Universitat Autònoma de Barcelona

2019/2020

Medicine and Surgery II

Code: 102944
ECTS Credits: 13.5

Degree	Type	Year	Semester
2502442 Medicine	OB	4	0

Contact

Name: José María Ribera Santasusana

Email: JoseMaria.Ribera@uab.cat

Use of Languages

Principal working language: catalan (cat)

Some groups entirely in English: No

Some groups entirely in Catalan: No

Some groups entirely in Spanish: No

Teachers

Jaume Fernández-Llamazares Rodríguez

Juan Genescà Ferrer

Jorge Sierra Gil

Christian Domingo Ribas

Sergi Bellmunt Montoya

Prerequisites

In order to take this subject, it is recommended that the students should previously have studied the pathophysiology of cardiovascular system, respiratory system and blood and lymphatic system. Additional knowledge of anatomy, genetics, molecular biology and pharmacology is also recommendable. Knowledge of psychological bases of health status and disease, and adequate knowledge of communication and ethics is also necessary.

The student will preserve the confidentiality and the professional secret and will maintain an ethical attitude in all the activities of knowledge

Objectives and Contextualisation

Hematology:

The students will reach the adequate knowledge of the diseases of blood and hematopoietic organs and will learn to interpret the hematologic abnormalities due to non-hematologic diseases.

The hematologic diseases, their classification, risk factors and prevention , clinical picture and laboratory diagnosis, treatment (including stem cell transplantation and immunotherapy/cell therapy) picture, the disease of the hemostatic system, the transfusion of blood and derivatives and the diseases of the spleen.

Cardiology:

The students will achieve adequate knowledge of the pathophysiology of the diseases of hearth and great vessels. The student will learn to make a differential diagnosis using the adequate complementary tools (electrocardiogram, chest X ray film, echocardiogram, CT scan, MRI, and biochemical markers, among others)

The diseases of the cardiovascular system, their risk factors and prevention, the pathophysiology and clinical picture of the diseases of myocardium, cardiac valves, pericardium, aorta and venous and lymphatic system. The principles and clinical use of diagnostic procedures and techniques used in Cardiology and cardiovascular surgery, the adequate treatment (medical, surgical or instrumental) and the rehabilitation procedures of patients with cardiovascular diseases.

Pneumology:

The students will achieve adequate knowledge of respiratory diseases (congenital, acquired, due to dysfunction, toxics drugs, infections, allergy, occupational, ambient, accidental inhalation, neoplastic, traumatism or of unknown origin), their clinical picture, risk factors and prevention , the diagnostic techniques and procedures , their medical, surgical (including the lung transplant) or instrumental therapy, as well as the rehabilitation procedures.

Competences

- Demonstrate understanding of the manifestations of the illness in the structure and function of the human body.
- Establish a diagnostic approach and a well thought-out strategy for action, taking account of the results of the anamnesis and the physical examination, and the results of the appropriate complementary tests carried out subsequently.
- Give the patient and/or accompanying persons the relevant information about the disease process, its bases and consequences, including bad news, in an appropriate way.
- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Indicate the most suitable treatment for the most prevalent acute and chronic processes, and for the terminally ill.
- Obtain and prepare a patient record that contains all important information and is structured and patient-centred, taking into account all age and gender groups and cultural, social and ethnic factors.
- Perform a general and a system-by-system physical examination appropriate to the patient's age and sex, in complete and systematic way, and a mental evaluation.

Learning Outcomes

1. Describe the effects on all organs and systems of diseases of the blood, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the genitourinary system, infectious pathologies and diseases of the elderly.
2. Describe the main pathological situations of the musculoskeletal system, the blood, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the genitourinary system, infectious pathologies and diseases of the elderly.
3. Design the treatment for the main infectious diseases, diseases of the blood, of the elderly, and of the hematopoietic system, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the renal and genitourinary system, the retroperitoneal system and the musculoskeletal system.
4. Explain the mechanisms by which illness affects the structure and function of the human body.
5. Give patients the maximum possible information about their health, diagnostic steps, complementary examinations and treatments in an appropriate way.
6. Identify tumour diseases, and the diagnosis and management of these.
7. Indicate the complementary examinations for diagnosing the main infectious diseases, diseases of the blood, of the elderly, and of the hematopoietic system, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the renal and genitourinary system, the retroperitoneal system and the musculoskeletal system.

8. Perform a suitable physical examination for the main infectious diseases, diseases of the blood, of the elderly, and of the hematopoietic system, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the renal and genitourinary system, the retroperitoneal system and the musculoskeletal system.
9. State the most probable diagnosis for the main infectious diseases, diseases of the blood, of the elderly, and of the hematopoietic system, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the renal and genitourinary system, the retroperitoneal system and the musculoskeletal system.
10. Write a report giving guidance on diagnosing the main infectious diseases, diseases of the blood, of the elderly, and of the hematopoietic system, the cardiovascular system, the digestive system, the respiratory system, the endocrine system, the nervous system, the renal and genitourinary system, the retroperitoneal system and the musculoskeletal system.

