

International School of Medicine / Medicine (English)

2023 - 2024 Academic Year

Endocrine & Nutrition

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
Endocrine & Nutrition	13. Committee	Fall Semester	75+22	0	7
Prerequisites Courses					
Recommended Elective Courses	none				
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Committee				
Course Coordinator					
Name of Lecturer(s)					
Assistant(s)	Prof.Dr. Bahar MÜEZZİNOĞLU, Prof.Dr. Sergülen DERVİŞOĞLU, Öğr.Gör. Rukiye Nilgün ERDOĞANDr.Öğr.Üye. Çağlar MACİT, Prof.Dr. Recep Serdar ALPAN, Doç.Dr. Mustafa GÜZELProf.Dr. Ayhan TAŞTEKİN, Prof.Dr. Seniye Sema ANAK, Prof.Dr. Sedat OKTEM, Prof.Dr. Abdullah ERDEM, Prof.Dr. Celal AKDENİZ, Prof.Dr. Cihangir AKGÜN, Prof.Dr. Gökhan BAYSOY, Doç.Dr. Öznur KÜÇÜK, Prof.Dr. İlke ÖZAHİ İPEK, Doç.Dr. Yasemin TOPÇU, Doç.Dr. Nalan KARABAYIR, Dr.Öğr.Üye. Remzi ERKESİM, Dr.Öğr.Üye. Yöntem YAMAN, Dr.Öğr.Üye. Hülya BİLGİN, Dr.Öğr.Üye. Sevgi CHODZA OĞLOU, Prof.Dr. Zeynep ATAYDoç.Dr. Mesut YILMAZ, Dr.Öğr.Üye. Özlem GÜVEN, Dr.Öğr.Üye. Canan SEVER, Dr.Öğr.Üye. Betül GİRAY, Dr.Öğr.Üye. Selda AYDIN, Dr.Öğr.Üye. Okan DERİN Prof.Dr. Özcan YILDIZ, Doç.Dr. Ömür Gökmen SEVİNDİK, Dr.Öğr.Üye. Hüseyin Saffet BEKÖZ,Dr.Öğr.Üye. Ali Timuçin ATAYOĞLU, Prof.Dr. Vedat GÖRAL, Doç.Dr. Meryem CANProf.Dr. Tamer ATASEVER, Prof.Dr. Ayşenur ÇİLA, Prof.Dr. Erol AKGÜL, Prof.Dr. Cengiz EROL, Dr.Öğr.Üye. Tansel ÇAKIRProf.Dr. Müjgan ÇALIŞKAN EVREN, Prof.Dr. Mustafa ÖNCEL, Prof.Dr. Fazlı Cem GEZEN, Dr.Öğr.Üye. Pelin BASIM,				
Aim	The aim of this committee is to provide information about the normal structure of the endocrine system, its functions, etiopathogenesis of diseases related to this system, symptoms, basic clinical and laboratory findings, diagnostic methods and drugs used in their treatment.				
Course Content	This course contains; Pathology of Thyroid disease, Basics of thyroid function testsclinical features and treatment of hypothyroidism, thyroiditis, iodine deficiency, hyperthyroidism, thyroid cancer. Radiological (Ultrasound and scan) features of thyroiditis, thyroid nodules, Graves disease, toxic and non-toxic nodular disease. ,Macroscopic and microscopic features of pituitary disease, interpretation of anterior and posterior pituitary functions, review of pituitary hormone changes and correlation with hypothalamic hormones and end hormones, concept of macroprolactinemia, Stalk effect and hook effects for interpretation of prolactin elevation, clinical lab and MR features of acromegaly, Cushing disease, TSH secreting tumors and prolactinoma. Diagnosis , differential diagnosis of pituitary tumors. Radiological features of Pituitary tumors, empty sella, hypophysitis,Hypopituitarism, diabetes incipitus, clinical features, treatment,Macroscopic and microscopic anatomic changes in various parathyroid disease, Approach to hypercalcemia and hypocalcemia. Clinical, lab and radiological features of primary hyperparathyroidism, osteoporosis, hypoparathyroidism, end stage renal disease. Clinical and lab features of MEN syndromes. Interpretation of bone mineral density, Management of vitamin D deficiency,Clinical features of type 1 and type 2 diabetes, the importance of diabetes... diagnosis of diabetes mellitus type 1, type 2 gestational diabetes, the importance of glycosylated hemoglobin and oral glucose tolerance test. The macroscopic and microscopic anatomic features of diabetes, autoimmune development, resistance to insulin, polycystic ovary syndrome, metabolic syndrome. Acute and chronic complications of type diabetes- prevention and treatment. Prevention or Cardiovascular complications in type 2 diabetes. The pharmacokinetic features of insulins, how to establish an insulin treatment. The medications used for type 2 diabetes: treatment effects and adverse effects. The treatment algorithm in type 2 diabetes. Hypoglycemia, prevention and treatment. Non-diabetic hypoglycemia,Macroscopic and microscopic anatomic changes in adrenal disease. Review of hypothalamus, pituitary and adrenal gland axis. Symptoms of adrenal insufficiency, clinical features, laboratory findings, diagnosis and treatment. Review of mineralocorticoid and glucocorticoid actions of steroids. Cushing's syndrome: screening, diagnosis, identification of the