



MICOLOGY AND PARASITES IN LAB

Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Bioanalisi
Year of study	1°
Period	1st semester (01/10/2021 - 14/01/2022)
ECTS	9
Language	Italian
Teaching methods	Face-to-face or online lessons, carried out through presentations (PowerPoint).
Assessment methods	The exam is oral (face-to face or onlile, depending on the university regulations at the time of the exams); it is scheduled for all students at the end of the course lessons. The interview aims to ascertain the knowledge and skills acquired as well as the personal capacity to re-elaborate the contents.

The activity is split

504457 - MICOLOGY AND PARASITES IN LAB-1

504458 - MICOLOGY AND PARASITES IN LAB-2



MICOLOGY AND PARASITES IN LAB-1

Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	BIO/02 (SYSTEMATIC BOTANICS)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Bioanalisi
Year of study	1°
Period	(01/10/2021 - 14/01/2022)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	SAVINO ELENA (titolare) - 3 ECTS RODOLFI MARINELLA - 3 ECTS
Prerequisites	Module 1. Fundamental Mycology: general characteristics of fungi; kindom Fungi: peculiarity of each Phylum.
Learning outcomes	Module 1. Aim of the course is to provide the student mycological knowledge useful in supporting him in his future work as laboratory analyst.
Course contents	Module 1. Mycoses caused by yeasts, dermatophytes, dimorphic and opportunistic fungi and related laboratory diagnostics. Contaminant microfungi of feed and food: problems and analytical methods. Fungi producing mycotoxins: a) mycotoxins and mycotoxicosis; b) macrofungi and mycetism. Aeromycology: outdoor

and indoor sampling methods; problems related to the aerial dispersion of spores.
Culture media and methods for mycological analysis.
Methods of identification of microfungi: common laboratory analysis kits and basic criteria for the taxonomic identification on a morpho-dimensional basis.

Teaching methods

Module 1.
Face-to-face or remote lessons, carried out through presentations (PowerPoint). In any case, the importance of involving students during the lesson is emphasized. Fungal microscopic images and some videos on the mycological methodologies will be presented to the students.

Reccomended or required readings

Module 1.
- Giuseppe Caretta (2012). *Micologia medica*. C.E.A. (Casa Editrice Ambrosiana)

- Polonelli, L. Ajello, G. Morace (1993). *Micologia Medica*, Società Editrice Esculapio.

- Stefano Andreoni, Claudio Farina, Pierluigi Lombardi (2003). *Atlante di micologia medica*. Systems Comunicazioni

- Laboratory Manual Series 4 (1998) by W. Gams, E.S. Hoekstra, A. Aptroot (Eds). CBS-KNAW Fungal Biodiversity Centre, Utrecht (The Netherlands).

- Samson, R. A., Houbraken, J., Thrane, U., Frisvad, J. C., & Andersen, B. (2010). *Food and indoor fungi*. Centraalbureau voor SchimmelcL. Utrecht (The Netherlands).

Assessment methods

Module 1.
The exam is oral (face-to face or onlile, depending on the university regulations at the time of the exams); it is scheduled for all students at the end of the course lessons. The exam includes at least three questions on the topics covered in Module 1_Mycology. The interview will be aimed to ascertain the knowledge and skills acquired as well as the personal capacity to re-elaborate the contents.

Further information

Module 1.
The exam is oral (face-to face or onlile, depending on the university regulations at the time of the exams); it is scheduled for all students at the end of the course lessons. The exam includes at least three questions on the topics covered in Module 1_Mycology. The interview will be aimed to ascertain the knowledge and skills acquired as well as the personal capacity to re-elaborate the contents.

Sustainable development goals - Agenda 2030

Module 1.
Special attention will be dedicated to the issue of food safety, that will be considered with reference to the biological risk caused by ingestion of food contaminated with mycotoxins.
[The goals](#)



MICOLOGY AND PARASITES IN LAB-2

Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	VET/06 (PARASITOLOGY AND PARASITIC ANIMAL DISEASES)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Bioanalisi
Year of study	1°
Period	(01/10/2021 - 14/01/2022)
ECTS	3
Lesson hours	24 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	CASTELLI MICHELE - 3 ECTS
Prerequisites	Basic knowledge of zoology, immunology, ecology, molecular biology, evolution, diagnostic methods
Learning outcomes	The course has the first objective of providing students with a general knowledge of parasitology from a medical point of view, but also from an ecological and evolutionary point of view. The main purpose of the course is subsequently to impart in-depth knowledge of the most important parasitic diseases and diagnostic methods in parasitology.
Course contents	Module 2. The aim of the parasitology course is provide students with the theoretical and diagnostic knowledge on the main human parasites. Therefore, the course will deal with the main parasitic protozoa, in particular Toxoplasma and malarial parasites. Subsequently endo- and ecto-parasitic metazoa will be presented, such as platyhelminthes, nematodes, and arthropods. Morphological, serological, and molecular

	biology diagnostic methods for the main parasites will be explained.
Teaching methods	The course will mainly take place through frontal lectures, with laboratories to allow students to carry out basic diagnostic practices under the microscope, such as the recognition of the different species of malarial parasites. The laboratory activities will be carried out if the health situation permits.
Reccomended or required readings	De Carneri. Parassitologia generale e umana. Casa Editrice Ambrosiana
Assessment methods	The exam is oral, with open questions aimed primarily at evaluating the knowledge on the basic concepts covered in the course, such as parasite cycles, diagnostic, ecological and epidemiological aspects of parasitology. The student's ability to establish links between concepts and to elaborate them in reasoning questions will be also assessed.
Further information	The exam is oral, with open questions aimed primarily at evaluating the knowledge on the basic concepts covered in the course, such as parasite cycles, diagnostic, ecological and epidemiological aspects of parasitology. The student's ability to establish links between concepts and to elaborate them in reasoning questions will be also assessed.
Sustainable development goals - Agenda 2030	The goals