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**SYLLABUS of the MODULE (SUBJECT)**

**General Information**

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| **Module title:CLINICAL ALLERGOLOGY** | |
| Module type | Clinical allergology |
| Faculty PMU | Faculty of Medicine and Dentistry |
| Major | Medicine |
| Level of study | long-cycle (S2J) |
| Mode of study | full-time studies |
| Year of studies, semester | Year IV, semester VIII |
| ECTS credits (incl. semester breakdown) |  |
| Type/s of training | seminars (15h)/practical(16h) |
| Form of assessment | ☒graded assessment:  ☐descriptive  ☒test  ☐practical  ☐oral  ☐non-graded assessment  ☐final examination  ☐descriptive  ☐test  ☐practical  ☐oral |
| Head of the Department/ Clinic, Unit | DR N.MED. IWONA POZIOMKOWSKA-GĘSICKA |
| Tutor responsible for the module | Dr n. med. IWONA POZIOMKOWSKA-GĘSICKA |
| Department’s/ Clinic’s/ Unit’s website | https://www.pum.edu.pl/studia\_iii\_stopnia/informacje\_z\_jednostek/wmis/zakad\_alergologii\_klinicznej/ |
| Language | English |

**Detailed information**

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| **Module objectives** | | The students should see, understand and solve problems related to morbid hypersensitivity. This concept is commonly and erroneously associated with the mechanism of allergy. However, it has a broader meaning. Describes the episodic and chronic symptoms of response to stimuli tolerated by the general population, which do not result from a specific immune response. Due to the specifics of the dentist's work, particular importance are: non-steroidal anti-inflammatory drugs, antibiotics, latex and materials used in dentistry as well as common environmental factors that are most often allergens that cause symptoms of allergic periodic and perennial rhinitis and asthma, so-called oral allergy syndrome, urticaria and angioedema, and anaphylaxis. Practical knowledge about allergic contact eczema, including changes in mucous membranes and the possible causative role of drugs and materials used in dentistry, is equally important. The students should know the principles of the diagnosis of morbid hypersensitivity and the possibilities of prevention in terms of individual patients' good. That is why we present the basic diagnostic techniques and principles of treatment of hypersensitivity symptoms and the possibility of selecting safe substitute drugs (antibiotics, local anesthetic agents and analgesics). |
| Prerequisite /essential  requirements | Knowledge | Knowledge acquired at earlier stages of education with particular emphasis on the following concepts: stimulus, reaction, individual and "normal" reaction, resistance, tolerance, hypersensitivity, allergy, sensitivity, specificity, prediction |
| Skills | Applicable to each doctor canon of medical proceedings (medical history, physical examination, first diagnosis, diagnostic program, final diagnosis, treatment). This also applies to the principles of medical reasoning, taking into account the principle of causality and the ability to correctly logically deduce. |
| Competences | Subjective treatment of the patient and care for his individual good and ethos of the profession in line with the message of the Code of Medical Ethics, with particular emphasis on recording:  **The biggest ethical order for a doctor is the good of the patient - *salus aegroti suprema lex esto*. Market mechanisms, social pressures and administrative requirements do not absolve physicians from compliance with this principle (Article 2 point 2)** |

