



Program studiów

| | |
|----------------------------|----------------------------|
| Wydział: | Wydział Lekarski |
| Kierunek: | Medical and Dental Program |
| Poziom kształcenia: | jednolite magisterskie |
| Forma kształcenia: | stacjonarne |
| Rok akademicki: | 2020/21 |

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Charakterystyka kierunku

Informacje podstawowe

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|-----------------|----------------------------|
| Nazwa wydziału: | Wydział Lekarski |
| Nazwa kierunku: | Medical and Dental Program |
| Poziom: | jednolite magisterskie |
| Profil: | ogólnoakademicki |
| Forma: | stacjonarne |
| Język studiów: | angielski |

Przyporządkowanie kierunku do dziedzin oraz dyscyplin, do których odnoszą się efekty uczenia się

Nauki medyczne

100,0%

Charakterystyka kierunku, koncepcja i cele kształcenia

Charakterystyka kierunku

The Medical and Dental Program at the Faculty of Medicine of the Jagiellonian University Medical College is a significant program on the European map of medical universities, as well as dynamic, modern, boasting excellent scientific and didactic staff consisting of 150 full professors and doctors with habilitation degrees, and over 450 doctors who, drawing on the wealth of centuries-old tradition, set new directions of thought development through the highest quality scientific research and teaching.

Every year, over 400 doctors graduate from the Faculty, including about 80 dentists. In particular, the Medical and Dental Program at the Faculty of Medicine of the Jagiellonian University Medical College each year enjoys great interest among candidates for medical universities.

The current shape of medical and dental studies is the result of many years of experience in professional education of dental staff in the care of human health and life.

Students have a rich, well-equipped scientific and didactic base, highly qualified scientific and didactic staff, specialist clinical base, and modern scientific and research infrastructure at their disposal.

Medical and dental studies are uniform master's studies lasting 10 semesters. The curriculum of the first three years of studies includes teaching in the field of theoretical disciplines of medical sciences, i.e. normal anatomy, biology with embryology, histology with cytophysiology, general and organic chemistry, biochemistry, physiology, biophysics, microbiology, immunology, genetics, pathology, pharmacology. From the first year of their studies, they are familiarized with the rules of ethics and learn about relations and communication with patients. During the first, second and third year of studies, students are taught general surgery with oncology, the basics of clinical sciences in the form of first aid and elements of nursing, propedeutics of medicine, and internal diseases, as well as epidemiology, history of medicine, history of philosophy, sociology of medicine, medical ethics, psychology, computer science with biometrics, and a foreign language. Pre-clinical classes are held as part of dentistry. This is aimed at preparing the student to work with the patient. These subjects are taught, e.g. as a part of optional classes. Basic clinical disciplines, i.e. paediatrics, infectious diseases, conservative dentistry with endodontics, dental surgery, dental prosthetics, periodontal diseases, oral mucosa, pediatric dentistry, orthodontics, maxillofacial surgery, are taught from the 4th to the 5th year of studies. In the course of studies there is also a program of numerous optional courses, e.g. in medical cytobiology and clinical disciplines, which broaden the

current scope of knowledge in the field of general courses. In order to complete individual years of study, it is necessary to complete program internships. Graduates of the medical and dental faculty receive a diploma and a professional title of doctor of dental surgery (Polish: lekarz dentysta).

Koncepcja kształcenia

The aim of medical and dental studies is to teach the fundamental theories and principles of medical and dental practice, to transfer the skills of communication and cooperation with patients, colleagues and other medical team members, and to prepare to lead human teams. The studies should provide the graduate with the necessary knowledge and skills, as well as ethical principles ensuring professional and safe dental care.

In accordance with the current teaching standards, the graduate has theoretical and practical skills in prevention and treatment necessary to practice the profession of a doctor of dental surgery.

In terms of knowledge, the graduate knows and understands issues in the field of medicine and natural sciences – in the basic scope, issues in the field of dentistry – at an advanced level, issues of health education, principles of conducting scientific research and spreading their results, organization of a dental practice, and management principles in health protection.

In terms of skills, the graduate is able to carry out diagnostics of the most common diseases, assess and describe the somatic and mental condition of a patient, and is able to provide professional dental care in terms of prevention, treatment, health promotion and health education. In addition, he or she is able to plan treatment concerning dental problems, conduct clinical proceedings based on knowledge, and respect the principles of humanitarianism, as well as plan his or her own educational activity and understands the need for continuous training. The graduate is able to inspire the learning process of other people, communicate with the patient and his or her family in an atmosphere of trust, taking into account the needs of the patient, communicate with colleagues within a team and share knowledge, critically evaluate the results of scientific research, and properly justify own position.

In terms of social competences, graduates are ready to establish and maintain deep and respectful contact with patients, as well as to show understanding for differences in world-related outlooks and cultures, keep the patient's well-being in mind, respect medical confidentiality and the rights of the patient. In addition, a graduate of the medical and dental program is ready to take action towards the patient based on the ethical standards and principles, with the awareness of social determinants and limitations resulting from the disease, as well as noticing and recognizing their own limitations, self-assessment of deficits and educational needs. Graduates are ready to promote pro-health behaviors, use objective sources of information, formulate conclusions from their own measurements or observations, implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical teams. In a multicultural and multinational environment, he or she is able to form an opinion on various aspects of professional activity, taking responsibility for decisions taken in the course of professional activity, including the safety of oneself and others.

Cele kształcenia

1. acquiring the ability to plan and implement preventive, diagnostic and therapeutic procedures on a scientific basis which respects the principles of humanity
2. acquiring the ability to critically assess research results
3. ability to conduct scientific research and to spread their results
4. preparation for cooperation with other health care providers
5. preparation for managing human teams
6. readiness to continue professional education
7. readiness to continue education in doctoral schools and to participate in medical research

Potrzeby społeczno-gospodarcze

Wskazanie potrzeb społeczno-gospodarczych utworzenia kierunku

The statistics of the The Polish Chamber of Physicians and Dentists indicate that in Poland there is a great need for educating reliable dentists who are capable of offering appropriate preventive, diagnostic and therapeutic methods, based

on solid theoretical foundations and the results of the latest research, adapted to the needs of individuals and groups of people. The need for education in a medical and dental program is therefore one of the most urgent needs in the current medical situation in the country.

Wskazanie zgodności efektów uczenia się z potrzebami społeczno-gospodarczymi

Thanks to the implementation of the assumed learning outcomes, graduates of medical and dental studies, in accordance with their knowledge and skills acquired during their studies, are prepared to work in: public and non-public health care institutions; education; research institutions and research and development centers; institutions dealing with counseling and dissemination of knowledge in the field of health-promoting education, which is the answer to the increase in demand for medical services caused by demographic and civilization trends.

Nauka, badania, infrastruktura

Główne kierunki badań naukowych w jednostce

The academic staff at the Faculty of Medicine, which conducts classes in the medical and dental program, participates in the implementation of a number of scientific research and scientific and implementation works in the field of medical and health sciences. Over the last 5 years, the research teams at the Faculty of Medicine participated in the implementation of over 300 interdisciplinary projects financed from the National Science Centre, The National Centre for Research and Development, The Ministry of Health, The Ministry of Science

and Higher Education, international funds (including other EU programs) and several hundred projects from the university's own funds. The employees of the Faculty of Medicine implement projects in the scope of searching for new pathomechanisms and possibilities of personalized diagnosis and therapy of modern-age diseases (e.g. of the cardiovascular system, malignant tumors, diabetes, obesity, neurological and mental diseases, digestive system diseases, diseases related to the aging of society), interdisciplinary issues (e.g. cardiometabolic, cardiooncological, neuroendocrine problems), reproductive health problems and developmental age medicine, and therapeutic applications of regenerative medicine (e.g. the use of stem cells in the treatment of serious diseases). All units involved in the implementation of the curriculum in the medical and dental program, both in the field of pre-clinical sciences and clinical subjects, conduct scientific research in all fields of dentistry. In particular, the projects focus on the prevention of diseases occurring in the oral cavity, improvement of diagnostic methods, treatment techniques and monitoring of treatment results, but also the issues of significant connection between oral cavity health and organism health are widely considered, which is connected with extensive cooperation between companies and universities in Poland and abroad.

Związek badań naukowych z dydaktyką

The majority of the employees of the medical and dental program at the Faculty of Medicine combine teaching with scientific work. The knowledge, skills and experience gained by academic teachers as a result of their research and development work are used in the educational process as a basis for modification and modernization of educational content, both in pre-clinical and clinical subjects. There are more than 100 student scientific clubs at the Faculty, at the pre-clinical and clinical units. The students who work there supplement their medical knowledge and learn the methodology of scientific work. The results of their work are presented every year at numerous international scientific conferences. Doctoral students are involved in the implementation of most of the scientific projects of the Faculty's researchers, while students participate in a large number of projects. Doctoral students may apply for funds for research in the JUMC competition, whereas students may apply for Student Grants. Every year, several "diamond grants" financed by the Ministry of Science and Higher Education are held at the Faculty of Medicine.

Opis infrastruktury niezbędnej do prowadzenia kształcenia

The main didactic base for dental students is the University Dental Clinic, which is located in the building at Montelupich Street in Krakow, where the Institute of Dentistry is located. Two wings with preclinical training rooms, two amphitheater lecture halls for 100 seats each, were added to the 19th century building. The facility was designed to be extended to 34 800 m³ of cubic capacity and 4 638 m² of usable area, and equipped with all the basic installations, compressed air, central vacuum, computer network. The main tasks of the University Dental Clinic include providing health care services in the field of dentistry in connection with the implementation of teaching and research tasks of the Jagiellonian University. This fact puts the Clinic in the position of a healthcare provider, with dental services provided at the highest level of knowledge and skills of medical staff. Experienced specialist doctors and experienced practitioners are employed. Lecture halls are equipped with appropriate equipment, i.e. multimedia projectors, computers. Students have access to the resources of the Medical Library and the resources of the Jagiellonian Library. Equipment and infrastructure are constantly updated, supplemented and developed in accordance with the demand resulting from the implementation of the education program. Apart from lecture halls, the Institute of Dentistry is equipped with 3 phantom rooms, each with 22 workstations, adjacent

labs, 4 seminar rooms and a library. In the pre-clinical classes, students use phantom rooms to adapt to the work with the future patient, using models of the maxilla and mandible and teeth faithfully reflecting the conditions of the oral cavity. Clinical classes take place in fully equipped clinical rooms of the Institute of Dentistry, where there are also prosthetic and orthodontic laboratories and x-ray laboratory, allowing for diagnostics and treatment of patients.

Program

Podstawowe informacje

| | |
|--------------------------------------|-----------------|
| Klasyfikacja ISCED: | 0911 |
| Liczba semestrów: | 10 |
| Tytuł zawodowy nadawany absolwentom: | lekarz dentysta |

Opis realizacji programu:

The curriculum of studies at the medical and dental program is based on the didactic and research facilities of the Faculty of Medicine of the Jagiellonian University Medical College in cooperation with external entities, thanks to which it is possible to train practical skills of students in various conditions and environments, which prepares them for later employment in the dental profession. The education program is primarily aimed at developing practical/clinical skills based on a reliable theoretical base and gained experience with patients. All students follow the same program.

Liczba punktów ECTS

| | |
|---|-----|
| konieczna do ukończenia studiów | 319 |
| w ramach zajęć prowadzonych z bezpośrednim udziałem nauczycieli akademickich lub innych osób prowadzących zajęcia | 188 |
| którą student musi uzyskać w ramach zajęć z zakresu nauki języków obcych | 9 |
| którą student musi uzyskać w ramach modułów realizowanych w formie fakultatywnej | 8 |
| którą student musi uzyskać w ramach praktyk zawodowych | 16 |
| którą student musi uzyskać w ramach zajęć z dziedziny nauk humanistycznych lub nauk społecznych | 6 |

Liczba godzin zajęć

Łączna liczba godzin zajęć: 5204

Praktyki zawodowe

Wymiar, zasady i forma odbywania praktyk zawodowych

As part of the medical and dental studies program, students are required to complete work experience in the amount of 480 teaching hours, which corresponds to 16 ECTS credits. Internships are carried out during the summer holidays (July-August) between the first and fourth year of studies, in hospitals, in outpatient clinics, the University Dental Clinic, dental offices, in the country and abroad. The internships take place within the scope of: health care organization; medical practice on general surgery, internal diseases or maxillofacial surgery; the assisting a dentist, and practice in the dental office. All apprenticeships are supervised by the internship coordinators.

Ukończenie studiów

Wymogi związane z ukończeniem studiów (praca dyplomowa/egzamin dyplomowy/inne)

The condition for graduation from the Medical and Dental Program at the Faculty of Medicine of the Jagiellonian University Medical College is to obtain credit for all subjects and practical training required by the study plan. In accordance with the current teaching standards, the graduate has theoretical and practical skills in prevention and treatment necessary to practice the profession of a doctor of dental surgery.

Efekty uczenia się

Wiedza

Ogólne

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|------|---|---------------|
| O.W1 | zagadnienia z zakresu medycyny i nauk przyrodniczych - w podstawowym zakresie | P7U_W |
| O.W2 | zagadnienia z zakresu stomatologii - w stopniu zaawansowanym | P7U_W, P7S_WG |
| O.W3 | problematykę edukacji prozdrowotnej | P7U_W |
| O.W4 | zasady prowadzenia badań naukowych i upowszechniania ich wyników | P7U_W |
| O.W5 | organizację praktyki lekarza dentysty i zasady zarządzania w ochronie zdrowia | P7U_W |

Szczegółowe

A. Nauki morfologiczne

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|------|---|-------|
| A.W1 | struktury organizmu ludzkiego: komórki, tkanki, narządy i układy, ze szczególnym uwzględnieniem układu stomatognatycznego | P7U_W |
| A.W2 | rozwój narządów i całego organizmu, ze szczególnym uwzględnieniem narządu żucia | P7U_W |
| A.W3 | budowę ciała ludzkiego w podejściu topograficznym i czynnościowym | P7U_W |
| A.W4 | rolę układu nerwowego w funkcjonowaniu poszczególnych narządów | P7U_W |
| A.W5 | znaczenie czynnościowe poszczególnych narządów i tworzonych przez nie układów | P7U_W |
| A.W6 | anatomiczne uzasadnienie badania przedmiotowego | P7U_W |

B. Naukowe podstawy medycyny

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|------|--|-------|
| B.W1 | znaczenie pierwiastków głównych i śladowych w procesach zachodzących w organizmie, z uwzględnieniem podaży, wchłaniania i transportu | P7U_W |
| B.W2 | znaczenie elektrolitów, układów buforowych i reakcji chemicznych w układach biologicznych | P7U_W |
| B.W3 | biochemiczne podstawy integralności organizmu ludzkiego | P7U_W |
| B.W4 | budowę i funkcje ważnych związków chemicznych występujących w organizmie ludzkim, w szczególności właściwości, funkcje, metabolizm i energetykę reakcji białek, kwasów nukleinowych, węglowodanów, lipidów, enzymów i hormonów | P7U_W |
| B.W5 | zasady gospodarki wapniowej i fosforanowej | P7U_W |
| B.W6 | rolę i znaczenie płynów ustrojowych, z uwzględnieniem śliny | P7U_W |

| Kod | Treść | PRK |
|--------------|--|---------------|
| B.W7 | zasady statyki i biomechaniki w odniesieniu do organizmu ludzkiego | P7U_W |
| B.W8 | mechanikę narządu żucia | P7U_W |
| B.W9 | metody obrazowania tkanek i narządów oraz zasady działania urządzeń diagnostycznych służących do tego celu | P7U_W, P7S_WG |
| B.W10 | zasady działania urządzeń ultradźwiękowych | P7U_W |
| B.W11 | zasady fotometrii i światłowodów oraz wykorzystania źródeł światła w stomatologii | P7U_W, P7S_WG |
| B.W12 | zasady działania laserów w stomatologii | P7U_W, P7S_WG |
| B.W13 | zasady działania sprzętu stomatologicznego | P7U_W, P7S_WG |
| B.W14 | podstawowe pojęcia z zakresu biologii i ekologii | P7U_W |
| B.W15 | współzależności między organizmami w ekosystemie | P7U_W |
| B.W16 | interakcje w układzie pasożyt - żywiciel | P7U_W |
| B.W17 | wybrane zagadnienia z zakresu genetyki i biologii molekularnej | P7U_W |
| B.W18 | kliniczne zastosowanie zasad genetyki | P7U_W |
| B.W19 | funkcje życiowe człowieka | P7U_W |
| B.W20 | neurohormonalną regulację procesów fizjologicznych | P7U_W |
| B.W21 | zasady równowagi kwasowo-zasadowej oraz transportu tlenu i dwutlenku węgla w organizmie | P7U_W |
| B.W22 | zasady metabolizmu i żywienia | P7U_W |
| B.W23 | wartość liczbowa podstawowych zmiennych fizjologicznych i zmiany wartości liczbowych | P7U_W |

C. Nauki przedkliniczne

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|--------------|---|---------------|
| C.W1 | rodzaje i gatunki oraz budowę wirusów, bakterii, grzybów i pasożytów, ich cechy biologiczne i mechanizmy chorobotwórczości | P7U_W |
| C.W2 | fizjologiczną florę bakteryjną człowieka | P7U_W |
| C.W3 | podstawy epidemiologii zarażeń wirusowych i bakteryjnych, zakażeń grzybiczych i pasożytniczych oraz dróg ich szerzenia się w organizmie człowieka | P7U_W |
| C.W4 | gatunki bakterii, wirusów i grzybów będących najczęstszymi czynnikami etiologicznymi zakażeń i infekcji | P7U_W, P7S_WG |
| C.W5 | podstawy dezynfekcji, sterylizacji i postępowania aseptycznego | P7U_W, P7S_WG |
| C.W6 | czynniki chorobotwórcze zewnętrzne i wewnętrzne | P7U_W |
| C.W7 | budowę układu odpornościowego i jego rolę | P7U_W, P7S_WG |
| C.W8 | humoralne i komórkowe mechanizmy odporności wrodzonej i nabytej oraz mechanizmy reakcji nadwrażliwości i procesów autoimmunologicznych | P7U_W |
| C.W9 | zjawisko powstawania lekooporności | P7U_W |
| C.W10 | podstawy immunodiagnostyki i immunomodulacji | P7U_W |
| C.W11 | patomechanizm chorób alergicznych, wybranych chorób uwarunkowanych nadwrażliwością, autoimmunizacyjnych i niedoborów odporności | P7U_W |

| Kod | Treść | PRK |
|--------------|---|---------------|
| C.W12 | pojęcia homeostazy, adaptacji, oporności, odporności, skłonności, podatności, mechanizmów kompensacyjnych, sprzężeń zwrotnych i mechanizmu „błędnego koła” | P7U_W |
| C.W13 | pojęcie zdrowia i choroby, mechanizmów powstawania oraz rozwoju procesu chorobowego na poziomie molekularnym, komórkowym, tkankowym oraz ogólnoustrojowym, objawów klinicznych choroby, rokowań i powikłań choroby | P7U_W |
| C.W14 | mechanizmy odczynu zapalnego i gojenia się ran | P7U_W |
| C.W15 | podstawowe zaburzenia regulacji wydzielania hormonów, gospodarki wodnej i elektrolitowej, równowagi kwasowo-zasadowej, pracy nerek i płuc oraz mechanizmy powstawania i skutki zaburzeń w układzie sercowo-naczyniowym, w tym wstrząs | P7U_W, P7S_WG |
| C.W16 | metody diagnostyczne wykorzystywane w patomorfologii oraz rolę badań laboratoryjnych w profilaktyce i rozpoznawaniu zaburzeń narządowych i układowych | P7U_W |
| C.W17 | znamiona śmierci i zmiany pośmiertne oraz zasady techniki i diagnostyki sekcyjnej zwłok | P7U_W |
| C.W18 | mechanizmy działania leków oraz farmakokinetykę i biotransformację poszczególnych grup leków | P7U_W, P7S_WG |
| C.W19 | wskazania oraz przeciwwskazania do stosowania leków, ich dawkowanie, działania niepożądane i toksyczne oraz interakcje między lekami | P7U_W, P7S_WG |
| C.W20 | zasady terapii zakażeń wirusowych, bakteryjnych, grzybiczych i pasożytniczych | P7U_W |
| C.W21 | zasady zapobiegania bólowi i lękowi oraz zwalczania ich, a także farmakologię leków stosowanych w stanach zagrożenia życia | P7U_W, P7S_WG |
| C.W22 | zasady zapisywania wybranych postaci leków gotowych i recepturowych na receptę | P7U_W |
| C.W23 | wyposażenie gabinetu stomatologicznego i instrumentarium stosowane w zabiegach stomatologicznych | P7U_W, P7S_WG |
| C.W24 | definicję oraz klasyfikację podstawowych i pomocniczych materiałów stomatologicznych | P7U_W, P7S_WG |
| C.W25 | skład, budowę, sposób wiązania, właściwości, przeznaczenie i sposób użycia materiałów stomatologicznych | P7U_W, P7S_WG |
| C.W26 | właściwości powierzchniowe twardych tkanek zęba oraz biomateriałów stomatologicznych | P7U_W, P7S_WG |
| C.W27 | zjawisko adhezji i mechanizmów wytwarzania adhezyjnego połączenia oraz procedury adhezyjnego przygotowania powierzchni szkliva, zębiny oraz biomateriałów stomatologicznych | P7U_W, P7S_WG |
| C.W28 | podstawowe procedury kliniczne rekonstrukcji tkanek twardych zębów i leczenia endodontycznego oraz metody i techniczno-laboratoryjne procedury wykonywania uzupełnień protetycznych | P7U_W, P7S_WG |
| C.W29 | mechanizmy degradacji (korozji) biomateriałów stomatologicznych w jamie ustnej i ich wpływ na biologiczne właściwości materiałów | P7U_W, P7S_WG |
| C.W30 | mechanizmy prowadzące do patologii narządowych i ustrojowych, w tym chorób infekcyjnych, inwazyjnych, autoimmunologicznych, z niedoboru odporności, metabolicznych i genetycznych | |
| C.W31 | wpływ na organizm pacjenta czynników fizycznych, chemicznych i biologicznych oraz awitaminoz i stresu | P7U_W, P7S_WG |
| C.W32 | podstawowe procedury kliniczne profilaktyki periodontologicznej | P7U_W, P7S_WG |
| C.W33 | podstawowe procedury kliniczne profilaktyki ortodontycznej | P7U_W |

