



# Pomeranian Medical University in Szczecin

## SYLLABUS of the MODULE (SUBJECT)

### General Information

Code		Title	Internal Diseases_Endocrinology
Module type			<i>Obligatory</i>
Faculty			<i>Faculty of Medicine (WLA)</i>
Field of study			<i>medicine ( KL )</i>
Major			<i>Not applicable</i>
Level of study			<i>II level/ long-cycle (S2J)</i>
Mode of study			<i>Intramural</i>
Year of study			<i>IV</i>
Semester			<i>Block system</i>
ECTS points			<i>1</i>
Types of training			<i>Seminars 9h /practical classes 27h (36 hours in total)</i>
Tutor responsible for the module			Prof. dr hab. n. med. Anhelli Syrenicz klinendo@pum.edu.pl
Tutors conducting the subject			Prof. dr hab. n. med. Anhelli Syrenicz Dr n. med. Ewa Źochowska Dr n. med. Agnieszka Kaźmierczyk-Puchalska Lek. med. Jakub Pobłocki Dr n. med. Bartosz Kiedrowicz Dr n. med. Anna Sieradzka
WWW			www.pum.edu.pl
Language			Polish, English

## Detailed information

Module objectives		<p>After the course of endocrinology student should have the knowledge and practical skills in the field prevention and treatment of endocrine diseases. In particular:</p> <ul style="list-style-type: none"> <li>-communication with the patient and his family,</li> <li>-taking history of medical interview of adult patient,</li> <li>-carry out physical examination of a patient with special reference to the endocrine testing,</li> <li>-proper selection of additional medical examinations,</li> <li>-setting the initial diagnosis,</li> <li>-proper treatment and help in states of direct threat to life in endocrinology.</li> </ul> <p>The student should be prepared to carry out professional medical care in the field of health promotion and health education</p>
Prerequisite /essential requirements	Knowledge	<ul style="list-style-type: none"> <li>- <i>development, construction and function of the human body under normal and pathological symptoms</i></li> <li>- <i>methods of diagnostic and therapeutic procedures appropriate to the particular conditions, ethical, social and legal conditions for the practice of medicine</i></li> <li>- <i>principles of health promotion</i></li> <li>- <i>scientific evidence</i></li> <li>- <i>current adopted standards</i></li> </ul>
	Skills	<ul style="list-style-type: none"> <li>-<i>can identify medical problems and define priorities for medical procedures,</i></li> <li>-<i>is able to recognize life-threatening conditions, and requirements for immediate medical attention,</i></li> <li>-<i>plan diagnostic procedures and can make the results interpretation,</i></li> <li>-<i>implement appropriate and safe therapeutic treatment and predict the effects</i></li> </ul>
	Competences	<ul style="list-style-type: none"> <li>-<i>is able to establish and maintain a deep and respectful contact with the patient, guided by the good of the patients, putting them in the first place, -</i></li> <li>- <i>respects the medical confidentiality and rights of the patients</i></li> <li>- <i>is aware of his own limitations; has need for lifelong learning.</i></li> </ul>

Description of the learning outcomes for the subject /module			
Number of learning outcome	Student, who has passed the (subject) Knows /is able to /can:	SYMBOL (referring the standards) EKK	Method of verification of learning outcomes
W01	knows environmental and epidemiological conditions of most frequent diseases	K_E.W1	End of the block Credit (oral form) Verification of theoretical knowledge and practical skills

W02	knows and recognizes causes, symptoms, diagnoses and therapeutic procedures with regard to the most frequent internal diseases in adults and related complications: a) endocrine system diseases, incl.: disorders of hypothalamus, pituitary, thyroid, parathyroid, adrenal cortex, adrenal medulla, ovaries, testes as well as neuroendocrine tumours, endocrine polyglandular syndromes, different types of diabetes and metabolic syndrome, hypoglycemia, obesity and dyslipidemia	K_E.W7	
W03	knows environmental and epidemiologic conditions for most frequent neoplasm in humans (thyroid cancer);	K_E.W23	
W04	knows bases of early neoplasms detection and the rules of oncological screening	K_E.W24	
W05	knows the potential of modern neoplasm therapy (incl. of multimodal therapy), perspectives of gene and cellular therapies well as their undesirable consequences	K_E.W25	
W06	knows the sorts of biological material used in laboratory diagnostics and the rules of proper sampling	K_E.W37	
W07	knows theoretical and practical bases of laboratory diagnostics	K_E.W38	
W08	knows and understands possibilities and limitations of laboratory tests in emergency states	K_E.W39	
U01	takes history of adult patient	K_E.U1	Verification of skills
U02	carries out complete and guided physical examination of adult patient	K_E.U3	Verification of skills
U03	evaluates general state, state of patient's consciousness and awareness	K_E.U7	Verification of skills
U04	carries out differentiation diagnostics of most frequent diseases in adults and children	K_E.U12	Verification of skills
U05	evaluates and describes somatic and mental state of patient	K_E.U13	Verification of skills
U06	recognizes states of direct threat to life	K_E.U14	Verification of skills
U07	plans diagnostics, therapeutic and preventive procedures	K_E.U16	Verification of skills
U08	analyzes possible adverse effects of certain drugs and interaction between them	K_E.U17	Verification of skills
U09	suggests individualization of applicable therapeutic guidelines and other treatment methods because of ineffectiveness or contraindications with regard to standard treatment	K_E.U18	Verification of skills
U10	qualifies patient for home and hospital treatment	K_E.U20	Verification of skills
U11	defines states in which recommended	K_E.U21	Verification of skills