hypersecretion site. Secondary hypertension: primary hyperaldosteronism, pheochromocytoma,Pathology of Pituitary Diseases,Pathology of Thyroid Diseases-1-,Pathology of Parathyroid Diseases and MEN Syndromes ,Pathology of Adrenal Gland Diseases (1) ,Pathology of Adrenal Gland Diseases (2) ,Pathology of Endocrine Pancreatic Diseases (1),Pathology of Endocrine Pancreatic Diseases (2),LAB-Team Based Learning ,History, Physical Examination and Diagnostic Methods in Endocrine Diseases 1-,History, Physical Examination and Diagnostic Methods in Endocrine Diseases 2-,Introduction to Endocrinology Anterior Pituitary and Hypothalamus,Posterior Pituitary and Diabetes Insipidus,Congenital Metabolism Diseases History, Physical Examination and Diagnostic Methods ,Bone Health and Diseases in Children,History, Physical Examination and Diagnostic Methods in Congenital Metabolic Diseases-,Normal Puberty,Type 1 Diabetes Mellitus,Medical Pharmacology- Drugs for treatment of hypothyroid disorders,Medical Pharmacology- Drugs for treatment of hyperthyroid disorders,Medical Pharmacology- Drugs for treatment of diabetes mellitus 1,Medical Pharmacology- Drugs for treatment of diabetes mellitus 2,Medical Pharmacology- Drugs for treatment of diabetes mellitus 3,Medical Pharmacology- Drugs for treatment of osteoporosis 1,Tıbbi Farmakoloji - Osteoporoz tedavisine yönelik ilaçlar 2-,Medical Pharmacology- Drugs for treatment of pituitary disorders,Medical Pharmacology- Adrenal steroids ,Medical Pharmacology- Questions, answers and discussion ,Public Health - Community Nutrition,Public Health -Nutritional Epidemiology,Public Health -Epidemiology of Type 2 Diabetes,Public Health -School Health,Scientific Research-Cross-sectional Studies,Microbiology-Introduction to mycology,Microbiology -Superficial mycoses,Microbiology -LAB (1-2-3)-Clinically important fungi and preparation examination,Radiology-Nuclear Medicine-Nuclear Medicine Applications and Treatments in Endocrine System ,Internal Medicine – Hypothalamic -Pituitary Disorders (2),Internal Medicine – Diseases of Posterior Pituitary,Adrenal Diseases ,Endocrine hypertension,Lipid Disorders,Diseases of calcium metabolism 1-2,Osteoporosis,Hirsutism and Polycystic Ovary Syndrome,Cross-sectional Studies.				
Course Learning Outcomes				Teaching Methods	Assessment Methods
Microbiological features of endocrine system disease					
1. Defines the anatomical structures of the endocrine system. particularly the relation of hypothalamus, pituitary and Target and organs as well as hormonal secretion patterns including positive and negative feedback, stalk and hook effects to explain prolactin elevations				37, 9	A
2. At the end of this committee, students list the etiopathogenesis, clinic, laboratory signs and histopathological findings of endocrine system diseases.Specifically includes Hypothyroidism, hyperthyroidism, thyroid nodules and thyroid cancers, thyroiditis, iodine deficiency, pituitary insufficiency, Cushing disease, prolactinoma, acromegaly, approach to pituitary tumors, İmaging modalities to diagnose pituitary disease, diabetes insipidus, hypercalcemia and hypocalcemia, osteoporosis, adrenal insufficiency, differentiation of primary versus secondary adrenal insufficiency, Cushing syndrome differential diagnosis of primary versus secondary or tertiary. Adrenal incidentaloma, hypoglycemia, basics of nutrition and healthy eating, obesity, endocrine hypertension. Endocrine basics of development from childhood to puberty, puberty precoc, delayed puberty, endocrine hypertension, pheochromocytoma, Primary hyperaldosteronism					
3. Be able to define imaging methods used for endocrine system.					
4. Be able to list the treatment methods used in endocrine system diseases.Specifically pharmacokinetic features of insulins and oral antihyperglycemic agents, treatment algorithyms for Type 2 diabetes, farmacokinetic features of corticosteroids, Thyroid hormones, antithyroid hormones, medications used for treatment of acromegaly, Cushing disease, hypogonadism, contraception, menopause, osteoporosis,					
5. Be able to list the effects of drugs used in the treatment of endocrine system diseases, their mechanism of action, pharmacokinetics, side effects and drug interactions.					