D. Nauki behawioralne

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|-------|---|----------------|
| D.W1 | aktualne poglądy na temat społecznego wymiaru zdrowia i choroby, wpływu środowiska społecznego (rodziny, sieci relacji społecznych) i nierówności społecznych oraz społeczno-kulturowych różnic na stan zdrowia, a także rolę stresu społecznego w zachowaniach zdrowotnych i autodestrukcyjnych; | P7U_W, P7S_WK |
| D.W2 | formy przemocy, modele wyjaśniające przemoc w rodzinie i przemoc w wybranych instytucjach, społeczne uwarunkowania różnych form przemocy oraz rolę lekarza i lekarza dentysty w jej rozpoznawaniu | P7U_W, P7S_WK |
| D.W3 | postawy społeczne wobec znaczenia zdrowia, choroby, niepełnosprawności i starości, konsekwencje społeczne choroby i niepełnosprawności oraz bariery społeczno-kulturowe, a także koncepcję jakości życia uwarunkowaną stanem zdrowia | P7S_WG, P7S_WK |
| D.W4 | znaczenie komunikacji werbalnej i niewerbalnej w procesie komunikowania się z pacjentem i pojęcie zaufania w interakcji z pacjentem | P7U_W |
| D.W5 | funkcjonowanie podmiotów systemu ochrony zdrowia oraz społeczną rolę lekarza i lekarza dentysty | P7U_W, P7S_WK |
| D.W6 | podstawowe psychologiczne mechanizmy funkcjonowania człowieka w zdrowiu i w chorobie | P7U_W |
| D.W7 | prawidłowości rozwoju psychicznego człowieka i rolę rodziny pacjenta w procesie leczenia | P7U_W |
| D.W8 | problematykę adaptacji pacjenta i jego rodziny do choroby jako sytuacji trudnej oraz do związanych z nią wydarzeń, w tym umierania i procesu żałoby rodziny | P7U_W |
| D.W9 | mechanizmy radzenia sobie ze stresem i jego rolę w etiopatogenezie i przebiegu chorób | P7U_W |
| D.W10 | mechanizmy uzależnień od substancji psychoaktywnych oraz cele i sposoby leczenia | P7U_W |
| D.W11 | zasady motywowania pacjenta do prozdrowotnych zachowań i informowania o niepomyślnym rokowaniu | P7U_W |
| D.W12 | zasady altruizmu i odpowiedzialności klinicznej | P7U_W |
| D.W13 | zasady funkcjonowania zespołu terapeutycznego | P7U_W |
| D.W14 | imperatyw i wzorzec zachowania lekarza i lekarza dentysty ustalony przez samorząd zawodowy lekarzy i lekarzy dentystów | P7U_W |
| D.W15 | prawa pacjenta | P7S_WG, P7S_WK |
| D.W16 | historię medycyny, ze szczególnym uwzględnieniem historii stomatologii | P7U_W, P7S_WK |
| D.W17 | proces kształtowania się nowych specjalności w zakresie dyscypliny naukowej - nauki medyczne i osiągnięcia czołowych przedstawicieli medycyny polskiej i światowej | P7U_W |

E. Nauki kliniczne ogólnolekarskie (niezabiegowe)

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|------|--|---------------|
| E.W1 | związek między nieprawidłowościami morfologicznymi a funkcją zmienionych narządów i układów oraz objawami klinicznymi a możliwościami diagnostyki i leczenia | P7U_W, P7S_WG |

| Kod | Treść | PRK |
|--------------|---|---------------|
| E.W2 | podstawowe metody badania lekarskiego oraz rolę badań dodatkowych w rozpoznawaniu, monitorowaniu, rokowaniu i profilaktyce zaburzeń narządowych i układowych, ze szczególnym uwzględnieniem ich oddziaływania na tkanki jamy ustnej | P7U_W, P7S_WG |
| E.W3 | etiopatogenezę i symptomatologię chorób układu oddechowego, krążenia, krwiotwórczego, moczowo-płciowego, immunologicznego, pokarmowego, ruchu oraz gruczołów dokrewnych, ze szczególnym uwzględnieniem jednostek chorobowych, których objawy występują w jamie ustnej | P7U_W, P7S_WG |
| E.W4 | zasady postępowania z poszkodowanymi w urazach wielonarządowych | P7U_W |
| E.W5 | zasady organizacji akcji ratunkowej w katastrofach i awariach, fazy akcji ratunkowej i zakres udzielania pomocy poszkodowanym | P7U_W |
| E.W6 | neurologiczne skutki przewlekłego zażywania leków | P7U_W |
| E.W7 | objawy ostrych chorób jamy brzusznej, zatrucia, zakażenia i posocznicy | P7U_W |
| E.W8 | objawy wirusowego zapalenia wątroby, zakażenia wirusem HIV i zespołu nabytego upośledzenia odporności (AIDS) w chorobach zakaźnych i pasożytniczych | P7U_W |
| E.W9 | zasady uodparniania przeciw chorobom zakaźnym u dzieci i dorosłych | P7U_W |
| E.W10 | uwarunkowania hormonalne organizmu kobiety w poszczególnych okresach życia | P7U_W |
| E.W11 | wpływ odżywiania w ciąży i uzależnień kobiety w ciąży na rozwój płodu | P7U_W |
| E.W12 | zasady opieki stomatologicznej nad kobietą w ciąży | P7U_W |
| E.W13 | zasady diagnostyki chorób oczu, w tym urazów oka | P7U_W |
| E.W14 | rolę zakażeń odogniskowych w chorobach narządu wzroku | P7U_W |
| E.W15 | metody diagnostyki cytologicznej oraz cytodagnostyczne kryteria rozpoznawania i różnicowania chorób nowotworowych i nienowotworowych | P7U_W |
| E.W16 | immunologiczne aspekty transplantacji i krwiolecznictwa | P7U_W |
| E.W17 | przyczyny i mechanizmy zatrzymania krążenia i oddychania oraz zasady prowadzenia reanimacji i postępowania po reanimacji | P7U_W, P7S_WG |
| E.W18 | stany zagrożenia życia | P7U_W, P7S_WG |
| E.W19 | metody stosowane w rehabilitacji medycznej, jej cele i metodykę planowania | P7U_W |
| E.W20 | przypadki, w których pacjenta należy skierować do szpitala | P7U_W |

F. Nauki kliniczne kierunkowe (zabiegowe)

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|-------------|--|---------------|
| F.W1 | normy zgryzowe na różnych etapach rozwoju osobniczego i odchylenia od norm | P7U_W, P7S_WG |
| F.W2 | zasady postępowania profilaktyczno-leczniczego w chorobach narządu żucia w różnym okresie rozwoju | P7U_W |
| F.W3 | florę wirusową, bakteryjną i grzybiczą jamy ustnej i jej znaczenie | P7U_W, P7S_WG |
| F.W4 | objawy, przebieg i sposoby postępowania w określonych jednostkach chorobowych jamy ustnej, głowy i szyi, z uwzględnieniem grup wiekowych | P7U_W, P7S_WG |
| F.W5 | zasady postępowania w przypadku chorób miazgi i zmineralizowanych tkanek zębów oraz urazów zębów i kości twarzy | P7U_W, P7S_WG |
| F.W6 | zasady postępowania w przypadku chorób tkanek okołowierzchołkowych | P7U_W, P7S_WG |

| Kod | Treść | PRK |
|--------------|---|---------------|
| F.W7 | morfologię jam zębowych i zasady leczenia endodontycznego oraz instrumentarium stosowane w tym leczeniu | P7U_W, P7S_WG |
| F.W8 | zasady postępowania w przypadku torbieli, stanów przednowotworowych oraz nowotworów głowy i szyi | P7U_W, P7S_WG |
| F.W9 | diagnostykę i sposoby leczenia przyzębia oraz chorób błony śluzowej jamy ustnej | P7U_W, P7S_WG |
| F.W10 | wskazania i przeciwwskazania do leczenia z wykorzystaniem wszczepów stomatologicznych | P7U_W, P7S_WG |
| F.W11 | wskazania i przeciwwskazania do wykonania zabiegów w zakresie stomatologii estetycznej | P7U_W, P7S_WG |
| F.W12 | przyczyny powikłań chorób układu stomatognatycznego i zasady postępowania w przypadku takich powikłań | P7U_W, P7S_WG |
| F.W13 | podstawy antybiotykoterapii i oporności przeciwanitybiotykowej | P7U_W, P7S_WG |
| F.W14 | metody rehabilitacji narządu żucia | P7U_W, P7S_WG |
| F.W15 | metody terapeutyczne ograniczania i znoszenia bólu oraz ograniczania lęku i stresu | P7U_W, P7S_WG |
| F.W16 | zasady znieczulenia w zabiegach stomatologicznych i podstawowe środki farmakologiczne | P7U_W |
| F.W17 | zasady budowy i działania aparatów ortodontycznych ruchomych i stałych | P7U_W |
| F.W18 | zasady diagnostyki radiologicznej | P7U_W |
| F.W19 | patomechanizm oddziaływania chorób jamy ustnej na ogólny stan zdrowia | P7U_W |
| F.W20 | patomechanizm oddziaływania chorób ogólnych lub stosowanych terapii na jamę ustną | P7U_W, P7S_WG |
| F.W21 | profilaktykę chorób jamy ustnej | P7U_W, P7S_WG |
| F.W22 | zasady postępowania w przypadku chorób tkanek narządu żucia, urazów zębów i kości szczęk | P7U_W, P7S_WG |
| F.W23 | specyfikę opieki stomatologicznej nad pacjentem obciążonym chorobą ogólną i zasady współpracy z lekarzem prowadzącym chorobę podstawową | P7U_W, P7S_WG |

G. Prawno-organizacyjne podstawy medycyny

Absolwent zna i rozumie:

| Kod | Treść | PRK |
|-------------|---|---------------|
| G.W1 | pojęcie zdrowia publicznego oraz cele, zadania i strukturę systemu opieki zdrowotnej | P7U_W, P7S_WK |
| G.W2 | konceptje i modele promocji zdrowia | P7U_W, P7S_WK |
| G.W3 | podstawowe pojęcia z zakresu profilaktyki, promocji zdrowia oraz higieny środowiskowej | P7U_W |
| G.W4 | podstawowe pojęcia związane ze zdrowiem, stylem życia i stanem zdrowia populacji | P7U_W, P7S_WK |
| G.W5 | metody określania potrzeb zdrowotnych społeczeństwa | P7U_W, P7S_WK |
| G.W6 | sytuację zdrowotną w Rzeczypospolitej Polskiej i na świecie | P7U_W, P7S_WK |
| G.W7 | strategię polityki zdrowotnej i społecznej Rzeczypospolitej Polskiej oraz Unii Europejskiej | P7U_W, P7S_WK |
| G.W8 | aspekty organizacyjne i prawne funkcjonowania polskiego systemu opieki zdrowotnej | P7U_W, P7S_WK |
| G.W9 | zasady zarządzania podmiotami leczniczymi | P7U_W, P7S_WK |

| Kod | Treść | PRK |
|--------------|--|----------------|
| G.W10 | zasady funkcjonowania, zarządzania i informatyzacji podmiotów leczniczych i innych instytucji zdrowia publicznego | P7U_W, P7S_WK |
| G.W11 | zasady funkcjonowania podstawowej opieki zdrowotnej | P7U_W, P7S_WK |
| G.W12 | zasady negocjacji i zawierania umów o udzielanie świadczeń zdrowotnych w sektorze publicznym i niepublicznym | P7U_W, P7S_WK |
| G.W13 | etiologię chorób zawodowych określonych w przepisach prawa, w tym związanych z wykonywaniem zawodu lekarza dentystry | P7S_WG, P7S_WK |
| G.W14 | wskaźniki stanu zdrowia ludności i zasady ich oceny | P7U_W |
| G.W15 | zasady zapobiegania chorobom i poprawy stanu zdrowia | P7U_W |
| G.W16 | zasady epidemiologicznego opracowania ogniska choroby zakaźnej | P7U_W |
| G.W17 | zasady planowania i ewaluacji działań profilaktycznych | P7U_W |
| G.W18 | zasady ergonomicznej organizacji pracy w gabinecie stomatologicznym i przeprowadzania zabiegów stomatologicznych | P7U_W |
| G.W19 | zasady bezpieczeństwa i higieny pracy w stomatologii | P7U_W |
| G.W20 | zasady postępowania w sytuacji zagrożenia epidemiologicznego | P7U_W |
| G.W21 | źródła stresu i możliwości ich eliminacji | P7U_W |
| G.W22 | zasady odpowiedzialności zawodowej lekarza dentystry (moralnej, etycznej, prawnej, materialnej i służbowej), a także obowiązki lekarza dentystry wobec pacjenta | P7U_W, P7S_WK |
| G.W23 | problematykę błędów lekarskiego: diagnostycznego, technicznego, terapeutycznego i organizacyjnego | P7U_W |
| G.W24 | zasady odpowiedzialności za naruszenie zasad wykonywania zawodu lekarza dentystry | P7U_W |
| G.W25 | podstawy prawne komunikowania się w medycynie | P7U_W, P7S_WK |
| G.W26 | prawa pacjenta | P7S_WG, P7S_WK |
| G.W27 | zasady etyki i deontologii lekarskiej, etyczne dylematy współczesnej medycyny wynikające z dynamicznego rozwoju nauki i technologii biomedycznych, a także zasady etycznego postępowania lekarza dentystry | P7U_W |
| G.W28 | podstawy prawne funkcjonowania zawodów medycznych oraz samorządu zawodowego lekarzy i lekarzy dentystry w Rzeczypospolitej Polskiej | P7U_W |
| G.W29 | przepisy prawa dotyczące prowadzenia działalności w zakresie opieki zdrowotnej | P7S_WG, P7S_WK |
| G.W30 | podstawowe obowiązki pracownika i pracodawcy | P7U_W |
| G.W31 | zasady udzielania świadczeń w razie choroby, macierzyństwa, wypadków przy pracy i chorób zawodowych | P7U_W |
| G.W32 | zasady orzekania o czasowej niezdolności do pracy, niezdolności do pracy dla celów rentowych, a także o niepełnosprawności | P7U_W |
| G.W33 | zasady postępowania ze zwłokami | P7U_W |
| G.W34 | zasady prowadzenia, przechowywania i udostępniania dokumentacji medycznej oraz ochrony danych osobowych | P7U_W |
| G.W35 | zagadnienia dotyczące serologii i genetyki sądowo-lekarskiej | P7U_W |
| G.W36 | podstawy toksykologii sądowo-lekarskiej | P7U_W |

| Kod | Treść | PRK |
|-------|--|-------------------|
| G.W37 | zasady sporządzania opinii w charakterze biegłego w sprawach karnych | P7S_WG, P7S_WK |
| G.W38 | sądowe aspekty etologii człowieka | P7U_W |

Umiejętności

Ogólne

Absolwent potrafi:

| Kod | Treść | PRK |
|------|--|--------|
| O.U1 | przeprowadzić diagnostykę najczęstszych chorób, ocenić i opisać stan somatyczny i psychiczny pacjenta | P7U_U |
| O.U2 | prowadzić profesjonalną opiekę dentystyczną w zakresie profilaktyki, leczenia, promocji zdrowia i edukacji prozdrowotnej | P7U_U |
| O.U3 | zaplanować leczenie w zakresie problemów stomatologicznych | P7U_U |
| O.U4 | prowadzić postępowanie kliniczne oparte na wiedzy i respektujące zasady humanitaryzmu | P7U_U |
| O.U5 | planować własną aktywność edukacyjną i stale doksztalać się w celu aktualizacji wiedzy | P7U_U |
| O.U6 | inspirować proces uczenia się innych osób | P7S_UU |
| O.U7 | komunikować się z pacjentem i jego rodziną w atmosferze zaufania, z uwzględnieniem potrzeb pacjenta | P7U_U |
| O.U8 | komunikować się ze współpracownikami w zespole i dzielić się wiedzą | P7S_UO |
| O.U9 | krytycznie oceniać wyniki badań naukowych i odpowiednio uzasadniać stanowisko | P7U_U |

Szczegółowe

A. Nauki morfologiczne

Absolwent potrafi:

| Kod | Treść | PRK |
|------|---|-------|
| A.U1 | interpretować relacje anatomiczne zilustrowane podstawowymi metodami badań diagnostycznych z zakresu radiologii (zdjęcia przeglądowe i z użyciem środków kontrastowych) | P7U_U |
| A.U2 | obsługiwać mikroskop, w tym w zakresie korzystania z immersji, oraz rozpoznawać pod mikroskopem strukturę histologiczną narządów i tkanek, a także dokonywać opisu i interpretacji budowy mikroskopowej komórek, tkanek i narządów oraz ich funkcji | P7U_U |

B. Naukowe podstawy medycyny

Absolwent potrafi:

| Kod | Treść | PRK |
|-------------|--|------------|
| B.U1 | odnosić zjawiska chemiczne do procesów zachodzących w jamie ustnej | P7S_UW |
| B.U2 | interpretować zjawiska fizyczne zachodzące w narządzie żucia | P7S_UW |
| B.U3 | wykorzystywać procesy fizyczne właściwe dla pracy lekarza dentysty | P7S_UW |
| B.U4 | wykorzystywać pojęcia biologiczne i ekologiczne w kontekście człowiek – środowisko życia | P7S_UW |
| B.U5 | stosować wiedzę z zakresu genetyki i biologii molekularnej w pracy klinicznej | P7S_UW |

C. Nauki przedkliniczne

Absolwent potrafi:

| Kod | Treść | PRK |
|--------------|--|------------|
| C.U1 | pobierać odpowiednio dobrany rodzaj materiału biologicznego do badania mikrobiologicznego w zależności od umiejscowienia i przebiegu zakażenia | P7S_UW |
| C.U2 | interpretować wyniki badań mikrobiologicznych, serologicznych i antybiogramu | P7S_UW |
| C.U3 | dobierać i wykonywać właściwe testy wskazujące na liczebność bakterii w płynach ustrojowych | P7S_UW |
| C.U4 | przewidywać i wyjaśniać złożone patomechanizmy zaburzeń prowadzących do powstawania chorób | P7S_UW |
| C.U5 | analizować przebieg kliniczny chorób w procesach patologicznych | P7S_UW |
| C.U6 | określać zmiany patologiczne komórek, tkanek i narządów w zakresie zaburzeń w krążeniu, zmian wstecznych, zmian postępowych oraz zapaleń | P7S_UW |
| C.U7 | określać zmiany patologiczne wywołane zakażeniem wirusem HIV i obserwowane u pacjentów z zespołem nabytego upośledzenia odporności (AIDS) | P7S_UW |
| C.U8 | dobierać leki w odpowiednich dawkach i ordynować leki według wskazań | P7S_UW |
| C.U9 | przeprowadzać leczenie endodontyczne oraz rekonstruować brakujące zmineralizowane tkanki w zębie fantomowym | P7S_UW |
| C.U10 | stosować techniki adhezyjne | P7S_UW |
| C.U11 | dokonywać wyboru biomateriałów odtwórczych, protetycznych oraz łączących, w oparciu o własności materiałów i warunki kliniczne | P7S_UW |
| C.U12 | odwzorowywać anatomiczne warunki zgryzowe i dokonywać analizy okluzji | P7S_UW |
| C.U13 | projektować uzupełnienia protetyczne zgodnie z zasadami ich wykonania laboratoryjnego | P7S_UW |
| C.U14 | określać zmiany patologiczne komórek, tkanek i narządów według podstawowych mechanizmów | |
| C.U15 | planować podstawowe etapy opieki profilaktycznej u pacjentów z obszaru potrzeb periodontologicznych | P7S_UW |
| C.U16 | planować podstawowe etapy opieki profilaktycznej u pacjentów z obszaru potrzeb ortodontycznych | P7S_UW |

D. Nauki behawioralne

Absolwent potrafi:

| Kod | Treść | PRK |
|--------------|--|---------------|
| D.U1 | uwzględniać w procesie postępowania terapeutycznego subiektywne potrzeby i oczekiwania pacjenta wynikające z uwarunkowań społeczno-kulturowych | P7S_UW |
| D.U2 | dostrzegać i reagować na oznaki zachowań antyzdrowotnych i autodestrukcyjnych | P7S_UW |
| D.U3 | wybierać takie leczenie, które minimalizuje konsekwencje społeczne dla pacjenta | P7S_UW |
| D.U4 | budować atmosferę zaufania podczas całego procesu diagnostycznego i leczenia | P7S_UW |
| D.U5 | podejmować działania zmierzające do poprawy jakości życia pacjenta i zapobiegania pogorszeniu się jej w przyszłości | P7S_UW |
| D.U6 | przeprowadzać rozmowę z pacjentem dorosłym, dzieckiem i rodziną z zastosowaniem techniki aktywnego słuchania i wyrażania empatii | P7S_UW |
| D.U7 | identyfikować czynniki ryzyka wystąpienia przemocy, rozpoznawać przemoc i odpowiednio reagować | P7S_UW |
| D.U8 | stosować w podstawowym zakresie psychologiczne interwencje motywujące i wspierające | P7S_UW |
| D.U9 | rozpoznawać przesłanki podjęcia działań lekarskich bez zgody pacjenta lub z zastosowaniem przymusu wobec pacjenta i stosować środki przewidziane przepisami prawa powszechnie obowiązującego | P7S_UW |
| D.U10 | pracować w zespole wielospecjalistycznym, w środowisku wielokulturowym i wielonarodowościowym | P7U_U, P7S_UO |
| D.U11 | przestrzegać wzorców etycznych w działaniach zawodowych | P7U_U |
| D.U12 | przestrzegać praw pacjenta | P7U_U |
| D.U13 | wykorzystywać i przetwarzać informacje stosując narzędzia informatyczne i korzystając z nowoczesnych źródeł wiedzy medycznej | P7U_U |
| D.U14 | planować pracę zespołu stomatologicznego oraz wyposażenie gabinetu stomatologicznego, zgodnie z zasadami ergonomii i bezpieczeństwa pracy | P7U_U, P7S_UO |
| D.U15 | porozumiewać się z pacjentem w jednym z języków obcych na poziomie B2+ Europejskiego Systemu Opisu Kształcenia Językowego | |
| D.U16 | krytycznie analizować piśmiennictwo medyczne, w tym w języku angielskim, i wyciągać wnioski | |

