



Course Syllabus

Course Code	Course Title	ECTS Credits
HEMA-542	Blood Disorders	7.5
Prerequisites	Department	Semester
HEMA-541	Life Sciences	Spring
Type of Course	Field	Language of Instruction
Concertation-Hematology	Biomedical Sciences	English
Level of Course	Lecturer(s)	Year of Study
2 nd Cycle	Dr. Laura Kouma Dr. Niki Vyrides	1 st
Mode of Delivery	Work Placement	Co-requisites
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Provide an overview of the most common blood disorders, including malignancies.
- Discuss the main techniques used for detecting and monitoring these diseases' progression.

Learning Outcomes:

After completion of the course students are expected to be able to:

1. Explain the classification of hematological malignancies.
2. Describe morphology and function of leukocytes subpopulations
3. Describe the symptoms, pathogenesis and laboratory investigation of hematological malignancies
4. List and explain the diagnostic methods used to diagnose these hematologic disorders.
5. Outline the treatment options and specify immunotherapy

Course Content:

1. Hemopoiesis in health and disease
2. Classification, clinical manifestations and laboratory markers of erythrocyte, granulocyte and lymphocyte disorders
3. Symptoms, pathogenesis, and laboratory investigation of hematological malignancies

(leukemias, myeloproliferative disorders, lymphomas, multiple myelomas, myelodysplastic syndromes)

4. Acquire the theoretical and practical knowledge related to diagnostic procedures in hematology:
 - a) Microscopic
 - b) Cytogenetics
 - c) Histopathology
 - d) Molecular diagnostic approaches
 - e) Investigation of cellular characteristics and abnormalities by flow cytometry
 - f) Flow cytometry and leukocyte subgrouping
 - g) Flow cytometric immunophenotyping of hematopoietic malignancies
5. Define the role and strategy of laboratory diagnostics in hematological diseases for diagnosing, differentiating, monitoring, evaluating treatment options, monitoring and evaluating the effects of treatment.
6. Outline the different treatments used in hematological malignancies and specify immunotherapy options.
7. Clinical cases and discussion

Learning Activities and Teaching Methods:

Lectures, problem-based learning, poster and/or oral medical / research papers presentations.

Assessment Methods:

Student performance in case studies, assignments, midterm, and final Exams

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Clinical Hematology: Theory & Procedures	Mary Lou Turgeon	Wolters Kluwer	2018	ISBN-13: 978-1496332288 ISBN-10: 1496332288
Hoffbrand's Essential Hematology (7 th edition)	A. Victor Hoffbrand, Paul A. H. Moss	Wiley-Blackwell	2015	978-1-118-40867-4

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Transfusion medicine & hemostasis: clinical and laboratory aspects (2 nd Edition)	Beth H. Shaz, Christopher D. Hillyer, Mikhail Roshal, Charles S. Abrams	Elsevier Science	2013	978-0123971647