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| **Description of the learning out**c**omes for the subject /module** | | | |  |
| **No. of learning outcome** | **Student, who has passed the (subject)**  **knows /is able to /can:** | **SYMBOL**  **(referring the standards)** | **Method of verification of learning outcomes\*** | |
| W01 | Knows genetic, environmental and epidemiological predisposition of most frequent diseases | K\_E.W1 |  | |
| W02 | knowsprinciples for the nutrition of healthy and sickchildren, principles of vaccination and healthbalance in children | K\_E.W2 |  | |
| W03 | knows and understands causes, symptoms, rules of diagnosis and therapeutic procedures in terms of the most frequent pediatric diseases:  a) rickets, tetany, convulsions  b) congenital heart diseases, inflammation of myocarditis, pericarditis and endocarditis, cardiomyopathy, cardiac arrhythmia, arterial hypertension, syncope  c) acute and chronic diseases of upper and lower airways, congenital defects/malformations/ of respiratory tract, tuberculosis, mucoviscidosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioneurotic edema  d) ischemia, hemorrhagic diathesis, marrow failure, childhood cancer incl. solid tumours  e) acute and chronic abdominal pain, vomiting, diarrhea, constipation, gastrointestinal bleeding, chronic peptic ulcer disease, non-specific enteropathy, hepatopathy, cholestesis and other acquired and congenital diseases of alimentary tract  f) urinary tract infections, congenital malformation of urinary tract, nephrotic syndrome, nephrolithiasis, acute and chronic renal failure, acute and chronic renal inflammation, renal tract diseases, dysuria, vesicoureteral reflux  g) abnormal growth, diseases of thyroid and parathyroid, adrenopathy, diabetes, obesity and disturbances of maturation and functions of gonads,  h) infantile cerebral palsy, meningoencephalitis, epilepsy  i) most frequent infantile infectious diseases j) genetic syndrome  k) diseases of connecting tissue, rheumatic fever, adolescence arthritis, systemic lupus, dermal-muscular inflammation | K\_E.W3 |  | |
| W04 | knows and recognizes causes, symptoms, diagnoses and therapeutic procedures with regard to the most frequent internal diseases in adults and related complications:  a) circulatory system diseases incl.: ischemic heart disease, organic heart diseases, endocardium, myocardium and pericardium diseases, heart failure (acute and chronic), angiopathy, primary and secondary hypertension and pulmonary hypertension,  b) respiratory tract diseases incl.: airway diseases, chronic obstructive pulmonary diseases, bronchial asthma, bronchiectasis, mucoviscidosis, respiratory tract infection, interstitial disease of lungs, pleura and mediastinum, obstructive and sleep apnea, acute and chronic respiratory failure, respiratory system neoplasm  c) alimentary system diseases, inlc.: stomatopathy, esophagus diseases, gastrosis, diseases of duodenum, enteropathy, diseases of hepatopathy, pancearopathy, cholepathy, cholecystopathy  d) endocrine system diseases, incl.: disorders of hypothalamus, hypophysis, thyroid, parathyroid, adrenal cortex, adrenal medulla, ovariopathy, orchiopathy, neuroendocrine tumour disease, endocrine polyglandular syndrome, different types of diabetes and metabolic syndrome, hypoglycemia, obesity and dyslipidemia  e) nephropathy and diseases of urinary tract incl. : acute and chronic renal failure, diseases of renal glomerules and interstitial diseases of kidneys, renal cyst, nephrolithiasis, urinary tract infections, urinary tract neoplasm, in particular bladder cancer and renal cancer  f) diseases of hematopoietic system, incl.: panmyelophthisis, anemia, granulocytopenia and granulocytosis, trombocytopenia, acute leukemia, myeloproliferative and myelodysplastic-myeloproliferative diseases, myelodysplasia syndrome, B and T cell lymphoma, hemorrhagic diathesis, thrombophilia, life-threatening states in hematology, dyshematopoiesis in the failure of other organs  g) rheumatic diseases, incl.: systemic connective tissue disease, systemic vasculitis arthritis of the spine, metabolic diseases of bones, in particular osteoporosis and arthrosis, uratic gout  h) allergic diseases, incl.: anaphylaxis and anaphylactic shock, angioneurotic edema  i) water-electrolyte and base-acid disorders: dehydration, over hydration, electrolytic equilibrium disorder, acidosis and alkalosis | K\_E.W7 |  | |
| W05 | knows major features, environmental and epidemiologic conditions of most frequent human skin diseases | K\_W33 |  | |
| W06 | knows types of biological materials used in laboratory diagnostics and rules governing 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 examinations in emergency situations | K\_W39 |  | |
| W09 | lists indications for implementation of monitored therapy | K\_E.W40 |  | |
| W10 | defines basic pharmacological and economic concepts | K\_E.W41 |  | |
| W11 | Knows the concepts describing the individual and corresponding accepted "norm" how the body reacts to stimuli surrounding environment |  |  | |
| W12 | Knows the concepts describing the morbid hypersensitivity and its determinants, as well as the clinical symptoms of hypersensitivity allergic and non-allergic |  |  | |
| W13 | Knows the rules of recognition of morbid hypersensitivity allergic and non-allergic |  |  | |
| W14 | Knows the definition of atopy and atopic disease pathogenic factors, symptomatology its phenotypes, as well as sources of potential airborne allergens. He can critically interpret the results of modern epidemiological studies. He knows the principles of diagnosis and treatment:  atopic dermatitis  allergic rhinitis and conjunctivitis  IgE-mediated asthma  IgE-mediated allergy is not associated with atopy " |  |  | |
| W15 | knows the definition of allergic contact dermatitis, the main sources of potential allergens, as well as the principles of its diagnosis and treatment. He can differentiate eczema, allergic and non-allergic |  |  | |
| W16 | Knows the conditions of morbid hypersensitivity to the components of food as a source of potential allergens and food additives and natural substances and medicines that are not allergens. Know the related syndromes, identification rules for food ingredients that cause symptoms, diagnosis of food allergy, as well as indications for the use of elimination diets |  |  | |
| W17 | Knows the definition of anaphylaxis and its compounds with hypersensitivity allergic or non-allergic. He can determine the nature of the symptoms, to assess the degree of their severity and differentiate them from symptoms of other chronic diseases reactions OR. He knows the rules and indications Treatment Adrenaline, other drug use, and treatment of hypovolemic shock. He knows the rules identifying the trigger anaphylaxis, as well as the principles of prevention and individual prevention in risk groups. |  |  | |
| W18 | knows and distinguishes himself from the notion of "adverse event associated with medication" and "drug-induced adverse reaction", as well as the two main types of adverse reactions. Associated adverse drug reactions Type B with morbid hypersensitivity to drugs. He knows the group of drugs most commonly cause hypersensitivity reactions and related frequently symptoms. He knows the rules of recognition of drug hypersensitivity and the reporting of adverse events and reactions to the central register |  |  | |
| U01 | takes history interview of adult patient | K\_E.U1 |  | |
| U02 | takes history interview of child and its family | K\_E. U2 |  | |
| U03 | carries out complete and guided physical examination of adult patient | K\_E.U3 |  | |
| U04 | carries out physical examination of child of any age | K\_E.U4 |  | |
| U05 | evaluates general state, state of patient’s consciousness and awareness | K\_E.U7 |  | |
| U06 | carries out differentiation diagnostics of most frequent diseases in adults and children | K\_E.U12 |  | |
| U07 | evaluates and describes somatic and mental state of patients | K\_E.U13 |  | |
| U08 | recognizes states representing direct threat to life | K\_E.U14 |  | |
| U09 | recognizes states following consumption of alcohol, narcotics and other stimulants | K\_E.U15 |  | |
| U10 | plans diagnostics, therapeutic and preventive procedures | K\_E.U16 |  | |
| U11 | analyzes possible adverse effects of certain drugs and interactions between them | K\_E.U17 |  | |
| U12 | suggests individualization of applicable therapeutic guidelines and other treatment methods because of ineffectiveness or contra-indications with regard to standard treatment | K\_E.U18 |  | |
| U13 | qualifies patients for home and hospital treatment | K\_E.U20 |  | |
| U14 | defines states in which treatment according to guidelines for a particular disease is limited by patients’ life expectancy, functional state or preferences | K\_E.U21 |  | |
| U15 | interprets laboratory investigations and identifies reasons for deviations | K\_E.U24 |  | |
| U16 | performs basic procedures and operations, incl.:  a) body temperature measurement, heart rate measurement, blood pressure measurement  b) monitoring life parameters using of cardiac monitor, pulse oximetry  c) spirometry, oxygen therapy, forced and replacement ventilation  d) introduction of mouth-throat tube  e) intravenous, intramuscular and subcutaneous injections, cannulation of peripheral veins, drawing peripheral venous blood, sampling urine culture, drawing arterial blood, drawing arterialized capillary blood  f) nose, throat and skin swabs, pleural cavity puncture  g) urinary bladder catheterization in women and men, passage of gastric tube into stomach, gastric lavage, enema  h) standard resting electrocardiogram c/w interpretation, electrical cardioversion and defibrillation  i) simple strip tests and glucose concentration measurement | K\_E.U29 |  | |
| U17 | assists with performing and interprets the result of the following procedures and operations:  a) transfusion of blood and blood-derivatives  b) pleural cavity drainage  c) heart sac puncture  d) peritoneal cavity puncture  e) lumbar puncture  f) thin-needle biopsy  g) epidermal tests  h) intradermal and scarification tests | K\_E.U30 |  | |
| U18 | interprets pharmaceutical specifications of medicinal products and reviews adverts regarding drugs | K\_E.U31 |  | |
| U19 | plans specialist consultations | K\_E.U32 |  | |
| U20 | recognizes agony and states death | K\_E.U37 |  | |
| U21 | keeps medical documentation | K\_E.U38 |  | |
| U22 | able to use the algorithm to recognize allergic and non-allergic hypersensitivity |  |  | |
| U23 | can independently perform and interpret skin tests for assessing specific hyperreactivity of the skin and the diagnosis of allergies, as well as the results of determinations of IgE |  |  | |
| U24 | can determine the indication and interpret the results of lung function tests |  |  | |
| U25 | can recognize morbid hypersensitivity reactions in patients with episodic exacerbations and chronic symptoms and determine the allergic or nonallergic mechanism |  |  | |
| U26 | takes history interview of adult patient | K\_E.U1 |  | |
| U27 | takes history interview of child and its family | K\_E. U2 |  | |
| U28 | carries out complete and guided physical examination of adult patient | K\_E.U3 |  | |
| K01 | working with the patient:  a) examines providing a sense of      intimacy, understanding, safety  b) planning diagnostic directs       the balance of expected risks and       benefits  c) provide information on       test results, the health status and rules       the proposed treatment method       understandable  d) is aware of patients’ rights |  |  | |
| K02 | working in a team:  a) co-operates with team members; can co-operate within a group and take different roles  b) shows proper respect to all       team members, regardless of       Depending on the nature of the business  c) cares for safety of colleagues, the environment and himself/herself |  |  | |
| K03 | respects patients/customers/social groups and makes decisions in their best interest |  |  | |

