**KING SAUD UNIVERSITY**

**COLLEGE OF APPLIED MEDICAL SCIENCES**

**CLINICAL LABORATORY SCIENCES DEPARTMENT**

- Environmental Microbiology (CLS416), Room No G76

Course Syllabus (Second Semester 1435-36 H /2014-2015 G)

**1. Course Description:**

This course is designed to provide the students with an understanding of the vital activities that microorganisms perform in nature and in the broader dimension of organic activities in the total ecosystem. Students will learn about the useful and harmful roles of microorganisms in the food and dairy industries. The use of microorganisms in industrial processes, the treatment of waste materials and microbial quality controls will also be discussed.

**2. Course Instructor:**

Sarah Alharbi

**Office**: 113, 3rd floor

**Office phone**: Ext :52436

**e-mail**: [sarralharbi@ksu.edu.sa](mailto:sarralharbi@ksu.edu.sa)

**Website**: http://fac.ksu.edu.sa/sarralharbi/home

**Office hours**:. Sunday:9-10

Tuesday: 12-1

\*\* It is important to make an appt. if you want to meet with me outside of office hours

**3. Text book and resources**

- Prescott's Microbiology by Joanne Willey and Linda Sherwood

- Scientific articles and reviews posted in my website

- lecture notes

**4. Web**

All information pertaining to the course is found on <http://fac.ksu.edu.sa/sarralharbi/home>.

* *Please check the website on a daily basis. Important notices posted here http://fac.ksu.edu.sa/sarralharbi/home*

**5. Expected Behavior**

1. Attendance, Please be on time to the class. students arriving 10 minutes after the class start are recorded as absent
2. Please turn your cell phones OFF during class. The use of cell phones for texting or any other reason is strictly prohibited in this class
3. Also, Wearing Abaya during examination is not allowed

**6. Assessment:**

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| --- | --- |
| **Assessment** | **MARKS** |
| First Mid Term Examination | 15 |
| Second Mid Term Examination | 15 |
| Laboratory examination | 10 |
| Final Practical Examination | 20 |
| Final Theoretical Examination | 40 |

**7. Time table**

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| --- | --- | --- |
| **Week** | **Date** | **Topic** |
| 1 | 27 January | Fundamentals of microbial ecology- |
| 2 | 3 February | Microbial symbiosis: Neutralism, mutualism, comensalism, antagonism, competition, parasitism and predation |
| 3 | 10 February | Epidemiology of infectious diseases: Terminology, disease reservoirs, modes of transmission, and public health measures for the control of epidemics |
| 4 | 17 February | Epidemiology of zoonotic diseases: Viral, bacterial, and parasitic zoonoses; prevention and control of zoonotic diseases |
| 5 | 24 February | Air Microbiology – Indoor and outdoor air, airborne diseases and its transmission, control of microorganisms in the air |
| 6 | 3 March | 1st mid term Exam |
| 7 | 10 March | Water Microbiology – Water sources, microbial content of water, pollution of water |
| 8 | 17 March | Environmental sanitation: Types of sewer lines, treatment of sewage, sewage transmitted diseases |
| 9 | 24 March | MID Semester Break |
| 10 | 31 March | Microorganisms involved in the spoilage of different types of food and milk |
| 11 | 7 April | Microorganisms involved in the spoilage of food  continued … Food borne diseases: Infection, intoxication; |
| 12 | 14 April | Food borne diseases continued …  Infection, intoxication; prevention  and control of food borne diseases |
| 13 | 21 April | 2nd mid term exam |
| 14 | 28 April | Nosocomial infections: Predisposing factors, endogenous and exogenous infections, sources, control measures |
| 15 | 5 May | Laboratory acquired infections: Classification of organisms into Risk groups, safety precautions when handling each Risk group, hazardous laboratory techniques and processes |
| 16 | 12 May | Microbial production processes: Characteristics of microbial fermenters, different types of microbial processes – dairy, pharmaceutical, single cell protein |
| 17 | 17 May | SALAM- ARAB EXAMS |
| 18 | 24 May | FINAL THEORY EXAMS |
| 19 | 31 MAy | FINAL THEORY EXAMS |

\* This timetable is subject to minor changes