



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

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|--|---|---|---------------------|--|---|--------------------------------|---|------------|---|
| Course Title | | Serological Diagnosis Of Protozoan Diseases | | | | | | | |
| Course Code | | VPR532 | | Couse Level | | Second Cycle (Master's Degree) | | | |
| ECTS Credit | 4 | Workload | 99 (<i>Hours</i>) | Theory | 2 | Practice | 2 | Laboratory | 0 |
| Objectives of the Course | | To be able to apply serological tests like IFAT and ELISA used for diagnosis of diseases caused by protozoans. | | | | | | | |
| Course Content | | To evaluate the serological tests like IFAT and ELISA used in many important protozoan diseases, preparation of antigens for serological tests, evaluation of results of these tests. | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Problem Solving | | | | | |
| Name of Lecturer(s) | | | | | | | | | |

Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1 | 30 |
| Final Examination | 1 | 60 |
| Assignment | 1 | 10 |

Recommended or Required Reading

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|---|---|
| 1 | Crowther J. R. (2001). The ELISA guidebook. Totowa, NJ : Humana Press, 421 p. |
| 2 | Crowther J. R. (1995). ELISA : theory and practice. Totowa, NJ : Humana Press, 223 p. |
| 3 | Catty, D. (1989). Antibodies, a practical approach. IRL Press. Vol I-II. |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|---|
| 1 | Theoretical | Biology and regulation of immune response |
| | Practice | Principles of preparation of the solutions to be used in serological tests |
| 2 | Theoretical | The structure and classification of antibodies |
| | Practice | Introduction to fluorescent microscopy and its working principles |
| 3 | Theoretical | Antigen - antibody interactions |
| | Practice | Preparation of antigens for the IFA test |
| 4 | Theoretical | Detection of antigen-antibody interaction |
| | Practice | Performing indirect IFA test- I |
| 5 | Theoretical | Immunofluorescence method |
| | Practice | Performing indirect IFA test- II |
| 6 | Theoretical | Enzyme Linked Immunosorbent assay (ELISA) |
| | Practice | Preparation of antigens for ELISA, introduction to the ELISA reader and program, preparation of related solutions |
| 7 | Theoretical | Evaluation of ELISA test results, determination of cut off values |
| | Practice | Performing an ELISA test- I |
| 8 | Intermediate Exam | Midterm exam |
| 9 | Theoretical | Immunodiffusion and immunoelectrophoresis |
| | Practice | Perform an ELISA test- I |
| 10 | Theoretical | Sabin-Feldman Dye test |
| | Practice | Preparation of SDS-PAGE gel and parasite proteins |
| 11 | Theoretical | Agglutination tests |
| | Practice | Elektroforesis of proteins on SDS-PAGE gel |
| 12 | Theoretical | Analysis of proteins in SDS-PAGE |
| | Practice | Western blot analysis -I |
| 13 | Theoretical | Western blot analysis |
| | Practice | Western blot analysis -II |
| 14 | Theoretical | Comparison of commercial kits with home-made tests |



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|----|-------------|------------------------------------|
| 14 | Practice | Sabin-Feldman test |
| 15 | Theoretical | General Discussion |
| | Practice | Use of some of the commercial kits |
| 16 | Final Exam | Final exam |
| 17 | Final Exam | Final exam |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|--|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 1 | 1 | 28 |
| Lecture - Practice | 14 | 0 | 2 | 28 |
| Assignment | 1 | 0 | 5 | 5 |
| Reading | 14 | 0 | 1 | 14 |
| Midterm Examination | 1 | 10 | 1 | 11 |
| Final Examination | 1 | 12 | 1 | 13 |
| Total Workload (Hours) | | | | 99 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 4 |

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

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|---|---|
| 1 | To be able to tell about basic applications of serologic tests. |
| 2 | To be able to explain how to prepare antigens. |
| 3 | To be able to experiment on how to perform serological tests. |
| 4 | to be able to evaluate results obtained from serologic tests. |
| 5 | To be able to know about the development of serological tests. |

Programme Outcomes (Parasitology (Veterinary Medicine) Master)

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|----|--|
| 1 | |
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| 11 | |
| 12 | |

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

| | L1 | L2 | L3 | L4 | L5 |
|-----|----|----|----|----|----|
| P1 | 2 | 3 | 4 | 5 | 5 |
| P2 | 3 | | 2 | 3 | 4 |
| P3 | 3 | 2 | 3 | 4 | 5 |
| P4 | 4 | 1 | 4 | 5 | 3 |
| P5 | 3 | | 4 | 5 | 3 |
| P6 | 2 | 1 | 3 | 4 | 4 |
| P7 | 2 | 2 | 5 | 2 | 5 |
| P8 | 5 | 3 | 2 | 3 | 3 |
| P9 | 5 | | 3 | 5 | 5 |
| P10 | 1 | 2 | 1 | 4 | 4 |
| P11 | 5 | 5 | 5 | 5 | 1 |
| P12 | 5 | 5 | 5 | 5 | 5 |