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| **Table presenting LEARNING OUTCOMES in relation to the form of classes** | | | | | | | | |
| **No. of learning outcome** | **Learning outcomes** | **Type of training** | | | | | | |
| **Lecture** | **Seminar** | **Practical classes** | **Clinical classes** | **Simulations** | **E-learning** | **Other…** |
| W01 | K\_E.W1 |  |  |  |  |  |  |  |
| W02 | K\_E.W2 |  |  |  |  |  |  |  |
| W03 | K\_E.W3 |  | X |  |  |  |  |  |
| W04 | K\_E.W7 |  | X |  | X |  |  |  |
| W05 | K\_W33 |  | X |  |  |  |  |  |
| W06 | K\_E.W37 |  | X |  |  |  |  |  |
| W07 | K\_E.W38 |  | X |  | X |  |  |  |
| W08 | K\_W39 |  | X |  |  |  |  |  |
| W09 | K\_E.W40 |  |  |  |  |  |  |  |
| W10 | K\_E.W41 |  |  |  |  |  |  |  |
| W11 |  |  | X |  |  |  |  |  |
| W12 |  |  | X |  |  |  |  |  |
| W13 |  |  | X |  | X |  |  |  |
| W14 |  |  | X |  | X |  |  |  |
| W15 |  |  | X |  | X |  |  |  |
| W16 |  |  | X |  |  |  |  |  |
| W17 |  |  | X |  |  |  |  |  |
| W18 |  |  | X |  |  |  |  |  |
| U01 | K\_E.U1 |  |  |  | X |  |  |  |
| U02 | K\_E. U2 |  |  |  | X |  |  |  |
| U03 | K\_E.U3 |  |  |  | X |  |  |  |
| U04 | K\_E.U4 |  |  |  | X |  |  |  |
| U05 | K\_E.U7 |  |  |  | X |  |  |  |
| U06 | K\_E.U12 |  |  |  | X |  |  |  |
| U07 | K\_E.U13 |  |  |  | X |  |  |  |
| U08 | K\_E.U14 |  |  |  | X |  |  |  |
| U09 | K\_E.U15 |  |  |  | X |  |  |  |
| U10 | K\_E.U16 |  |  |  | X |  |  |  |
| U11 | K\_E.U17 |  |  |  | X |  |  |  |
| U12 | K\_E.U18 |  |  |  | X |  |  |  |
| U13 | K\_E.U20 |  | X |  |  |  |  |  |
| U14 | K\_E.U21 |  | X |  |  |  |  |  |
| U15 | K\_E.U24 |  | X |  |  |  |  |  |
| U16 | K\_E.U29 |  |  |  | X |  |  |  |
| U17 | K\_E.U30 |  |  |  | X |  |  |  |
| U18 | K\_E.U31 |  |  |  | X |  |  |  |
| U19 | K\_E.U32 |  |  |  | X |  |  |  |
| U20 | K\_E.U37 |  | X |  |  |  |  |  |
| U21 | K\_E.U38 |  | X |  |  |  |  |  |
| U22 |  |  |  |  | X |  |  |  |
| U23 |  |  |  |  | X |  |  |  |
| U24 |  |  |  |  | X |  |  |  |
| U25 |  |  | X |  | X |  |  |  |
| U26 | K\_E.U1 |  | X |  |  |  |  |  |
| U27 | K\_E. U2 |  | X |  |  |  |  |  |
| U28 | K\_E.U3 |  | X |  |  |  |  |  |
| K01 |  |  |  |  |  |  |  |  |
| K02 |  |  |  |  |  |  |  |  |
| K03 |  |  | X |  |  |  |  |  |