	treatment is limited by life expectancy, functional state or preferences of patient		
U12	evaluates functionality of disabled patient	K_E.U22	Verification of skills
U13	interprets laboratory investigations and identifies reasons of deviations	K_E.U24	Verification of skills
U14	performs basic procedures and operations, incl. of: a) body temperature measurement, sphygmometry, blood pressure measurement,	K_E.U29	Verification of skills
U15	assists with performing following procedures and operations: f) fine-needle biopsy, and interprets results thereof	K_E.U30	Verification of skills
U16	interprets pharmaceutical specifications of medicinal products and reviews ads regarding drugs	K_E.U31	Verification of skills
U17	plans specialist's consultation	K_E.U32	Verification of skills
U18	keeps medical documentation	K_E.U38	Verification of skills
K01	accepts the need of ethical standards	K_K01	Credit/oral form
K02	recognizes responsibility for property entrusted	K_K02	Credit/oral form
K03	shows the habit of self-education, understands the need for lifelong education, can inspire and organize learning process among other persons	K_K03	Credit/oral form
K04	co-operates with team members; can co-operate within group taking different roles	K_K04	Credit/oral form
K05	can form opinions on different aspects of professional activity	K_K06	Credit/oral form

**Matrix presenting the learning outcomes of the subject/module in relation to the form of classes**

Number of learning outcome	Student, who has passed the (subject) Knows /is able to /can:	Types of training							
		Lecture	Seminar	Laboratory classes	Project work	Clinical classes	Classes	Practical classes	Other
W01	knows environmental and		X			X			
W02	knows and recognizes causes,		X			X			
W03	knows environmental and		X			X			
W04	knows bases of early neoplasms		X			X			
W05	knows the potential of modern		X			X			
W06	knows the sorts of biological		X			X			
W07	knows theoretical and practical		X			X			
W08	knows and understands		X			X			
U01	takes history of adult patient					X			
U02	carries out complete and guided					X			
U03	evaluates general state, state of					X			
U04	carries out differentiation					X			
U05	evaluates and describes somatic					X			
U06	recognizes states of direct threat to					X			

U07	plans diagnostics, therapeutic and					X			
U08	analyzes possible adverse effects					X			
U09	suggests individualization of					X			
U10	qualifies patient for home and					X			
U11	defines states in which					X			
U12	evaluates functionality of disabled					X			
U13	interprets laboratory investigations					X			
U14	performs basic procedures and					X			
U15	assists with performing following					X			
U16	interprets pharmaceutical					X			
U17	plans specialist's consultation					X			
U18	keeps medical documentation					X			
K01	accepts the need of ethical					X			
K02	recognizes responsibility for					X			
K03	shows the habit of self-education,					X			
K04	co-operates with team members;					X			
K05	can form opinions on different					X			

Module (subject) contents		
Symbol of teaching programme	Content of teaching programme	References to learning outcomes
TK_01	<p><b>Seminar:</b> Physiology of the endocrine glands. Hormones - classification, mechanisms of action and regulation of secretion. The concept of neurotransmission mechanisms. Neurohormones, hormones, enterohormones, tissue hormones. Feedback mechanisms and principles of hormonal regulation. The mechanism of hormone action.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Explanation of medical records including medical history.</p>	<p>K_E.W7 K_E.W38</p>
TK_02	<p><b>Seminar:</b> Hyperpituitarism (acromegaly, gigantism, Cushing's syndrome, prolactinoma, TSH-oma). Hypopituitarism (Sheehan syndrome, Simmonds syndrome, diabetes insipidus, isolated tropic hormone deficiency). Tumors of the pituitary gland.</p> <p><b>Practical classes:</b> Description and explanation of clinical departments functionality. Physical examination of a patient.</p>	<p>K_E.W1; 23; 24; 25</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>
TK_03	<p><b>Seminar:</b> Classification of thyroiditis (acute, subacute, autoimmune and Riedel's thyroiditis) - the clinical picture. Etiopathogenesis, clinical picture and treatment of autoimmune thyroiditis. Hyperthyroidism, hypothyroidism. Epidemiology, pathogenesis, clinical characteristics of Graves-Basedov's disease. Thyroid-associated ophthalmopathy -clinical picture. Congenital hypothyroidism (CH) - etiology, clinical overview and treatment. Primary hypothyroidism in adults - etiology, clinical picture and treatment. Secondary and tertiary hypothyroidism – individual approach in diagnosis and treatment. Subclinical hypothyroidism - principles of diagnosis and treatment.</p>	<p>K_E.W1; 7; 38; 39</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>

