The Hebrew University of Jerusalem

Syllabus

Heart and blood vessels of the sick person - 96301

Last update 08-09-2022

HU Credits: *4.5*

Degree/Cycle: *1st degree (Bachelor)*

Responsible Department: *Medicine*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *Ein Karem*

Course/Module Coordinator: *Prof. Ronen Beeri and Prof Rabeah Assaleh*

Coordinator Email: *ronenbe@ekmd.huji.ac.il*

Coordinator Office Hours: *By appointment only*

Teaching Staff:

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Dr. Sara Shimoni,
Dr. Mutaz Karameh,
Dr. Yotam Kolben,
Dr. Dean Nahman,
Dr. ayelet Shauer,
Dr. Yair Elitzur,
Prof Moshe Swissa

Course/Module description:

The course consists of lectures, a pathology laboratory, clinical presentations, and workshops.
The course provides the student with the pathological basis for the development of cardiovascular diseases including coronary heart disease, cardiomyopathy, pericarditis, benign and malignant tumors of the heart muscle, endocarditis, arrhythmias, peripheral vascular disease, congenital heart defects.
At the same time, the course will provide the student with the knowledge related to the drug treatment of these diseases, with emphasis on understanding the mechanisms of action of the drugs and the clinical basis in their selection.

Course/Module aims:

Providing basic and clinical knowledge of pathological, pharmacological and genetic principles related to the activity of the cardiovascular system and the heart in diseased conditions.

Learning outcomes - On successful completion of this module, students should be able to:

1. To provide an understanding of the morphological changes at the cell, tissue, and organ levels in response to diseases related to cardiovascular activity.
2. To recognize pathological mechanisms and processes that mediate damage to the cardiovascular system.
3. Follow the relationship between the structural changes in the organ and its functioning.
4. Understand the clinical symptoms of cardiovascular disease and provide the basis for clinical understanding and treatment.
5. Understand the relationship between the mechanism of action of a drug and its use in a wide range of cardiovascular diseases.
6. To assess different clinical conditions and suggest ways to treat them pharmacologically.
7. Learn to decode clinical occurrences and build cardiovascular treatment programs.

Attendance requirements(%):
80% in lectures 100% in workshop and clinical presentations
100% in workshops, laboratories, and clinical presentations

Teaching arrangement and method of instruction: Frontal lectures, clinical presentations, lab, and simulation and pharmacology workshops.

Course/Module Content:
1. Hypertension - Introduction, mechanical and therapeutic aspects

2. Ischemic heart disease - from causes to diagnosis

3. Heart failure - symptoms, diagnosis and treatment

4. Diagnosis and treatment of various types of angina pectoris

5. Blood clotting problems, bleeding and anemia - diagnosis and treatment

6. Factors and methods of treatment of hyperlipidemia

7. Pathophysiology of valve diseases

8. Rheumatic heart disease

9. Differentiating between endocarditis, pericarditis and myocarditis

10. Treatment of endocarditis, pericarditis and myocarditis

11. Cardiomyopathy - causes, symptoms and treatment methods

12. Cardiomyopathy in the clinical aspect
Clinical presentation - valve diseases

13. Vasculitis

14. Heart defects - symptoms and treatment

15. Heart defects in adults from the clinical and therapeutic aspects

16. Arrhythmias - mechanisms and medication

17. Arrhythmias - from the clinical perspective

Required Reading:
1. Robbins and Cotran: Pathologic Basis of Disease (Kumar, Abbas, Fausto, Aster), Saunders Elsevier, 9th Edition, 2015
2. Robbins and Cotran Atlas of Pathology, 2nd/3rd Edition
3. Basic and Clinical Pharmacology: B.G Katzung, S.B. Masters, A.J. Trevor 12th Ed LANGE.
4. The Pharmacological Basis of Therapeutics, Goodman & Gilman's. Laurence L. Brunton, Bruce A. Chabner, Björn C. Knollmann, 13th Ed.

Additional Reading Material:

Grading Scheme:

Additional information:
The final grade will be weighted with the other components (grade of the workshop in pharmacology as well as the grades of the quizzes) provided that the grade of the theoretical examination is a passing score (60).

In addition, attendance is mandatory in all clinical presentations, workshops and laboratories.