Content

Is highly recommendable to have basic knowledge of pathophysiology of cardiovascular system, respiratory system and blood and lymphatic system.

Additional knowledge of anatomy, genetics, molecular biology and pharmacology is also recommendable.

Knowledge of psychological bases of health status and disease, and adequate knowledge of communication and ethics is also necessary.

The student will preserve the confidentiality and the professional secret and will maintain an ethical attitude in all the activities of knowledge

Hematology:

The students will reach the adequate knowledge of the diseases of blood and hematopoietic organs and will learn to interpret the hematologic abnormalities due to non-hematologic diseases.

The hematologic diseases, their classification, risk factors and prevention , clinical picture and laboratory diagnosis, treatment (including stem cell transplantation and immunotherapy/cell therapy) picture, the disease of the hemostatic system, the transfusion of blood and derivatives and the diseases of the spleen.

Cardiology:

The students will achieve adequate knowledge of the pathophysiology of the diseases of hearth and great vessels. The student will learn to make a differential diagnosis using the adequate complementary tools (electrocardiogram, chest X ray film, echocardiogram, CT scan, MRI, and biochemical markers, among others)

The diseases of the cardiovascular system, their risk factors and prevention, the pathophysiology and clinical picture of the diseases of myocardium, cardiac valves, pericardium, aorta and venous and lymphatic system. The principles and clinical use of diagnostic procedures and techniques used in Cardiology and cardiovascular surgery, the adequate treatment (medical, surgical or instrumental) and the rehabilitation procedures of patients with cardiovascular diseases.

Pneumology:

The students will achieve adequate knowledge of respiratory diseases (congenital, acquired, due to dysfunction, toxics drugs, infections, allergy, occupational, ambient, accidental inhalation, neoplastic, traumatism or of unknown origin), their clinical picture, risk factors and prevention , the diagnostic techniques and procedures , their medical, surgical (including the lung transplant) or instrumental therapy, as well as the rehabilitation procedures.

A) HEMATOLOGY

Theory (20 hours)

1. Main hematologic syndromes. Hematologic tests and procedures

2. Anemias. Classification. Iron deficiency anemia. Anemia of chronic diseases. Megaloblastic and other macrocytic anemias.

3. Congenital and acquired hemolytic anemias

5. Myelodysplastic syndromes

6. Acute leukemias

7. Chronic myeloproliferative neoplasias

8. Benign and malignant diseases of lymph nodes. Diagnosis and staging of lymphomas.

9. Malignant lymphomas

10. Chronic lymphoproliferative diseases.

11. Monoclonal gammopathies

12. Pathology of the spleen.

13. Pathology of mononuclear phagocytic system

14. Diseases of the hemostatic system. Thrombocytopenia and thrombocytopathy.

15. Congenital and acquired coagulopathies.

16. Hypercoagulability. Anticoagulant and thrombolytic therapy.

17. Hemotherapy

18.Hematopoietic stem cell transplantation and cellular therapy

Seminars on clinical cases (7 hours)

1. Case 1: anemia

2. Case 2: pancytopenia

3. Case 3: adenopathy

4. Case 4: hemorrhage

5. Case 5: thrombosis

6. Case 6: hematologic abnormalities of extrahematologic disease

7. Case 7: splenomegaly

B) CARDIOVASCULAR

Theory (28 hours)

1. Ischemic cardiopathy

2. Ischemic cardiopathy II (diagnosis)

3. Ischemic cardiopathy III (stable and unstable angor)

4. Ischemic cardiopathy IV (myocardial infarction)

5. Surgery of ischemic cardiopathy

6. Pericardic diseases

7. Myocardial diseases (myocarditis, dilated cardiomyopathy)

8. Myocardial diseases II (hypertrophic cardiomyopathy)

9. Cardiac failure I (concept, clinical picture and diagnosis)

10. Cardiac failure II (treatment)

11. Arrhythmias I (bradiarrhythmias)

12. Arrhythmias II (supraventricular tachiarrhythmias)

13. Arrhythmias III (ventricular tachiarrythmias)

14. Arrhythmias IV (treatment)

15. Syncope and sudden death

16. Valvulopathies I (mitral)

17. Valvulopathies II (aortic)

18. Infectious endocarditis

19. Valvular surgery. Hearth transplant

20. Arterial hypertension

21. Pulmonary arterial hypertension and pulmonary thromboembolism

22. Diseases of thoracic aorta

23. Congenital cardiopathies in adults

24. Acute ischemia and vascular trauma

25. Chronic ischemia. Diabetic foot.

26. Aneurisms

27. Tumors and angiodysplasia. Arteriovenous fistulas.

28. Arteritis and functional vasculopathies

Specialized seminars (6 hours)

