   |   |                                    |
| <b>Strategy</b>                         | <b>1- Enabling students to analyze and think about topics related to the intellectual framework of the subject of poultry management and production.</b><br><b>2- Enabling students to analyze to identify the topics related to measuring productivity .</b><br><b>3- Enabling students to identify the optimal use of fodder materials available in the market .</b> |  |   |   |                                    |
| <b>10. Course Structure</b>             |  |  |   |   |                                    |
| <b>Fifteenth</b>                        | <b>Hours</b>   | <b>Intended Learning Outcomes</b>  | <b>Module / Course Name or</b>  | <b>Learning method</b>  | <b>Valuation Method</b>            |
| <b>1</b>                                | <b>5</b>   | <b>Introducing students to the general concept of managing poultry projects</b>  | <b>Poultry science and the concept of managing poultry projects.</b>  | <b>Theoretical lectures.<br/>Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b>       | <b>Daily and monthly reports .</b> |
| <b>2</b>                                | <b>5</b>   | <b>The student should learn about the importance of poultry projects</b>   | <b>Importance of poultry projects<br/>Egg and meat production projects</b>  | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>3</b>                                | <b>5</b>   | <b>Enabling students to know the internal organs of the chicken and its functions,(male and female digestive and reproductive systems and the components of the egg.</b> | <b>The internal organs of the chicken and its functions,(male and female digestive and reproductive and egg components)</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>4</b>                                | <b>5</b>   | <b>The student should learn about the types of poultry houses and breeding supplies</b>  | <b>Types of poultry houses and breeding supplies.</b>   | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>5</b>                                | <b>5</b>   | <b>The student should be familiar with hatching and hatching management ( selection of hatching egg specifications, treatment of hatching eggs before and</b>            | <b>Hatching and Hatch Management</b>  | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |

|          |          |   |   |   |                                    |
|----------|----------|---|---|---|------------------------------------|
|          |          | <b>during hatching , stages of embryonic development,types of hatching,factors affecting fertility and hatching rates, hatching problems)</b>   |   |   |                                    |
| <b>6</b> | <b>5</b> | <b>The student should be familiar with the management and production of meat broilers ( types of modern breeds and their specifications, nursing and caring for broilers, raising and caring for meat broilers, breeding systems, feeding meat broilers and types of ties ,marketing meat broilers, meat preparation operations in slaughterhouses)</b> | <b>Management and production of meat poultry</b>              | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>7</b> | <b>5</b> | <b>The student should know about the management and production of laying hens ( types of modern breeds and their specifications, nursing and care of laying hens, breeding systems, feeding laying hens during the stages of growth and production , calculations of egg production rates)</b>  | <b>Management and production of laying hens</b>               | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>8</b> | <b>5</b> | <b>Enabling students to know the compulsory qalash (its methods and benefits)</b>   | <b>Mandatory straws</b>                                       | <b>1- Theoretical lectures.<br/>2- Practical lectures.<br/>Displays<br/>Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b> | <b>5</b> | <b>Enabling students to know the management of mothers' herds (mothers of meat and</b>  | <b>Management of maternal herds (broiler and egg mothers)</b> | <b>1- Theoretical lectures.<br/>2- Practical lectures.</b>  | <b>Daily and monthly reports .</b> |

|   |   |  |  |   |                             |
|---|---|--|--|---|-----------------------------|
|   |   | eggs)  |  | <b>Displays<br/>Dialogue and<br/>Discussion</b>   |                             |
| 10  | 5 | The student should learn about raising turkey, ducks and almonds .                               | Raising turkeys, ducks and almonds .   | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 11  | 5 | The student should be familiar with the management of poultry fields in hot weather .            | Manage poultry fields in hot climates .  | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 12  | 5 | The student should get acquainted with the management of fodder factories and fodder preparation | Management of fodder factories and preparation of fodder .                                     | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 13  | 5 | Enabling students to know poultry disease and methods of prevention and treatment .              | Poultry disease and methods of prevention and treatment .                                      | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 14  | 5 | The student should identify the records and their types in the poultry fields.                   | Records and their types in poultry fields.   | 1- Theoretical lectures.<br>2- Practical lectures.<br>Displays<br>Dialogue and Discussion | Daily and monthly reports . |
| 15  | 5 |  | exam   |   | Daily and monthly reports . |
| <b>Course Evaluation</b>  |   |  |  |   |                             |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |   |  |  |   |                             |
| <b>Learning and Teaching Resources</b>  |   |  |  |   |                             |
| <b>Required textbooks (curricular books, if any)</b>  |   |  | Al-Zubaidi , Suhaib Saad Alwan (1986), Poultry Management, University of Basra .               |   |                             |
| <b>Main References (Sources)</b>  |   |  | A modern machine base from the Internet and from specialized scientific fields, the Journal of |   |                             |

|   |  |
|---|--|
|   | <b>Agricultural Sciences - Iraq, and the consensual library that is related to the material.</b> |
| <b>Recommended books and references (scientific journals, reports...)</b> | <b>Handbook of Poultry   VetBooks</b>  |
| <b>E-References, Websites</b>   | <b>Poultry Science<br/>Poultry (almerja.com)</b>   |