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Course Learning Outcomes		Teaching Methods	Assessment Methods
Teaching Methods		37: Computer-Internet Supported Instruction, 9: Lecture Method	
Assessment Methods		A: Traditional Written Exam	
Lecture Schedule			
Sequence	Topics	Preliminary Preparation	
1	Pathology of Thyroid disease, Basics of thyroid function tests clinical features and treatment of hypothyroidism, thyroiditis, iodine deficiency, hyperthyroidism, thyroid cancer. Radiological (Ultrasound and scan) features of thyroiditis, thyroid nodules, Graves disease, toxic and non-toxic nodular disease.	none	
2	Macroscopic and microscopic features of pituitary disease, interpretation of anterior and posterior pituitary functions, review of pituitary hormone changes and correlation with hypothalamic hormones and end hormones, concept of macroprolactinemia, Stalk effect and hook effects for interpretation of prolactin elevation, clinical lab and MR features of acromegaly, Cushing disease, TSH secreting tumors and prolactinoma. Diagnosis, differential diagnosis of pituitary tumors. Radiological features of Pituitary tumors, empty sella, hypophysitis, Hypopituitarism, diabetes insipidus, clinical features, treatment	none	
3	Macroscopic and microscopic anatomic changes in various parathyroid disease, Approach to hypercalcemia and hypocalcemia. Clinical, lab and radiological features of primary hyperparathyroidism, osteoporosis, hypoparathyroidism, end stage renal disease. Clinical and lab features of MEN syndromes. Interpretation of bone mineral density, Management of vitamin D deficiency	none	
4	Clinical features of type 1 and type 2 diabetes, the importance of diabetes... diagnosis of diabetes mellitus type 1, type 2 gestational diabetes, the importance of glycosylated hemoglobin and oral glucose tolerance test. The macroscopic and microscopic anatomic features of diabetes, autoimmune development, resistance to insulin, polycystic ovary syndrome, metabolic syndrome. Acute and chronic complications of type diabetes- prevention and treatment. Prevention or Cardiovascular complications in type 2 diabetes. The pharmacokinetic features of insulins, how to establish an insulin treatment. The medications used for type 2 diabetes: treatment effects and adverse effects. The treatment algorithm in type 2 diabetes. Hypoglycemia, prevention and treatment. Non-diabetic hypoglycemia	NONE	
5	Macroscopic and microscopic anatomic changes in adrenal disease. Review of hypothalamus, pituitary and adrenal gland axis. Symptoms of adrenal insufficiency, clinical features, laboratory findings, diagnosis and treatment. Review of mineralocorticoid and glucocorticoid actions of steroids. Cushing's syndrome: screening, diagnosis, identification of the hypersecretion site. Secondary hypertension: primary hyperaldosteronism, pheochromocytoma	none	
7	Pathology of Pituitary Diseases	none	
8	Pathology of Thyroid Diseases-1-	none	
9	Pathology of Parathyroid Diseases and MEN Syndromes	none	
10	Pathology of Adrenal Gland Diseases (1)	none	
11	Pathology of Adrenal Gland Diseases (2)	none	
12	Pathology of Endocrine Pancreatic Diseases (1)	none	
13	Pathology of Endocrine Pancreatic Diseases (2)	none	
14	LAB-Team Based Learning		
15	History, Physical Examination and Diagnostic Methods in Endocrine Diseases 1-	none	
16	History, Physical Examination and Diagnostic Methods in Endocrine Diseases 2-	none	
17	Introduction to Endocrinology Anterior Pituitary and Hypothalamus	none	
18	Posterior Pituitary and Diabetes Insipidus	none	
18	Congenital Metabolism Diseases History, Physical Examination and Diagnostic Methods	none	
19	Bone Health and Diseases in Children	none	
20	History, Physical Examination and Diagnostic Methods in Congenital Metabolic Diseases-	none	
21	Normal Puberty	none	
22	Type 1 Diabetes Mellitus	none	
23	Medical Pharmacology- Drugs for treatment of hypothyroid disorders	none	
24	Medical Pharmacology- Drugs for treatment of hyperthyroid disorders	none	
25	Medical Pharmacology- Drugs for treatment of diabetes mellitus 1	none	
26	Medical Pharmacology- Drugs for treatment of diabetes mellitus 2	none	
27	Medical Pharmacology- Drugs for treatment of diabetes mellitus 3	none	
28	Medical Pharmacology- Drugs for treatment of osteoporosis 1	none	
29	Tıbbi Farmakoloji - Osteoporoz tedavisine yönelik ilaçlar 2-	none	
30	Medical Pharmacology- Drugs for treatment of pituitary disorders	none	
31	Medical Pharmacology- Adrenal steroids	none	
32	Medical Pharmacology- Questions, answers and discussion	none	
33	Public Health -Community Nutrition	none	
34	Public Health -Nutritional Epidemiology	none	
35	Public Health -Epidemiology of Type 2 Diabetes	none	