1. Normal electrocardiogram

2. Arrhythmias

3. Hearth failure

4. Ischemic cardiopathy. Myocardial infarction

5. Aneurisms

6. Ischemia of extremities

C) PNEUMOLOGY AND THORACIC SURGERY

Theory (23 hours)

1. Study of patients with respiratory disease

2. Respiratory failure

3. Disorders of ventilation. Hypoventilation and hyperventilation

4. Respiratory disorders during the sleep

5. Chronic obstructive pulmonary disease

6. Asthma

7. Defensive mechanisms of lung. Bronchiectasis. Cystic fibrosis.

8. Respiratory infections

9. Nosocomial pneumonia

10. Lung tuberculosis

11. Lung infections in immunosuppressed patients

12. Occupational and ambient diseases

13. Pulmonary eosinophilias. Extrinsic allergic alveolitis

14. Interstitial and infiltrative lung diseases

15. Sarcoidosis

16. Lung involvement in systemic diseases and pulmonary vasculitis

17. Lung cancer I; epidemiology, etiology, classification, histology, clinical picture, radiology, diagnosis, paraneoplastic syndromes, medical therapy.

18. Lung cancer II; surgical staging, indications of surgery, surgical techniques, combined therapy, solitary pulmonary nodule.

19. Lung cancer III; lung metastasis, benign lung tumors. Surgical aspects of the treatment of tumors.

20. Pathology of the mediastinum. Diagnosis and therapy of mediastinal tumors. Pleuropericardic and bronchogenic cysts. Neurogenic tumors. Acute and chronic mediastinitis

21. Benign pleural diseases: Etiology. Classification, diagnosis. Tuberculous pleuritis

22. Thoracic traumatisms; management

23. Lung transplant

Specialized seminars (3 hours) and seminaries of clinical cases (4 hours)

1. Study of lung function in clinical setting

2. Pneumothorax, hemothorax, chilothorax. Malignant pleural effusion. Pleurodesis, pleural neoplasias. Mesothelomas, fibrous pleural tumors.

3. Oxigenotherapy. Invasive and non-invasive ventilation.

Methodology

The setting, content methodology and general rules if MIC II according to the general study plan are herein described. The final organization of MIC II regarding the number and size of groups, calendar distribution, date of exams, specific criteria for evaluation and review of exams will be specifically indicated at each Docent Unit in their respective web pages, as well as by the responsible professors of MICII at each Docent Unit

As a general rule for teaching methodology the theoretical classes and seminars should have a practical orientation avoiding when possible the magisterial class. They should be based on practical clinical cases and should be oriented to the training of general physicians, avoiding the concepts belonging to super specialization.

The professors responsible of MIC II for this course are:

Responsible Departments: Medicine and Surgery

Responsible at the Faculty: Josep-Maria Ribera Santasusana, Jaume Fernández-Llamazares

Responsible at the Teaching Hospital Units (UDH)

Unitat Docent Sant Pau

	Responsible UDH	Responsible Surgery	Responsible Medicine
MIC II	J. Sierra Gil jsierra@santpau.cat	Eduardo Targarona etargarona@santpau.cat	J. Guerra Ramos jguerra@santpau.cat
• Cardiovascular diseases	J. Guerra Ramos jguerra@santpau.cat	Josep Maria Padró jpadro@santpau.cat	J.Guerra Ramos jguerra@santpau.cat
• Respiratory diseases	V. Plaza Moral vplaza@santpau.cat	Josep Maria Padró jpadro@santpau.cat	V. Plaza Moral vplaza@santpau.cat
• Hematologic diseases	J. Sierra Gil jsierra@santpau.cat	Eduardo Targarona etargarona@santpau.cat	J. Sierra Gil jsierra@santpau.cat

Unitat Docent Vall d'Hebron

	Responsible UDH	Responsible surgery	Responsible medicine
MIC II	Joan Genescà jgenesca@vhebron.net Sergi Bellmunt Montoya (sbellmunt@vhebron.net)		
	Joan Genescà jgenesca@vhebron.net	Sergi Bellmunt Montoya (sbellmunt@vhebron.net)	Joan Genescà jgenesca@vhebron.net