E. Nauki kliniczne ogólnolekarskie (niezabiegowe)

Absolwent potrafi:

| Kod | Treść | PRK |
|-------------|--|---------------|
| E.U1 | przeprowadzać diagnostykę różnicową najczęstszych chorób osób dorosłych | P7U_U, P7S_UW |
| E.U2 | oceniać i opisywać stan somatyczny i psychiczny pacjenta | P7U_U |
| E.U3 | planować postępowanie diagnostyczne i terapeutyczne w przypadku najczęstszych chorób osób dorosłych | P7U_U, P7S_UW |
| E.U4 | interpretować wyniki badań laboratoryjnych | P7U_U |
| E.U5 | identyfikować prawidłowe i patologiczne struktury i narządy w dodatkowych badaniach obrazowych (RTG, USG, tomografia komputerowa - CT) | P7U_U, P7S_UW |
| E.U6 | planować postępowanie w przypadku ekspozycji na zakażenie przenoszone drogą krwi | P7U_U |
| E.U7 | dokonywać kwalifikacji pacjenta do szczepień | P7U_U, P7S_UW |
| E.U8 | rozpoznawać ryzyko zagrożenia życia | P7U_U |

| Kod | Treść | PRK |
|--------------|---|---------------|
| E.U9 | opisywać i rozpoznawać objawy wstrząsu i ostrej niewydolności krążenia | P7U_U, P7S_UW |
| E.U10 | rozpoznawać objawy urazów mózgu i chorób naczyniowych mózgu, zespołów otępiennych i zaburzeń świadomości | P7U_U, P7S_UW |
| E.U11 | diagnozować bóle głowy i twarzy oraz choroby neurologiczne dorosłych i dzieci stwarzające problemy w praktyce stomatologicznej | P7U_U |
| E.U12 | rozpoznawać choroby jamy nosowo-gardłowej, ich etiologię i patomechanizm | P7U_U, P7S_UW |
| E.U13 | wstępnie diagnozować zmiany nowotworowe w obrębie nosa, gardła i krtani | P7U_U, P7S_UW |
| E.U14 | diagnozować i leczyć choroby skóry: infekcyjne, alergiczne i przenoszone drogą płciową | P7U_U |
| E.U15 | rozpoznawać nowotwory skóry i stany przednowotworowe | P7U_U |
| E.U16 | rozpoznawać dermatozy i kolagenozy przebiegające z objawami w obrębie błony śluzowej jamy ustnej | P7U_U, P7S_UW |
| E.U17 | rozpoznawać choroby związane z nałogiem palenia tytoniu, alkoholizmem i innymi uzależnieniami | P7U_U |
| E.U18 | diagnozować choroby przebiegające z powiększeniem węzłów chłonnych szyi i okolicy podżuchwowej oraz choroby zakaźne, ze szczególnym uwzględnieniem zmian w obrębie jamy ustnej | P7U_U, P7S_UW |
| E.U19 | omawiać i diagnozować wybrane jednostki chorobowe układu optycznego i ochronnego oka | P7U_U, P7S_UW |
| E.U20 | wykonywać podstawowe procedury i zabiegi medyczne: pomiar temperatury, pomiar tętna, nieinwazyjny pomiar ciśnienia tętniczego, leczenie tlenem, wentylację wspomaganą i zastępczą, wprowadzenie rurki ustno-gardłowej, przygotowanie pola operacyjnego, higieniczne i chirurgiczne odkażanie rąk, wstrzyknięcie dożylnie, domięśniowe i podskórne, pobieranie obwodowej krwi żyłnej, pobieranie wymazów z nosa, gardła i skóry, proste testy paskowe, pomiar stężenia glukozy we krwi | P7U_U |

F. Nauki kliniczne kierunkowe (zabiegowe)

Absolwent potrafi:

| Kod | Treść | PRK |
|--------------|---|---------------|
| F.U1 | przeprowadzać wywiad lekarski z pacjentem lub jego rodziną | P7U_U |
| F.U2 | przeprowadzać stomatologiczne badanie fizykalne pacjenta | P7U_U |
| F.U3 | wyjaśniać pacjentowi istotę jego dolegliwości, ustalać sposób leczenia potwierdzony świadomą zgodą pacjenta oraz rokowanie | P7U_U, P7S_UW |
| F.U4 | przekazać pacjentowi lub jego rodzinie informacje o niekorzystnym rokowaniu | P7U_U |
| F.U5 | pobierać i zabezpieczać materiał do badań diagnostycznych, w tym cytologicznych | P7U_U, P7S_UW |
| F.U6 | interpretować wyniki badań dodatkowych i konsultacji | P7U_U |
| F.U7 | ustalać wskazania i przeciwwskazania do wykonania określonego zabiegu stomatologicznego | P7U_U, P7S_UW |
| F.U8 | prowadzić leczenie ostrych i przewlekłych, zębopochodnych i niezębopochodnych procesów zapalnych tkanek miękkich jamy ustnej, przyzębia oraz kości szczęk | P7U_U |
| F.U9 | postępować w przypadku wystąpienia powikłań ogólnych i miejscowych podczas zabiegów stomatologicznych i po zabiegach stomatologicznych | P7U_U, P7S_UW |
| F.U10 | przepisywać leki, z uwzględnieniem ich interakcji i działań ubocznych | P7U_U, P7S_UW |

| Kod | Treść | PRK |
|--------------|---|---------------|
| F.U11 | prowadzić bieżącą dokumentację pacjenta, wypisywać skierowania na badania lub leczenie specjalistyczne stomatologiczne i ogólnomedyczne | P7U_U |
| F.U12 | formułować problemy badawcze w zakresie stomatologii | P7U_U, P7S_UW |
| F.U13 | przedstawiać wybrane problemy medyczne w formie ustnej lub pisemnej, w sposób adekwatny do poziomu odbiorców | P7U_U |
| F.U14 | ocenić ryzyko próchnicy z zastosowaniem testów bakteriologicznych i badań śliny | P7U_U, P7S_UW |
| F.U15 | ustalać leczenie w chorobach tkanek układu stomatognatycznego | P7U_U |
| F.U16 | stosować odpowiednie leki w czasie i po zabiegu stomatologicznym w celu zniesienia bólu i lęku | P7U_U |
| F.U17 | diagnozować i leczyć w podstawowym zakresie choroby przyzębia | P7U_U, P7S_UW |
| F.U18 | diagnozować, różnicować i klasyfikować wady zgryzu | P7U_U, P7S_UW |
| F.U19 | udzielać pomocy w przypadku uszkodzenia aparatu ortodontycznego | P7U_U |
| F.U20 | wykonywać proste aparaty ortodontyczne | P7U_U, P7S_UW |
| F.U21 | przeprowadzać leczenie zapobiegające wadom zgryzu w okresie uzębienia mlecznego i wczesnej wymiany uzębienia | P7U_U |
| F.U22 | przeprowadzić rehabilitację protetyczną w prostych przypadkach w zakresie postępowania klinicznego i laboratoryjnego | P7U_U, P7S_UW |
| F.U23 | opisywać zdjęcia zębowe i pantomograficzne | P7U_U |

G. Prawno-organizacyjne podstawy medycyny

Absolwent potrafi:

| Kod | Treść | PRK |
|--------------|--|---------------|
| G.U1 | analizować dane o stanie zdrowia populacji, dane epidemiologiczne i określać na ich podstawie stan zdrowia populacji | P7U_U, P7S_UW |
| G.U2 | opisywać wybrane zjawiska zdrowotne w skali populacyjnej oraz prognozować ich wpływ na funkcjonowanie opieki zdrowotnej | P7U_U |
| G.U3 | oceniać skalę problemów zdrowotnych oraz wskazywać priorytety zdrowotne i określać ich znaczenie w polityce zdrowotnej | P7U_U |
| G.U4 | analizować uwarunkowania sytuacji epidemiologicznej w aspekcie procesów społecznych i demograficznych | P7U_U, P7S_UW |
| G.U5 | tworzyć proste programy badawcze z zakresu profilaktyki i leczenia | P7U_U |
| G.U6 | identyfikować czynniki wpływające na politykę zdrowotną państwa | P7U_U |
| G.U7 | planować działania z zakresu profilaktyki i promocji zdrowia oraz wdrażać działania promocyjne dotyczące zdrowia populacji | P7U_U, P7S_UW |
| G.U8 | analizować różne systemy finansowania świadczeń zdrowotnych w Rzeczypospolitej Polskiej i innych państwach | P7U_U, P7S_UW |
| G.U9 | przygotowywać oferty konkursowe związane z udzielaniem świadczeń zdrowotnych | P7U_U, P7S_UW |
| G.U10 | zorganizować i prowadzić gabinet stomatologiczny | P7U_U, P7S_UW |
| G.U11 | pracować w zespole i kierować zespołem w gabinecie stomatologicznym | P7S_UO |
| G.U12 | rozpoznawać czynniki szkodliwe i uciążliwe w miejscu pracy, zamieszkania lub nauki | P7U_U |

| Kod | Treść | PRK |
|--------------|--|---------------|
| G.U13 | oceniać poziom zagrożeń dla zdrowia wynikających ze stanu powietrza, wody, gleby i jakości żywności | P7U_U, P7S_UW |
| G.U14 | potwierdzać lub wykluczać związek czynników środowiskowych z etiologią choroby, w tym choroby zawodowej | P7U_U |
| G.U15 | dostarczać pacjentowi potrzebnych informacji w zakresie promocji zdrowia jamy ustnej | P7U_U |
| G.U16 | przekazywać pacjentowi informacje na temat czynników ryzyka i sposobów zapobiegania najczęstszym chorobom społecznym w Rzeczypospolitej Polskiej | P7U_U |
| G.U17 | interpretować podstawowe wskaźniki epidemiologiczne, definiować i oceniać rzetelność i trafność testów stosowanych w badaniach przesiewowych | P7U_U |
| G.U18 | projektować badania epidemiologiczne | P7U_U, P7S_UW |
| G.U19 | przeprowadzać dochodzenie epidemiologiczne | P7U_U |
| G.U20 | pracować z zachowaniem zasad ergonomicznej organizacji pracy | P7U_U |
| G.U21 | stosować przepisy sanitarno-epidemiologiczne oraz dotyczące bezpieczeństwa i higieny pracy | P7U_U |
| G.U22 | działać w warunkach niepewności i stresu | P7U_U |
| G.U23 | wskazywać podobieństwa i różnice między normami etycznymi i prawnymi | P7U_U, P7S_UW |
| G.U24 | stosować przepisy prawa dotyczące wykonywania zawodu lekarza dentysty | P7U_U |
| G.U25 | wyjaśniać i stosować normy zawarte w Kodeksie Etyki Lekarskiej oraz międzynarodowe normy etyki lekarskiej | P7U_U |
| G.U26 | prowadzić dokumentację medyczną | P7U_U |
| G.U27 | wystawiać orzeczenia lekarskie | P7U_U |
| G.U28 | oceniać zmiany pośmiertne | P7U_U, P7S_UW |
| G.U29 | dokonywać identyfikacji zwłok na podstawie badania stomatologicznego | P7U_U |
| G.U30 | oceniać skutki urazów twarzy i czaszki oraz dokonywać ich kwalifikacji w postępowaniu karnym i cywilnym | P7U_U |

Kompetencje społeczne

Ogólne

Absolwent jest gotów do:

| Kod | Treść | PRK |
|-------------|--|----------------|
| O.K1 | nawiązania i utrzymania głębokiego oraz pełnego szacunku kontaktu z pacjentem, a także okazywania zrozumienia dla różnic światopoglądowych i kulturowych | P7U_K, P7S_KR |
| O.K2 | kierowania się dobrem pacjenta | P7S_KO, P7S_KR |
| O.K3 | przestrzegania tajemnicy lekarskiej i praw pacjenta | P7S_KO, P7S_KR |
| O.K4 | podejmowania działań wobec pacjenta w oparciu o normy i zasady etyczne, ze świadomością społecznych uwarunkowań i ograniczeń wynikających z choroby | P7U_K, P7S_KR |

| Kod | Treść | PRK |
|--------------|--|----------------|
| O.K5 | dostrzegania i rozpoznawania własnych ograniczeń oraz dokonywania samooceny deficytów i potrzeb edukacyjnych | P7S_KO, P7S_KR |
| O.K6 | propagowania zachowań prozdrowotnych | P7S_KO, P7S_KR |
| O.K7 | korzystania z obiektywnych źródeł informacji | P7S_KO, P7S_KR |
| O.K8 | formułowania wniosków z własnych pomiarów lub obserwacji | P7S_KK |
| O.K9 | wdrażania zasad koleżeństwa zawodowego i współpracy w zespole specjalistów, w tym z przedstawicielami innych zawodów medycznych, także w środowisku wielokulturowym i wielonarodowościowym | P7S_KO, P7S_KR |
| O.K10 | formułowania opinii dotyczących różnych aspektów działalności zawodowej | P7S_KK |
| O.K11 | przyjęcia odpowiedzialności związanej z decyzjami podejmowanymi w ramach działalności zawodowej, w tym w kategoriach bezpieczeństwa własnego i innych osób | P7S_KO, P7S_KR |

Plany studiów

Semestr 1

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--|-----------------|---|-------------|---------------------|---|----|
| Physical Education | | ćwiczenia: 30 | - | - | 0 | Os |
| Anatomy with embryology and basics of genetics | A | ćwiczenia: 75 e-learning: 33 | - | - | 0 | Os |
| Histology with Cytophysiology | A | ćwiczenia: 20 e-learning: 20 | - | - | 0 | Os |
| Medical Polish | D | lektorat: 30 | - | - | 0 | Or |
| Computer science and medical statistics | C | ćwiczenia: 20 | 1,0 | zaliczenie | 0 | Or |
| History of medicine and dentistry | D | seminarium: 11 e-learning: 14 | 2,0 | egzamin | 0 | Os |
| Philosophy | D | seminarium: 15 | 1,0 | zaliczenie na ocenę | 0 | Os |
| First aid and elements of nursing | F | e-learning: 5 symulacje: 10 | - | - | 0 | Os |
| Dental Prophylaxix | F | ćwiczenia: 28 e-learning: 5 symulacje: 12 | 3,0 | zaliczenie na ocenę | 0 | Os |
| Health and Safety | | szkolenie BHK: 5 | - | zaliczenie | 0 | Os |

It is necessary to choose 1 elective subject from each group – total 4 electives (one during each year). A student must obtain 8 ECTS during studies.

Semestr 2

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--|-----------------|---------------------------------|-------------|---------------------|---|----|
| Physical Education | | ćwiczenia: 30 | - | zaliczenie | 0 | Os |
| Anatomy with embryology and basics of genetics | A | ćwiczenia: 74 e-learning: 32 | 22,0 | egzamin | 0 | Os |
| Histology with Cytophysiology | A | ćwiczenia: 32 e-learning: 30 | 12,0 | egzamin | 0 | Os |
| Medical Polish | D | lektorat: 30 | 3,0 | zaliczenie | 0 | Or |
| First aid and elements of nursing | F | e-learning: 5 symulacje: 10 | 2,0 | zaliczenie na ocenę | 0 | Os |
| Hygiene | G | ćwiczenia: 26 | 2,0 | zaliczenie na ocenę | 0 | Os |
| Dental Materials and Equipment | C | e-learning: 10 symulacje: 20 | 3,0 | zaliczenie | 0 | Or |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|--|-------------|---------------------|---|----|
| Propaedeutics of Medicine and Dentistry | E | ćwiczenia: 16 seminarium: 4 e-learning: 14 | 3,0 | zaliczenie na ocenę | O | Os |
| Medical practice in general surgery, internal diseases or maxillofacial surgery - summer internship | I | praktyka zawodowa: 60 | 2,0 | zaliczenie | O | Os |
| Health care organization - summer clerkship | I | praktyka zawodowa: 60 | 2,0 | zaliczenie | O | Os |
| HUMANITIES AND BEHAVIORAL SCIENCES | D | | | | O | Os |
| Main aspects of Polish history and culture | D | wykład: 30 | 2,0 | zaliczenie na ocenę | F | Os |
| Medicine of the Third Reich | D | wykład: 30 | 2,0 | zaliczenie na ocenę | F | Os |
| Introduction to the philosophy of science | D | seminarium: 30 | 2,0 | zaliczenie na ocenę | F | Os |

Semestr 3

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--|-----------------|---|-------------|---------------------|---|----|
| Biochemistry with Elements of Chemistry | B | ćwiczenia: 18 seminarium: 23 e-learning: 24 | - | - | O | Os |
| Human physiology | B | ćwiczenia: 26 e-learning: 54 | - | - | O | Os |
| Propaedeutics of Integrated Dentistry | F | seminarium: 14 e-learning: 8 symulacje: 56 | - | - | O | Or |
| Medical Polish | D | lektorat: 30 | - | - | O | Or |
| Medical Psychology | D | ćwiczenia: 45 | 3,0 | zaliczenie na ocenę | O | Os |
| Sociology of medicine in dentistry | D | ćwiczenia: 20 | 1,0 | zaliczenie na ocenę | O | Os |
| Dental Materials and Equipment | C | seminarium: 20 e-learning: 10 | 3,0 | egzamin | O | Os |
| Dental occlusion and function of the jaw | E | ćwiczenia: 24 seminarium: 8 e-learning: 6 | 3,0 | egzamin | O | Os |

Semestr 4

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|---|-------------|-------------------|---|----|
| Biochemistry with Elements of Chemistry | B | ćwiczenia: 18 seminarium: 23 e-learning: 24 | 9,0 | egzamin | O | Os |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--|------------------------|--|--------------------|--------------------------|---|----|
| Human physiology | B | ćwiczenia: 26 e-learning: 54 | 12,0 | egzamin | O | Os |
| Medical Polish | D | lektorat: 30 | 3,0 | zaliczenie | O | Or |
| Propaedeutics of Integrated Dentistry | C, F | seminarium: 14 e-learning: 8 symulacje: 60 | 13,0 | zaliczenie | O | Or |
| Immunology | E, B | ćwiczenia: 15 seminarium: 6 e-learning: 4 | 2,0 | zaliczenie na ocenę | O | Os |
| General radiology | F | ćwiczenia: 7 e-learning: 8 | 1,0 | zaliczenie na ocenę | O | Os |
| Epidemiology and environmental medicine | G | ćwiczenia: 30 | 2,0 | zaliczenie na ocenę | O | Os |
| Medical Biophysics | B | ćwiczenia: 36 seminarium: 6 e-learning: 6 | 3,0 | egzamin | O | Os |
| Practice in the field of assisting a dentist - summer internship | I | praktyka zawodowa: 120 | 4,0 | zaliczenie | O | Os |
| SCIENTIFIC FOUNDATION OF MEDICINE | B | | | | O | Os |
| Basics of medical imaging | B | e-learning: 30 | 2,0 | zaliczenie na ocenę | F | Os |
| Molecular Biology in Medicine | B | ćwiczenia: 20 e-learning: 10 | 2,0 | zaliczenie na ocenę | F | Os |

Semestr 5

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|------------------------|--|--------------------|--------------------------|---|----|
| Pathology | C, E | ćwiczenia: 57 e-learning: 16 | - | - | O | Os |
| Pharmacology with elements of clinical pharmacology | C | ćwiczenia: 28 seminarium: 6 e-learning: 18 | - | - | O | Os |
| Internal diseases with physiotherapy and rehabilitation | E | e-learning: 15 ćwiczenia kliniczne: 61 | - | - | O | Os |
| Conservative dentistry with endodontics | F | seminarium: 10 ćwiczenia kliniczne: 56 | - | - | O | Or |
| Medical Polish | D | lektorat: 30 | - | - | O | Or |
| Anesthesiology and resuscitation | F | e-learning: 10 symulacje: 20 | 2,0 | zaliczenie na ocenę | O | Os |
| General surgery with oncology | E | e-learning: 12 ćwiczenia kliniczne: 44 | 3,0 | egzamin | O | Os |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|------------------------|--|--------------------|--------------------------|---|----|
| Microbiology and oral cavity microbiology with mycology | F, C | ćwiczenia: 36 seminarium: 9 | 3,0 | egzamin | 0 | Os |
| Propaedeutics of Integrated Dentistry | C, F | seminarium: 5 e-learning: 10 symulacje: 50 | 6,0 | egzamin | 0 | Os |
| Physiology of pregnancy | E | e-learning: 5 ćwiczenia kliniczne: 10 | 1,0 | zaliczenie na ocenę | 0 | Os |
| Bioethics | D | seminarium: 10 | 1,0 | zaliczenie na ocenę | 0 | Os |
| Computer science and medical statistics | C | ćwiczenia: 25 | 1,0 | zaliczenie na ocenę | 0 | Os |
| Medical rescue | E | seminarium: 2 e-learning: 7 symulacje: 6 | 1,0 | zaliczenie na ocenę | 0 | Os |

Semestr 6

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|------------------------|---|--------------------|--------------------------|---|----|
| Pathology | C, E | ćwiczenia: 58 e-learning: 14 | 9,0 | egzamin | 0 | Os |
| Pharmacology with elements of clinical pharmacology | F, C | ćwiczenia: 26 seminarium: 6 e-learning: 18 | 6,0 | egzamin | 0 | Os |
| Internal diseases with physiotherapy and rehabilitation | E | e-learning: 14 ćwiczenia kliniczne: 60 | 7,0 | egzamin | 0 | Os |
| Conservative dentistry with endodontics | F | seminarium: 10 ćwiczenia kliniczne: 54 | 9,0 | zaliczenie | 0 | Or |
| Medical Polish | D | lektorat: 30 | 3,0 | egzamin | 0 | Os |
| Dental radiology | F | seminarium: 18 e-learning: 10 ćwiczenia kliniczne: 22 | 3,0 | egzamin | 0 | Os |
| Oral biochemistry | C, F | ćwiczenia: 12 seminarium: 6 e-learning: 12 | 2,0 | zaliczenie na ocenę | 0 | Os |
| Propaedeutics of oral surgery | F | e-learning: 10 symulacje: 40 | 3,0 | zaliczenie na ocenę | 0 | Os |
| Medical law | G | e-learning: 10 | 1,0 | zaliczenie na ocenę | 0 | Os |
| Public Health | G | seminarium: 12 | 1,0 | zaliczenie na ocenę | 0 | Os |
| Dental practice in a dental office - summer internship | I | praktyka zawodowa: 120 | 4,0 | zaliczenie | 0 | Os |
| PRECLINICAL SCIENCES | C | | | | 0 | Os |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|----------------|-------------|---------------------|---|----|
| Methodology of scientific research in medicine | C | seminarium: 30 | 2,0 | zaliczenie na ocenę | F | Os |
| Borderline problems of human existence: suicide, assisted suicide, euthanasia | C | seminarium: 30 | 2,0 | zaliczenie na ocenę | F | Os |

