Technological Applications of fungi, Mycotoxins and Food safety

Discipline	Mycology
Title of the course	Technological Applications of fungi, Mycotoxins and Food safety
Code	Code de l'UE (Nd)
Duration **Date start** **Date end**	– 6 ECTS (16 hours (8 x 2 h) lectures, 20 hours (10 x 2 h) tutorials, 4 hours seminars by industrialists During fall semester (12 weeks)
Course coordinator and contact details	Gérard Barroso gerard.barroso@u-bordeaux.fr
Other contact person	
Mode of delivery	– Teaching, in French language, includes in-class (group < 40 students) lectures (8 x 2 h), tutorials (10 x 2 h of case studies and English article analysis) and seminars (4h).
Level	- Master 2
ECTS credit points	– 6 ECTS representing 150 hours = 40 contact hours (20 h lectures and seminars, 20 h tutorials) and 3 h exam; 110 hours self-study (40 h private reading, 30 h exam preparation, 40 h tutorials work preparation)
Language	- French
Description[1]	The aim of the course is to present an overview of the technological and Industrial applications of fungi. At the end of this course, students will have a broad knowledge of the industrial potential of fungal organisms and the responses they can bring to major societal issues (environment, nutrition / food/ sustainable development). They will experience the professional (industrial) fields related to fungal microorganisms which are important job providers.
Content <	The course will focus on the most commonly used fungal organisms such as the yeasts (oenological or bakery industries) but also on the filamentous organisms and their use in food industries (cheese) and in the production of molecules such as proteins, flavors or dyes in bioreactors). It will also describe innovative technologies using fungi in bio-remediation or degradation of lignocellulosic compounds. A part of the course will be devoted to industrially grown edible mushrooms, the use of mycorrhizal fungi and the study of mycotoxin producing fungi and their applications in food safety. The teaching is based on lectures but will also involve sessions of flipped class-room. Industrial applications will be addressed by case studies and analysis of publications during tutorials.

Methods	- Lectures, seminars, case studies, article analyses
Assessment procedures	- Terminal examination constituted by a written synthesis test (3 h, coef. 0.8) - Continuous assessment constituted by an oral presentation of case study or article analysis during tutorials (coef. 0.2)
Prerequisites	– Master 1 (first year) in biological Sciences Academic level
Other information	

Please note that the number of places available may be limited for certain classes.