هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T4 2020

Course Specifications

Course Title:	**Yeasts**
Course Code:	**2013212-3**
Program:	**Bachelor of Microbiology**
Department:	**Biology Department**
College:	**College of Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours: 3 h
2. Course type **a.** University College | Department √ Others **b.** Required √ Elective
3. Level/year at which this course is offered: 9th level – 3rd year
4. Pre-requisites for this course (if any)**: General Microbiology / 2012203-3**
5. Co-requisites for this course (if any)**: None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	6 hrs/Week	100
2	**Blended**	-	-
3	**E-learning**	-	-
4	**Distance learning**	-	-
5	**Other**	-	-

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	30
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	60

B. Course Objectives and Learning Outcomes

1. Course Description:

The course focuses on various aspects including: Taxonomy of yeasts, Isolation techniques, Cytology, Growth and stress responses in yeasts, Physiology and metabolic pathways, Standard and molecular biological identification techniques, Yeast ecology and its interaction with other microorganisms, Use of yeast in industry and Pathogenic yeasts.

2. Course Main Objective:

The main objective of the course is to give the students a broad knowledge of taxonomy, physiology, and molecular genetics of yeast with focus on understanding growth kinetics and its importance for fermentation processes involving yeasts and the final product quality.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding:**	
1.1	Recognize yeast isolation and identification techniques.	K1

CLOs		Aligned PLOs
1.2	Differentiate between various types of yeast.	K2
2	**Skills:**	
2.1	Explain methods of isolation and identification of yeasts.	S1
2.2	Recognize the importance of yeasts in medical, economic and environmental fields.	S3
3	**Values:**	
3.1	Gain personal and leadership skills needed to achieve individual or group assignments.	V1

C. Course Content

No	List of Topics	Contact Hours
1	Chapter 1: Introduction, Definition, and Nomenclature of the Yeasts.	3L + 3P
2	The general composition of the yeast cell.	3L + 3P
3	Basics of yeasts classification and the distribution of yeats in various environments.	3L + 3P
4	Chapter2: Ascomycetous Taxa (Teleomorphic and anamorphic Ascomycetous genera and species).	3L + 3P
5	Basidiomycetous Taxa (Teleomorphic and anamorphic Basidiomycetous genera and species).	3L + 3P
6	Chapter 3: Yeast ecology and cytology, isolation, identification, characterization and maintenance.	3L + 3P
7	Growth kinetics of yeast.	3L + 3P
8	Chapter 4: Physiology and metabolic pathways (carbohydrate, protein, and lipid).	3L + 3P
9	Use of yeast in industry.	3L + 3P
10	Pathogenic yeasts.	3L + 3P
Total		30L + 30P

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding:**		
1.1	Recognize yeast isolation and identification techniques.	Interactive learning	Paper-based exams
1.2	Differentiate between various types of yeast.	Open discussion Mind Mapping	Paper-based exams
2.0	**Skills:**		
2.1	Explain methods of isolation and identification ofyeasts.	Small group activities	Paper-based exams Practical reports

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.2	Recognize the importance of yeasts in medical, economical and environmental fields.	Small group activities Interactive learning	Practical exam Assignments
3.0	**Values:**		
3.1	Gain personal and leadership skills needed to achieve individual or group assignments.	Small group activities	Practical exam Assignments

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments and activities: 1- Written Assignment Power-point presentation	Variable	10
2	Midterm Exam	5th	20
3	Periodic Exam	7th	10
4	Practical Reports	Continuous	15
5	Final Practical Exam	11th	5
6	Final Exam	12th	40

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

6 hours per week for academic advice and consultations
Teaching staff is also available using Blackboard web site and Taif University "Edugate" System

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Kurtzman,C., and Fell, J.W. 2011. The Yeasts - A Taxonomic Study 5th Edition. ISBN: 9780080931272, Elsevier Science. Page: 2354
Essential References Materials	Querol, A., and Fleet, G..(2006). Yeasts in Food and Beverages. ISBN 978-3-540-28398-0. Springer Link. جابر زايد بريشة(2012) الخمائر. جامعة المنيا. جمهورية مصر العربية.
Electronic Materials	Blackboard website Website of Saudi digital Library
Other Learning Materials	Computer-based programs and professional software

2. Facilities Required

Item	Resources
Accommodation	▪ Classroom (capacity not more than 40 students)

Item	Resources
(Classrooms, laboratories, demonstration rooms/labs, etc.)	for 2 h/week. ▪ Microbiology Lab (capacity not more than 20 students) for 3 h/week.
Technology Resources (AV, data show, Smart Board, software, etc.)	▪ Data Show projectors, smart blackboard Computer Portable PowerPoint presentations to special lectures.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	▪ Autoclave ▪ Incubators ▪ Micropipettes and its tips ▪ Petri dishes ▪ Microscopes ▪ Culture media Samples of different sources

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Indirect
Quality of learning resources	Peer Reviewer Students	Direct Indirect
Extent of achieving the course learning outcomes	Peer Reviewer Students	Direct Indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Biology Department**
Reference No.	**Committee number 14 - Academic Year 1442-1443H**
Date	**22\5\2022G – 21\10\1443H**

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