Semestr 7

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|--|-------------|---------------------|---|----|
| Periodontal and oral mucosa diseases | F | seminarium: 11 ćwiczenia kliniczne: 62 | - | - | O | Os |
| Conservative dentistry with endodontics | F | seminarium: 8 e-learning: 3 ćwiczenia kliniczne: 62 | - | - | O | Os |
| Oral surgery | F | ćwiczenia: 52 seminarium: 5 e-learning: 3 | - | - | O | Os |
| Prosthodontics | F | seminarium: 12 e-learning: 5 ćwiczenia kliniczne: 70 | - | - | O | Os |
| Pediatrics | E | seminarium: 6 e-learning: 10 ćwiczenia kliniczne: 30 | 3,0 | egzamin | O | Os |
| Basics of psychiatry | E | ćwiczenia: 10 seminarium: 5 | 1,0 | zaliczenie na ocenę | O | Os |
| Dermatology with venereology and allergology in dentistry | E | e-learning: 14 ćwiczenia kliniczne: 26 | 2,0 | egzamin | O | Os |
| Orthodontics | F | seminarium: 12 e-learning: 6 ćwiczenia kliniczne: 60 | 5,0 | zaliczenie | O | Os |
| Pediatric dentistry | F | seminarium: 12 ćwiczenia kliniczne: 104 | 4,0 | zaliczenie | O | Os |
| Sensory organ diseases with elements of neurology | E | seminarium: 20 ćwiczenia kliniczne: 20 | - | - | O | Os |

Semestr 8

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|---|-------------|-------------------|---|----|
| Periodontal and oral mucosa diseases | F | seminarium: 10 ćwiczenia kliniczne: 62 | 8,0 | zaliczenie | O | Os |
| Conservative dentistry with endodontics | F | seminarium: 7 e-learning: 3 ćwiczenia kliniczne: 62 | 8,0 | zaliczenie | O | Os |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--|-----------------|---|-------------|---------------------|---|----|
| Oral surgery | F | ćwiczenia: 52 seminarium: 5 e-learning: 3 | 6,0 | zaliczenie | O | Os |
| Prosthodontics | F | seminarium: 12 e-learning: 5 ćwiczenia kliniczne: 70 | 7,0 | zaliczenie | O | Os |
| Infectious Diseases | E | seminarium: 10 e-learning: 10 ćwiczenia kliniczne: 10 | 2,0 | egzamin | O | Os |
| Sensory organ diseases with elements of neurology | E | e-learning: 10 ćwiczenia kliniczne: 30 | 3,0 | egzamin | O | Os |
| Maxillofacial surgery | F | e-learning: 12 ćwiczenia kliniczne: 55 | 3,0 | zaliczenie | O | Os |
| Clinical and Experimental Dentistry | F | seminarium: 30 | 3,0 | zaliczenie na ocenę | O | Os |
| Disaster and Emergency Medicine | E | seminarium: 10 e-learning: 10 symulacje: 10 | 2,0 | zaliczenie na ocenę | O | Os |
| Forensic Medicine | G | e-learning: 15 | 1,0 | zaliczenie na ocenę | O | Os |
| Dental practice in a dental office - summer internship | I | praktyka zawodowa: 120 | 4,0 | zaliczenie | O | Os |
| SURGICAL CLINICAL SCIENCES | F | | | | O | Os |
| Endodontic treatment in dental operating microscope | F | seminarium: 5 e-learning: 3 ćwiczenia kliniczne: 22 | 2,0 | zaliczenie na ocenę | F | Os |
| Type and incidence of lesions on oral mucosa in elderly patients | F | ćwiczenia kliniczne: 30 | 2,0 | zaliczenie na ocenę | F | Os |
| Machine systems in endodontic treatment | F | seminarium: 30 | 2,0 | zaliczenie na ocenę | F | Os |

Semestr 9

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|--|-------------|-------------------|---|----|
| Conservative dentistry with endodontics | H | seminarium: 10 e-learning: 3 ćwiczenia kliniczne: 73 | - | - | O | Os |
| Oral surgery | H | seminarium: 8 e-learning: 5 ćwiczenia kliniczne: 58 | - | - | O | Os |

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|--------------------------------------|-----------------|---|-------------|---------------------|---|----|
| Prosthodontics | H | seminarium: 7 e-learning: 5 ćwiczenia kliniczne: 73 | - | - | 0 | Os |
| Periodontal and oral mucosa diseases | H | seminarium: 13 ćwiczenia kliniczne: 48 | - | - | 0 | Os |
| Maxillofacial surgery | H | ćwiczenia kliniczne: 55 | - | - | 0 | Os |
| Integrated stomatology of adulthood | H | ćwiczenia kliniczne: 70 | 4,0 | zaliczenie na ocenę | 0 | Os |

Semestr 10

| Przedmiot | Grupa standardu | Liczba godzin | Punkty ECTS | Forma weryfikacji | | |
|---|-----------------|---|-------------|---------------------|---|----|
| Conservative dentistry with endodontics | H | seminarium: 10 e-learning: 3 ćwiczenia kliniczne: 72 | 11,0 | egzamin | 0 | Os |
| Pediatric dentistry | H | seminarium: 18 ćwiczenia kliniczne: 90 | 7,0 | egzamin | 0 | Os |
| Oral surgery | H | seminarium: 7 e-learning: 5 ćwiczenia kliniczne: 57 | 8,0 | egzamin | 0 | Os |
| Prosthodontics | H | seminarium: 7 e-learning: 5 ćwiczenia kliniczne: 72 | 11,0 | egzamin | 0 | Os |
| Periodontal and oral mucosa diseases | H | seminarium: 12 ćwiczenia kliniczne: 47 | 7,0 | egzamin | 0 | Os |
| Orthodontics | H | seminarium: 18 e-learning: 10 ćwiczenia kliniczne: 95 | 8,0 | egzamin | 0 | Os |
| Integrated dentistry of developmental age | H | ćwiczenia kliniczne: 40 | 3,0 | zaliczenie na ocenę | 0 | Os |
| Maxillofacial surgery | H | ćwiczenia kliniczne: 5 | 4,0 | egzamin | 0 | Os |
| Gerostomatology | H | ćwiczenia kliniczne: 45 | 3,0 | zaliczenie na ocenę | 0 | Os |

O - obowiązkowy

O(G) - obowiązkowy (grupa)

F - fakultatywny

Or - obowiązkowy do zaliczenia roku

Os - obowiązkowy do zaliczenia w toku studiów

Physical Education

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification No ISCED cat. found</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 1</p> | <p>Examination -</p> <p>Activities and hours classes: 30</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 2</p> | <p>Examination credit</p> <p>Activities and hours classes: 30</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | Universal physical development of the body. Education, improvement and keeping of basic motor skills, such as strength, endurance, quickness and motor coordination. |
| C2 | Development of an attitude of conscious and permanent participation in various forms of sports and recreational activities in the course of education and upon its completion for the purpose of keeping physical and mental health. |
| C3 | Development of personality attitudes: self-esteem, respect to others, especially those weaker and with lesser abilities. |
| C4 | Learning to cooperate in a team, group, self-acceptance and acceptance of others, the culture of sports fan support, the following of the "fair play" rule in sports and in life. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|-----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | health education issues | O.W3 | classroom observation |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | promote health-promoting behaviors | O.K6 | classroom observation |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| classes | 30 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Semester 2

| Activity form | Activity hours* |
|---------------|-----------------|
| classes | 30 |

| | |
|-----------------------------------|--------------------|
| Student workload | Hours 30 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|------------|
| 1. | Discussion of the rules of occupational health and safety during physical education classes. Learning about the conditions of passing the subject, the regulations of the Physical Education and Sports Department at the Jagiellonian University Medical College and rules of using an external complex of sports facilities. | W1, U1, K1 | classes |
| 2. | Learning about basic technical and tactical elements of team games; - Volleyball: volleyball player's attitude, overhand pass and forearm pass, tennis serve, bump and forearm hitting, ball setting forward and backward, attack, block, playing. | W1, U1, K1 | classes |
| 3. | Learning about basic technical and tactical elements of team games; Basketball: moving around the field, passes and grips, dribbling with a right hand and left hand, shot while running from the right or left, set shot, 1:1 defence, feints with or without a ball, half-court offence and fast break, playing. | W1, U1, K1 | classes |
| 4. | Various forms of physical activity of adults accompanied by music - aerobics as a form of monostructural exercises; exercises to strengthen and shape arm, back, stomach and leg muscles. Dance aerobics: use of basic steps like step, touch, double step out, heel back, knee up, grapevine, V step, A step, forming choreography. | W1, U1, K1 | classes |
| 5. | Fitness: exercises on step platforms, forming choreography. | W1, U1, K1 | classes |
| 6. | Fitness: exercises with balls - ball exercising technique, correct performance exercising. | W1, U1, K1 | classes |
| 7. | Fitness: TBC - Total Body Conditioning, body shaping; ABT - abdominal, buttocks, thighs. | W1, U1, K1 | classes |
| 8. | Fitness: exercises with weights and barbells. | W1, U1, K1 | classes |
| 9. | Fitness: stretching exercises with elements of yoga, callanetics and stretching. | W1, U1, K1 | classes |

| | | | |
|-----|---|------------|---------|
| 10. | Gym: strengthening all muscle groups on weight training and aerobic training equipment; cardio workout: bicycles, elliptical trainers, treadmills, indoor rowers; weight lifting: multigym, gym benches with racks for weights, decline benches, indoor rowers, dumbbell set. | W1, U1, K1 | classes |
| 11. | Table tennis: posture at the table and movements during the game, ways to hold the racket, forehand, backhand, serve, attack, defence, indirect shot, playing. | W1, U1, K1 | classes |
| 12. | Gym: strengthening all muscle groups on weight training and aerobic training equipment; cardio workout: bicycles, elliptical trainers, treadmills, indoor rowers; weight lifting: multigym, gym benches with racks for weights, decline benches, indoor rowers, dumbbell set. | W1, U1, K1 | classes |
| 13. | Floorball: moving on the pitch, forehand and backhand pass, receiving the ball, shot on goal from the spot and in motion, dribbling, feints, defense, goalkeeping. | W1, U1, K1 | classes |
| 14. | Therapeutic gymnastics: exercises strengthening postural muscles, upper and lower limbs, torso and deep muscles. The use of isometric exercises, balance exercises, stretching, disease-related exercises, exercises with equipment and relaxation. Exercises in isolated positions, the role of proper breathing during exercises. | W1, U1, K1 | classes |
| 15. | Nordic Walking: selection and adjustment of the length of poles to height, RR and NN technique, technique of walking in flat terrain, uphill and downhill, general development exercises with the use of poles, selection of distance and pace of walking. | W1, U1, K1 | classes |

Course advanced

Semester 1

Teaching methods:

classes / practicals, demonstration, presentation, group work, practical classes

| Activities | Examination methods | Credit conditions |
|------------|-----------------------|--|
| classes | classroom observation | Attendance at all 15 classes in a semester are obligatory. |

Semester 2

Teaching methods:

demonstration, presentation, group work, practical classes

| Activities | Examination methods | Credit conditions |
|------------|-----------------------|--|
| classes | classroom observation | Attendance at all 15 classes in a semester are obligatory. |

Entry requirements

No medical contraindications to active participation in physical education classes provided for in the curriculum. Basic fitness. Attendance at all 15 classes in a semester are obligatory.

Anatomy with embryology and basics of genetics

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group A. Morphological sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 1</p> | <p>Examination -</p> <p>Activities and hours e-learning: 33, classes: 75</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|--|--|
| <p>Period Semester 2</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 32, classes: 74</p> | <p>Number of ECTS points 22.0</p> |
|-------------------------------------|--|--|

Goals

| | |
|----|---|
| C1 | To familiarize students with the structure of the human body in terms of topography, functional and clinical anatomy. |
| C2 | Student acquires knowledge about human anatomy with special focus on head and neck regions, development of these regions of the body and human birth defects associated with it(eg cleft palate and lip) |
| C3 | Student should realize the role of the stomatognathic system for the function of the entire body and be aware of specific of the dentist's practice. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | human body structures: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system | A.W1 | practical examination, practical colloquiums, classroom observation, test |
| W2 | development of organs and the whole organism, with particular emphasis on the masticatory organ | A.W2 | practical examination, practical colloquiums, classroom observation, test |
| W3 | human body structure in topographic and functional approach | A.W3 | practical examination, practical colloquiums, classroom observation, test |
| W4 | the role of the nervous system in the functioning of individual organs | A.W4 | practical examination, practical colloquiums, classroom observation, test |
| W5 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | practical examination, practical colloquiums, classroom observation, test |
| W6 | the rules of conducting scientific research and spreading their results | O.W4 | practical examination, practical colloquiums, classroom observation, test |
| W7 | the functional significance of individual organs and their systems | A.W5 | practical examination, practical colloquiums, classroom observation, test |
| W8 | anatomical justification for the physical examination | A.W6 | practical examination, practical colloquiums, classroom observation, test |
| W9 | issues in dentistry - at an advanced level | O.W2 | practical examination, practical colloquiums, classroom observation, test |

| | | | |
|------------------------------|---|------|--|
| W10 | health education issues | O.W3 | practical examination, practical colloquiums, classroom observation, test |
| W11 | organization of dentist practice and management principles in healthcare | O.W5 | practical examination, practical colloquiums, classroom observation, test |
| Skills - Student can: | | | |
| U1 | interpret anatomical relations illustrated by basic diagnostic methods in radiology (plain scans and scans after contrast agent administration) | A.U1 | practical examination, practical colloquiums, classroom observation, test |
| U2 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | practical examination, practical colloquiums, classroom observation, test |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | practical examination, practical colloquiums, classroom observation, test |
| U4 | inspire the learning process of others | O.U6 | practical examination, practical colloquiums, classroom observation, test |
| U5 | communicate and share knowledge with colleagues in a team | O.U8 | practical examination, practical colloquiums, classroom observation, test |
| U6 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | practical examination, practical colloquiums, classroom observation, test |
| U7 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | practical examination, practical colloquiums, classroom observation, test |
| U8 | plan treatment for dental problems | O.U3 | practical examination, practical colloquiums, classroom observation, test |
| U9 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | practical examination, practical colloquiums, classroom observation, test |
| U10 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | practical examination, practical colloquiums, classroom observation, test |
| U11 | operate the microscope, including the use of immersion, and recognize the histological structure of organs and tissues under the microscope, as well as describe and interpret the microscopic structure of cells, tissues and organs and their functions | A.U2 | practical examination, practical colloquiums, classroom observation, test |

| Social competences - Student is ready to: | | | |
|--|--|-------|---|
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | practical examination, practical colloquiums, classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | practical examination, practical colloquiums, classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | practical examination, practical colloquiums, classroom observation |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | practical examination, practical colloquiums, classroom observation |
| K5 | use objective sources of information | O.K7 | practical examination, practical colloquiums, classroom observation |
| K6 | promote health-promoting behaviors | O.K6 | practical examination, practical colloquiums, classroom observation |
| K7 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | practical examination, practical colloquiums, classroom observation |
| K8 | formulate opinions on the various aspects of the professional activity | O.K10 | practical examination, practical colloquiums, classroom observation |
| K9 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | practical examination, practical colloquiums, classroom observation |
| K10 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | practical examination, practical colloquiums, classroom observation |
| K11 | formulate conclusions from own measurements or observations | O.K8 | practical examination, practical colloquiums, classroom observation |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|-----------------------------|------------------------|
| e-learning | 33 |
| classes | 75 |
| preparation for test | 30 |
| preparation for classes | 30 |
| preparation for examination | 40 |

| | |
|-----------------------------------|---------------------|
| preparation for colloquium | 30 |
| Student workload | Hours 238 |
| Workload involving teacher | Hours 108 |
| Practical workload | Hours 75 |

* hour means 45 minutes

Semester 2

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 32 |
| classes | 74 |
| preparation for colloquium | 40 |
| preparation for classes | 40 |
| preparation for examination | 50 |
| preparation for test | 40 |
| preparation for classes | 50 |
| Student workload | Hours 326 |
| Workload involving teacher | Hours 106 |
| Practical workload | Hours 74 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|----------------|-----------------------------|------------|
|-----|----------------|-----------------------------|------------|

| | | | |
|----|---|--|---------------------|
| 1. | Basic Anatomy. Descriptive Anatomical Terms : Terms Related to Position and Movement. Connective Tissue : general structure of the bone, Biological & mechanical properties of bones. Classification of bones. Joints : fibrous, cartilaginous & synovial joints. Vertebral column -General characteristics of a vertebra. Cervical, thoracic, lumbar vertebrae. Sacrum, coccyx. Intervertebral disc. Joints of vertebral column. Atlanto-occipital joints. Atlanto-axial joints. Curves of vertebral column. Ribs. Sternum. The thoracic cage. Bones of the shoulder girdle: scapula, clavicle. Acromioclavicular, sternoclavicular joint. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 2. | Vascular system: Heart. Blood vessels. Lymphatic system. Muscles and Structures Associated with Muscles. Humerus. Shoulder joint. Radius. Ulna. Bones of the hand. Elbow joint. Wrist joint. The carpal tunnel. The hand as a functional unit. The bony pelvis. Hip bone. Sacrum. Coccyx. Sacroiliac joints. Symphysis pubis. Greater & lesser sciatic foramina. Inguinal ligament. Sex differences of the pelvis. Femur. Hip joint. Acetabulum. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 3. | Divisions of the skull. Development of the skull. Tibia. Fibula. Patella. Knee joint. (intra- & extracapsular ligaments) Menisci. Bones of the foot. Ankle joint. Bones of the Neurocranium. Frontal Bone. Occipital Bone. Sphenoid bone. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 4. | The Ear: External Ear. Middle Ear (Tympanic Cavity). Inner Ear (Osseous Labyrinth). Ethmoid Bone. Parietal Bone. Temporal Bone. Review of the specimens. Bones of the Visceral Cranium. Mandible. Hyoid Bone. Maxilla. Palatine Bone. Inferior Nasal Concha. Lacrimal Bone. Vomer. Zygomatic Bone. Review of the specimens. Temporomandibular joint: function, introduction to TMJ dysfunction | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 5. | Anterior, middle and posterior cranial fossae- limitation and communication. Anterior middle and posterior cranial fossae practically. Orbital Cavity. Nasal Cavity. Oral Cavity- practically. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 6. | Openings in the skull- contents. Temporal, infratemporal, retromandibular and pterygopalatine fossae.- practically. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 7. | Introduction into the anatomy of the Nervous system. Divisions of the nervous system. Neurons. Central, peripheral and autonomic nervous system. Spinal cord, brainstem, medulla oblongata, midbrain. Exit of the cranial nerves from brain. Brainstem and its relation with the cerebellum, Cerebellum. Interbrain. 3rd and 4th ventricles. Motor neuronal tracts. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |

| | | | |
|-----|---|--|---------------------|
| 8. | Development of the nervous system. Blood supply of CNS.Telencephalon(hemisphere). Brodman areas. Blood supply of the brain.Sensory neuronal tracts. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 9. | The Ear (external, middle & internal). Vestibulocochlear nerve. Temporomandibular joint. Clinical notes : Hyperacusis. Otosclerosis. Conductive deafness. Otitis media. Meniere's disease (labyrinthine hydrops).Muscles of the neck and nuchal region. Cervical plexus .Surface anatomy of the neck. Triangles of the neck. Thyroid gland. Parathyroid glands.Vagus nerve, accessory nerve, hypoglossal nerve and sympathetic trunk(cervical part)Head and neck development | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 10. | The Orbit & its walls. Structure of the Eyeball. Nerve & blood supply of the eyeball. Ciliary ganglion. The accessory organs of the eyeball (muscles, eyelids, lacrimal apparatus). Optic nerve. Oculomotor nerve. Trochlear nerve. Abducent nerve. Clinical notes : Horner's syndrome. Crocodile tears syndrome. Glaucoma. Cataract. Retinal detachment.External & internal carotid arteries. External & internal jugular veins. Lymph drainage of the neck. Pharynx, parapharyngeal space, glossopharyngeal space, tonsils. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 11. | Autonomic nervous system of head and neck - overview Larynx- structure, blood and nerve supply, lymph drainage. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 12. | Blood and nerve supply of the face. Facial artery and nerve. Parotid gland. Dura mater venous sinuses. Venous drainage of the head. Blood & nerve supply of the meninges. Development of face.Oral cavity.Teeth.Gingiva. The tongue Maxillary artery. Maxillary nerve. Muscles of facial expression and mastication | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 13. | Mandibular division of trigeminal nerve. Pterygopalatine, infratemporal and retromandibular fossae. Trigeminal system - overview | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 14. | Nasal cavity- walls, nerve & blood supply. Paranasal sinuses Anatomy of anesthesia. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 15. | Thoracic walls- muscles, vessels , nerves. The diaphragm. Mediastinum. Lungs and heart Pericardium. Conducting system of the heart. Arterial supply and venous drainage of the heart. Nerve supply and action of the heart. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |

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|-----|--|--|---------------------|
| 16. | Large vessels of the thorax: SVC, IVC, Aorta, pulmonary trunk, Pulmonary veins. Azygos veins. Vagus & phrenic nerves. Thoracic part of ST. Nerves of upper limb | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 17. | Muscles of shoulder girdle and arm. Muscles of forearm and hand Vascular system of upper limb. | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 18. | Brachial plexus, nerves of upper limb Arterial and venous blood supply of upper limb. Vascular system of abdomen and pelvis | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 19. | Walls of abdomen and pelvis. Gastrointestinal tract- esophagus, stomach, small and large intestine The liver- portal circulation | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 20. | Retroperitoneal space, kidneys, suprarenal glands, ureters, abdominal aorta, IVC. Abdominal cavity – mini quiz | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 21. | Nerves of the lower limb – clinical correlation. Male and female genital organs. Muscles of the lower limb. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 22. | Arteries of the lower limb – clinical correlations. Muscles. Superficial veins and lymphatic drainage of the upper limb – clinical correlations. Vessels of lower limb. Nerves of lower limb. | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 23. | Salivary glands | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |
| 24. | Lymphatic system of the head and neck. Fascia of the head and neck, interfascial spaces- possible pathways of infection spreading. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | classes, e-learning |

Course advanced

Semester 1

Teaching methods:

classes / practicals, dissection classes, e-learning

| Activities | Examination methods | Credit conditions |
|------------|---|---|
| e-learning | test | Only Students who have not exceeded the allowed number of absences and have received at least 50% from all mid-semester tests are allowed to take the final anatomy exam (both practical exam and the test). Grading system, both for the mid-semester tests, practical exams and the final exam is as follows: excellent = approximately 90% of all possible points; very good = 80%; good = 70%, satisfactory = 60%; sufficient = 50%. A Student can be exempted from the final exam if the results of all mid-semester tests (including both practical and theoretical tests) exceed 90%. A Student is exempted from the final practical exam if results of all practical mid-semester tests exceed 80%. |
| classes | practical examination, practical colloquiums, classroom observation, test | Only Students who have not exceeded the allowed number of absences and have received at least 50% from all mid-semester tests are allowed to take the final anatomy exam (both practical exam and the test). Grading system, both for the mid-semester tests, practical exams and the final exam is as follows: excellent = approximately 90% of all possible points; very good = 80%; good = 70%, satisfactory = 60%; sufficient = 50%. A Student can be exempted from the final exam if the results of all mid-semester tests (including both practical and theoretical tests) exceed 90%. A Student is exempted from the final practical exam if results of all practical mid-semester tests exceed 80%. |

Semester 2**Teaching methods:**

classes / practicals, dissection classes, e-learning

| Activities | Examination methods | Credit conditions |
|------------|---------------------|---|
| e-learning | test | Only Students who have not exceeded the allowed number of absences and have received at least 50% from all mid-semester tests are allowed to take the final anatomy exam (both practical exam and the test). Grading system, both for the mid-semester tests, practical exams and the final exam is as follows: excellent = approximately 90% of all possible points; very good = 80%; good = 70%, satisfactory = 60%; sufficient = 50%. A Student can be exempted from the final exam if the results of all mid-semester tests (including both practical and theoretical tests) exceed 90%. A Student is exempted from the final practical exam if results of all practical mid-semester tests exceed 80%. |

| Activities | Examination methods | Credit conditions |
|------------|---|---|
| classes | practical examination, practical colloquiums, classroom observation, test | Only Students who have not exceeded the allowed number of absences and have received at least 50% from all mid-semester tests are allowed to take the final anatomy exam (both practical exam and the test). Grading system, both for the mid-semester tests, practical exams and the final exam is as follows: excellent = approximately 90% of all possible points; very good = 80%; good = 70%, satisfactory = 60%; sufficient = 50%. A Student can be exempted from the final exam if the results of all mid-semester tests (including both practical and theoretical tests) exceed 90%. A Student is exempted from the final practical exam if results of all practical mid-semester tests exceed 80%. |

Entry requirements

Student has basic information about structure of the human body and its development .

