



Mycology

Diploma COURSE SPECIFICATION

A- Basic information

| 1-Basic information | |
|--------------------------------|----------------------------|
| University | University Of Sadat City |
| Faculty | Veterinary Medicine |
| Program title: | Diploma of microbiology |
| Academic year: | 2014/2015 |
| Department offering the course | Department of Microbiology |
| Corse code | 954 |
| Course Title | Mycology |
| Contact hours/week: | Lecture: 1 Practical: 2 |

B-PROFESSIONAL INFORMATION

1) Overall aims of course

Upon successful completion of the course, the student will be able to:

-)] Understand the basic concepts of basic and Advanced Mycology.
-)] Achieve competency in basic laboratory technology in the field of animal mycology.

2) Intended learning outcomes of course (ILOs)

a) KNOWLEDGE AND UNDERSTANDING

By the end of this course, the graduate should be able to:

- a.1. Recognize the general morphology of Fungus, and fungal genetics.
- a.2. Describe the basic host-pathogen relationship and fungal pathogenesis.
- a.3. Recognizes the basic concepts of basic and advanced Mycology.
- a.4. Realize the culture, antigenic structure, and virulence factor of fungal pathogens of detrimental role in host immune response.
- a.5. Recognizes the most fungal affections and the techniques of proper identification.

b) INTELLECTUAL SKILLS

By the end of this course, the student should be able to:

- b.1. Interpret the results of microbiological, serological and molecular tests used for fungus.
- b.2. Identify a microorganism as Fungus according to standard taxonomy and other morphological features.
- b.3. Identify the most common cultures and staining used for identification and isolation of fungus.
- b.4. Compare according evidence the causal relationship of microbes and diseases.
- b.5. Identify a scientific scheme for proper isolation and identification of medically important fungus.

c) PROFESSIONAL AND PRACTICAL SKILLS

By the end of this course, the student should be able to:

- c.1. Diagnose medically important Fungus based on microscopic examination of stained preparations.
- c.2. Apply culture media and biochemical tests commonly used for Fungus identification.
- c.3. Use the different serological and technological tests for identification of different microorganisms as Fungus and compare between available resources.
- c.4. Write a scientific reports in the field of fungus

d) GENERAL AND TRANSFERABLE SKILL

By the end of this course, the student should be able to:

- d.1. Communicate effectively and use information technology.
- d.2. Work in at team.
- d.3. Manage time efficiently.
- d.4. Writing skills for thesis and publication issues.

3) Topics and contents

| Courses | Lecture(hr) | practical (hour) | Total hours |
|--|-------------|------------------|-------------|
| 1- types of fungi which cause mastitis | 10 | ... | 11 |
| 2- types of fungi which cause abortion | 14 | | 16 |
| 3- Types of fungi which infect neonates) | 20 | ... | 21 |
| 4- The diagnostic serological test | | 20 | 20 |
| 5- Staining and morphological studies for all microbes taken through the course) | | 20 | 20 |
| 6- Uses of recent techniques in diagnosis) | ... | 10 | 10 |
| 7- Sterilization and disinfection) | ... | 10 | 10 |
| 8- Chemotherapeutic agents | ... | 10 | 10 |
| 9- Diagnosis of fungal diseases) | ... | 18 | 10 |
| Total | 44 | 88 | 132 |

4) Teaching and learning methods

- Lectures to gain knowledge and understanding skills. The teacher usually uses all the available teaching tools like data show. The lectures usually take the form of open discussion.
- Writing a review paper about the field of specialization to gain the skills of information collection, self-learning and presentation.
- Practical and lab sessions to gain practical skills.

5) Student assessment

a. METHODS:

- Ñ Written exam to assess knowledge, information and intellectual skills.
- Ñ Practical exam to assess professional and practical skills.
- Ñ Oral exam to assess knowledge and information and intellectual skills.

