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Course specification of Applied Bacteriology for Hepatology medicine Master

C- Administrative Information
Course Title: Applied Bacteriology  
Code: HEPT713 
Department giving the course: Medical Microbiology and Immunology 
Program on which the course is given: Master Hepatology Medicine 
Department offering the Program: Hepatology Medicine 
Academic level: 1st part 
Date of specification: 2011 
Date of approval by department and Institute council: 2011

D- Professional Information

1 – Overall aims of course:
- To enable the candidate to cope with the international standards of Medical Microbiology & Immunology.  
- To know Infection control procedures 
- To have knowledge of the modern established technologies of diagnostic techniques in hepatology field.  
- To understand laboratory management including effective sterilization.

2 – Intended learning outcomes of course (ILOs)

A - Knowledge and Understanding: 
 a1- Describe the nature of viruses, bacteria, parasites and fungi  
 a2- Explain modes of transmission and the mechanisms of microbial pathogenesis and the outcomes of infection, including chronic microbial infections that affect the liver.  
 a3- Discuss the laboratory diagnosis of microbial diseases affecting the liver.  

b- Intellectual Skills  
 b1 - Analyze, present, interpret an critically evaluate biomedical data  
 b2- Assess health risk factors associated with working in a research diagnostic laboratory  

C- Professional and Practical Skills 
 c1- Select diagnostic laboratory tests to diagnose infectious diseases.  
 c2- Evaluate laboratory reports.

D- General and Transferable Skills
d1- Demonstrate competence and problem solving techniques

3- Course contents Detailed topics of course

I- General Bacteriology:
- Bacterial morphology and ultra structure
- Bacterial physiology
- Microbial genetics
- Advanced molecular techniques and its application in diagnostic microbiology
- Sterilization
- Antimicrobial agents and chemotherapy

II- Systematic Bacteriology
- Staphylococci
- Streptococci including Streptococcus pneumoniae
- Neisseria
- Spore forming organisms
- Corynebacteria
- Spore forming organisms
- Mycobacteria
- Enterobacteriaceae
- Vibrios, Campylobacter and Helicobacter
- Brucella, Haemophilus, Bordetella, Yersinia
- Mycoplasma and Legionella
- Spirochaetes-Bacteroids, Actinomyces, Nocardia
- Anaerobic bacteria
- General Virology
- Systematic Virology DNA Viruses RNA Viruses

III-Applied Microbiology (Hospital acquired infections)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Theoretical hours</th>
<th>Laboratory/Practical</th>
<th>Total</th>
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<tbody>
<tr>
<td>General</td>
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</table>
4– Teaching and learning methods

4.1- Lectures
4.2- practical rounds.

5- Student assessment methods

5.1- Written Examination for assessment of knowledge and understanding and intellectual skills
5.2- Oral Examination for assessment of knowledge and understanding outcomes, intellectual skills, and general skills

Assessment schedule
One written exam 3 hour in Applied Bacteriology(150 mark ) + oral (50 marks).

Assessment weighing:
Final written exam: 75%
Oral exam: 25%
Total: 100%

6- List of references

6.3- Recommended books: Jawetz, Melnick and Adelberg’s
6.4- periodicals and web sites of Microbiology and Immunology
http://www.microbe.org/microbes/virus_or_bacterium.asp
http://www.bact.wisc.edu/Bact330/330Lecturetopics

7- Facilities required for teaching and learning

7.1- Overhead projectors
7.2- Computers
7.3- Microscope slides

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Credits</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>Bacteriology</td>
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<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Systematic Bacteriology</td>
<td>4</td>
<td>3</td>
<td>7</td>
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<tr>
<td>Applied Microbiology</td>
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<td>3</td>
<td>6</td>
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<td><strong>Total hours</strong></td>
<td>11</td>
<td>9</td>
<td>20</td>
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7.4- Laboratories instruments
7.5- Internet club

*We certify that all of the information required to deliver this course is contained in the above specification and will be implemented*

Course coordinator:
Name: **prof.Dr.Enas khoneem**
Head of Department of Medical Microbiology and Immunology