### Course Description Form

|  |   |  |                                   |                        |                          |
|--|---|--|-----------------------------------|------------------------|--------------------------|
| <b>1- Course Name</b>  |   |  |                                   |                        |                          |
| <b>Feed poultry</b>  |   |  |                                   |                        |                          |
| <b>2-CourseCode</b>  |   |  |                                   |                        |                          |
| <b>POBN445</b>   |   |  |                                   |                        |                          |
| <b>3-semester/ year</b>  |   |  |                                   |                        |                          |
| <b>2023 – 2024 (Fall Semester )</b>                                      |   |  |                                   |                        |                          |
| <b>4-The date of preparing this description</b>                          |   |  |                                   |                        |                          |
| <b>8 February 2024</b>   |   |  |                                   |                        |                          |
| <b>Available attendance forms</b>  |   |  |                                   |                        |                          |
|  |   |  |                                   |                        |                          |
| <b>6. Number of study hours (total) / number of units (total)</b>        |   |  |                                   |                        |                          |
| <b>75 hours (2 theoretical + 3 practical) *15 weeks</b>                  |   |  |                                   |                        |                          |
| <b>Name of course administrator (if more than one name is mentioned)</b> |   |  |                                   |                        |                          |
| <b>Name: M.Sc Ali Jassim Mohammed</b>                                    |   |  |                                   |                        |                          |
| <b>Course Objectives</b>   |   |  |                                   |                        |                          |
| <b>Objectives of the unit</b>  | <b>Preparing graduates who are able to know :</b><br><b>1- How to digest, absorb and metabolize nutritional nutrients.</b><br><b>2- Field work skills, and how to create and prepare projects for raising chicken and poultry .</b><br><b>3- How to make feed mixes used in poultry projects.</b><br><b>5- The work of the digestive system in the animal .</b><br><b>5- Applying for external tests by local / regional / international bodies.</b>  |  |                                   |                        |                          |
| <b>TEACHING AND LEARNING STRATEGIES</b>                                  |   |  |                                   |                        |                          |
| <b>Strategy</b>  | <b>1- Enabling students to analyze and think about topics related to the intellectual framework of poultry feeding.</b><br><b>2- Enabling students to analyze to identify the digestive system and its work in poultry birds.</b><br><b>3- Enabling students to identify the main nutrients.</b><br><b>4- Enabling students to identify the best ways to synthesize feed mixes.</b><br><b>5-Enabling students to identify the optimal use of fodder materials available in the market .</b> |  |                                   |                        |                          |
| <b>10. Course Structure</b>  |   |  |                                   |                        |                          |
| <b>Fifteenth</b>   | <b>Hours</b>  | <b>Intended Learning Outcomes</b>      | <b>Module / Course Name or</b>    | <b>Learning method</b> | <b>Valuation Method</b>  |
| <b>1</b>   | <b>5</b>  | <b>Introducing students to energy,</b> | <b>Energysources .Split it up</b> | <b>1- Theoretical</b>  | <b>Daily and monthly</b> |

|   |   |   |   |   |                             |
|---|---|---|---|---|-----------------------------|
|   |   | its components, sections, importance and the factors affecting it .   | <b>.Influences</b>  | lectures.<br>2- Practical lectures. Displays Dialogue and Discussion                | reports .                   |
| 2 | 5 | The student should identify the proteins, their types, classification, their importance for birds, and the impact of increasing and decreasing them . | <b>Proteins – their types and classification</b><br>The effect of their increase and decrease | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 3 | 5 | Introducing students to the most important factors affecting protein utilization.   | <b>Proteins and factors affecting their utilization</b>                                       | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 4 | 5 | Enabling students to know the vitamins and their importance for the bird and its sections and the factors affecting them .                            | <b>Vitamins - their classification and factors affecting their needs</b>                      | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 5 | 5 | Introducing students to inorganic elements and their importance to birds and provoking their increase and decrease .                                  | <b>Minerals, their classification, the effect of their increase and decrease</b>              | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 6 | 5 | Introducing students to the nutrients , the   | <b>Water is its importance, functions,</b>  | 1- Theoretical lectures.  | Daily and monthly reports . |

|           |          |  |  |   |                                    |
|-----------|----------|--|--|---|------------------------------------|
|           |          | <b>importance of water for the bird and its sources .</b>  | <b>sources and quality</b>   | <b>2- Practical lectures. Displays Dialogue and Discussion</b>                          |                                    |
| <b>7</b>  | <b>5</b> |  | <b>Monthly Exam</b>  |   | <b>Daily and monthly reports .</b> |
| <b>8</b>  | <b>5</b> | <b>Enabling students to know the digestive system and its work in poultry birds, types of digestion , and nutrient metabolism.</b> | <b>Digestion and Metabolism - Digestive System - Its Functions</b>   | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>9</b>  | <b>5</b> | <b>Introducing students to the end products of digestion of nutrients , and the factors affecting digestion .</b>                  | <b>End-products of digestion - factors affecting digestion</b>       | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>10</b> | <b>5</b> | <b>Introducing students to the feed used in feeding poultry birds, their sources and types .</b>                                   | <b>Primary fodder materials, their sources and types</b>             |   | <b>Daily and monthly reports .</b> |
| <b>11</b> | <b>5</b> | <b>Introducing students to food additives, their types and their importance in terms of health and economic</b>                    | <b>Vitamins, minerals and feed additives</b>                         | <b>1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion</b> | <b>Daily and monthly reports .</b> |
| <b>12</b> | <b>5</b> | <b>Enabling students to know the feed concentrates and mixtures used in poultry nutrition and its production</b>                   | <b>Feed concentrates, mixtures and their production requirements</b> | <b>1- Theoretical lectures. 2- Practical lectures.</b>                                  | <b>Daily and monthly reports .</b> |