	<b>Practical classes:</b> Overview of additional medical examinations. Current standards in ultrasound performance (USG) of the thyroid.	
TK_04	<p><b>Seminar:</b> Division of malignant tumors of the thyroid (differentiated: papillary and follicular, anaplastic carcinoma, and C-cell cancer - medullary). Epidemiology, clinical picture and treatment of cancer: papillary, follicular and anaplastic. Iodine deficiency degrees. Sporadic and endemic goiter: criteria for the diagnosis and treatment principles.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Interpretation and planning additional examinations (ultrasound USG, Computed Tomography (CT), magnetic resonance imaging (MRI), scintigraphy, somatostatin receptor scintigraphy)</p>	<p>K_E.W1; 7; 23; 24; 25; 37; 38; 39</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>
TK_05	<p><b>Seminar:</b> Pathophysiology of hypercortisolism. Cushing's syndrome. Addison's disease. Adrenal crisis (reasons, symptomatology, diagnosis, treatment). Tumors of the adrenal glands. MEN syndromes and carcinoid.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Discussion/argumentation and further planning of additional medical examinations.</p>	<p>K_E.W1; 7; 23; 24; 25; 37; 38; 39</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>
TK_06	<p><b>Seminar:</b> Obesity. Anorexia nervosa. Definitions of obesity and anorexia nervosa. The etiology of eating disorders. Metabolic diseases - clinical manifestation. Metabolic syndrome, diabetes, porphyria, Gaucher's disease.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Discussion/argumentation and further planning of additional medical examinations.</p>	<p>K_E.W1; 7</p>
TK_07	<p><b>Seminar:</b> Epidemiology and risk factors for osteoporosis. Assessment of bone mass density by DXA - current recommendations regarding the diagnosis of osteopenia and osteoporosis using imaging methods. Parathyroid disease: the role of parathyroid hormone, calcitonin and vitamin D to maintain phosphorus, magnesium and calcium homeostasis. Hypercalcemia - definition, causes. Primary hyperparathyroidism. Secondary and tertiary hyperparathyroidism. Pseudohyperparathyroidism. Hypocalcemia, hypoparathyroidism, pseudohypoparathyroidism - definition, causes, symptoms. Parathyroid tumors/cancer.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Discussion/argumentation and further planning of additional medical examinations.</p>	<p>K_E.W1; 7; 23; 24; 25; 37; 38; 39</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>
TK_08	<b>Seminar:</b> Types of hypogonadism: male / female,	K_E.W1; 7; 23; 24; 25; 37; 38;

	<p>congenital / acquired, central / peripheral. Clinical symptoms of hypogonadism, male / female: primary, secondary. The most common syndromes coming with hypogonadism (Klinefelter, Turner). Diagnosis and treatment of male hypogonadism. Diagnosis and treatment of female hypogonadism. Causes, indications and contraindications for hormonal treatment. Hormonally active tumors of the gonads.</p> <p><b>Practical classes:</b> Physical and symptomatic examination of the patient. Discussion/argumentation and further planning of additional medical examinations</p>	<p>39</p> <p>K_E.U1; 3; 7; 12; 13; 14; 15; 16; 17; 18; 20; 21; 22; 24; 29; 30; 31; 32; 38</p> <p>K_K01;02;03;04;06</p>
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#### References and educational resources

1. Syrenicz A. Endocrinology in clinical practice. Pomeranian Medical University, 2011.

2. Walker B.R. Davidson's principles & practice of medicine. Churchill Livingstone/Elsevier, 2014.

Form of student’s activity (in-class participation; activeness, produce a report, etc.)	Workload [h]		
	Tutor	Student	Average
activities that require direct participation of tutors	36	36	
Preparation to the classes		5	
Reading of the indicated/specified literature		10	
Report writing/project making			
Time spent to prepare for the exam			
Other			
Student’s workload in total		51	
ECTS points for the subject	1		
Remarks at the end			

Methods of assessment, for example:

E – exam- problem resolving

S – verifying of practical skills

R – report

D – discussion

P – presentation

Others-