• Cardiovascular diseases	Sergi Bellmunt Montoya (sbellmunt@vhebron.net) Rafael Rodriguez Lecoq (rrodriguez@vhebron.net)	Rafael Rodriguez Lecoq (rrodriguez@vhebron.net)	Sergi Bellmunt Montoya (sbellmunt@vhebron.net)
Respiratory diseases	Joan Genescà jgenesca@vhebron.net Laura Romero Vielva lromero@vhebron.net	Laura Romero Vielva lromero@vhebron.net	Joan Genescà jgenesca@vhebron.net
• Hematologic diseases	Nivardo Rodriguez Conde jgenesca@vhebron.net Joan Genescà nirodriguezvhebron.net	Nivardo Rodriguez Conde nirodriguezvhebron.net	Joan Genescà jgenesca@vhebron.net

Unitat Docent Germans Trias i Pujol

	Responsible UDH	Responsible Surgery	Responsib
MIC II	Josep-Maria Ribera Santasusana jribera@@iconcologia.net Jaume Fdez.-Llamazares Rodríguez jfllamazares.germanstrias@gencat.cat	Jaume Fdez.-Llamazares Rodríguez jfllamazares.germanstrias@gencat.cat	Josep-Ma Santa jribera@ico
• Cardiovascular diseases	AntoniBayés Genís abayesgenis@gmail.com Secundino Llagostera Pujol sllagostera.germanstrias@gencat.cat	Secundino Llagostera Pujol sllagostera.germanstrias@gencat.cat	Antoni Ba abayesgenis
• Respiratory diseases	Jorge Abad Capa jabadc.germanstrias@gencat.cat Pedro Enrique López de Castro plopezdecastro.germanstrias@gencat.cat	Pedro Enrique López de Castro plopezdecastro.germanstrias@gencat.cat	Jorge Ab jabadc.germans
• Hematologic diseases	Josep Ma. Ribera Santasusana jribera@iconcologia.net Jaume Fdez.-Llamazares Rodriguez jfllamazares.germanstrias@gencat.cat	Jaume Fdez.-Llamazares Rodríguez jfllamazares.germanstrias@gencat.cat	Josep M. Ribe jribera@ico

Unitat Docent Parc Taulí

	Responsible UDH	Responsible Surgery	Responsible Medicine
MICII			

	Cristian Domingo Ribas Cdomingo@tauli.cat	Salvador Navarro Soto snavarro@tauli.cat	Cristian Domingo Ribas Cdomingo@tauli.cat
• Cardiovascular diseases	Antoni Martinez Rubio AMartinezR@tauli.cat	Salvador Navarro Soto snavarro@tauli.cat	Cristian Domingo Ribas Cdomingo@tauli.cat
• Respiratory diseases			
• Hematologic diseases	Luz Muñoz Marin Lmunoz@tauli.cat	SalvadorNavarro Soto snavarro@tauli.cat	Cristian Domingo Ribas Cdomingo@tauli.cat

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
CARE PRACTICUM WITHOUT GUIDELINES	62	2.48	1, 2, 3, 8, 4, 9, 6, 7, 5, 10
CLINICAL CASE SEMINARS (SCC)	9	0.36	1, 2, 3, 8, 4, 9, 6, 7, 5, 10
Specialized seminars (SEM)	9	0.36	1, 2, 3, 8, 4, 9, 6, 7, 5, 10
THEORY (TE)	73	2.92	1, 2, 3, 8, 4, 9, 6, 7, 5, 10
Type: Autonomous			
SELF-STUDY /READING ARTICLES /REPORTS OF INTEREST	167.5	6.7	1, 2, 3, 8, 4, 9, 6, 7, 5, 10

Assessment

The evaluation procedure of each matter of MIC II will consist of a written theoretical exam (40% of final score), evaluation through case studies and problem solving (40% of final score), analysis of clinical, cyto or histologic, radiologic EKG, or other image pictures (10% of final scores) and evaluation of the attendance to the hospital practice (10%). The attendance and active participation in class and seminars will also be taken into account.

Theoretical exam (40%)

Restricted question or multiple choice questions can be used according to the criteria of each Hospital Teaching Unit

Case studies and problem solving (40%)

At least two clinical cases.

Pictures (10%)

Will be presented during the exam. A specific answer will be required

Hospital practice (10%)

The attendance is mandatory. A written signature by the professor will be required

If the student has not approved the exam of any of the matters of MIC II (minimal score 5) a n additional exam with the same structure will be offered

The final score of MIC II will be the mean of scores of the three matters (cardiology, neumology and hematology)

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Objective tests	60%	10	0.4	1, 2, 3, 8, 4, 9, 6, 7, 5, 10
Practical evaluations: open and descriptive registries and / or closed registers	40%	7	0.28	1, 2, 3, 8, 4, 9, 6, 7, 5, 10

Bibliography

The biblography of ewach mattter of MIC II will appear in the specific programs located at the web page of each Teaching Unit and /or at the virtual campus of MIC II