|   |   |   |   |   |                             |
|---|---|---|---|---|-----------------------------|
|   |   | requirements  |   | Displays Dialogue and Discussion  |                             |
| 13  | 5 | Introducing students to the fodder factory, its departments and its importance in animal production projects.   | Feed Production and Manufacturing Feed Factory Its Importance and Sections          | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 14  | 5 | Introduce students to periodic maintenance of the feed factory and methods of synthesizing feed mixtures.   | Laboratory Maintenance Formation and Synthesis of Relationships and Quality Control | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| 15  | 5 |   | Second Month Exam   | 1- Theoretical lectures.<br>2- Practical lectures. Displays Dialogue and Discussion | Daily and monthly reports . |
| <b>Course Evaluation</b>  |   |   |   |   |                             |
| Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports .... |   |   |   |   |                             |
| <b>Learning and Teaching Resources</b>  |   |   |   |   |                             |
| <b>Required textbooks (curricular books, if any)</b>  |   | Al Yaseen. Ali Abdul Khaliq , Abdul Abbas , Mohammed Hassan (2010), Poultry Feeding, University of Baghdad , Faculty of Agriculture . Al-Kassar, Ali Mahmoud Jawad , Ammar Hussein , Ali Saif (2021). Poultry feed and chemical analysis. University of Kufa . Faculty of Agriculture |   |   |                             |
| <b>Main References (Sources)</b>  |   | 1 - Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq and the library of satisfaction, which is related to the feeding of poultry birds.  |   |   |                             |
| <b>Recommended books and references</b>   |   | Handbook of Poultry Nutrition   VetBooks  |   |   |                             |



|                                   |                                |
|-----------------------------------|--------------------------------|
| (scientific journals, reports...) | Poultry Nutrition   MDPI Books |
| E-References, Websites            | Poultry Science                |

### Course Description Form

| <b>1. Course Name: Pasture management</b>                                     |                                 |  |  |                         |                   |
|---|---------------------------------|--|--|-------------------------|-------------------|
| <b>2. Course Code:</b><br>PAMA451   |                                 |  |  |                         |                   |
| <b>3. Semester / Year: Fall Semester - First Course</b>                       |                                 |  |  |                         |                   |
| <b>4. Description Preparation Date: 20/9/ 2023</b>                            |                                 |  |  |                         |                   |
| <b>5. Forms of Attendance: weekly</b>   |                                 |  |  |                         |                   |
| <b>hours 75 6. Number of Studying Hours (Total) / Number of Units (Total)</b> |                                 |  |  |                         |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>    |                                 |  |  |                         |                   |
| <b>Name: Rasha Naji Abd</b>   |                                 |  | <b>Email: rashanaji@uomisan.edu.iq</b>     |                         |                   |
| <b>8. Course Objectives</b>   |                                 |  |  |                         |                   |
| <b>Course Objectives</b>  |                                 | <ul style="list-style-type: none"> <li>• The student is able to understand and comprehend the pasture management subject</li> <li>• Enables the student to know the most important ways to protect natural pastures</li> <li>• Familiarity with the most important types of natural pastures</li> <li>• • • Detection and knowledge of the palatability of pasture plants.</li> <li>• • • • The student can judge the quality of pasture plants</li> </ul> |  |                         |                   |
| <b>9. Teaching and Learning Strategies</b>                                    |                                 |  |  |                         |                   |
| <b>Strategies</b>   |                                 | The theoretical part of the lecture is interactive, brainstorming, • • • dialogue, and discussion. As for the practical part, there is an assignment to group work to reveal leadership skills, and assignment .of tasks and a report for each field visit   |  |                         |                   |
| <b>10. Course Structure</b>   |                                 |  |  |                         |                   |
| Week  | Hours                           | Required Learning Outcomes   | Unit or subject name                       | Learning method         | Evaluation method |
| 1   | 2<br>Theoretical<br>Practical 3 | Pasture management   | The importance of pastures                 | Theoretical + Practical | Exams + Cups      |
| 2   | 2<br>Theoretical<br>Practical 3 | Pasture management   | Vegetable . clothing                       | Theoretical + Practical | Exams + Cups      |
| 3   | 2<br>Theoretical<br>Practical 3 | Pasture management   | Environmental factors and natural pastures | Theoretical + Practical | Exams + Cups      |
| 4   | 2<br>Theoretical<br>Practical 3 | Pasture management   | Climatic factors.                          | Theoretical + Practical | Exams + Cups      |
| 5   | 2                               | Pasture management   | Pasture                                    | Theoretical +           | Exams +           |

|                              |  |                           |  |                                    |                         |
|------------------------------|--|---------------------------|--|------------------------------------|-------------------------|
|                              | <b>Theoretical<br/>Practical 3</b>       |                           | <b>management and<br/>its relationship to<br/>soil and water<br/>conservation</b>                              | <b>Practical</b>                   | <b>Cups</b>             |
| <b>6</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>The role of .<br/>plants in<br/>maintaining soil<br/>and pastoral<br/>areas in Iraq and<br/>the world</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>7</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>.Monthly exam</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>8</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Grazing and its<br/>various effects on<br/>fodder<br/>production, plant<br/>growth, and root<br/>growth</b> | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>9</b>                     | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Animal load and<br/>its determining<br/>factors</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>10</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Exploitation of<br/>natural pastures</b>  | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>11</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Sources of<br/>exploitation of<br/>pastoral plants<br/>and the condition<br/>of natural<br/>pastures</b>    | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>12</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Livestock<br/>management and<br/>pasture<br/>redressing</b>   | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>13</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>For natural and<br/>artificial<br/>coverings and<br/>harmful plants in<br/>pastures</b>                     | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>14</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Methods of<br/>taking pasture<br/>samples and<br/>estimating<br/>pasture<br/>productivity</b>               | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>15</b>                    | <b>2<br/>Theoretical<br/>Practical 3</b> | <b>Pasture management</b> | <b>Monthly exam</b>  | <b>Theoretical +<br/>Practical</b> | <b>Exams +<br/>Cups</b> |
| <b>11. Course Evaluation</b> |  |                           |  |                                    |                         |

