

# Pomorski Uniwersytet Medyczny w Szczecinie

## COURSE SYLLABUS

### General information

Course title : Internal diseases-endocrinology	
Type of classes	Mandatory
Faculty of PUM	Faculty of Medicine and Dentistry
Field of study	<i>Medicine</i>
Specialization	-
Level of study	long-term studies
Mode of study	full-time, part-time
Year of study /semester	Year IV, semesters 7 and 8 ( <i>block</i> )
Number of allocated ECTS credits	2
Forms of teaching (number of hours)	lectures 6h, seminars 6h, practical classes 23h, simulation 2h
Ways of verifying and assessing learning outcomes <sup>1</sup>	<input type="checkbox"/> Graded credit: <ul style="list-style-type: none"> <li><input type="checkbox"/> descriptive</li> <li><input checked="" type="checkbox"/> test</li> <li><input checked="" type="checkbox"/> practical</li> <li><input checked="" type="checkbox"/> oral</li> </ul> <input type="checkbox"/> credit without grade  <input type="checkbox"/> Final exam:

<sup>1</sup> \* mark as appropriate, changing  to .

	<input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of Unit	Title/degree <i>Prof. Dr. hab. n. med. Anhelli Syrenicz</i>
Teaching assistant professor or person responsible for the course	<i>Dr n. Med. Bartosz Kiedrowicz</i> <a href="mailto:bartosz.kiedrowicz@pum.edu.pl">bartosz.kiedrowicz@pum.edu.pl</a>
Name and contact details of unit	Department of Endocrinology, Metabolic Diseases and Internal Medicine  <i>Secretariat Tel. 91425 3540 Fax 914253542</i>
Unit's website	<a href="mailto:klinendo@pum.edu.pl">klinendo@pum.edu.pl</a>
Language of instruction	Polish/English

#### Detailed information

Course objective	<p><i>After the end of the course in endocrinology the student should have knowledge and practical skills in prevention and treatment of endocrine diseases. This applies in particular to the following skills: communication with the patient and his/her family, interviewing the patient, examination of the patient, taking into account the specificity of endocrine examination, proper selection of additional examinations, making the initial diagnosis, treatment and assistance in cases of immediate life threatening endocrinology.</i></p> <p><i>The student should be prepared to conduct professional medical care in the field of health promotion and pro-health education.</i></p>	
Initial requirements	Knowledge	<p><i>He/she is familiar with the development, structure and functions of the human organism in normal and pathological conditions, with symptoms and course of diseases, with diagnostic and therapeutic procedures relevant to specific disease states, with ethical, social and legal conditions of practising the profession of a doctor as well as with the principles of health promotion, basing his knowledge on scientific evidence and accepted standards;</i></p>
	Skills	<p><i>He/she is able to identify medical problems and determine priorities in medical proceedings, can recognize life-threatening</i></p>

		<i>conditions requiring immediate medical intervention, can plan diagnostic proceedings and interpret their results, can implement appropriate and safe therapeutic procedures and predict their consequences</i>
	Social competences	<i>He/she is able to establish and maintain a deep and respectful contact with the patient, he/she is guided by the good of the patient, putting it in the first place, he/she observes medical confidentiality and patient's rights, he/she is aware of his/her limitations and has the ability of continuous training.</i>

<b>LEARNING OUTCOMES</b>			
<b>Number of learning outcome</b>	<b>A student who has completed the COURSE knows/can:</b>	<b>SYMBOL (reference to) learning outcomes for the field of study</b>	<b>Means of verifying the effects of learning*</b>
W01	He /she knows the environmental and epidemiological conditions of the most common diseases	K_E.W1	O
W07	He /she knows and understands the causes, symptoms, principles of diagnosis and therapeutic management in relation to the most common internal diseases occurring in adults and their complications: a) cardiovascular diseases, including: ischemic heart disease, heart defects, endocardial diseases, myocardium, pericardium, heart failure (acute and chronic), arterial and venous vessel diseases, arterial hypertension: primary and secondary, pulmonary hypertension, b) respiratory system diseases, including respiratory diseases, chronic obstructive pulmonary disease, bronchial asthma, bronchial dilatation, cystic fibrosis, respiratory infections, interstitial lung diseases, pleural diseases, mediastinal diseases, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory cancers, c) diseases of the digestive system, including diseases of: oral cavity, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder,	K_E.W7	S, SP, PS

