Course Description Form

| 1. | Course Name: | | | | | | |
|----|---|--|--|--|--|--|--|
| | Immunology | | | | | | |
| 2. | Course Code: | | | | | | |
| | VEP3115 | | | | | | |
| 3. | Semester / Year: | | | | | | |
| | 1 st semester / Year 3 | | | | | | |
| 4. | Description Preparation Date: | | | | | | |
| | 13/02/2024 | | | | | | |
| 5. | Available Attendance | Forms: | | | | | |
| | Physically in Lecture | Hall and Laboratory + Google classroom | | | | | |
| 6. | Number of Credit Ho | urs (Total) / Number of Units (Total) | | | | | |
| | (semester=15 weeks) * (theory 2 hours/week + practical 2 hours /week) = total 60 hours/semester (number of units = theory 2 units + practical 1 unit = total 3 units) | | | | | | |
| 7. | Course administrator's name (mention all, if more than one name) | | | | | | |
| | Name: Assist. Lecturer Luay Jumaah Jihad | | | | | | |
| | Email: Luay.Jumaah@uokirkuk.edu.iq | | | | | | |
| 8. | Course Objectives | | | | | | |
| | Course Objectives | Knowing how natural immunity and acquired immunity work. Study of the lymphatic system, lymphoid organs, and immune cells. Study of antigens, antibodies and immun receptors. Understanding how immunity develops within the body of animals against microorganisms. Understanding the occurrence of diseases resulting from a failure or overuse of the immune system, such as: allergies and autoimmunity. Study of organ transplantation, cancer, vaccines and serums. Linking concepts and information to real and their applications. | | | | | |

| Strategy | | • Expla | anation, clarific | ation and or | rganizati |
|-------------------|-------|--|--|--|---|
| 10. Course Struct | ure | topic contr what • Coop | etive attention o , monitoring un olling comprehe has been learne perating with oth em, and discuss elf. | derstanding ension, evai ed, or self-e ners to solve | , luating valuation e a |
| Week | Hours | Requi red Learni ng Outco mes | Unit or subject name | Learnin g method | Evalua tion metho d |
| One | 4 | the topic, apply experiment | Principle of immunity and immune response (specific and nonspecific) | Observation meticulousn s, explanatio and experimenta n | observation and written tests/exer |
| Two | 4 | Understar the topic, apply | Immunoglobulin Structure, variati Function and synthesis | | observation and writted tests/exer |
| Three | 4 | the topic, apply | Immunoglobulin Structure, variati Function and synthesis | meticulousn s, explanatio and experimenta n | observati and writte tests/exer es |
| Four | 4 | | Immunology of ' and B cells | Observation meticulousn s, explanatio and experimenta n | observation and written tests/exer |

| | | down the | | | |
|-------|---|--|------------------|--|--|
| | | results | | | |
| Five | 4 | Understar | Immunology of ' | Observation | Direct |
| | | the topic, | and B cells | meticulousn | observatio |
| | | apply | | s, explanation | and writte |
| | | experime | | and | tests/exer |
| | | correctly, | | experimenta | es |
| | | and write | | n | |
| | | down the | | | |
| | | results | | | |
| Cirr | 4 | | Complement: | Observation | Direct |
| Six | 4 | | - | meticulousn | |
| | | the topic, | , | | |
| | | apply . | and pathways | s, explanation | |
| | | experime | | and | tests/exerc |
| | | correctly, | | experimenta | es |
| | | and write | | n | |
| | | down the | | | |
| | | results | | | |
| Seven | 4 | | Cell mediated | Observation | |
| | | the topic, | immunity, antige | meticulousn | observatio |
| | | apply | recognition by T | s, explanatio | and writte |
| | | experime | cells | and | tests/exerc |
| | | correctly, | | experimenta | es |
| | | and write | | n | |
| | | down the | | | |
| | | results | | | |
| Eight | 4 | Understar | Immunological | Observation | Direct |
| | • | the topic, | tolerance | meticulousn | observatio |
| | | apply | | s, explanation | and writte |
| | | experime | | and | tests/exer |
| | | correctly, | | experimenta | es |
| | | and write | | n | ••• |
| | | down the | | | |
| | | results | | | |
| Nine | 4 | | Types of | Observation | Direct |
| INITE | 4 | | Hypersensitivity | meticulousn | |
| | | · · | Mechanisms | | |
| | | apply | | s, explanation and | tests/exerc |
| | | experime | | | |
| | | correctly, | | experimenta | es |
| | | and write | | n | |
| | | down the | | | |
| | | 1. | | | |
| | | results | | 01 | D ' |
| Ten | 4 | Understar | Types of | Observation | |
| Ten | 4 | Understar the topic, | Hypersensitivity | meticulousn | observatio |
| Ten | 4 | Understar | | meticulousn s, explanatio | observation and writte |
| Ten | 4 | Understar the topic, | Hypersensitivity | meticulousn | observatio |
| Ten | 4 | Understar the topic, apply | Hypersensitivity | meticulousn s, explanatio | observation and written tests/exerce |
| Ten | 4 | Understar the topic, apply experime | Hypersensitivity | meticulousn s, explanatio and | observation and written tests/exerce |
| Ten | 4 | Understar the topic, apply experiment correctly, | Hypersensitivity | meticulousn s, explanatio and experimenta | observation and written tests/exerce |