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Lecture Schedule		
Sequence	Topics	Preliminary Preparation
36	Public Health -School Health	none
37	Scientific Research-Cross-sectional Studies	none
38	Microbiology-Introduction to mycology	none
39	Microbiology -Superficial mycoses	none
40	Microbiology -LAB (1-2-3)-Clinically important fungi and preparation examination	
41	Radiology-Nuclear Medicine-Nuclear Medicine Applications and Treatments in Endocrine System	none
42	Internal Medicine – Hypothalamic -Pituitary Disorders (2)	none
43	Internal Medicine – Diseases of Posterior Pituitary	none
44	Adrenal Diseases	none
45	Endocrine hypertension	none
46	Lipid Disorders	none
47	Diseases of calcium metabolism 1-2	none
48	Osteoporosis	none
49	Hirsutism and Polycystic Ovary Syndrome	none
50	Cross-sectional Studies	
Evaluation Methods		Weight(%)
Midterm Exam		60
General Exam		40

Resources
<p>Patology: Vinay Kumar, Abul K. Abbas, Nelson Fausto, Richard Mitchell: Robbins Basic Pathology. 10 th ed. Saunders/Elsevier Edward C. Klatt: Robbins and Cotran Atlas of Pathology. 2nd ed. Saunders. online websites(Pathology outlines vb) lecture notes:ppt</p> <p>Pharmacology : 1.Kayaalp, SO: Rasyonel Tedavi Yönünden Tibbi Farmakoloji, Ankara. 2.Hardman JG, Limbird LE, Eds.: Goodman and Gilman's The Pharmacological Basis of Therapeutics, New York. 3.Katzung & Trevor: Farmakoloji, Ankara.</p> <p>Microbiyoloji: Microbiology: An Introduction (11th Edition), Gerard J. Tortora</p> <p>Internal medicine: Harrison Internal Medicine-İç hastalıkları Ders kitabı</p> <p>Uptodate database</p> <p>Greenspan : basiz and clinical endocrinology presentation notes-ppt</p> <p>Surgery: : schwartz principles of general surgery 10th edition</p> <p>Radiology and Pediatrics: Presentation notes-PPT slidesnone</p>