	<p>d) diseases of the endocrine system, including diseases of: hypothalamus and pituitary, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumours, polyglandular syndromes, different types of diabetes and metabolic syndrome: hypoglycaemia, obesity, dyslipidaemia,</p> <p>e) diseases of the kidneys and urinary tract, including: acute and chronic renal failure, glomerular and interstitial kidney diseases, kidney cysts, kidney stones, urinary tract infections, urinary tract tumours, in particular bladder cancer and kidney cancer,</p> <p>f) diseases of the haematopoietic system, including: bone marrow aplasia, anaemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukaemias, myeloproliferative and myelodysplastic neoplasms, myelodysplastic syndromes, neoplasms from mature B and T lymphocytes, haemorrhagic diathesis, thrombophilia, immediate life-threatening conditions in haematology, blood disorders in diseases of other organs;</p> <p>g) rheumatic diseases, including: systemic connective tissue diseases, systemic vasculitis, arthritis with spinal involvement, metabolic bone diseases, in particular osteoporosis and osteoarthritis, gout,</p> <p>h) allergic diseases, including: anaphylaxis and anaphylactic shock and angioedema,</p> <p>i) water-electrolyte and acid-base disorders: states of dehydration, states of conductivity, electrolyte disturbances, acidosis and alkalosis;</p>		
W23.	He /she knows the environmental and epidemiological conditions of the most common endocrine neoplasms (thyroid cancer);	K_E.W7 K_E.W35	S, PS
W24	He /she knows the basics of early cancer detection and the principles of screening in endocrine oncology;	K_E.W7	S, PS
W25	He /she knows the possibilities of modern cancer therapy (including multimodality therapy), the perspectives of cellular and gene therapies and their adverse effects;	K_E.W7	S, PS

W37	He /she knows the types of biological materials used in laboratory diagnosis and the principles of collecting material for tests	K_E.W37	S, SP
W38	He /she knows the theoretical and practical fundamentals of laboratory diagnosis;	K_E.W38	S, SP
W 39	He /she knows and understands the possibilities and limitations of laboratory tests in emergencies;	K_E.W39	S, SP
U01	He /she takes a medical history of the adult patient;	K_E.U1	S, PS
U03	He /she performs a full and focused physical examination of the adult patient;	K_E.U3	S, PS
U07	He /she assesses the general condition, state of consciousness and awareness of the patient;	K_E.U7	S, SP, PS
U12	He /she carries out the differential diagnosis of the most common diseases of adults and children;	K_E.U12	S, PS
U13	He /she assesses and describes the somatic and psychological state of the patient;	K_E.U13	S, SP, PS
U14	He /she identifies life-threatening conditions;	K_E.U14	S
U16	He /she plans diagnostic, therapeutic and preventive procedures;	K_E.U16	S, PS
U17	He /she knows carries out an analysis of the possible side effects of individual medicines and interactions between them;	K_E.U17	S, PS
U18	He /she proposes individualisation of existing therapeutic guidelines and other methods of treatment in the event of ineffectiveness or contraindications to standard therapy;	K_E.U18	S, PS
U20	He /she qualifies the patient for home and hospital treatment;	K_E.U20	S, PS
U21	He /she defines conditions where life expectancy, functional status or patient preferences limit disease-specific management;	K_E.U21	S, PS
U24	He /she interprets laboratory tests and identify causes of deviations;	K_E.U24	S, PS

U29	He /she performs basic medical procedures and interventions including: a) taking body temperature, measuring heart rate, non-invasive blood pressure	K_E.U29	S, PS
U30	He /she assists in carrying out the following medical procedures and treatments: (f) fine needle biopsy, and interprets the results;	K_E.U30	S, PS
U31	He /she interprets the pharmaceutical characteristics of medicinal products and critically evaluates advertising material for medicines;	K_E.U31	PS
U32	He /she plans specialist consultations;	K_E.U32	PS
U38	He /she maintains the patient's medical records.	K_E.U38	PS
K01	He /she accepts the need for ethical standards;		OH, PS
K02	He /she understands the concept and the need for responsibility for entrusted goods	K_K02	OH, PS
K05	He /she demonstrates the habit of self-education, understand the need for lifelong learning, be able to inspire and organise the learning process of others	K_K05	OH, PS
K09	He /she cooperates with team members; is able to work in a group and take on different roles	K_K09	OH, PS
K10	He /she is able to formulate opinions concerning various aspects of professional classes	K_K10	OH, PS