Histology with Cytophysiology

Educational subject description sheet

Basic information

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|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group A. Morphological sciences</p> |
|---|---|

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| <p>Period Semester 1</p> | <p>Examination -</p> <p>Activities and hours e-learning: 20, classes: 20</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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| <p>Period Semester 2</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 30, classes: 32</p> | <p>Number of ECTS points 12.0</p> |
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Goals

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|----|--|
| C1 | To provide students with the knowledge concerning the microscopic and submicroscopic structure and its relations to functions of cells, tissues and organs with special emphasis on the stomatognathic system. |
| C2 | To familiarize students with the morphological features related to functional specialization of cells, tissues, organs. |
| C3 | To provide students with the skills allowing them to identify different cells, tissues and organs in the light and electron microscope. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | human body structures: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system | A.W1 | practical examination, multiple choice test |
| W2 | the role of the nervous system in the functioning of individual organs | A.W4 | multiple choice test |
| Skills - Student can: | | | |
| U1 | operate the microscope, including the use of immersion, and recognize the histological structure of organs and tissues under the microscope, as well as describe and interpret the microscopic structure of cells, tissues and organs and their functions | A.U2 | practical examination |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | practical examination, multiple choice test |
| K2 | formulate conclusions from own measurements or observations | O.K8 | practical examination, multiple choice test |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|------------------------------|-----------------|
| e-learning | 20 |
| classes | 20 |
| preparation for classes | 50 |
| preparation for test | 30 |
| participation in examination | 2 |

| | |
|-----------------------------------|---------------------|
| Student workload | Hours 122 |
| Workload involving teacher | Hours 40 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Semester 2

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 30 |
| classes | 32 |
| preparation for classes | 70 |
| preparation for colloquium | 20 |
| preparation for examination | 75 |
| participation in examination | 4 |
| Student workload | Hours 231 |
| Workload involving teacher | Hours 62 |
| Practical workload | Hours 32 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|--|------------------------------------|-------------------|
| 1. | Introduction to histology. Light and electron microscopy. Magnification and resolving power. Preparation of the tissues for light and electron microscopy. Basic histological methods. Principles of histochemistry, enzyme histochemistry, immunohistochemistry and hybridization techniques. | U1, K1, K2 | classes |

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| 2. | The cell - The biological membranes. Transport across the membranes. The cell membrane, glycocalyx, adhesion molecules. The cell nucleus. The nucleolus. The nuclear envelope and communication between the nucleus and the cytoplasm. Structure and function of ribosomes, the translation process. The endoplasmic reticulum (smooth and rough). The Golgi apparatus. Exo- and endocytosis, including receptor-mediated endocytosis. Lysosomes. Proteasomes. Mitochondria. Genetic apparatus and biogenesis of mitochondria. Peroxisomes. The cytoskeleton and its involvement in the motility of cells. Cell death: necrosis and apoptosis. | W1, W2, U1, K1, K2 | classes, e-learning |
| 3. | The epithelial tissue. Definition and components of a tissue. General characteristics and functions of epithelia. Classification and characteristics of different types of epithelia. Epithelial cell polarity. Free surface of the epithelial cells and its structures: microvilli and cilia, mechanism of ciliary movement. The basolateral surface: cell-cell and cell-matrix junctions, their structure and functions. Basal lamina. Glands: morphological and functional classification. | W1, U1, K1, K2 | classes, e-learning |
| 4. | The connective tissue proper. Chemical and structural characteristics of the extracellular substance: matrix and fibers. Stages of collagen fiber production. Origin, structure and function of the connective tissue cells: fibroblasts, plasma cells, mast cells and macrophage family. General classification of connective tissue. Characteristics of connective tissue proper types. The comparative characteristics of white and brown adipose tissue. | W1, U1, K1, K2 | classes, e-learning |
| 5. | Cartilage and bone. Cartilage: characteristics of the extracellular substance, chondral territories, nourishment of cartilage. Types of cartilage and their mechanical properties. Bone: organic and inorganic components of the extracellular substance. Bone cells: osteoprogenitor cells, osteoblasts, osteocytes, osteoclasts. The bone lamella, organization of cancellous and compact (Haversian) bone. Intramembraneous and endochondral ossification. Growth and remodelling of the bone. Basic mechanisms of biomineralization. | W1, U1, K1, K2 | classes, e-learning |
| 6. | Blood and hematopoiesis. Blood plasma. Blood cells, their counts, characteristics and functional adaptations. Erythrocyte and its cell membrane. Comparative characteristics of granulocytes and agranulocytes. The role of granulocytes in the defense mechanisms: neutrophils and bacteria-killing system, eosinophils, basophils. Lymphocytes - general characteristics. Monocytes and their functions. Blood platelets. The structure of hematopoietic bone marrow and principles of hematopoiesis. | W1, U1, K1, K2 | classes, e-learning |

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| 7. | The muscle tissue. The contractile apparatus. Classification of the muscle tissue. Characteristics of smooth, skeletal and cardiac muscle cells/fibres. Structural and biochemical basis of smooth and striated muscle contraction. Sarcomere, its structure, contractile, regulatory and accessory proteins. The role of T-tubules and sarcoplasmic reticulum in excitation-contraction coupling. Motor end plate. The organization of smooth muscle layer, skeletal muscle, and cardiac muscle including the conduction system. The nonmuscle contractile cells. | W1, U1, K1, K2 | classes, e-learning |
| 8. | The nerve tissue. Definition of the neuron and its structural characteristics. Classification of neurons. Types of nerve fibers. Structural and chemical basis of neural conduction: resting and action potentials, the role of ion channels and myelin sheath. Structure and types of synaptic junctions, neurotransmitters, the synaptic transmission. Paracrine transmission. Types and functions of neuroglial cells. Organization of the nervous tissue: the peripheral nerve, the dorsal root ganglion, white and grey matter of the central nervous system. | W1, U1, K1, K2 | classes, e-learning |
| 9. | The vascular system. Components of the vascular wall. Endothelium – structural characteristics and functions. Mechanisms of transendothelial transport of substances and migration of leukocytes. The structure and types of capillaries. Precapillaries and postcapillaries. Regulation of blood flow in capillary bed. Layers of the vascular wall, comparative characteristics of arteries and veins. Arterioles and arteries (muscular and elastic). The veins and their structural variability. Arteriovenous anastomoses. The heart wall layers. | W1, U1, K1, K2 | classes, e-learning |
| 10. | The lymphatic system. The innate immunity: pattern recognition receptors, NK cells. The adaptive immunity: cells involved in the immune reactions - antigen presenting cells, T- and B-lymphocytes and their subpopulations, characteristics and cooperation. Humoral and cell-mediated immune response. The lymphoid tissue and its organization. The lymphoid nodule. Structure and function of the lymph node. Spleen - organization and functions of white and red pulp, the splenic circulation. Thymus: general organization, epithelioreticular cell system and its role in the differentiation and maturation of T lymphocytes. | W1, U1, K1, K2 | classes, e-learning |
| 11. | The integument. Layers of the integument. Epidermis: keratinocytes and the keratinization process, melanocytes, Langerhans and Merkel cells and their functions. Organization of dermis and hypodermis. Eccrine and apocrine sweat glands and sebaceous glands: structure, function and mode of secretion. The hair follicle. Vascularization and innervation of the skin, types of encapsulated mechanoreceptors and their function. Comparative characteristics of thick and thin skin. | W1, U1, K1, K2 | classes, e-learning |

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| 12. | <p>The oral cavity. Definition and general characteristics of mucosa. The lip. The mucosa of different regions of the oral cavity. The tongue: lingual papillae and glands. Structure and function of taste buds, mechanisms of taste perception. The pharynx. The tonsils. Oral exfoliative cytology.</p> <p>Salivary glands and temporomandibular joint. General histology of the salivary glands. The secretory portions: serous acinus and mucous tubule. The excretory ducts, their morphological and functional characteristics. Composition of saliva. Histological differences between parotid, sublingual and submandibular glands. Minor salivary glands. General histology of the joint, specific structure of the temporomandibular joint.</p> | W1, U1, K1, K2 | classes, e-learning |
| 13. | <p>The dental organ. Structure and function of mineralized tissues. General architecture and components of the dental organ. Composition, structure and function of mineralized tissues of the tooth: enamel, dentin and cementum (primary and secondary). Dental plaque and dental calculus. Structure and function of nonmineralized tissues. Tooth pulp: its components, areas, vascularization and innervation. Characteristics of pulp cells - odontoblasts, fibroblasts, dendritic cells and stem cells. The periodontal ligament: general structure, classification of principal fibers and their functions, cells present in the ligament, its vascularization and innervation. Gingiva and dentogingival junction.</p> | W1, U1, K1, K2 | classes, e-learning |
| 14. | <p>Development of the dental organ. Stages of tooth development. Mechanisms of induction of tooth tissues. Formation of primary epithelial band and dental lamina. Development and functions of enamel organ, dental papilla and dental follicle. Formation and mineralization of enamel and dentin, structural and functional characteristics of the involved cells: ameloblasts and odontoblasts. Development of cementum and periodontal ligament. Tooth eruption and shedding.</p> | W1, U1, K1, K2 | classes, e-learning |
| 15. | <p>The alimentary canal. General organization of the alimentary canal, characteristics of the wall layers. The esophagus. The wall of stomach: surface lining epithelium and its protective function, characteristics of the gastric glands and their cellular composition. The intestines and their adaptations to function (intestinal epithelium, villi and crypts), segmental differences in the wall structure. The gut-associated lymphoid tissue. Innervation of the alimentary canal.</p> | W1, U1, K1, K2 | classes, e-learning |
| 16. | <p>Large glands of the alimentary system: pancreas and liver. The pancreas - organization of the exocrine part, characteristics of the secretory pancreatic cell, acini and ducts. General organization of the liver, types of hepatic lobules. Structural and functional characteristics of the hepatocyte and its polarity. The hepatic sinusoids and associated cells. The hepatic circulation. Intra- and extrahepatic bile ducts.</p> | W1, U1, K1, K2 | classes, e-learning |

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| 17. | The respiratory system. The airways - characteristics of the mucosa, the airway epithelium and its cell types, the mucociliary cleaning mechanism. Nasal mucosa: the respiratory and the olfactory regions. Olfactory epithelium: cell types and functions. The paranasal sinuses and Eustachian tube. The middle ear. Pharynx and larynx. The structure of trachea, bronchi and bronchioles. General organization of the lungs. The pulmonary alveoli: types and functions of pneumocytes, air-blood barrier, the surfactant and its role. | W1, U1, K1, K2 | classes, e-learning |
| 18. | The endocrine system. General characteristics of endocrine glands. The pituitary gland: adeno- and neurohypophysis. The functional interrelations between hypothalamus and the pituitary. Morphological and functional classification of cells in adeno- and neurohypophysis, structure and function of pars nervosa. General organization of thyroid gland. The thyroid follicle: its cells and stages of thyroid hormone production. The C-cells. The parathyroid glands - its histological structure and cell types. The pancreatic islets: ultrastructural and functional characteristics of their cells. The adrenal cortex, its layers and hormones. The ultrastructural features of steroidogenic cells. Adrenal medulla, chromaffin cells. The system of disseminated neuroendocrine cells (DNES). | W1, U1, K1, K2 | classes, e-learning |
| 19. | The reproductive systems. The testis: seminiferous tubules, spermatogenesis and spermiogenesis. Sertoli cells and their functions. Endocrine function of testis: Leydig cells. Excretory ducts: efferent tubules and ductus epididymis. Vas deferens. Basic characteristics of prostate gland, seminal vesicles and Cowper glands. The ovary: developmental stages of ovarian follicles. Corpus luteum. Endocrine function of the ovary. The oviduct. The uterus - endometrial alterations during the menstrual cycle. The vagina. | W1, U1, K1, K2 | classes, e-learning |
| 20. | The urinary system. The kidney: cortex and medulla. Nephron and the localization of its segments in the renal parenchyma. The renal corpuscle and filtration barrier, mechanism of ultrafiltration. Structural and functional characteristics of the successive segments of the nephron. The collecting tubule and its role in urine condensation. The juxtaglomerular apparatus: its components and their function. Renal blood vessels. The excretory passages: ureter and urinary bladder. | W1, U1, K1, K2 | classes, e-learning |
| 21. | The organ of vision. General organization of the eyeball and its layers. The sclera and cornea. The choroid and structures responsible for accommodation and adaptation: ciliary body and iris. Production and circulation of the aqueous humor. The lens. The retina: layers, characteristics of cones and rods, molecular basis of photoreception. Macula lutea and optic disk. The eyelid: conjunctiva, tarsal plate, glands. The lacrimal gland. | W1, K1 | e-learning |

Course advanced

Semester 1

Teaching methods:

classes / practicals, e-learning

| Activities | Examination methods | Credit conditions |
|------------|---|--|
| e-learning | multiple choice test | Passing mini-quizzes (MCQ) concerning all subjects (approx. 9 questions in each). The final theoretical exam (MCQ, 100 questions, 60% pass level), covering the material concerning histology of systems and organs. |
| classes | practical examination, multiple choice test | Basic knowledge during labs (minitests). The practical (laboratory) exam: Identification of cells/tissues/organs and their specific structures in 13 microscopic slides and 2 electron micrographs. This part is evaluated on the pass/fail basis, pass level 9 pts. |

Semester 2

Teaching methods:

classes / practicals, e-learning

| Activities | Examination methods | Credit conditions |
|------------|---|--|
| e-learning | multiple choice test | Passing mini-quizzes (MCQ) concerning all subjects (approx. 9 questions in each). The final theoretical exam (MCQ, 100 questions, 60% pass level), covering the material concerning histology of systems and organs. |
| classes | practical examination, multiple choice test | Basic knowledge during labs (minitests). The practical (laboratory) exam: Identification of cells/tissues/organs and their specific structures in 13 microscopic slides and 2 electron micrographs. This part is evaluated on the pass/fail basis, pass level 9 pts. |

Entry requirements

none

Medical Polish

Educational subject description sheet

Basic information

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| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0231 Language acquisition</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21, 2021/22, 2022/23</p> <p>Lecture languages Polish</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
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| <p>Period Semester 1</p> | <p>Examination -</p> <p>Activities and hours foreign language course: 30</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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| <p>Period Semester 2</p> | <p>Examination credit</p> <p>Activities and hours foreign language course: 30</p> | <p>Number of ECTS points 3.0</p> |
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| <p>Period Semester 3</p> | <p>Examination -</p> <p>Activities and hours foreign language course: 30</p> | <p>Number of ECTS points 0.0</p> |
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| Period Semester 4 | Examination credit Activities and hours foreign language course: 30 | Number of ECTS points 3.0 |
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| Period Semester 5 | Examination - Activities and hours foreign language course: 30 | Number of ECTS points 0.0 |
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|-----------------------------|---|-------------------------------------|
| Period Semester 6 | Examination examination Activities and hours foreign language course: 30 | Number of ECTS points 3.0 |
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Goals

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|----|--|
| C1 | Development of language competences at the level A1-C1 in terms of: pronunciation, vocabulary, grammar/function and listening ,reading , speaking, writing |
| C2 | Mastering communication strategies especially in terms of communication with the patient |
| C3 | Developing and strengthening the motivation to learn Polish and learning strategies and intercultural awareness, exploring Polish realities |
| C4 | Recognizing and noticing cultural differences and similarities |
| C5 | Intellectual and emotional development |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | written examination, test |
| Skills - Student can: | | | |
| U1 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | written examination, oral examination, oral answer, clinical case presentation, project |
| U2 | talk to the adult patient, child and family using active listening and empathy techniques | D.U6 | written examination, oral examination, oral answer, clinical case presentation, project |
| U3 | communicate with the patient in one of the foreign languages at B2+ level of the Common European Framework of Reference for Languages | D.U15 | written examination, oral examination, oral answer, clinical case presentation, project |

| Social competences - Student is ready to: | | | |
|--|---|------|---|
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | written examination, oral examination, oral answer, clinical case presentation, project |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| foreign language course | 30 |
| preparation for classes | 10 |
| Student workload | |
| | Hours 40 |
| Workload involving teacher | |
| | Hours 30 |

* hour means 45 minutes

Semester 2

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| foreign language course | 30 |
| preparation for classes | 10 |
| preparation for examination | 10 |
| Student workload | |
| | Hours 50 |
| Workload involving teacher | |
| | Hours 30 |

* hour means 45 minutes

Semester 3

| Activity form | Activity hours* |
|-------------------------|------------------------|
| foreign language course | 30 |
| preparation for classes | 10 |
| Student workload | |
| | Hours 40 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 30 |
|-----------------------------------|--------------------|

* hour means 45 minutes

Semester 4

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| foreign language course | 30 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Semester 5

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| foreign language course | 30 |
| preparation for classes | 10 |
| preparation for examination | 5 |
| Student workload | Hours 45 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Semester 6

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| foreign language course | 30 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|-----------------------|------------------------------------|-------------------|
|------------|-----------------------|------------------------------------|-------------------|

| | | | |
|----|--|--------------------|-------------------------|
| 1. | Vocabulary in terms of: man, family, everyday life, leisure time activities, housing, places, means of transport, work, education, nutrition, shopping and services, natural environment, basic human anatomy, health and personal hygiene, diseases, symptoms | W1, U1, U2, U3, K1 | foreign language course |
| 2. | Grammar and syntactic problems (inflection, word formation, syntax) | U1, U2, K1 | foreign language course |
| 3. | Speaking strategies and communication roles provided for level A1-B2, as appropriate, according to the: Programy nauczania języka polskiego jako obcego. Poziomy A1-C2" pod red. I. Janowskiej, E. Lipińskiej, A. Rabiej, A. Seretny, P. Turka, Kraków 2011 | U1, U2, K1 | foreign language course |

Course advanced

Semester 1

Teaching methods:

textual analysis, educational game, language conversation classes, foreign language course, situation method

| Activities | Examination methods | Credit conditions |
|-------------------------|--|--|
| foreign language course | written examination, oral answer, test | 1. The final grade will be a result of the following scores: 50 % (final test) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good (4.0) 84-91 good + (4.5) 92-100 very good (5.0) |

Semester 2

Teaching methods:

textual analysis, classes / practicals, educational game, project method, situation method, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|-------------------------|--|--|
| foreign language course | written examination, oral examination, oral answer, test | 1. The final grade will be a result of the following scores: 50 % (final test) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good (4.0) 84-91 good + (4.5) 92-100 very good (5.0) |

Semester 3

Teaching methods:

textual analysis, classes / practicals, educational game, language conversation classes, project method, situation method, presentation, group work

| Activities | Examination methods | Credit conditions |
|-------------------------|---|--|
| foreign language course | written examination, oral examination, oral answer, clinical case presentation, project, test | 1. The final grade will be a result of the following scores: 50 % (final exam) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good(4.0) 84-91 good+ (4.5) 92-100 very good (5.0) |

Semester 4

Teaching methods:

textual analysis, educational game, language conversation classes, presentation

| Activities | Examination methods | Credit conditions |
|-------------------------|---|--|
| foreign language course | written examination, oral examination, oral answer, project, test | 1. The final grade will be a result of the following scores: 50 % (final exam) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good(4.0) 84-91 good+ (4.5) 92-100 very good (5.0) |

Semester 5

Teaching methods:

textual analysis, educational game, language conversation classes

| Activities | Examination methods | Credit conditions |
|-------------------------|--|--|
| foreign language course | written examination, oral examination, oral answer | 1. The final grade will be a result of the following scores: 50 % (final exam) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good(4.0) 84-91 good+ (4.5) 92-100 very good (5.0) |

Semester 6

Teaching methods:

textual analysis, classes / practicals, language conversation classes

| Activities | Examination methods | Credit conditions |
|-------------------------|---|--|
| foreign language course | written examination, oral examination, oral answer, project, test | 1. The final grade will be a result of the following scores: 50 % (final exam) 30 % (partial tests/midterms) 10 % (attendance) 10 % (class work) Grading scale: 0-59 failed (2.0) 60-67 satisfactory (3.0) 68-75 satisfactory + (3.5) 76-83 good(4.0) 84-91 good+ (4.5) 92-100 very good (5.0) |

