Course specification

University/Academy: Damanhour
Faculty/Institute: Science
Department: Botany

1. Course Data:

<table>
<thead>
<tr>
<th>Course code: mic 421</th>
<th>Course title: virus and yeasts</th>
<th>Academic year/level: 2010/2011 (first term) / 4th year students</th>
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</thead>
<tbody>
<tr>
<td>Specialization: Chemistry /microbiology</td>
<td>No. of instructional units: lecture 2hrs practical 3</td>
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2. Course Aim

By the end of the course, students will be able to:

- Realize structural components of viruses.
- Understand the basic biological concepts of viral replication with special emphasis on bacteriophages.
- Recognize classification and application of yeast.

3. Intended learning outcome

a) Knowledge and understanding

By the end of the course, students will be able to:

A1: Write the significant differences between viruses.
A2: Describe the replication and mode of infection.
A3: List principles of yeast classification and application.

b) Intellectual skills

By the end of the course, the students are expected to develop higher order skills that are reflected in their ability to:

B1: Differentiate between different viral types.
B2: Compare between different modes of viral actions.
B3: Determine the taxonomic position of yeasts.
B4: Apply the basic knowledge of genetics in handling and interpreting information.

c) Professional skills

By the end of the course, students will be able to:

C1: Demonstrate the main features of a number of simple virus and yeasts.
C2: Use the simple microscope to identify different yeast samples.  
C3: Practice the different yeasts media.  

| d) General skills | By the end of the course, students will be able to:  
C1: Demonstrate the main features of a number of simple virus and yeasts.  
C2: Use the simple microscope to identify different yeast samples.  
C3: Practice the different yeasts media.  
By the end of the course, students will be able to:  
D1: Exchange ideas, principles and information by oral, written and visual means.  
D2: Work effectively both in a team and independently.  
D3: Use the information technology to gather information and right reports. |

| 4. course content | • Structural components of viruses, morphology  
Expression of their genome, Replication and assembly, Modes of transmission of plant viruses, propagation and detection  
• Taxonomy of animal and plant viruses, discussion of represented groups  
Bacteriophages, Viroids, satellites  
Phycoviruses and mycoviruses  
• Classification and nomenclature of yeast  
Brewers wine and sake yeast, baking yeast  
Food and feed yeast, miscellaneous products  
• Scientific excursions of yeasts  
• Immobilized yeasts and application |

| 5. Teaching and learning methods | 5.1. Lectures and seminars.  
5.2. Lab work.  
5.3. Problems.  
5.4. Short reports. |

| 6. teaching and learning methods for students with special needs | |

| 7. Student Assessment | - 7.1. Quizzes.  
7.2. Mid term exam.  
7.3. Practical exam. |
7.4. Final term exam.

| a) Procedures used:         | ---------- |
| b) Schedule:               | - Assessment 1: Quizzes  
Assessment 2: Mid term exam  
Assessment 3: Practical exam  
Assessment 4: Final term exam |
| c) Weighing of Assessment: | Mid-Term Examination: 10  
Final-Term Examination: 100  
Practical Examination: 30  
Semester Work: 10  
Total 150 |

8. List of Textbooks and References:

| 8.1. Course Notes |
| 8.2. Periodicals, Web Sites, . . . etc |
| www.mhhe.com |

| a) Course Notes             | ---------- |
| Required Books (Textbooks)  | ---------- |
| b) Recommended Books        | - |
| c) Periodicals, web sites,…,etc |

| Data show, overhead projector, simple microscopes, compound light microscopes ,Elisa and microbiology lab |

Course Instructor: ----------  
Head of Department: ----------  
Date: -----/-----/-----