|  |  |
|--|--|
| <b>Distribution of the grade out of 100 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |  |
| <b>12. Learning and Teaching Resources</b>   |  |
| <b>Required textbooks (curricular books, if any)</b>   | <b>Pasture management book<br/>Al-Takriti<br/>Ramadan, Taif Ahmed and Abbas Mahdi<br/>Hassan (1976<br/>(Al-Tamimi, Mahdi Abdel Latif (1987</b> |
| <b>Main references (sources)</b>   |  |
| <b>Recommended books and references (scientific journals, reports...)</b>  |  |
| <b>Electronic References, Websites</b>   |  |

### Course Description Form

|   |   |
|---|---|
| <b>1. Course Name: meat production</b>  |   |
| <b>2. Course Code:</b><br>MEPR446   |   |
| <b>3. Semester / Year: Fall semester 2024</b>   |   |
| <b>4. Description Preparation Date:</b>   |   |
| <b>5. Forms of Attendance: Compact</b>  |   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours (2 theoretical + 3 practical) *15 weeks</b> |   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>  |   |
| <b>Name: noor falah mahde<br/>shabib munshid jasim</b>  | <b>Email:</b>   |
| <b>8. Course Objectives</b>   |   |
| <b>Course Objectives</b>  | <b>Introducing the student to the types of beef cattle, the habitat of each 1 type, what are the known methods of raising them in the world, what are the methods that increase production efficiency in a way that is compatible with each type of beef cattle, what are the special concerns for producing beef cattle and their axes, and how to invest in production .efficiency<br/>2. Giving the student important information and foundations about beef cattle, which will enable him to manage beef cattle fields and produce animals with high meat production qualities compared to the traditional methods used that are not based on sound scientific foundations.</b> |
| <b>9. Teaching and Learning Strategies</b>  |   |
| <b>Strategies</b>   | <b>Explanation and clarification<br/>The lecture method<br/>Writing scientific reports<br/>Scientific trips</b>   |

| <b>10. Course Structure</b> |              |  |                             |  |                          |
|-----------------------------|--------------|--|-----------------------------|--|--------------------------|
| <b>Week</b>                 | <b>Hours</b> | <b>Required Learning Outcomes</b>                        | <b>Unit or subject name</b> | <b>Learning method</b>                             | <b>Evaluation method</b> |
| 1                           | 2            | The concept of traditional and modern meat production    | meat production             | Explanation presentation of the model and lecture  | the exam                 |
| 2                           | 2            | Biological hubs for meat production                      | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 3                           | 2            | The reality of production and consumption of beef cattle | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 4                           | 2            | Challenges and obstacles to beef cattle production       | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 5                           | 2            | Growth and development of meat animals                   | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 6                           | 2            | Factors affecting growth                                 | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 7                           | 2            | Breeding patterns for meat animals                       | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 8                           | 2            | Optimal investment for production efficiency             | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 9                           | 2            | Composition of carcasses and slaughtering ratio          | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 10                          | 2            | Modern production technologies                           | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 11                          | 2            | Marketing class  | meat production             | Explanation, presentation of the model and lecture | the exam                 |
| 12                          | 2            | Genetic variation in meat traits                         | meat production             | Explanation, presentation of the model and lecture | the exam                 |

|    |   |   |                 |  |          |
|----|---|---|-----------------|--|----------|
| 13 | 2 | Establishing and managing a herd of beef cattle | meat production | Explanation, presentation of the model and lecture | the exam |
| 14 | 2 | Beef cattle production systems                  | meat production | Explanation, presentation of the model and lecture | the exam |
| 15 | 2 | Raising young calves                            | meat production | Explanation, presentation of the model and lecture | the exam |

#### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

#### 12. Learning and Teaching Resources

|  |  |
|--|--|
| Required textbooks (curricular books, if any)                      |  |
| Main references (sources)  | Beef cattle production - Dr. Fouad Abdel Latif Abdel Karim                                 |
| Recommended books and references (scientific journals, reports...) | Iraqi academic scientific journals<br>Journal of Agricultural Sciences/University of Basra |
| Electronic References, Websites                                    | Animal Science Journal   |