Computer science and medical statistics

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21, 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group C. Preclinical course</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 1</p> | <p>Examination credit</p> <p>Activities and hours classes: 20</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination graded credit</p> <p>Activities and hours classes: 25</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | The basic aim is to introduce students with modern and innovative information systems and applications used in medicine, especially in dentistry. Objectives include also demonstrate methods and tools and develop skills to used efficiently in supporting decision and therapeutic processes |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | multiple choice test |
| W2 | the rules of conducting scientific research and spreading their results | O.W4 | assignment report, multiple choice test |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | project, multiple choice test |
| U2 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | project |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | assignment report |
| K2 | formulate conclusions from own measurements or observations | O.K8 | assignment report |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| classes | 20 |
| preparation for classes | 15 |
| Student workload | Hours 35 |
| Workload involving teacher | Hours 20 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Semester 5

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| classes | 25 |
| Student workload | Hours 25 |
| Workload involving teacher | Hours 25 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 25 |
|---------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------|
| 1. | Medical databases | W2, U2, K1, K2 | classes |
| 2. | 3D technologies in medicine | W1, U1, K1 | classes |
| 3. | E-learning in medicine | W1, U1, K1 | classes |
| 4. | Simulation in medicine, Virtual Patient | W1, U1 | classes |
| 5. | Medical images analysis | W1, U1, U2, K1 | classes |
| 6. | Clinical Decision Support Systems | U1, K1 | classes |
| 7. | Teleconsultation in medicine | W1, U1, K1 | classes |
| 8. | Biostatistics | W1, U2, K2 | classes |

Course advanced

Semester 1

Teaching methods:

case study, classes / practicals, computer classes, laboratories (labs), demonstration, discussion, e-learning, project method, case study method, presentation, group work, seminar, virtual patient, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|---|--|
| classes | assignment report, multiple choice test | - attend all classes - active participation in discussions during class - preparation and execution of individual tasks - preparation of presentation on given subject - active participation in preparing and performing a clinical pathway - pass the computer test on medical informatics |

Semester 5

Teaching methods:

computer classes, laboratories (labs), discussion, e-learning, problem solving method, project method, presentation, group work, simulation, low fidelity simulation, PBL Problem Based Learning

| Activities | Examination methods | Credit conditions |
|------------|--|--|
| classes | project, assignment report, multiple choice test | - attend all classes - active participation in discussions during class - preparation and execution of individual tasks - preparation of presentation on given subject - active participation in preparing and performing a clinical pathway - pass the computer test on medical informatics |

History of medicine and dentistry

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0222 History and archaeology</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 1</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 14, seminar: 11</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | To acquaint students with the historical development of the medicine on the grounds of the selected disciplines of basic and clinical sciences. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | multiple choice test |

| | | | |
|--|--|-------|----------------------|
| W2 | history of medicine, with particular emphasis on the history of dentistry | D.W16 | multiple choice test |
| W3 | the process of shaping new specialties in the field of scientific discipline - medical sciences and achievements of leading representatives of Polish and world medicine | D.W17 | multiple choice test |
| Skills - Student can: | | | |
| U1 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | multiple choice test |
| K2 | formulate opinions on the various aspects of the professional activity | O.K10 | multiple choice test |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 14 |
| seminar | 11 |
| preparation for classes | 5 |
| preparation for examination | 10 |
| participation in examination | 1 |
| conducting literature research | 10 |
| Student workload | Hours 51 |
| Workload involving teacher | Hours 25 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------|
| 1. | HISTORY OF ANATOMY | W1, W2, W3, U1 | e-learning |
| 2. | HISTORY OF PHYSIOLOGY | W1, W2, W3, U1 | e-learning |
| 3. | HISTORY OF PATHOLOGY | W1, W2, W3, U1 | e-learning |
| 4. | HISTORY OF PATHOLOGICAL ANATOMY | W1, W2, W3, U1 | e-learning |
| 5. | HISTORY OF INTERNAL MEDICINE: DIAGNOSIS | W1, W2, W3, U1 | e-learning |
| 6. | HISTORY OF INTERNAL MEDICINE: THERAPY | W1, W2, W3, U1 | e-learning |

| | | | |
|-----|---|------------------------|------------|
| 7. | HISTORY OF SURGERY | W1, W2, W3, U1 | e-learning |
| 8. | HISTORY OF BIOCHEMISTRY | W1, W2, W3, U1, K1, K2 | seminar |
| 9. | HISTORY OF GENETICS | W1, W2, W3, U1, K1, K2 | seminar |
| 10. | HISTORY OF RADIOLOGY | W1, W2, W3, U1, K1, K2 | seminar |
| 11. | HISTORY OF HYGIENE AND SOCIAL MEDICINE | W1, W2, W3, U1, K1, K2 | seminar |
| 12. | HISTORY OF NATURAL HEALING AND ALTERNATIVE MEDICINE | W1, W2, W3, U1, K1, K2 | seminar |
| 13. | SUMMARY CLASS OF THE HISTORY OF MEDICINE AND DENTISTRY COURSE | W1, W2, W3, U1, K1, K2 | seminar |

Course advanced

Teaching methods:

discussion, e-learning, presentation, seminar

| Activities | Examination methods | Credit conditions |
|------------|----------------------|--|
| e-learning | multiple choice test | Correct answer to control questions included in e-learning presentations |
| seminar | multiple choice test | Positive passing of the final multiple-choice test containing questions from the topics of lectures and seminars |

Entry requirements

None

Philosophy

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0223 Philosophy and ethics</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|--|--|

| | | |
|-----------------------------|--|-------------------------------------|
| Period Semester 1 | <p>Examination graded credit</p> <p>Activities and hours seminar: 15</p> | Number of ECTS points 1.0 |
|-----------------------------|--|-------------------------------------|

Goals

| | |
|----|--|
| C1 | Providing students with knowledge on the Western philosophical traditions. |
| C2 | Providing students with knowledge on the philosophical anthropology and foundations of ethics |
| C3 | Providing students with knowledge on theoretical foundations of science and scientific methods |
| C4 | Developing in students ability to critical thinking and analysis of philosophical text |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|--|-------|---|
| W1 | organization of dentist practice and management principles in healthcare | O.W5 | classroom observation, oral answer, oral credit |
| Skills - Student can: | | | |
| U1 | inspire the learning process of others | O.U6 | classroom observation, oral answer, oral credit |
| U2 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation, oral answer, oral credit |
| U3 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, oral answer, oral credit |
| U4 | comply with ethical standards in professional activities | D.U11 | classroom observation, oral answer, oral credit |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation, oral answer, oral credit |
| K2 | formulate opinions on the various aspects of the professional activity | O.K10 | classroom observation, oral answer, oral credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| seminar | 15 |
| preparation for classes | 15 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 15 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|------------|
| 1. | 1. The idea of philosophy. Socrates and Plato. The metaphor of the cave. 2. Aristotle's ethics. Virtue as a mean. 3. Bacon and Descartes - the foundations of modern rationalism. 4. The political philosophy of classical liberalism - Locke, Montesquieu. 5. Hegel's philosophy of history. 6. Capitalism - for (Adam Smith) and against (Karl Marx). The communist idea. 7. Nietzsche and the death of God - the problem of nihilism. | W1, U1, U2, U3, U4, K1, K2 | seminar |

Course advanced

Teaching methods:

textual analysis, brainstorm, discussion, group work, seminar, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------|---|--|
| seminar | classroom observation, oral answer, oral credit | Presence is obligatory. A student can be absent one time, without any excuse. In case of further absence a student is obliged to additional work assigned by a teacher. Students activity impacts his final mark |

Entry requirements

active presence required

First aid and elements of nursing

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 1</p> | <p>Examination -</p> <p>Activities and hours e-learning: 5, simulations: 10</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 5, simulations: 10</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | Familiar the students with the principles of cardiopulmonary resuscitation in adults and children, including: - Assessment of the unconscious victim, - Placing the victim in the recovery position - Chest compression - Perform rescue breathing technique of mouth-to-mouth, mouth-to-nose, using a pocket mask and bag-mask valve - Use of Automated External Defibrillator |
| C2 | Familiar the students with the principles of first aid in life-threatening conditions not related to trauma |
| C3 | Familiar the students with the basic nursing skills: - iv placement - blood pressure taking |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|-----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | practical examination |
| W2 | health education issues | O.W3 | practical examination |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | practical examination |
| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | practical examination |
| U3 | plan treatment for dental problems | O.U3 | practical examination |
| U4 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | practical examination |
| U5 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | practical examination |
| U6 | inspire the learning process of others | O.U6 | practical examination |
| U7 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | practical examination |
| U8 | communicate and share knowledge with colleagues in a team | O.U8 | practical examination |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | practical examination |
| K2 | to be guided by the well-being of a patient | O.K2 | practical examination |
| K3 | respect medical confidentiality and patients' rights | O.K3 | practical examination |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | practical examination |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | practical examination |
| K6 | promote health-promoting behaviors | O.K6 | practical examination |
| K7 | use objective sources of information | O.K7 | practical examination |
| K8 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | practical examination |
| K9 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | practical examination |

Calculation of ECTS points

Semester 1

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 5 |
| simulations | 10 |
| <hr/> | |
| Student workload | Hours 15 |
| Workload involving teacher | Hours 15 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Semester 2

| Activity form | Activity hours* |
|--|--------------------|
| e-learning | 5 |
| simulations | 10 |
| preparation for examination | 10 |
| preparation of multimedia presentation | 10 |
| information collection | 5 |
| <hr/> | |
| Student workload | Hours 40 |
| Workload involving teacher | Hours 15 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--|-------------------------|
| 1. | Assessment of an unconscious victim, recovery position, calling for help | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |

| | | | |
|-----|--|--|-------------------------|
| 2. | Technique of opening the airway without instruments. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 3. | Assisted ventilation: mouth-to-mouth, mouth-to-nose, mouth-mouth/nose, pocket mask, bag-mask valve. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 4. | Technique for chest compression. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 5. | Technique for cardiopulmonary resuscitation in adults and children. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 6. | The use of an automated external defibrillator. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 7. | Principles for giving first aid in the life-threatening situation (choking, fainting, chest pain, stroke, seizures, injuries). | W1, W2, U1, U2, U3, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, simulations |
| 8. | Assessment of a conscious patient according to the ABC scheme and performing of the basic SAMPLE interview. | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 9. | Principles of selected nursing activities (blood pressure, getting vascular accesses). | W1, U1, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K7, K8, K9 | e-learning, simulations |
| 10. | Ethical issues associated with conducting CPR. | W1, W2, U1, U2, U3, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, simulations |

Course advanced

Semester 1

Teaching methods:

classes / practicals, classes in simulated conditions, OSCE examination, e-learning, presentation, simulation, low fidelity simulation, lecture with multimedia presentation, practical classes, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|-------------|-----------------------|---|
| e-learning | practical examination | - The presence at the exercises - one justified absence is possible. - Knowledge and active participation in classes - A positive completion of performance and a presentation about the set topics - To achieve a positive completion of a practical exam |
| simulations | practical examination | Assessment of module is subject to the following conditions: - The presence at the exercises - one justified absence is possible. - Knowledge and active participation in classes - A positive completion of performance and a presentation about the set topics - To achieve a positive completion of a practical exam |

Semester 2

Teaching methods:

classes / practicals, classes in simulated conditions, OSCE examination, e-learning, presentation, simulation, low fidelity

simulation, lecture with multimedia presentation, practical classes, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|---|
| e-learning | practical examination | - The presence at the exercises - one justified absence is possible. - Knowledge and active participation in classes - A positive completion of performance and a presentation about the set topics - To achieve a positive completion of an practical exam |
| simulations | practical examination | - The presence at the exercises - one justified absence is possible. - Knowledge and active participation in classes - A positive completion of performance and a presentation about the set topics - To achieve a positive completion of an practical exam |

Entry requirements

Obligatory presence. One absence (2h) allowed.

Dental Prophylaxis

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 1</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 5, simulations: 12, classes: 28</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | 1) Explain what health prophylaxis is, what the tools of prophylaxis are to prevent diseases and why prevention of the diseases is much better than treating them. 2) Explain what measures of prophylaxis in dentistry to prevent caries, periodontal diseases and oral cancers are. 3) Explain links between oral health and systemic health. 4) Explain how systemic diseases can impact health of the oral cavity. 5) Explain how general diseases can influence the modality of the dental treatment. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|-------------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | health education issues | O.W3 | test |

| | | | |
|--|---|-------|---|
| W2 | issues in dentistry - at an advanced level | O.W2 | test |
| W3 | prevention of oral diseases | F.W21 | test |
| W4 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | test |
| W5 | principles of preventive and therapeutic management in diseases of the masticatory organ in various periods of development | F.W2 | test |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of professional skills, classroom observation |
| U2 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of professional skills, classroom observation |
| U3 | carry out a dental physical examination of the patient | F.U2 | booklet of professional skills, classroom observation |
| U4 | assess the risk of caries using bacteriological tests and saliva tests | F.U14 | booklet of professional skills, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | promote health-promoting behaviors | O.K6 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 5 |
| simulations | 12 |
| classes | 28 |
| preparation for classes | 12 |
| preparation for examination | 20 |
| Student workload | Hours 77 |
| Workload involving teacher | Hours 45 |
| Practical workload | Hours 40 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|----------------------------------|
| 1. | <p>1)Dental caries - epidemiology, etiology, detection methods. Dental examination, the elements of ergonomics, charting, dental notes keeping.</p> <p>2)Methods of caries prevention.</p> <p>3)Prevention of periodontal disease - the morphology of periodontal tissues, examination of periodontal tissue, periodontal indexes for monitoring the state of periodontal tissues. Fundamentals of scaling and root planning. Basic instruments: scalers and curettes. Ultrasonic scalers.</p> <p>4)Elements of prevention in prosthetic treatment - protection of periodontal tissues and mucosa membranes during treatment with partial and complete dentures.</p> <p>5)X-ray - the importance of radiographic images in the prevention and early detection of diseases of oral tissues at an early stage of development.</p> <p>6)Preventive Oncology in dentistry: precancerous states of the tissues of the oral cavity - differential diagnosis.</p> <p>7)Treatment of patients with systemic diseases: hypertension, coronary heart disease, asthma, allergies, diabetes, renal or liver failure, patients in immunosuppressive therapy and during anticoagulant therapy during chemotherapy, immunocompromised patients and pregnant women - the prevention of the adverse effect of dental treatment on the condition of the underlying disease.</p> | W1, W2, W3, W4, W5, U1, U2, U3, U4, K1 | classes, e-learning, simulations |

Course advanced

Teaching methods:

case study, classes / practicals, preclinical classes, presentation, group work, seminar, simulated patient, lecture, PBL Problem Based Learning, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|---|-------------------|
| e-learning | test | test exam |
| simulations | test | test exam |
| classes | booklet of professional skills, classroom observation | test exam |

Entry requirements

no initial requirement to enter the course

Health and Safety

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 1022 Occupational health and safety</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group</p> |
|--|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 1</p> | <p>Examination credit</p> <p>Activities and hours Health and Safety training: 5</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | Acquainting students and doctoral students starting education in doctoral schools with the provisions and principles of safety and hygiene of education on the basis of selected legal provisions |
| C2 | Getting to know the threats to life and health that occur during classes, how to protect against these threats and how to deal with these threats |
| C3 | Informing students and doctoral students starting education in doctoral schools about the principles of fire protection and in particular about how to prevent fires, fire detection systems, fire-fighting equipment and conducting evacuation in the event of fire and other local threats |
| C4 | Introduction to the general principles of first aid |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|---|-------|--------|
| W1 | organization of dentist practice and management principles in healthcare | O.W5 | credit |
| W2 | issues in dentistry - at an advanced level | O.W2 | credit |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | credit |
| U2 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | credit |
| U3 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | credit |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | credit |
| K2 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| Health and Safety training | 5 |
| analysis of the research material | 1 |
| Student workload | Hours 6 |
| Workload involving teacher | Hours 5 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|--|------------------------------------|----------------------------|
| 1. | Module i - Selected legal regulations-legal grounds for safety and hygiene of education - rights and obligations of a student and Rector in the field of safety and hygiene of education-basic safety principles applicable to students during classes organized by the University | W1, U2, K1 | Health and Safety training |
| 2. | Module I - Conditions of safety and hygiene of education in the University's premises - roads and passages- the University's premises-lighting-heating and ventilation-first aid kit-stand equipped with a screen monitor | W2, U3, K1, K2 | Health and Safety training |

| | | | |
|----|---|----------------|----------------------------|
| 3. | Module i - Educational environment factors and their threats and prevention - dangerous factors-harmful factors- arduous factors | W1, U1, K2 | Health and Safety training |
| 4. | Module I - Accidents to which students may suffer during classes organized by the University - rules of conduct in the event of accidents and in the event of danger and failure | W1, U2, K1, K2 | Health and Safety training |
| 5. | Rules of using student houses | W1, U2, K1 | Health and Safety training |
| 6. | Module I - rules for first aid - medical rescue system in Poland - first aid in legal acts - survival chain - lifeguard safety - injured party assessment (ABC) and call for help - safe position - cardiopulmonary resuscitation (CPR) - automatic cardiopulmonary resuscitation AED external defibrillator - emergency procedures | W1, U1, U2, K2 | Health and Safety training |
| 7. | Module I - Fire protection - legal bases for fire protection - duties of the University, students and doctoral students in the field of fire protection - definition of fire - fire groups - causes of fires - ways of fire fighting - fire fighting equipment - rules of use and operation - rules of behavior during a fire - rules of behavior during evacuation | W1, U2, K1 | Health and Safety training |
| 8. | Module II - 1. Threats of biological agents in the learning environment. 2. Personal protective equipment against biological threats. 3. Problems of environmental protection | W1, U2, U3, K2 | Health and Safety training |
| 9. | Module III - 1. Threats of chemical agents in the learning environment. 2. Personal protective equipment against chemical threats. 3. Problems of environmental protection | W1, U1, U3, K2 | Health and Safety training |

Course advanced

Teaching methods:

e-learning, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|----------------------------|---------------------|--|
| Health and Safety training | credit | watching and listening to the presentation is the basis for recognizing participation in compulsory training |

Entry requirements

Obligatory for passing in the course of studies

Hygiene

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group G. Legal and organizational basis for medicine</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours classes: 26</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Acquisition of practical skills in health care and health promotion by students. |
| C2 | Acquiring knowledge on estimating and minimizing environmental risks. |
| C3 | Student introduction to selected environmental factors in the place of residence and work that affect human health and methods of monitoring the home and working environment. |
| C4 | Civilizational diseases. To acquaint students with the issues of environmental conditions of carcinogenesis. |
| C5 | To provide the student with the basics of knowledge on the evaluation of the state of nutrition and the manner of human nutrition, including nutrients in food, as well as vitamins and minerals and energy requirements. |
| C6 | Development of awareness of the impact of lifestyle and diet on human health |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | health education issues | O.W3 | written examination |
| W2 | basic concepts of prevention, health promotion and environmental hygiene | G.W3 | written examination |
| W3 | basic concepts related to health, lifestyle and health of the population | G.W4 | written examination |
| W4 | etiology of occupational diseases specified in legal regulations, including those related to the profession of a dentist | G.W13 | written examination |
| W5 | principles of disease prevention and improvement of health condition | G.W15 | written examination |
| W6 | principles of ergonomic organization of work in the dental office and carrying out dental procedures | G.W18 | written examination |
| W7 | health promotion concepts and models | G.W2 | assignment report |
| W8 | principles of occupational health and safety in dentistry | G.W19 | assignment report |
| W9 | sources of stress and possibilities of their elimination | G.W21 | assignment report |
| Skills - Student can: | | | |
| U1 | plan prevention and health promotion activities and implement promotional activities on population health | G.U7 | written examination, assignment report |
| U2 | identify harmful and burdensome factors in the workplace, at home or in education | G.U12 | written examination, assignment report |
| U3 | assess the level of health risks arising from the state of air, water, soil and food quality | G.U13 | written examination, assignment report |
| U4 | confirm or exclude the relationship of environmental factors with the etiology of the disease, including occupational disease | G.U14 | written examination, assignment report |
| U5 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | written examination, assignment report |
| U6 | work in accordance with the principles of ergonomic work organization | G.U20 | assignment report |
| U7 | apply sanitary and epidemiological regulations as well as health and safety at work | G.U21 | assignment report |
| U8 | operate in conditions of uncertainty and stress | G.U22 | assignment report |
| U9 | organize and run a dental office | G.U10 | assignment report |
| Social competences - Student is ready to: | | | |
| K1 | promote health-promoting behaviors | O.K6 | assignment report |
| K2 | use objective sources of information | O.K7 | assignment report |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| classes | 26 |
| preparation for classes | 14 |
| analysis of the research material | 20 |
| | |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 26 |
| Practical workload | Hours 46 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------|
| 1. | Environment and human health | W1, W2, W3, U1, U2, U5, U9 | classes |
| 2. | Biomonitoring: biological and environmental | W2, W3, W4, W5, U1, U2, U3, K2 | classes |
| 3. | Occupational diseases, environmental diseases. Exposure to noise and vibration in workplace - impact on the human body. | W4, W5, W6, U1, U2, K1, K2 | classes |
| 4. | Relationship between environmental conditions and cancer, with particular emphasis on tumors having localization or giving symptoms within the viscerocranium | W4, W5, W7, W8, W9, U2, U6, U7, U8, K1, K2 | classes |
| 5. | Diet-related diseases. Malnutrition in hospital, types of diets. Parenteral nutrition. | W1, W3, W5, U1, U3, U5, K1, K2 | classes |
| 6. | Nutrition status assessment. Energy in food: energy needs, with particular emphasis on fats and food fibre. Vitamins and mineral elements, interactions. | W1, W3, W5, U1, U3, U4, K1 | classes |

Course advanced

Teaching methods:

brainstorm, classes / practicals, preclinical classes, discussion, e-learning, educational film, assignments solving, seminar, simulated patient, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|--|--|
| classes | written examination, assignment report | Presence during all classes. Assignments done correctly. |

