**CLS 414**

**Department       :** **Clinical Laboratory Sciences**

**Course Number: CLS 414**

**Course Title      : Immunology**

**Credit Hours     : 3 + 1 = 4**

**Overall aim of the course:**

1. This course is designed to provide students with understanding of practical aspects of immunology.

2-Students will learn the different principles of serological tests.

3-Students will be able to have good practice of serological tests

4-Students will learn how to use controls and have quality control over the performed tests

**Intended learning outcomes of the course: (Skills)**

* **Practical skills:**

1. Students will learn to use micropipettes and micro titer plates efficiently
2. Students will be able to read the results for performed serological tests and interpret them
3. Students will be able to compare between different serological tests

* **Interpersonal skills:**

1. Students will obtain self confidence to perform and read different serological tests properly
2. Students work in pairs or groups , so they will have good group work training
3. Students will learn how to present their answers in different ways

**Teaching Methods:**

1-Power point presentation,

2-Demonsration of practical work

3-Students perform different lab procedures under supervision of lab instructor; compare their results with demonstration results.

4-Homework , Discussion of results

**CLS 212:   Laboratory Schedule:**

|  |  |  |  |  |  |  |  |  |  |
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| **KING SAUD UNIVERSITY** | | | | | | | |  | | --- | |  | | | |
| **COLLEGE OF APPLIED MEDICAL SCIENCES** | | | | | | |
| **CLINICAL LABORATORY SCIENCES DEPARTMENT** | | | | | | |
|  |  |  |  |  |  |  |  |  |
| **ACADEMIC CALENDAR 1432/1433[H]- 2011/2012[G]Second Semester** | | | | | | | | |
|  |  |  |  |  |  |  |  |  |
| WEEK | DATE [G] | DATE [H] | **LAB** | **CLS 414(5%Quiz-5%Mid-20% Final Exam)** | | | | |
| 1 | **28.1.2012** | **5.3.1433** |  | **CLASSES START** | | | | |
| 2 | 4.2 | 12.3. | **1** | Introduction, safety rules,dilution | | | |  |
| 3 | 11.2. | 19.3. | **2** | Direct agglutination (Brucella Agg.) | | | |  |
| 4 | 18.2 | 26.3. | **3** | Carrier particle agglitination (latex) | | | | **\*** |
| 5 | 25.2 | 3.4. | **4** | Indirect agglutination (Hemagglutination) | | | | |
| 6 | 3.3 | 10.4. | **5** | Precipitation test | |  |  | **\*** |
| 7 | 10.3 | 17.4 | **6** | Anti-streptolysin test | | |  | |
| 8 | 17.3. | 24.4 | **7** | Mid- Practical Exam\* | | | | |
| 9 | 24.3.12. | 1.5..33. |  | ***Mid semester break*** | | | | |
| 10 | 31.3. | 8.5. | |  | | --- | | **8** | | Complement fixation test | | |  |  |
| 11 | 7.4. | 15.5 | **9** | Immunofluorescent test | | |  |  |
| 12 | 14.4. | 22.5 | **10** | Enzyme linked immunosorbant assay | | | | |
| 13 | 21.4 | 29.5 | **11** | Cell mediated immunity | | |  |  |
| 14 | 28.4 | 7.6. | **12** | Revision |  | | | |
| 15 | 5.5. | 14.6. | **13** | **FinalPractical Exam** | | |  |  |
| 16 | 12.5 | 21.6. | **14** |  | | | | |
| 17 | 19.5 | 28.6 |  | **SALAM - ARAB EXAMS** | | | | |
| 18 | 26.5.2012 | 5.7.33 |  | **FINAL THEORY EXAMS** | | | | |
| 19 | 2.6.12 | 12.7.33 |  | **FINAL EXAMS CONT ...** | | | | |
| ***Vacation starts on Wednesday 6.6-2012 [G] / 16.7.1433 [H]*** | | | | | | | | |
| ***Vacation for staff starts on 12.6.2012 [G] / 22.7.1433 [H]*** | | | | | | | | |
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| ***Classes start on Saturday 1-9-2012 [G] / 14-10-1433[H]*** | | | | | | | | |

**Assessment methods:**

1. 3 Quizzes, choose best 2= 5%
2. Mid practical exam= 5%
3. Final Practical exam= 20%

References

1. 1- Peter J. Delves et al., **Riot's Essential Immunology**, Blackwell Publishing, Latest Edition July 2006
2. Ian R. Tizard., **Immunology- An Introduction**, Saunders College Publishing, Latest Edition.