### Course Description Form

|  |        |
|--|--------|
| <b>1. Course Name: Ecology and animal behavior</b>   |        |
| <b>2. Course Code:</b><br>ANBE320  |        |
| <b>3. Semester / Year: Fall semester 2024</b>  |        |
| <b>4. Description Preparation Date:</b>  |        |
| <b>5. Forms of Attendance: Compact</b>   |        |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 30 hours (2 theoretical)*15 weeks</b> |        |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>                             |        |
| Name: noor falah mahde   | Email: |
| <b>8. Course Objectives</b>  |        |

|                          |   |
|--------------------------|---|
| <b>Course Objectives</b> | <p><b>Introducing the student to the concept of the environment and its relationship with animals, and studying the natural behavior of the animal, which brings it comfort and well-being, which is ultimately reflected in its productive performance.</b></p> <p><b>Study the sections of environmental science and their definitions</b></p> <p><b>Study of environmental factors and their impact on animals and the administrative aspect of fields</b></p> <p><b>Study of animal behavior at various stages of its life</b></p> <p><b>Studying the natural behavior of the animal, which brings it comfort and well-being, which is ultimately reflected in its productive performance</b></p> |
|--------------------------|---|

### 9. Teaching and Learning Strategies

|                   |  |
|-------------------|--|
| <b>Strategies</b> | <p><b>Explanation and clarification</b></p> <p><b>The lecture method</b></p> <p><b>Writing scientific reports</b></p> <p><b>Scientific trips</b></p> |
|-------------------|--|

### 10. Course Structure

| <b>Week</b> | <b>Hours</b> | <b>Required Learning Outcomes</b>                             | <b>Unit or subject name</b> | <b>Learning method</b>                             | <b>Evaluation method</b> |
|-------------|--------------|---|-----------------------------|--|--------------------------|
| 1           | 2            | Definitions of ecology and its sections                       | Ecology and animal behavior | Explanation presentation of the model and lecture  | the exam                 |
| 2           | 2            | Laws of distribution of animals on Earth                      | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 3           | 2            | Environmental factors and their impact on animals             | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 4           | 2            | Sources of heat in the animal's body and factors affecting it | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 5           | 2            | Heat, humidity and their effect on animals                    | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 6           | 2            | Thermal balance   | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 7           | 2            | Convection, radiation, conduction and evaporation             | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam                 |
| 8           | 2            | Camels and the desert environment                             | Ecology and animal behavior | Explanation, presentation                          | the exam                 |

|    |   |   |                             |  |          |
|----|---|---|-----------------------------|--|----------|
|    |   |   |                             | of the model and lecture                           |          |
| 9  | 2 | The role of the hypothalamus and pituitary gland                  | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 10 | 2 | Sweating and body temperature regulating factors                  | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 11 | 2 | The concept of animal behavior and its impact on production       | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 12 | 2 | Behavior of cattle before, during and after calving               | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 13 | 2 | Food intake, rumination and water drinking behavior of the animal | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 14 | 2 | Lactation behavior, bull behavior                                 | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |
| 15 | 2 | Behavior of sheep and goats                                       | Ecology and animal behavior | Explanation, presentation of the model and lecture | the exam |

### 11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc

### 12. Learning and Teaching Resources

|  |  |
|--|--|
| Required textbooks (curricular books, if any)                      |  |
| Main references (sources)  | Agricultural animal environment Dr. Akram Thanoun and Animal Behavior / Talal Youssef Boutros and Dr. Daa Khalil Ibrahim |
| Recommended books and references (scientific journals, reports...) | Iraqi academic scientific journals<br>Journal of Agricultural Sciences/University of Basra                               |
| Electronic References, Websites                                    | Animal Science Journal- Journal of Animal Behavior Science   |

## Course Description Form

1. Course Name: meat science

| <b>2. Course Code:</b>  |              |  |                             |  |                          |
|---|--------------|--|-----------------------------|--|--------------------------|
| MESC447   |              |  |                             |  |                          |
| <b>3. Semester / Year: Spring semester 2024</b>   |              |  |                             |  |                          |
| <b>4. Description Preparation Date:</b>   |              |  |                             |  |                          |
| <b>5. Forms of Attendance: Compact</b>  |              |  |                             |  |                          |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours (2 theoretical + 3 practical) *15 weeks</b> |              |  |                             |  |                          |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>  |              |  |                             |  |                          |
| Name: noor falah mahde<br>shabib munshid jasim  |              |  | Email:                      |  |                          |
| <b>8. Course Objectives</b>   |              |  |                             |  |                          |
| <b>Course Objectives</b>  |              | <ul style="list-style-type: none"> <li>• Introducing the student to important definitions related to the subject of meat science</li> <li>• Study the chemical composition of meat and the processes of converting muscle into meat</li> <li>• Introducing the student to the carcasses and meat of different animals</li> <li>• Teaching the student how to preserve fresh, chilled and frozen meat</li> <li>• How to obtain highly tender meat</li> <li>• Introducing the student to the most important causes of meat contamination and methods of packaging</li> </ul> |                             |  |                          |
| <b>9. Teaching and Learning Strategies</b>  |              |  |                             |  |                          |
| <b>Strategies</b>   |              | <ul style="list-style-type: none"> <li>• Explanation and clarification</li> <li>• The lecture method</li> <li>• Writing scientific reports</li> <li>• Scientific trips</li> </ul>  |                             |  |                          |
| <b>10. Course Structure</b>   |              |  |                             |  |                          |
| <b>Week</b>   | <b>Hours</b> | <b>Required Learning Outcomes</b>  | <b>Unit or subject name</b> | <b>Learning method</b>                             | <b>Evaluation method</b> |
| 1   | 2            | the introduction   | meat science                | Explanation presentation of the model and lecture  | the exam                 |
| 2   | 2            | Types of red and white meat  | meat science                | Explanation, presentation of the model and lecture | the exam                 |
| 3   | 2            | Types of voluntary and involuntary muscles   | meat science                | Explanation, presentation of the model and lecture | the exam                 |
| 4   | 2            | Chemical composition of meat   | meat science                | Explanation, presentation of the model and lecture | the exam                 |