Dental Materials and Equipment

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21, 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group C. Preclinical course</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 2</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 10, simulations: 20</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 3</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 20</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|-----|--|
| C1 | Teaching of general characteristics of dental materials divided into basic and auxiliary materials. Indication of the division of materials according to the field of dentistry. |
| C2 | To familiarize students with biomechanics of the US and correlation of this area with the requirements for biomaterials. |
| C3 | Teaching of theoretical knowledge regarding strength issues of masticatory tissues and dental materials. |
| C4 | To familiarize students with material testing and determining their mechanical parameters and biocompatibility. |
| C5 | To introduce students with basic and auxiliary materials and to provide practical skills in the field of work with the above materials. |
| C6 | To introduce theoretical knowledge in the field of prosthetic constructions manufacturing technology. |
| C7 | To familiarize students with methods of diagnostic imaging. |
| C8 | To introduce students with disinfection and sterilization techniques. |
| C9 | To familiarize students with the equipment used in the laboratory of dental and orthodontic technology. |
| C10 | To familiarize students with the possibilities and functioning of modern clinical dental equipment. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | written examination, practical examination, theoretical colloquiums |
| W2 | dental office equipment and instruments used in dental procedures | C.W23 | written examination, theoretical colloquiums |
| W3 | definition and classification of basic and auxiliary dental materials | C.W24 | written examination, theoretical colloquiums |
| W4 | composition, structure, binding method, properties, purpose and use method of dental materials | C.W25 | written examination, practical examination, theoretical colloquiums |
| W5 | surface properties of hard tooth tissues and dental biomaterials | C.W26 | written examination, practical examination, theoretical colloquiums |
| W6 | the phenomenon of adhesion and mechanisms for the production of adhesive bond, and the procedure for the adhesive preparation of enamel, dentine and dental biomaterials | C.W27 | written examination, practical examination, theoretical colloquiums |
| W7 | mechanisms of degradation (corrosion) of dental biomaterials in the oral cavity and their impact on the biological properties of materials | C.W29 | written examination, practical examination, theoretical colloquiums |
| W8 | basic principles of disinfection, sterilization and aseptic management | C.W5 | written examination, practical examination, theoretical colloquiums |
| W9 | basic clinical procedures for dental hard tissue reconstruction and endodontic treatment, as well as methods and technical and laboratory procedures for prosthetic restorations | C.W28 | written examination, practical examination, theoretical colloquiums |

| | | | |
|--|--|-------|---|
| W10 | basic clinical procedures for periodontal prevention | C.W32 | written examination, practical examination, theoretical colloquiums |
| W11 | basic clinical procedures for orthodontic prevention | C.W33 | written examination, practical examination, theoretical colloquiums |
| Skills - Student can: | | | |
| U1 | select restorative, prosthetic and connective biomaterials based on material properties and clinical conditions | C.U11 | practical examination, theoretical colloquiums |
| U2 | apply adhesive techniques | C.U10 | written examination, theoretical colloquiums |
| U3 | carry out endodontic treatment and reconstruct missing mineralised tissues in phantom teeth | C.U9 | written examination |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | written examination, practical examination, theoretical colloquiums |
| K2 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | theoretical colloquiums |

Calculation of ECTS points

Semester 2

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 10 |
| simulations | 20 |
| preparation for classes | 15 |
| preparation for examination | 15 |
| preparation for colloquium | 15 |
| information collection | 15 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Semester 3

| Activity form | Activity hours* |
|--|--------------------|
| e-learning | 10 |
| seminar | 20 |
| preparation for examination | 15 |
| preparation of multimedia presentation | 15 |
| preparation for classes | 15 |
| preparation for colloquium | 15 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------|
| 1. | <p>2nd semester; lectures.</p> <p>Lecture topics:</p> <ol style="list-style-type: none"> 1. Biomechanics of the stomatognathic system. Strength issues of masticatory tissues and dental materials. Division and properties of dental materials. 2. General characteristics of dental materials. Impression materials. Dental plasters. 3. Laboratory waxes. The use of polymers in dental prosthetics and maxillofacial surgery. 4. Metals and metal alloys used in dentistry. Dental alloys, casting procedures. Plastic processing - orthodontic wires. Intraosseous implants. 5. New technologies in the production of prosthetic constructions. Galvanoforming. CAD CAM technologies in the milling procedure and in the laser sintering procedure. | W1, W10, W11, W2, W3, W4, W5, W6, W7, W9, K1 | e-learning |

| | | | |
|----|---|--|-------------------------|
| 2. | <p>2nd semester; Laboratory exercises. The components of each exercise are: demonstration, discussion and student work. Subjects of laboratory exercises: 1. Overview of the program and exercise rules. Demonstration of instruments and devices for carrying out exercises. To familiarize students with the functioning of the clinic and the computer system supporting its work. 2. Types, properties and use of dental gypsum in dental prosthetics and orthodontics. Gypsum insulation materials. Demonstration and individual work of the student with the material - dental plaster. 3. Types, properties, clinical and laboratory use of rigid and flexible impression materials. Discussion of impression trays. 4. Types, properties and use of laboratory waxes and insulation materials. 5. Disinfection and sterilization techniques. 6. Imaging of the masticatory apparatus using x-rays. 7. Spatial modeling. 8. Analysis of strength parameters of alloys and metals used in dentistry. The use of wire as a construction material in orthodontics and prosthetics. 9. Polymer materials in dentistry. Application and properties of acrylic.</p> | W1, W2, W3, W4, W5, W6, W7, W8, U1, U3, K1, K2 | simulations |
| 3. | <p>3rd semester; lectures. Lecture topics: 1. Dental ceramics. Classification. Ceramic-metal systems. All-ceramic restorations. 2. Cements used in dentistry. Connecting systems. 3. Materials for permanent fillings. Creation of dentin and enamel joints with dental materials. Materials for filling root canals. 4. Clinical dental equipment. 5. Laboratory dental equipment.</p> | U1, K1 | e-learning, simulations |

| | | | |
|----|---|--|---------|
| 4. | <p>3rd semester: seminars Seminars include multimedia presentations and discussions on the following topics:</p> <ol style="list-style-type: none"> 1. Mechanical properties of biomaterials, the concept of stress and strain. Strength laboratory tests. 2. Impression materials - types, properties, advantages, disadvantages, standard and individual impression trays. Rigid and flexible masses and ways of grinding them. Two-layer impressions - one-time and two-time impressions. 3. Cements in dentistry. Composition analysis, setting, clinical significance of cement type, strength parameters, retention problem. Cements based on water, resins and oils. Auxiliary materials and preparations. 4. Materials for dental fillings. Composites, glass ionomers, compomers, amalgams - discussion of properties and indications. Adhesion of tissues and restorative materials. 5. Dental alloys - types of alloys and their properties. Methods for obtaining cast metal constructions. Dental implants. methods of holding metal structures using modern technologies. 6. Biomaterials and tissue scaffolds. Stem cells. Tissue engineering. 7. Characteristics of acrylic materials and flexible materials. 8. Dental ceramics. Ceramics fired on metal and metal-free. 9. Dental equipment - presentation of modern clinical and diagnostic equipment. 10. Dental laboratory equipment - demonstration of laboratory procedures (gypsum shop, acrylic laboratory, foundry, technical positions, precision machining laboratory, dental ceramics laboratory). | W1, W2, W3, W4, W5, W6, W7, U1, U2, K1, K2 | seminar |
|----|---|--|---------|

Course advanced

Semester 2

Teaching methods:

case study, classes / practicals, laboratories (labs), preclinical classes, classes in simulated conditions, demonstration, discussion, e-learning, educational film, presentation, group work, assignments solving, seminar, simulation, workshop, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|---|--|
| e-learning | written examination, practical examination | all classes are obligatory |
| simulations | written examination, practical examination, theoretical colloquiums | Presence mandatory required at all exercises, positive assessment of all practical procedures and tests. |

Semester 3

Teaching methods:

demonstration, discussion, e-learning, educational film, presentation, group work, seminar, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|-------------------|---|---|
| e-learning | written examination, practical examination | all classes are obligatory |
| seminar | written examination, practical examination, theoretical colloquiums | Presence mandatory required at all seminars, positive assessment of colloquias. |

Entry requirements

Students attendance is compulsory.

Propaedeutics of Medicine and Dentistry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 14, seminar: 4, classes: 16</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | To know basics of embriology and histology of the tooth. |
| C2 | To know the importance of sterilization and disinfection principles in dentistry. |
| C3 | To know and teach to recognize dental instruments and burs instruments |
| C4 | To know dentist-patient relationships. |
| C5 | To know epidemics of twenty first century. |
| C6 | To know the teeth as part of the body. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | test |
| W2 | organization of dentist practice and management principles in healthcare | O.W5 | test |
| Skills - Student can: | | | |
| U1 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| U2 | perform basic medical procedures and procedures: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen therapy, assisted and substitute ventilation, placement of a oropharyngeal tube, preparation of the surgical field, hygienic and surgical hand disinfection, intravenous, intramuscular and subcutaneous injection, peripheral venous blood collection, collecting nasal, pharyngeal and dermal swabs, simple strip tests, measurement of blood glucose levels | E.U20 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K2 | use objective sources of information | O.K7 | classroom observation |
| K3 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K5 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K6 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K7 | formulate opinions on the various aspects of the professional activity | O.K10 | classroom observation |
| K8 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |
| K9 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|---------------|-----------------|
|---------------|-----------------|

| | |
|-----------------------------------|--------------------|
| e-learning | 14 |
| seminar | 4 |
| classes | 16 |
| preparation for colloquium | 20 |
| preparation for classes | 15 |
| practice | 12 |
| Student workload | Hours 81 |
| Workload involving teacher | Hours 34 |
| Practical workload | Hours 28 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------|
| 1. | Embriology of the tooth. | W1, W2, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar |
| 2. | Histology of the tooth. | W1, K2 | seminar |
| 3. | Dental instruments Dental burs. Prosthodontics instruments. Surgical instruments | W1, W2, U2, K1, K2, K3, K4, K5, K6, K7, K8, K9 | classes, seminar |
| 4. | Dentist-patient relationships. | W1, U1, K1 | e-learning |
| 5. | Epidemics of twenty first century. | W1, K1 | e-learning |
| 6. | Sterilization and disinfection. | W2, K2 | classes |

Course advanced

Teaching methods:

presentation, seminar

| Activities | Examination methods | Credit conditions |
|------------|---------------------|---|
| e-learning | test | Final mid-term test passed -the theoretical part.The test consists of 50 questions which cover the whole material of the course (seminars, classes, lectures) |
| seminar | test | Final mid-term test passed -the theoretical part.The test consists of 50 questions which cover the whole material of the course (seminars, classes, lectures) |

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|--------------------------|
| classes | classroom observation | Observation. |

Entry requirements

Lectures, seminars and classes are obligatory.

Medical practice in general surgery, internal diseases or maxillofacial surgery - summer internship

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group I. Professional practice</p> |
|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 2</p> | <p>Examination credit</p> <p>Activities and hours professional practice: 60</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | The aim of the course is to familiarize students with working arrangements of hospital wards. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | booklet of practice |
| W2 | health education issues | O.W3 | booklet of practice |
| Skills - Student can: | | | |

| | | | |
|--|--|------|---------------------|
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practice |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practice |
| U3 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practice |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practice |
| K2 | to be guided by the well-being of a patient | O.K2 | booklet of practice |
| K3 | respect medical confidentiality and patients' rights | O.K3 | booklet of practice |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practice |
| K5 | formulate conclusions from own measurements or observations | O.K8 | booklet of practice |
| K6 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | booklet of practice |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| professional practice | 60 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 60 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|-----------------------|
| 1. | history taking and clinical examination | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |
| 2. | assistance to clinical examination and medical procedures | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |

| | | | |
|----|---|--|-----------------------|
| 3. | recording of vital signs | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |
| 4. | dressings of small wounds | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |
| 5. | assistance to sanitary procedures of patients | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |
| 6. | rules of first aid | W1, W2, U1, U2, U3, K1, K2, K3, K4, K5, K6 | professional practice |

Course advanced

Teaching methods:

professional practice

| Activities | Examination methods | Credit conditions |
|-----------------------|---------------------|------------------------------|
| professional practice | booklet of practice | 60h of professional practice |

Health care organization – summer clerkship

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group I. Professional practice</p> |
|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 2</p> | <p>Examination credit</p> <p>Activities and hours professional practice: 60</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | The aim of the course is to familiarize students with organization of health system and working system of hospital wards |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | booklet of practice |
| Skills - Student can: | | | |

| | | | |
|--|---|------|---------------------|
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practice |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practice |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| professional practice | 60 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 60 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|-----------------------|
| 1. | A familiarisation with functioning and computerisation of health care units | W1, U1, K1 | professional practice |
| 2. | A familiarisation with the rules of personal data protection | W1, U1, K1 | professional practice |
| 3. | The rules of conducting and archiving of medical records | W1, U1, K1 | professional practice |
| 4. | The rules of coding of diagnoses and medical procedures | W1, U1, K1 | professional practice |

Course advanced

Teaching methods:

professional practice

| Activities | Examination methods | Credit conditions |
|-----------------------|---------------------|------------------------------|
| professional practice | booklet of practice | 60h of professional practice |

Main aspects of Polish history and culture

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0222 History and archaeology</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours lecture: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Course Description: History of Poland is not only fascinating for Poles but unfortunately difficult to understand for foreigners. Understanding Polish mentality and culture without basic knowledge about our history might be "mission impossible". During this course I will try to share with students the basic political, cultural and social changes in the Polish and Polish-Lithuanian history from its beginning to the beginnings of the XXI century. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | essay |
| Skills - Student can: | | | |

| | | | |
|--|--|------|-------|
| U1 | inspire the learning process of others | O.U6 | essay |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | essay |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| lecture | 30 |
| information collection | 15 |
| preparation of a report | 15 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|----------------|-----------------------------|------------|
| 1. | | W1, U1, K1 | lecture |

Course advanced

Teaching methods:

case study, discussion, presentation, trip, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|---------------------|------------------------------------|
| lecture | essay | Evaluation: • One analytical essay |

Medicine of the Third Reich

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0222 History and archaeology</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours lecture: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | In the Third Reich, medicine has become one of the main instruments of introducing racist policy. Without active participation of many doctors and nurses, the program of compulsory sterilisation, forced euthanasia, and medical experiments in concentration camps would not be fully implemented. Moreover, their involvement in eugenics provided pseudo-scientific justification for anti-Semitism. Therefore, the aim of the course is to describe and analyse eugenic ideas in the Third Reich in comparative context, as well as to raise student's awareness of crucial role of ethics in the profession of doctors. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|---|-------|--|
| W1 | the current views on the social dimension of health and disease, the impact of the social environment (family, social networks) and social inequalities and socio-cultural differences on health, and the role of social stress in health and self-destructive behaviors; | D.W1 | written examination, classroom observation, essay, project |
| W2 | history of medicine, with particular emphasis on the history of dentistry | D.W16 | written examination, classroom observation, essay, project |
| W3 | social attitudes towards the importance of health, disease, disability and old age, the social consequences of disease and disability and social and cultural barriers, and the concept of quality of life as determined by the state of health | D.W3 | written examination, classroom observation, essay, project |
| W4 | patient rights | D.W15 | written examination, classroom observation, essay, project |
| Skills - Student can: | | | |
| U1 | comply with ethical standards in professional activities | D.U11 | written examination, classroom observation, essay, project |
| U2 | respect the rights of the patient | D.U12 | written examination, classroom observation, essay, project |
| Social competences - Student is ready to: | | | |
| K1 | formulate opinions on the various aspects of the professional activity | O.K10 | written examination, classroom observation, essay, project |
| K2 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | written examination, classroom observation, essay, project |
| K3 | to be guided by the well-being of a patient | O.K2 | written examination, classroom observation, essay, project |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| lecture | 30 |
| case analysis | 30 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|-----------------------|------------------------------------|-------------------|
|------------|-----------------------|------------------------------------|-------------------|

| | | | |
|----|--|------------------------------------|---------|
| 1. | <p>Topic 1</p> <p>I. Situation and role of Jewish society in pre-war Krakow - 2h Prof. dr hab. n. med. Aleksander Skotnicki</p> <p>II. Holocaust in the light of philosophy - 4h Prof. dr hab. Jan Woleński • Problem of explanation: intentionalism, contextualism • Image of a Jew in Nazi propaganda - Jew as public enemy No. 1 • Philosophical foundations of the Nazi race concept • Dehumanization of Jews • Construction of the world of death • The Holocaust and religion • Sources of knowledge about the Holocaust • The problem of narrative about the Holocaust: realism, symbolism • Moral attitudes towards the Holocaust • The issue of responsibility for the Holocaust .</p> <p>III. Institutionalization of racist doctrine in the Third Reich - 6h mgr Katarzyna du Vall 1. Birth of the racist stream of eugenics • International context: ideas of eugenics in the United States, Scandinavia and Poland • Race hygiene movement in Germany • The problem of race in Nazi ideologists: the views of Adolf Hitler, Alfred Rosenberg , Walthera Darré 2. Eugenics of population policy in the Third Reich • The so-called inherited; problem of Jewish population • eugenic legislation • Organization of health care; doctors in the SS ranks and oath of loyalty to Hitler • The role of propaganda in the implementation of the eugenics program 3. Positive and negative Eugenics • Family policy, the role of women, Lebensborn • Sterilization for eugenic reasons of German citizens 4. Euthanasia • Action T4 (program of physical "elimination of life not worth living "Implemented in the years 1939-1941); euthanasia of children 5. Eugenics and so-called Jewish issue • Anti-Jewish legislation in Germany.</p> <p>IV. Implementation of the anti-Jewish policy of the Third Reich after the outbreak of World War II - 4h Agnieszka Zajączkowska-Drożdż, MA • Anti-Jewish legislation in the occupied territories and incorporated into the Third Reich • Concepts of solving the so-called Jewish issues: resettlement to the General Government, idea of creating a Jewish 'reserve' in Madagascar, idea of resettlement to the USSR • Conference in Wannsee • The role of state administration in the Holocaust of Jews • Ghettoization • The role of concentration camps .</p> <p>V. Medical and pseudomedical experiments and post-war fate of doctors - 6h mgr Agnieszka Zajączkowska-Drożdż 1. Medical and pseudomedical experiments • Guidelines of the Nazi authorities regarding the method and scope of conducting experiments • Experiments carried out in the Buchenwald, Auschwitz-Birkenau, Ravensbruck, Dachau, Mauthausen-Gusen, Natzweiler-Struthof, Neuengamme, Sachsen and Sachsen camps Types of experiments carried out • Range of experiments, number of victims, number of doctors involved • Profiles of individual doctors and nurses 2. Post-war fate of doctors • First Nuremberg trial - US trial A vs. Karl Brandt and others: main defendants, charges and proceedings, judgments • Profile of Karl Brandt - doctor Adolf Hitler. • Presentation of fragments of source materials from the process.</p> <p>VI. Contemporary bioethical issues in the historical context - 8h Katarzyna du Vall</p> | W1, W2, W3, W4, U1, U2, K1, K2, K3 | lecture |
|----|--|------------------------------------|---------|

Course advanced

Teaching methods:

case study, discussion, e-learning, problem solving method, case study method, presentation, seminar, lecture, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|--|--|
| lecture | written examination, classroom observation, essay, project | attendance + exam / presentation / essay |

Entry requirements

Interest in the history of medicine and medical ethics in the interwar period and during WW2.