b. MATRIX ALIGNMENT OF THE MEASURED ILOS/ ASSESSMENTS METHODS:

| | K.U (a) | I.S (b) | P.P.S (c) | G.S (d) |
|----------------|---------|---------|-----------|---------|
| Written exam | 1-5 | 3 | | |
| Practical exam | | 1-5 | 1-4 | |
| Oral exam | 1-5 | 1,3,4 | | |
| Assignment | | | | 1-4 |

c. WEIGHT OF ASSESSMENTS:

| Self-Learning Activities included: |
|--|
| <ul style="list-style-type: none"> Assay on a specific topic Self-Assessment Exercise Enhancing Questioning Skills Open discussion |

| Student Assessment Methods | | |
|----------------------------|-----------------------------|------------|
| | Exams and activities | Weight (%) |
| | 1- Final written exam | 50 |
| | 2- Final Practical exam | 20 |
| | 3- Final oral exam | 20 |
| | 4- Self-learning activities | 10 |
| | Total | 100 |

| Assessment | Evidence |
|--------------------|---|
| Final written exam | Marked and signed written paper |
| Practical exam | Marked and signed practical exam paper |
| Oral exam | Signed list of oral exam marks |
| Assignment | Representative samples of presented materials |

7) List of references

6.1. Essential textbooks

-] Jawetz, Melnick and Adelberg's *Medical Microbiology*.
-] Merchant and Packer. *Veterinary Bacteriology and Virology*.

6.2. Recommended books

-] Janeway and Travers *Immunobiology: The immune system in health and disease*.

6.3. Periodicals

-] *Veterinary Microbiology*
-] *Diagnostic Microbiology and Infectious Disease*
-] *FEMS Immunology and Medical Microbiology*
-] *FEMS Microbiology Reviews*
-] *International Journal of Food Microbiology*
-] *Journal of Microbiology, Immunology and Infection*
-] *Research in Microbiology*
-] *Systematic and Applied Microbiology*
-] *Journal of Microbiology Research*

6.4. Web sites

-] *Veterinary Microbiology* – ResearchGate- http://www.researchgate.net/journal/0378-1135_Veterinary_Microbiology
-] American Society Of Microbiology
-] *Veterinary Microbiologist - Animal Careers - About.com*
-] *Bacteriology: Bacteriology: Animal Health Diagnostic Center-* <https://ahdc.vet.cornell.edu/sects/bact/>
-] o asmnews@asmusa.org
-] *VetBact-* <http://www.vetbact.org/vetbact/>
-] o <http://www.phage.org/black09.htm>
-] o http://www.microbe.org/microbes/virus_or_bacterium.asp

√) Facilities required for teaching and learning

- √, 1 Data-show.
- √, 2 Microscopes and media for characterization of microorganisms.
- √, 3 Network for technology transfer.
- √, 4 Bacteriology lab.
- √, 5 Biotechnology lab.
- √, 6 Computer.

| | Course coordinators | Head of department |
|------------------|----------------------------|---------------------------|
| Name | Dr. Alaa El Din Moustafa | Dr. Alaa El Din Moustafa |
| Signature | | |

Matrix alignment of course topics and ILOs

| Courses | hours /week (Lect) | hours /week (Pract) | Lecture(hr) | practical (hour) | Total hours | KU | ILS | PPS | GTS |
|--|-------------------------------|--------------------------------|--------------------|-------------------------|--------------------|-----------|------------|------------|------------|
| 1- types of fungi which cause mastitis | 1 | | 10 | ... | 11 | 1-5 | 1-5 | 1-4 | 1-4 |
| 2- types of fungi which cause abortion | 1 | | 14 | | 16 | 1-5 | 1-5 | 1-4 | 1-4 |
| 3- Types of fungi which infect neonates) | 1 | | 20 | | 21 | 1-5 | 1-5 | 1-4 | 1-4 |
| 4- The diagnostic serological test | | 2 | | 20 | 20 | 1-5 | 1-5 | 1-4 | 1-4 |
| - Staining and morphological studies for all microbes - taken through the course) | | 2 | | 20 | 20 | 1-5 | 1-5 | 1-4 | 1-4 |
| 6- Uses of recent techniques in diagnosis) | | 2 | ... | 10 | 10 | 1-5 | 1-5 | 1-4 | 1-4 |
| 7- Sterilization and disinfection) | | 2 | ... | 10 | 10 | 1-5 | 1-5 | 1-4 | 1-4 |
| Λ- Chemotherapeutic agents | | 2 | ... | 10 | 10 | 1-5 | 1-5 | 1-4 | 1-4 |
| Total | | | 44 | 88 | 132 | | | | |