|  |   |  |   |  |          |
|--|---|--|---|--|----------|
| 5  | 2 | Mechanics of muscle contraction                        | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 6  | 2 | Regor mortis and the factors affecting it              | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 7  | 2 | Physical properties of fresh meat                      | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 8  | 2 | Physical properties of cooked meat                     | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 9  | 2 | The most important techniques for improving tenderness | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 10   | 2 | Meat storage methods                                   | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 11   | 2 | Meat contamination                                     | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 12   | 2 | Meat processing  | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 13   | 2 | Meat packaging   | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 14   | 2 | Sausage industry                                       | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| 15   | 2 | Smoking meat   | meat science                                      | Explanation, presentation of the model and lecture | the exam |
| <b>11. Course Evaluation</b>   |   |  |   |  |          |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |   |  |   |  |          |
| <b>12. Learning and Teaching Resources</b>   |   |  |   |  |          |
| Required textbooks (curricular books, if any)  |   |  | Meat Science Book - Dr. muharib Abdul Hamid Taher |  |          |

|  |   |
|--|---|
| Main references (sources)  | Meat Technology Book - Dr. Youssef Al-Sharik and the book “Meat Science and Technology” - Dr. Majed Bashir Al-Aswad |
| Recommended books and references (scientific journals, reports...) | Iraqi academic scientific journals<br>Journal of Agricultural Sciences/University of Basra                          |
| Electronic References, Websites                                    | Animal Science Journal  |

### Course Description Form

| <b>1. Course Name: Principles of domestic birds</b>   |       |   |                              |                                       |                   |
|---|-------|---|------------------------------|---------------------------------------|-------------------|
| <b>2. Course Code:</b><br>PRPO152   |       |   |                              |                                       |                   |
| <b>3. Semester / Year: Spring semester 2024</b>   |       |   |                              |                                       |                   |
| <b>4. Description Preparation Date:</b>   |       |   |                              |                                       |                   |
| <b>5. Forms of Attendance: Compact</b>  |       |   |                              |                                       |                   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours (2 theoretical + 3 practical) *15 weeks</b> |       |   |                              |                                       |                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b>  |       |   |                              |                                       |                   |
| Name: noor falah mahde<br>Zainab Zidane Khalaf  |       |   | Email:                       |                                       |                   |
| <b>8. Course Objectives</b>   |       |   |                              |                                       |                   |
| <b>Course Objectives</b>  |       | Introducing the student to the importance of poultry and how the poultry industry develops<br>Introducing the student to the most important body systems of birds<br>Teaching the student how to prepare poultry diets<br>Introducing the student to the principles of poultry genetics and improvement<br>Identify the most important diseases that affect poultry |                              |                                       |                   |
| <b>9. Teaching and Learning Strategies</b>  |       |   |                              |                                       |                   |
| <b>Strategies</b>   |       | Explanation and clarification<br>The lecture method<br>Writing scientific reports<br>Scientific trips   |                              |                                       |                   |
| <b>10. Course Structure</b>   |       |   |                              |                                       |                   |
| Week  | Hours | Required Learning Outcomes  | Unit or subject name         | Learning method                       | Evaluation method |
| 1   | 2     | the introduction  | Principles of domestic birds | Explanation presentation of the model | the exam          |

|           |          |   |                                     |   |                 |
|-----------|----------|---|-------------------------------------|---|-----------------|
|           |          |   |                                     | <b>and lecture</b>  |                 |
| <b>2</b>  | <b>2</b> | <b>Economic importance of the poultry industry</b>  | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>3</b>  | <b>2</b> | <b>Types of poultry birds</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>4</b>  | <b>2</b> | <b>Poultry science and related sciences</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>5</b>  | <b>2</b> | <b>The anatomical structure of the most important organs in the body: feathers and skin</b> | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>6</b>  | <b>2</b> | <b>Skeletal system</b>  | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>7</b>  | <b>2</b> | <b>Musculature</b>  | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>8</b>  | <b>2</b> | <b>Circulatory device</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>9</b>  | <b>2</b> | <b>Urinary and reproductive system</b>  | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>10</b> | <b>2</b> | <b>Nervous system</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>11</b> | <b>2</b> | <b>Respiratory system</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>12</b> | <b>2</b> | <b>Lymphatic system</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>13</b> | <b>2</b> | <b>Genetic improvement in poultry</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>14</b> | <b>2</b> | <b>Nutrition and feed materials</b>   | <b>Principles of domestic birds</b> | <b>Explanation, presentation</b>                          | <b>the exam</b> |

|   |          |  |  |   |                 |
|---|----------|--|--|---|-----------------|
|   |          |  |  | <b>of the model and lecture</b>                           |                 |
| <b>15</b>   | <b>2</b> | <b>The most important poultry diseases</b> | <b>Principles of domestic birds</b>  | <b>Explanation, presentation of the model and lecture</b> | <b>the exam</b> |
| <b>11. Course Evaluation</b>  |          |  |  |   |                 |
| <b>Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc</b> |          |  |  |   |                 |
| <b>12. Learning and Teaching Resources</b>  |          |  |  |   |                 |
| <b>Required textbooks (curricular books, if any)</b>  |          |  |  |   |                 |
| <b>Main references (sources)</b>  |          |  | <b>Dictionary of poultry science</b>   |   |                 |
| <b>Recommended books and references (scientific journals, reports...)</b>   |          |  | <b>Iraqi academic scientific journals<br/>Journal of Agricultural Sciences/University of Basra</b> |   |                 |
| <b>Electronic References, Websites</b>  |          |  | <b>Poultry science- Animal Science Journal</b>   |   |                 |