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| **Table presenting TEACHING PROGRAMME** | | | |
| **No. of a teaching programme** | **Teaching programme** | **No. of hours** | **References to learning outcomes** |
| **BLOCK** | | | |
| **Seminars** | | | |
| TK01 | Concepts describing the individual and corresponding to the adopted standard way to respond to the stimuli surrounding environment | 1 | W11 |
| TK02 | Concepts describing „morbid hypersensitivity” and its mechanisms and clinically significant manifestations of allergic and non-allergic hypersensitivity | 1 | W12 |
| TK03 | Recognition „morbid hypersensitivity”. Diagnostic algorithm | 1 | W04; W13; U01; U02; U03; U04;  U06;U07;  U21;U22;U25;U26;  U27;U28;  K01; K02;  K03; |
| TK04 | Atopic disease and its phenotypes | 1 | W14 |
| TK05 | Phenotypes of allergic rhinitis and asthma | 3 | W02; W14;  U01; U02;  U03; U04;  U13; U15  U18; U19 |
| TK06 | The phenotype of atopic dermatitis | 1 | W05; W14  U01; U02;  U03; U04;  U13; U15 |
| TK07 | Allergic contact dermatitis | 1 | W05; W15  U01; U02;  U03; U04;  U06; U07  U13; U15 |
| TK08 | Allergic and non-allergic food hypersensitivity | 2 | W02; W16  U01; U02  U13; U18 |
| TK09 | Allergic and non-allergic anaphylaxis | 2 | W04; W17;  U05; U07;  U02; U08;  U13;U15;  U17; U18;  U19; U23; |
| TK10 | Drug hypersensitivity. Adverse drug reactions Type B | 2 | W18; U14;U15; U16,U17; U18; U21;U22; U24, U09 |

