***Department: Clinical Laboratory Sciences***

***Course number: CLS 241***

***Course title: Haematology***

***Credit hours: 2 + 2 =4***

**Course description**

Teaches basic and diagnostic haematology with an emphasis on pathology. Normal hematopoiesis is covered in lecture, followed by a review of morphology of peripheral blood and bone marrow in lab and normal & abnormal haemoglobins.

Cell counting techniques; blood film staining and role of iron, vitamin B12 and folate. Anemias are covered through lectures, with morphology slides, and illustrative cases, which emphasizes to laboratory diagnosis.

Normal hemostasis, coagulation disorders, and thrombotic disorders are presented through lectures, case discussions and laboratory unknowns.

Morphology slides and clinical correlations are used to present myeloproliferative - lymphoproliferative disorders and acute leukemias.

An individually assigned case study at the end of the course emphasizes proper evaluation of laboratory data, microscopic analysis, and differential diagnosis of common hematologic disorders.

***Learning Objectives:***

1. become familiar with the haematology laboratory;
2. become proficient in basic diagnostic techniques used in a haematology laboratory and understand their use in classifying clinical pathology;
3. be able to identify the structure and function of cellular blood components;
4. understand normal haemostasis and techniques of its determination.
5. become proficient in the morphological interpretation of a blood film;
6. be able to relate changes in blood cell morphology to clinical pathology;

***CLS 241 Laboratory Schedule***

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| **Week #** | **Subject** |
| **1** | Collection of blood from patients |
| **2** | Basic haematological techniques |
| **3** | Preparation and staining methods for peripheral blood and bone-marrow films |
| **4** | Blood-cell morphology in health and disease |
| **5** | Blood-cell cytochemistry and supplementary techniques |
| **6** | Laboratory methods used in the investigation of the haemolytic anaemias  |
| **7** |  Investigation of the hereditary haemolytic anaemias |
| **8** |  Investigation of the haemoglobinopathies |
| **9** | Laboratory methods used in the investigation of paroxysmal nocturnal haemoglobinuria  |
| **10** | Quantitative assay of coagulation factors |
| **11** | Investigation of platelet function |
| **12** | Laboratory control of anticoagulant and thrombolytic therapy  |
| **13** | Investigation of megaloblastic and iron-deficiency anaemias  |
| **14** | Miscellaneous tests  |

***References***

* Haematology at a Glance…Atu Mehta & Victor Hoffbrand…ISBN 10-4051-2666-3
* 2-Practical Hematology..Sir John V. Dace & SM Lewwis..ISBN: 0 443 01981 9
* 4- Essential Haematology..Hoffbrand AV, Pettit JE, PAH Moss..4th ed. 2001, Blackwell Scientific Publications…ISBN 0632051531