### Course Description Form

|  |                                   |
|--|-----------------------------------|
| <b>1. Course Name:</b>   |                                   |
| <b>Animal Physiology</b>   |                                   |
| <b>2. Course Code:</b>   |                                   |
| <b>ANPH319</b>   |                                   |
| <b>3. Semester / Year:</b>   |                                   |
| <b>2023 -2024</b>  |                                   |
| <b>4. Description Preparation Date:</b>                                    |                                   |
| <b>1-7-2024</b>  |                                   |
| <b>5. Forms of Attendance:</b>   |                                   |
| <b>Attendance</b>  |                                   |
| <b>6. Number of Studying Hours (Total) / Number of Units (Total)</b>       |                                   |
| <b>75 hours (2 theoretical &amp; 3 practical * 15 weeks)/ 3.5 units</b>    |                                   |
| <b>7. Course Administrator's Name (mention all, if more than one name)</b> |                                   |
| <b>Name: Faisal Ghazi Lazim</b>  | <b>Email: f.bio1987@gmail.com</b> |
| <b>8. Course Objectives</b>  |                                   |

| <b>Course Objectives</b>                   |              | <b>To knowledge of general animal physiology, and study the structure and functions of the animal body through studying the body's systems and organs.</b>   |                             |  |                          |
|--|--------------|--|-----------------------------|--|--------------------------|
| <b>9. Teaching and Learning Strategies</b> |              |  |                             |  |                          |
| <b>Strategies</b>                          |              | <b>Presenting academic courses by using the pictures and illustrations. 1- Conducting practical lectures in laboratories and training students to -2 do the laboratory tests<br/>3- Discussions and dialogues during the lecture</b> |                             |  |                          |
| <b>10. Course Structure</b>                |              |  |                             |  |                          |
| <b>Week</b>                                | <b>Hours</b> | <b>Required Learning Outcomes</b>  | <b>Unit or subject name</b> | <b>Learning method</b>   | <b>Evaluation method</b> |
| <b>1</b>                                   | <b>5</b>     | <b>Introduction about the animal physiology</b>  | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |                          |
| <b>2</b>                                   | <b>5</b>     | <b>Cell physiology, definitions about the cell, cell membrane structure, cell membrane movement, and what is related to them</b>   | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |                          |
| <b>3</b>                                   | <b>5</b>     | <b>Cell membrane function, methods of transport across the cell membrane,</b>  | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |                          |
| <b>4</b>                                   | <b>5</b>     | <b>Circulatory system, heart and blood vessels, heart cavities and valves.</b>   | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |                          |
| <b>5</b>                                   | <b>5</b>     | <b>Electrical conduction of the heart muscle, control of heart function, blood pressure and its control, factors that regulate heart function, and other related topics.</b>   | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |                          |
| <b>6</b>                                   | <b>5</b>     | <b>General structure and function of the respiratory system,</b>   | <b>Animal Physiology</b>    | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion</b>              |                          |

|           |          |   |                          |  |  |
|-----------|----------|---|--------------------------|--|--|
|           |          |   |                          | <b>and dialogue</b>  |  |
| <b>7</b>  | <b>5</b> | <b>Control of the breathing process, factors that controlling the rate of ventilation, main functions of the respiratory system</b> | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>8</b>  | <b>5</b> | <b>The nervous system, sections of the nervous system, how the nervous system works, types of axons</b>                             | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>9</b>  | <b>5</b> | <b>Nerve impulse, neurotransmitters, neuromuscular connection, nerve reflex, vital activities controlled by the nervous system</b>  | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>10</b> | <b>5</b> | <b>Endocrine system, endocrinology, hormones, their structure and concentrations in the body.</b>                                   | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>11</b> | <b>5</b> | <b>General functions of hormones, regulation of hormone secretion, methods of measuring it, glands</b>                              | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>12</b> | <b>5</b> | <b>Physiology of the urinary system, structure of the urinary system, renal unit,</b>   | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>13</b> | <b>5</b> | <b>Urinary tract, nervous hormonal regulation of kidney function,</b>   | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>14</b> | <b>5</b> | <b>Metabolism and energy release, protein metabolism,</b>   | <b>Animal Physiology</b> | <b>-Theoretical and Practical lectures<br/>- data show<br/>- Discussion and dialogue</b> |  |
| <b>15</b> | <b>5</b> | <b>Carbohydrate metabolism, fat</b>   | <b>Animal Physiology</b> | <b>-Theoretical and Practical</b>  |  |

|  |  |  |  |  |
|--|--|--|--|--|
|  | metabolism, water and mineral metabolism, vitamins   |  | lectures<br>- data show<br>- Discussion and dialogue |  |
| <b>11. Course Evaluation</b>   |  |  |  |  |
| Distribution of the grade out of 50 according to the tasks assigned to the student, such as .homework, daily, oral, monthly, written exams, reports, etc |  |  |  |  |
| <b>12. Learning and Teaching Resources</b>   |  |  |  |  |
| Required textbooks (curricular books, if any)  | 1. شتيوي العبد الله : علم وظائف الاعضاء ، ط 1 (عمان ، دار المسيرة للنشر والتوزيع ، 2012).<br>2. صباح ناصر العلوجي: علم وظائف الاعضاء ، (عمان ، دار الفكر ناشرون وموزعون ، 2014). |  |  |  |