| | 4 | TT 1 | | A . | | ·. I | 01 | | |
|---|-------------------------|--------------|--------------------------|-----------------|-------------|---------------|---|------------|-------------|
| Eleven | | | | Au | to-immun | пy | | | Direct |
| | | | the topic, | | | | s, explanatic and write | | |
| | | apply_ | | | | | | 1a11a110 | |
| | | expe | | | | | and | • | tests/exerc |
| | | corre | • | | | | - | imenta | es |
| | | and v | | | | | n | | |
| | | down | | | | | | | |
| | | resul | | E | | | 01 | | D : |
| Twelve | 4 | Unde | | Transplantation | | ion | | | Direct |
| | | the to | - | | | | | | observatio |
| | | apply | | | | - | lanatio | and writte | |
| | | expe | | | | and | | tests/exer | |
| | | correctly, | | | | | - | imenta | es |
| | | and v | | | | | n | | |
| | | down | | | | | | | |
| | 4 | resul | | р. | · 1 · 0 | | | | D' (|
| Thirteen | 4 | | | | nciple of | <i>.</i> . | Observation Direct | | |
| | | the topic, | | immune genetics | | | | | |
| | | apply | | | | s, explanatio | | | |
| | | expe | | | | and | | tests/exer | |
| | | corre | | | | experimenta | | es | |
| | | and write | | | | | n | | |
| | | down | | | | | | | |
| | | resul | | - | | | 01 | | |
| Fourteen 4 | | | Understar Immunoanaphyla | | | ohyla | Observation Direct meticulousn observati | | |
| | | the to | - · | s re | action | | | | |
| | | apply | | | | | - | lanatio | and writte |
| | | expe | | | | | and | | tests/exer |
| | | corre | - | | | | experi | imenta | es |
| | | and v | | | | | n | | |
| | | down | | | | | | | |
| | | resul | | _ | | | | | |
| Fifteen | 4 | | | | nunity of | | | | Direct |
| | | the to | - | ınfe | ection | | | | observatio |
| | | apply | | | | | - | Ianatio | and writte |
| | | expe | | | | | and | | tests/exer |
| | | corre | • | | | | - | imenta | es |
| | | and v | | | | | n | | |
| | | down | | | | | | | |
| 11.0 5.1 | • | resul | ts | | | | | | |
| 11.Course Evaluation Annual quest 40% | | | | | | | D: 1 | | (00/ |
| Ann | ual ques | ractical 13% | | | | Final | exam | 00% | |
| | | Pr | actic | cal 1 | 3% | | | | |
| Theory 27% | | | | | Mont | ТЪ | eory | | |
| Theory 27% | Mon | | | | | 111 | CULY | D | . 1 |
| Theory 27%QuRepDiscut | Mon thly | Que | р | | | | • | Pra | actical |
| Theory 27%Qu ezRep ortsDiscut ions | thly | Que z | Rep | | hly | | kam | | |
| Theory 27%Qu ez 5Rep ortsDiscut | thly exa | Ζ | Rep ts 1 | | | | • | | m 20% |
| Theory 27%Qu ezRep ortsDiscut ions | thly exa m | - | - | | hly | | kam | | |
| Theory 27%Qu ez 5Rep ortsDiscut ions55%2% | thly exa m 15% | z 2% | ts 1 | % | hly exam | | kam | | |

| Required textbooks (curricular books, if any) | Not specified | | | |
|---|-----------------------------|--|--|--|
| Required textbooks (currential books, if any) | Not specified | | | |
| Main references (sources) | Veterinary Immunology an | | | |
| | Introduction; 10th edition; | | | |
| | Ian R. Tizard (2018(| | | |
| Recommended books and references | Kuby Immunology; 8th | | | |
| (scientific journals, reports) | edition; Jenni Punt, Sharon | | | |
| | A. Stranford, Patricia P. | | | |
| | Jones, Judith A. Owen. | | | |
| | (2019) | | | |
| Electronic References, Websites | World Organisation for | | | |
| | Animal Health, | | | |
| | ResearchGate, google sear | | | |