**Table of learning outcomes in relation to the form of classes**

Number of learning outcome	Learning outcomes  A student:	Form of the classes						
		Lecture	Seminar	Practical classes	Clinical practical	Simulations	E-learning	Other forms
W01	K_E.W1	X			X			
W07	K_E.W7	X			X			
W23.	Knows the environmental and epidemiological	X			X			
W24	Knows the basics of early cancer detection and	X			X			
W25	Knows the possibilities of modern cancer therapy	X			X			
W37	Knows the types of biological materials used in	X			X			
W38	knows the theoretical and practical fundamentals of	X			X			

W 39	Knows and understands the possibilities and	X		X		
U01	Takes a medical history of the adult patient;	X		X		X
U03	Performs a full and focused physical examination of	X		X		X
U07	Assesses the general condition, state of	X		X	X	
U12	Carries out the differential diagnosis of the most	X		X		
U13	Assesses and describes the somatic and psychological	X		X		
U14	recognises life-threatening conditions;	X		X	X	
U16	Plans diagnostic, therapeutic and preventive	X		X		
U17	Carries out an analysis of the possible side effects of			X	X	
U18	Proposes individualisation of existing therapeutic			X		
U20	Qualifies the patient for home and hospital			X		
U21	Defines conditions where life expectancy, functional			X		
U24	Interprets laboratory tests and identify causes of			X		
U29	Performs basic medical procedures and interventions			X		
U30	Assists in carrying out the following medical			X		
U31	Interprets the pharmaceutical characteristics of			X		
U32	Plans specialist consultations;			X		
U38	Maintains the patient's medical records.			X		
K01	Accepts the need for ethical standards;	X		X		
K02	Understands the concept and the need for			X		
K05	Demonstrates the habit of self-education,			X		
K09	Cooperates with team members; is able to work in a			X		
K10	Is able to formulate opinions concerning various			X		

<b>TABLE OF CURRICULUM CONTENT</b>			
curriculum content	Curriculum content	Number of hours	Reference to the learning outcomes for the COURSE
<b>BLOCK</b>			
<b>Lectures</b>			
TK06	Physiology of the endocrine glands. Hormones - division, mechanisms of action and regulation of secretion. Concept of neurotransmission and neurotransmission. Neurohormones, hormones, etherohormones, tissue hormones. Feedback and principles of action of hormonal regulation. Mechanism of action of hormones.	1	W07 W38
TK07	Division of malignant thyroid neoplasms (differentiated - papillary and follicular carcinoma, anaplastic and C-cell carcinoma). Epidemiology, clinical presentation and treatment of papillary, follicular and anaplastic carcinoma. Degrees of iodine deficiency.	2	W01W07 W23 W24 W25 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30

	Sporadic and endemic goiter-criteria for diagnosis and principles of treatment.		U31 U32 U38 K01 K02 K05 K09 K10
TK08	Adrenal tumours. Neuroendocrine tumours (NEN) and MEN syndromes.	1	W01W07 W23 W24 W25 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK09	Etiology of eating disorders. Metabolic diseases - clinical manifestation. Metabolic syndrome, diabetes, porphyria, Gaucher disease.	1	W01W07
TK10	Endocrine active tumours of the gonads.	1	W01W07 W23 W24 W25 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
<b>Seminars</b>			
TK01	Pituitary hyperfunction (acromegaly, gigantism, Cushing's syndrome, prolactinoma, TSH-oma). Pituitary insufficiency (Sheehan syndrome, Simmonds syndrome, uraemia, isolated tropic hormone deficiency). Pituitary tumours.	1	W01 W07 W23 W24 W25 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK02	Division of thyroiditis (acute, subacute, autoimmune and Riedl goitre) - clinical picture. Etiopathogenesis, clinical picture and management of autoimmune thyroiditis. Hyperthyroidism, hypothyroidism. Epidemiology, etiopathogenesis, characteristic clinical features of Graves-Basedow disease. Oedematous ophthalmopathy: clinical picture. Congenital hypothyroidism - etiology, clinical picture and treatment. Primary hypothyroidism in adults - etiology, clinical presentation and treatment. Secondary and tertiary hypothyroidism - distinctions in diagnosis and treatment. Subclinical hypothyroidism - principles of diagnosis and treatment.	1	W01W07 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK03	Pathophysiology of hypercortisolemia. Cushing's syndrome. Addison's disease. Adrenal crisis (causes, symptomatology, diagnosis, treatment).	1	W01W07 W23 W24 W25 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20