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| **Booklist** |
| Obligatory literature: Materials provided exercise and seminars |
| 1.**EAACI website guidelines.** |
| 2. **www.worldallergy.org. Disease, Focus Reviews & News** |
| Supplementary literature: |
| **1.** [**www.ginasthma.org**](http://www.ginasthma.org)**.** |
| **2. European Academy of Allergy, Clinical Immunology Food Allergy, Anaphylaxis Guidelines Group. EAACI guideline: Anaphylaxis (2021 update).**  Muraro A, Worm M, Alviani C, Cardona V, et al.  Allergy. 2021 Aug 3. doi: 10.1111/all.15032. Epub ahead of print. PMID: 34343358. |

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| **Student’s workload** | |
| Form of student’s activity  (in-class participation; activeness, produce a report, etc.) | Student’s workload [h] |
| Tutor |
| Contact hours with the tutor | 8 |
| Time spent on preparation to seminars/ practical classess | 3 |
| Time spent on reading recommended literature | 2 |
| Time spent on writing report/making project |  |
| Time spent on preparing to colloqium/ entry test | 2 |
| Time spent on preparing to exam |  |
| Other ….. |  |
| Student’s workload in total | 16 |
| **ECTS credits for the subject (in total)** | 1.5 |
| **Remarks** | |
| Work without outpatientsClinic-13h | |

\* Selected examples of methods of assessment:

EP – written examination

EU –oral examination

ET – test examination

EPR – practical examination

K – colloqium

R – report

S – practical skills assessment

RZĆ – practical classes report, incl. discussion on results

O –student’s active participation and attitude assessment

SL –lab report

SP – case study

PS - assessment of student’s ability to work independently

W – entry test

PM – multimedial presentation

other…