### Course Description Form

|   |   |
|---|---|
| <b>1- A course Name: Principles of Freedom and Democracy</b>      |   |
|   |   |
| <b>2- Course Code</b>   |   |
| DEHR207   |   |
| <b>3- Semester / Year / Semester – Second Course</b>              |   |
|   |   |
| <b>4- Date of preparation of this description</b>                 |   |
|   |   |
| <b>5- Available attendance forms: Weekly</b>                      |   |
|   |   |
| <b>6- Number of study hours (total): ..... hours</b>              |   |
|   |   |
| <b>7- Course Supervisor Name: Asst. Prof. Dr. Ali Aziz Dawood</b> |   |
| Email: ali_izaz@uomisan.edu.iq                                    |   |
| <b>8- A course objectives</b>                                     |   |
| Subject objectives  | Introducing students to the concept of freedom .and democracy and their origins<br>Introducing students to human rights and .democracy in ancient civilizations<br>Introducing students to human rights in divine .laws and religions<br>Emphasizing the features and characteristics of human rights and the extent of their application .in power<br>Emphasizing the application of freedom and democracy in their correct concept according to .the societal perspective |
| <b>9- Teaching and learning strategies</b>                        |   |
| The Strategy :  | The strategy in applying this course is for the student to become familiar with the nature of freedom and democracy, their definition, and the most important ways of spreading and applying them, as well as defining the special features of  |

|                      |               |  | human rights under the different governments in our contemporary world.             |                        |                          |
|----------------------|---------------|--|---|------------------------|--------------------------|
| 10- Course structure |               |  |   |                        |                          |
| The Week             | Hours         | Required learning outcomes                                       | Unit or topic name  | Learning method        | Evaluation method        |
| Day 1                | theoretical 1 | Introduction to Freedom and Democracy                            | Definition and objectives   | Theoretical lecture    | Exams + Quizzes          |
| Day 2                | theoretical 1 | Advantages of freedom and democracy                              | Introductions to Freedom and Democracy in Ancient Civilizations                     | Theoretical lecture    | Exams + Quizzes          |
| Day 3                | theoretical 1 | Learn about human rights   | Human rights in ancient civilizations   | Theoretical lecture    | Exams + Quizzes          |
| Day 4                | theoretical 1 | Understanding and awareness are the most important human rights. | Guarantees for the implementation of the human right to live as a human being       | Theoretical lecture    | Exams + Quizzes          |
| Day 5                | theoretical 1 | Defining the concept and characteristics of human rights         | Defining the concept of human rights and their divisions                            | Theoretical lecture    | Exams + Quizzes          |
| <b>The Week</b>      | <b>Hours</b>  | <b>Required learning outcomes</b>                                | <b>Unit or topic name</b>   | <b>Learning method</b> | <b>Evaluation method</b> |
| Day 6                | theoretical 1 | Forms of human rights  | Explaining and clarifying the forms and classifications of human rights             | Theoretical lecture    | Exams + Quizzes          |
| Day 7                | theoretical 1 | Public freedoms  | Definition of freedom according to linguistic and legal terminology                 | Theoretical lecture    | Exams + Quizzes          |
| Day 8                | theoretical 1 | Freedom and democracy in the western perspective                 | Explanation and clarification of freedom and democracy from the Western perspective | Theoretical lecture    | Exams + Quizzes          |
| Day 9                | theoretical 1 | Characteristics of democracy                                     | Explanation and clarification of the most important features                        | Theoretical lecture    | Exams + Quizzes          |



|               |                      |                                   |  |                            |                        |
|---------------|----------------------|-----------------------------------|--|----------------------------|------------------------|
| <b>Day 10</b> | <b>theoretical 1</b> | <b>The emergence of democracy</b> | <b>The most important ways to spread democracy</b>     | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |
| <b>Day 11</b> | <b>theoretical 1</b> | <b>Forms of democracy</b>         | <b>Defining the most important forms of democracy</b>  | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |
| <b>Day 12</b> | <b>theoretical 1</b> | <b>Islam and democracy</b>        | <b>Governance and authority in the Islamic concept</b> | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |
| <b>Day 13</b> | <b>theoretical 1</b> | <b>Democratic State</b>           | <b>Is a democratic state a state of citizenship ?</b>  | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |
| <b>Day 14</b> | <b>theoretical 1</b> | <b>Dictatorships</b>              | <b>How dictatorial regimes arise</b>                   | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |
| <b>Day 15</b> | <b>theoretical 1</b> | <b>midterm exam review</b>        | <b>Monthly exam</b>                                    | <b>Theoretical lecture</b> | <b>Exams + Quizzes</b> |

#### **11- Course Evaluation**

**The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, posters, etc.**

#### **12- Learning and teaching resources**

|  |   |
|--|---|
| <b>Required textbooks (methodology if any)</b>                                       | <b>Books related to freedom, democracy and human rights by a group of authors</b> |
| <b>Main References (Sources)</b>   | <b>From textbooks, auxiliary books, the Internet and scientific research.</b>     |
| <b>Recommended supporting books and references (scientific journals, reports...)</b> | <b>Scientific journals in basic disciplines</b>                                   |
| <b>Electronic references, websites</b>   | <b>found on web pages</b>   |