			U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK04	Endocrine disorders in anorexia, bulimia. Effects of pregorexia on the pregnant woman and the fetus.	1	W01W07
TK05	Division of hypogonadism: male/female, congenital/acquired, central/peripheral. Clinical manifestations of male/female hypogonadism: primary, secondary. The most common syndromes with hypogonadism (Klinefelter, Turner). Diagnosis and treatment of male hypogonadism. Diagnosis and treatment of female hypogonadism. Basics, indications and contraindications to hormonal treatment.	1	W01W07 W23 W24 W25 W37 W38 W 39 U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
<b>Practical classes</b>			
TK12	Discussion of safety rules, hygiene measures (masks), hand disinfection. Repetition: techniques of medical history taking according to the scheme: demographic data, current complaints, past diseases, taken medicines, allergies, family history, social history, history concerning particular systems and organs. Repetition of the physical examination.	5	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK 13	Taking medical history and physical examination of the patient including endocrine diagnosis. Discussion of medical records including medical history.	5	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK15	Discussion of additional examinations: Standards in thyroid ultrasound.	5	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK 16	Taking medical history and physical examination of the patient. Interpretation and planning of additional examinations (USG, CT, NMR, scintigraphy, receptor scintigraphy)	5	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10
TK 17	Taking medical history and physical examination of the patient. Discussion and planning of additional	5	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30

	examinations.  Oral credit of the material from lectures, seminars and practical classes		U31 U32 U38 K01 K02 K05 K09 K10
<b>Simulation</b>			
	<ol style="list-style-type: none"> <li>1. Hypercalcaemic breakthrough</li> <li>2. Adrenal hyperplasia</li> <li>3. Thyroid storm</li> <li>4. Hypertensive crisis</li> </ol>	3	U01 U03 U07 U12 U13 U14 U16 U17 U18 U20 U21 U22 U24 U29 U30 U31 U32 U38 K01 K02 K05 K09 K10

<b>Recommended literature:</b>	
Reference literature	
1. Endocrinology in clinical practice. Anelli Syrenicz, Szczecin : Pomeranian Medical University, 2011	
2. Davidson's principles & practice of medicine. 23rd edition / edited by Stuart H. Ralston, Edinburgh, Elsevier 2018	
<b>Complementary literature</b>	
1. Greenspan's Basic & Clinical Endocrinology. David G Gardner; Francis S Greenspan; Dolores M Shoback, New York McGraw Hill Education, 2018	
2. Endocrine secrets, Michael T McDermott, Philadelphia : Elsevier Saunders, 2013, 2019	

<b>Student workload</b>	
Form of student workload  (course attendance, student's involvement, report preparation, etc.)	Student workload [h]  In the teacher's assessment (opinion)
Contact hours with the teacher	30
Preparation for practical classes/seminar	15
Reading of designated literature	4
Writing a lab/practical classes report/preparing a project/reference	20

paper, etc.	
Preparation for the test/colloquium	40
Preparation for the examination	200
Other .....	
Total student workload	309
ECTS credits	
<b>Notes</b>	

\*Example ways to verify learning outcomes:

EP - written exam

EU - oral test

ET - test exam

EPR - practical test

K - colloquium

R - paper

S - testing of practical skills

RZĆ - report on practical classes with discussion of results

O - assessment of student's involvement and attitude

SL - Laboratory report

SP - case study

PS - assessment of ability to work

independently W - a short test before the

beginning of class PM - multimedia

presentation

and other