Introduction to the philosophy of science

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0223 Philosophy and ethics</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2020/21</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 2</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| G1 | Providing students with theoretical knowledge and methodological tools allowing them to conceive the character of scientific knowledge. |
| G2 | Revealing historical changeability in comprehension of standards of scientificity in various periods. |
| G3 | Acquainting students with description of mechanisms of scientific knowledge development. |
| G4 | Showing students myths and stereotypes in social comprehension of science. |
| G5 | Developing in students rationally critical approach towards science and social expectations from it. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|--|------|------------------------------|
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | classroom observation, essay |
| W2 | the rules of conducting scientific research and spreading their results | O.W4 | classroom observation, essay |
| Skills - Student can: | | | |
| U1 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, essay |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation, essay |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| seminar | 30 |
| preparation for classes | 10 |
| preparation of a paper | 20 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|---|------------------------------------|-------------------|
| 1. | Philosophy of science as expression of self-awareness of scientists and philosophers with regard to scientific knowledge and its development. | W1, W2, U1, K1 | seminar |
| 2. | Theoretical structure of empirical and deductive sciences - similarities and differences. | W1, W2, U1, K1 | seminar |
| 3. | Methods of creation of scientific theories in empirical sciences. | W1, W2, U1, K1 | seminar |
| 4. | Basic methods of reasoning in empirical sciences: induction, deduction, reduction. | W1, W2, U1, K1 | seminar |
| 5. | Interdependence of empirical and theoretical knowledge in the development of science. | W1, W2, U1, K1 | seminar |
| 6. | Methods of conducting empirical research and principles of verification of its results. | W1, W2, U1, K1 | seminar |
| 7. | The role of fact and discovery in the growth of knowledge. | W1, W2, U1, K1 | seminar |

| | | | |
|-----|---|----------------|---------|
| 8. | Cognitive status of scientific theories and their impact on the development of science. | W1, W2, U1, K1 | seminar |
| 9. | Main theories of growth of science: positivistic theories, falsificationism, theory of scientific revolutions, methodological realism and operationalism. | W1, W2, U1, K1 | seminar |
| 10. | Specificity of research methods in biomedical sciences. | W1, W2, U1, K1 | seminar |
| 11. | Methodology of basic and clinical research. | W1, W2, U1, K1 | seminar |
| 12. | Principles of verification and interpretation of research results - methodological traps. | W1, W2, U1, K1 | seminar |
| 13. | Concepts of norm and pathology in biomedical sciences. | W1, W2, U1, K1 | seminar |
| 14. | The concept of disease and controversies surrounding it. | W1, W2, U1, K1 | seminar |
| 15. | Logico-methodological and ethical implications of the theory of empirical research in biomedical sciences. | W1, W2, U1, K1 | seminar |

Course advanced

Teaching methods:

textual analysis, discussion

| Activities | Examination methods | Credit conditions |
|------------|------------------------------|---|
| seminar | classroom observation, essay | The final score consists on: - active participation in class discussions - 50% - assessment of critical review of a suggested book relevant to the issues of the course - 50% |

Biochemistry with Elements of Chemistry

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group B. Scientific basis for medicine</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 3</p> | <p>Examination -</p> <p>Activities and hours seminar: 23, classes: 18, e-learning: 24</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 4</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 24, seminar: 23, classes: 18</p> | <p>Number of ECTS points 9.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | Introduction to biochemical processes providing a basis to understanding physiology and pathology. |
| C2 | Introduction to basic biochemical laboratory techniques and analysis of quantitative data. |
| C3 | Developing skills for searching for information in the field of biochemical basis of physiological and pathological processes and for the presentation of the topic. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | classroom observation, assignment report, multiple choice test |
| W2 | the rules of conducting scientific research and spreading their results | O.W4 | classroom observation, assignment report |
| W3 | the importance of electrolytes, buffer systems and chemical reactions in biological systems | B.W2 | classroom observation, assignment report, multiple choice test |
| W4 | biochemical foundations of human body integrity | B.W3 | multiple choice test |
| W5 | structure and functions of important chemical compounds present in the human body, in particular properties, functions, metabolism and energy of reactions of proteins, nucleic acids, carbohydrates, lipids, enzymes and hormones | B.W4 | multiple choice test |
| W6 | selected issues in the field of genetics and molecular biology | B.W17 | classroom observation, multiple choice test |
| W7 | principles of acid-base balance and transport of oxygen and carbon dioxide in the body | B.W21 | classroom observation, multiple choice test |
| W8 | principles of metabolism and nutrition | B.W22 | classroom observation, assignment report, multiple choice test |
| W9 | health education issues | O.W3 | classroom observation, assignment report, multiple choice test |
| W10 | the importance of the main and trace elements in the processes occurring in the body, including supply, absorption and transport | B.W1 | classroom observation, multiple choice test |
| W11 | principles of calcium and phosphate management | B.W5 | classroom observation |
| W12 | the role and importance of body fluids, including saliva | B.W6 | classroom observation |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation, assignment report |
| U2 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, assignment report |
| U3 | apply knowledge of genetics and molecular biology in clinical work | B.U5 | classroom observation, assignment report, multiple choice test |
| U4 | relate chemical phenomena to oral cavity processes | B.U1 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation |

Calculation of ECTS points

Semester 3

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| seminar | 23 |
| classes | 18 |
| e-learning | 24 |
| preparation for classes | 20 |
| preparation for test | 20 |
| Student workload | Hours 105 |
| Workload involving teacher | Hours 65 |
| Practical workload | Hours 18 |

* hour means 45 minutes

Semester 4

| Activity form | Activity hours* |
|--|---------------------|
| e-learning | 24 |
| seminar | 23 |
| classes | 18 |
| preparation for classes | 20 |
| preparation for test | 20 |
| preparation for examination | 30 |
| participation in examination | 11 |
| preparation of multimedia presentation | 4 |
| Student workload | Hours 150 |
| Workload involving teacher | Hours 65 |
| Practical workload | Hours 18 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------------------------|
| 1. | Water as a solvent. Weak interactions in water solutions - hydrogen bond, hydrophobic and van der Waals interactions - examples of biological importance. Water as a reactant - hydrolysis reactions. Polar and nonpolar molecules. Electrostatic interactions of water. The fitness of the aqueous environment for living organisms. Semipermeable membranes - osmotic and oncotic pressure. Colloidal solutions. Osmotic pressure and Donnan Membrane Equilibria. Typical organic reactions. Nucleophiles and electrophiles. Isomers. Naming and characteristic reactions of simple organic alcohols, thiols, aldehydes and carboxylic acids. Aromatic compounds - definition and properties. | W1, W4, U2, U4 | classes, seminar, e-learning |
| 2. | Chemical equilibria -basics. Water dissociation. pH concept. Brönsted-Lowry concept of acids and bases. Acid-base conjugated pair. Strong and weak acids and bases. Dissociation constants of weak acids (Ka) and bases (Kb). Buffer solutions. Biological buffer systems. Regulation of bicarbonate concentration - role of kidneys. Simple acid - base disorders. Regulation of water volume and sodium cation concentration- basis. | W11, W12, W3, W7, U2 | classes, seminar, e-learning |
| 3. | Basics of thermodynamics. Spontaneity of chemical reactions. Enthalpy change ΔH . The 1st law of thermodynamics. Entropy change ΔS . The 2nd law of thermodynamics. The free energy change and the equilibrium constant. Coupled reactions. ATP. High-energy phosphates. Oxidation, reduction - definitions. Standard and biological standard reduction half-cell potentials. Half-cell potentials under nonstandard conditions - Nernst equation. | W1, W3, U2 | classes, seminar, e-learning |
| 4. | Basis of chemical kinetics. Factors affecting reaction rates (c, T, pH). Activation energy. Reaction mechanism. Catalysis - examples of inorganic catalysts. Biocatalysts | W1, W10 | e-learning |
| 5. | Carbohydrates - classification, nomenclature, stereo-isomerism, reducing property. Creating O-and N-glycosides, esterification, the formation of amino sugars. Di-, oligo-and polysaccharides. Heteroglycans. Lipids - classification, properties. Amino acids - classification. Peptides - the structure of the peptide bond. | W1, W10, W5 | classes, seminar, e-learning |
| 6. | Proteins - structure, physico-chemical properties. Globular proteins. Myoglobin and hemoglobin - the structure and function. Fibril protein (collagen, keratin). Plasma proteins. Enzymes. The specificity and catalytic efficiency. The kinetics of enzymatic reaction. Class of enzymes. Coenzymes (vitamins role). Control activity (allosteric enzymes). Examples of the mechanism of action of enzymes. The importance of enzymes in diagnosis. Enzyme inhibitors. | W1, W10, W5, W7 | classes, seminar, e-learning |

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| 7. | Nucleic acid structure and physico-chemical properties of DNA and RNA. Replication. Mutations and DNA repair mechanisms. Transcription and post-transcriptional modifications. Translation. Post-translational modifications and protein sorting. The degradation of proteins in the cell. Basic methods of molecular biology (PCR, gene-expression analysis of RT-PCR, DNA electrophoresis, hybridization). | W1, W10, W2, W6, W7, U3 | seminar, e-learning |
| 8. | Fundamentals of bioenergetics. Role of ATP. Anabolism and catabolism. Respiratory chain, oxidative phosphorylation. Krebs cycle. Reactive oxygen species - formation in the body, effects, means of disposal. Digestion and absorption of carbohydrates. Glycolysis. Phosphorylation of substrates. Pentose-phosphate pathway. Glycogen metabolism. Gluconeogenesis. Metabolism of fructose and galactose. Coordination of carbohydrate metabolism system. Glucose homeostasis. | W1, W10, W4, W5 | classes, seminar, e-learning |
| 9. | Digestion, absorption and transport of lipids. Lipase. Plasma lipoprotein (types, metabolism, the role). Oxidation of fatty acids. Synthesis and the role of ketone bodies. The synthesis of saturated fatty acids and unsaturated. Synthesis of lipids. Intracellular degradation of complex lipids. The synthesis of cholesterol and derivatives (bile acids, hormones). Eicosanoid metabolism. | W1, W10, W5, W8, K1 | seminar, e-learning |
| 10. | Digestion of proteins. Absorption and further life of amino acids in a cell. Removal of protein nitrogen. Synthesis of urea. Ammonia toxicity. Glucogenic and ketogenic amino acids. Degradation of selected amino acids and the synthesis of amino acids. The role of one-carbon fragments and transmethylation metabolism of amino acids and their derivatives. Metabolism of phenylalanine and tyrosine. The metabolism of nitrogenous compounds derived from amino acids: haem, creatinine, adrenaline, serotonin. | W1, W8, K1 | seminar, e-learning |
| 11. | Biosynthesis and degradation of purine and pyrimidine nucleotides. | W1, W10, W8, W9 | e-learning |
| 12. | Biochemistry of detoxification processes. The role of cytochrome P450, coupling reactions. | W1, W8, U2, K1 | seminar, e-learning |
| 13. | Basic concepts of signal transduction. Membrane and nuclear receptors. Signaling cascades. Integration and coordination of metabolism. Energy metabolism of different tissues - after meals, between meals, during starvation. Hormonal regulation of metabolism at the cellular level and the body. | W1, W4, W8, U1, K1 | seminar, e-learning |
| 14. | Fundamentals of cell cycle regulation. The transformation of cancer cells: morphological characteristics and metabolism of cancer cells. Oncogenes, tumor suppressor genes. Signal transduction disorders. Invasion and metastasis of cancer. Apoptosis. | W1, W4, W6, K1 | e-learning |

Course advanced

Semester 3

Teaching methods:

laboratories (labs), seminar, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|--------------------------------|
| seminar | multiple choice test | 2 partial tests (40 questions) |
| classes | multiple choice test | short quizzes, presentations |
| e-learning | classroom observation, assignment report | short quizzes, written reports |

Semester 4**Teaching methods:**

laboratories (labs), seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| e-learning | multiple choice test | two partial tests (40 questions); final test (80 questions) |
| seminar | multiple choice test | short quizzes, presentations |
| classes | classroom observation, assignment report | short quizzes, written reports |

Human physiology

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group B. Scientific basis for medicine</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 3</p> | <p>Examination -</p> <p>Activities and hours e-learning: 54, classes: 26</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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|-------------------------------------|--|--|
| <p>Period Semester 4</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 54, classes: 26</p> | <p>Number of ECTS points 12.0</p> |
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Goals

| | |
|----|---|
| C1 | <p>The major goal of the Physiology course is to provide the clear and up-to-date knowledge on the functions and regulations of the human body for medical students. In particular, our major interest is dedicated to present the medical physiology to medical students in concise, uncomplicated and understandable fashion with focus to the following topics: - Basic principles of body fluids and water-electrolyte balance of the human body - Concepts of: solubility, osmotic pressure, isotonic conditions, colloidal solutions and Gibbs-Donnan balance - Transcellular and intracellular cell communications and the cell signaling - Physiology of skeletal and smooth muscle and the functions of circulating blood - Background necessary to understand the impulse conduction and stimulation in peripheral and central nervous system, higher functions and basic functions of centers in the brain and other centers of central nervous system in order to understand the homeostatic control of body organs and brain special senses - Relevant physical laws explaining the blood flow and gaseous molecules flow along with factors affecting endothelial resistance in circulatory blood vessels and the term of air resistance in airways of respiratory tract - Functions and regulatory mechanisms of all organs and systems of human body including muscular system, cardiovascular and respiratory systems, gastrointestinal tract, endocrine and urinary systems, skin surface system physiology, their interactions and dependence - Metabolic profile of major organs and systems - Acid-base balance, the mechanism of buffer functions and their significance for the future medical practice - Digestive tract enzymes, the mechanism of gastric acid formation and secretion, pancreatic functions, bile synthesis, release and circulation, the course and mechanism of digestion and absorption process of food products and gastrointestinal disorders - The process of food intake and the consequences of bad nutrition leading to nutritional disorders such as cachexia, obesity and unbalanced diet - Hormones and their regulation, release and mechanism of action and hormonal disturbances and disorders - The course and regulation of reproductive functions in female and male - Basic principles and quantitative parameters describing efficiency of particular human organs and systems.</p> |
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Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | human vital signs | B.W19 | multiple choice test |
| W2 | principles of calcium and phosphate management | B.W5 | multiple choice test |
| W3 | the role and importance of body fluids, including saliva | B.W6 | multiple choice test |
| W4 | basic concepts in the field of biology and ecology | B.W14 | multiple choice test |
| W5 | interrelationships between organisms in the ecosystem | B.W15 | multiple choice test |
| W6 | interactions in the parasite-host system | B.W16 | multiple choice test |
| W7 | clinical application of genetics | B.W18 | multiple choice test |
| W8 | neurohormonal regulation of physiological processes | B.W20 | multiple choice test |
| W9 | principles of acid-base balance and transport of oxygen and carbon dioxide in the body | B.W21 | multiple choice test |
| W10 | numerical value of basic physiological variables and changes in numerical values | B.W23 | multiple choice test |
| W11 | principles of statics and biomechanics in relation to the human body | B.W7 | multiple choice test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | multiple choice test |

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| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | multiple choice test |
| U3 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | multiple choice test |
| U4 | relate chemical phenomena to oral cavity processes | B.U1 | multiple choice test |
| U5 | use biological and ecological concepts in the context of human - living environment | B.U4 | multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | multiple choice test |
| K2 | formulate conclusions from own measurements or observations | O.K8 | multiple choice test |

Calculation of ECTS points

Semester 3

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 54 |
| classes | 26 |
| Student workload | Hours 80 |
| Workload involving teacher | Hours 80 |
| Practical workload | Hours 26 |

* hour means 45 minutes

Semester 4

| Activity form | Activity hours* |
|-----------------------------|-----------------|
| e-learning | 54 |
| classes | 26 |
| preparation for classes | 40 |
| preparation for colloquium | 50 |
| preparation of a paper | 40 |
| preparation for examination | 50 |
| consultations with lecturer | 17 |

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|-----------------------------------|---------------------|
| participation in examination | 3 |
| Student workload | Hours 280 |
| Workload involving teacher | Hours 80 |
| Practical workload | Hours 26 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|---|---------------------|
| 1. | <p>Basic information concerning homeostasis. The genesis of resting membrane potential and action potential of excitable cells, and the conduction of action potential along the cell membrane. Structure, functions and consequences of blocking the Na⁺/K⁺ pump. Biogenesis of action potential of excitable cells. Ion channels of cell membranes.</p> <p>Conduction of membrane potential along the membrane. Types of synapses, synaptic transmission. Physiology of neuromuscular junction. Electrical and mechanical linkage. Types of skeletal muscles' contractions. The relationship between contraction strength and the original length. Types of smooth muscles' contractions. Types of smooth muscles and mechanisms that activate the contraction of smooth muscles. Rodzaje skurczów mięśni gładkich.</p> | W1, W11, W3, W4, W5, U1, U2, U4, U5, K1, K2 | classes, e-learning |
| 2. | <p>Mechanisms of ion action potential of the heart muscle and pacemaker cell. The cardiac conduction system and hierarchy of centres creating stimuli in the heart. ECG data. Mutual dependencies between electrical and mechanical activity in the heart. The term of cardiac contractility, assessment methods, modifying conditions. Cardiac cycle. The influence of the autonomic nervous system on the heart.</p> <p>Endogenous regulatory mechanisms of cardiac output. Cardiac metabolism. The structure of the small and large cardiovascular system. The function of central arteries, arterioles and capillaries. Instantaneous and mean arterial pressure. Baroreflex. Filtration and resorption phenomena in peripheral circulation capillaries. Blood flow autoregulation. Endothelial and non-endothelial factors affecting the width of the vascular bed. Factors modifying return of the venous blood to the heart. Physiology of the coronary circulation.</p> | W1, W10, W5, U1, U2, K1, K2 | classes, e-learning |

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|----|--|------------------------------------|---------------------|
| 3. | Bronchial tree, its functions, factors that regulate bronchial muscle tonus. Susceptibility of lungs to elastic and non-elastic resistance to breathing. Static and dynamic breathing tests. Gas exchange in the lungs and transport of respiratory gases. General characteristics of the pulmonary circulation. V/Q ratios. Respiration control. Chemically sensitive zone in breath regulation. Regulation of breathing in exercise. | W1, W10, W9, U1, U2, K1, K2 | classes, e-learning |
| 4. | Structure of the excretory system and renal flow characteristics. Glomerular filtration. The R-A-A system and its physiological role. Resorption of water, Na and high-threshold substances. Tubular secretion. Compaction of urine. Resorption and regeneration of the bases and the basics of the acid-base balance of the body. | W1, W3, W5, U1, U2, U3, K1, K2 | classes, e-learning |
| 5. | Basics of water balance in the body. Regulation of food intake. Mechanisms regulating the activity of the gastrointestinal tract. Myoelectric activity of the gastrointestinal tract. Swallowing, esophageal motility and regulation of motor activity of lower esophageal sphincter (LES). Basics of motor activity in the stomach. Regulation of gastric emptying. Bowel motor activity and its regulation. The composition of the saliva, secretory activity of the salivary glands and its regulation. Structure of the gastric mucosa. Secretory activity of the stomach and its regulation. Phases of gastric secretion. The composition of the saliva, secretory activity of the salivary glands and its regulation. Structure of the gastric mucosa. Secretory activity of the stomach and its regulation. Phases of gastric secretion. Exocrine and endocrine activity of the pancreas. Enzymatic and non-enzymatic composition of pancreatic juice. Pancreatic secretion activity and its regulation. Phases of pancreatic secretion. Exocrine and endocrine activity of the pancreas. Enzymatic and non-enzymatic composition of pancreatic juice. Pancreatic secretion activity and its regulation. Phases of pancreatic secretion. Composition of bile and regulation of its secretion. Circulation of bile salts. Digestion and absorption of sugars, fats and proteins in the gastrointestinal tract. | W1, W3, W6, W8, U1, U2, U3, K1, K2 | classes, e-learning |
| 6. | Sensory and motor axis of central nervous system (CNS). Functional levels of the central nervous system. Functions of the spinal cord. Mechanisms of muscle tension regulation. Structure and functions of the pyramidal system. Structure and function of the extrapyramidal system. Structure and function of the reticular system. Structure and functions of the cerebellum. Types of receptors and mechanisms of coding sensory information. Afferent sensory ways. Neuronal organization of the sensory cortex and symptoms of its damage. Perception and gnosis of the sensory stimulus. Anatomical structure and functional division of the hypothalamus. Functions of the hypothalamus and the effects of its damage. Neuronal basis of speech. Associative areas of the cerebral cortex. Functions of individual areas of cerebral cortex - a summary | W1, W8, U1, U2, U3, K1, K2 | classes, e-learning |

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|----|---|--------------------------------|---------------------|
| 7. | Structure of the endocrine system. Division of hormones and mechanisms of their action. Regulation of hormone release. Hypothalamic hormones. Pituitary hormones. Hormonal adrenal activity. Hormonal reactions under stress. Thyroid secretory activity. Pancreatic endocrine activity. Basics of calcium-phosphate balance. The scope of action of sex hormones. Ovulatory cycle. | W1, W2, W7, U1, U2, U3, K1, K2 | classes, e-learning |
|----|---|--------------------------------|---------------------|

Course advanced

Semester 3

Teaching methods:

brainstorm, classes / practicals, computer classes, laboratories (labs), classes in simulated conditions, demonstration, discussion, e-learning, educational film, case study method, group work, assignments solving, seminar, simulation, simulation in interprofessional groups, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------|----------------------|--|
| e-learning | multiple choice test | During 3rd term there are 2 colloquiums in a written form, each after completion of a given section. Each colloquium consists of 10 questions. The student can get from 0 p. to 2 p. for each question (point scale: 0 p., 0.5 p., 1 p., 1.5 p., 2 p.). Each colloquium lasts 50 min. Colloquiums are to be passed on a single date. |
| classes | multiple choice test | Multiple choice midterm exams, multiple choice test as final exam. No absences are allowed. |

Semester 4

Teaching methods:

classes / practicals, computer classes, laboratories (labs), classes in simulated conditions, demonstration, discussion, e-learning, educational film, problem solving method, group work, computer room, assignments solving, seminar, simulation, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------|----------------------|--|
| e-learning | multiple choice test | During 3rd term there are 2 colloquiums in a written form, each after completion of a given section. Each colloquium consists of 10 questions. The student can get from 0 p. to 2 p. for each question (point scale: 0 p., 0.5 p., 1 p., 1.5 p., 2 p.). Each colloquium lasts 50 min. Colloquiums are to be passed on a single date. |
| classes | multiple choice test | Multiple choice midterm exams, multiple choice test as final exam. No absences are allowed. |

Entry requirements

Propaedeutics of Integrated Dentistry

Educational subject description sheet

Basic information

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| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22, 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups C. Preclinical course, F. Clinical curriculum-oriented (invasive) sciences</p> |
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|-------------------------------------|--|---|
| <p>Period Semester 3</p> | <p>Examination -</p> <p>Activities and hours e-learning: 8, seminar: 14, simulations: 56</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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| <p>Period Semester 4</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 8, seminar: 14, simulations: 60</p> | <p>Number of ECTS points 13.0</p> |
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| <p>Period Semester 5</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 5, simulations: 50</p> | <p>Number of ECTS points 6.0</p> |
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Goals

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|-----|---|
| C1 | To know and teach rules of ergonomy in dentistry. |
| C2 | To know and teach basic rules of examination of the patient. |
| C3 | Introduction to local anesthesia techniques |
| C4 | To know and teach practical skills in the diagnosis and treatment of dental hard tissue diseases: carious and no carious origin |
| C5 | To know and teach practical skills in the diagnosis and treatment of pulp diseases and periapical tissue diseases. |
| C6 | To know and teach practical skills in the basic prosthetic procedures. |
| C7 | To know and teach practical skills in basic periodontal diseases. |
| C8 | To know basic diagnostic tests in dentistry. Radiology in dentistry. |
| C9 | To teach how to work in the team in the field of basic dental procedures |
| C10 | To know basic problems in orthodontics. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | oral answer, test |
| W2 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | oral answer, test |
| W3 | morphology of dental chambers and principles of endodontic treatment and instruments used in this treatment | F.W7 | oral answer, test |
| W4 | indications and contraindications for performing procedures in the field of cosmetic dentistry | F.W11 | oral answer, test |
| W5 | prevention of oral diseases | F.W21 | oral answer, test |
| W6 | basic clinical procedures for dental hard tissue reconstruction and endodontic treatment, as well as methods and technical and laboratory procedures for prosthetic restorations | C.W28 | oral answer, test |
| W7 | basic clinical procedures for periodontal prevention | C.W32 | oral answer, test |
| W8 | basic clinical procedures for orthodontic prevention | C.W33 | oral answer, test |
| W9 | definition and classification of basic and auxiliary dental materials | C.W24 | oral answer, test |
| W10 | surface properties of hard tooth tissues and dental biomaterials | C.W26 | oral answer, test |
| W11 | dental office equipment and instruments used in dental procedures | C.W23 | oral answer, test |
| W12 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral answer, test |
| W13 | health education issues | O.W3 | oral answer, test |

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|------------------------------|--|-------|---|
| W14 | the rules of conducting scientific research and spreading their results | O.W4 | oral answer, test |
| W15 | issues in dentistry - at an advanced level | O.W2 | oral answer, test |
| W16 | organization of dentist practice and management principles in healthcare | O.W5 | oral answer, test |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, practical examination, classroom observation |
| U2 | plan treatment for dental problems | O.U3 | booklet of practical skills, practical examination, classroom observation |
| U3 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, practical examination, classroom observation |
| U4 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | booklet of practical skills, practical examination, classroom observation |
| U5 | inspire the learning process of others | O.U6 | booklet of practical skills, practical examination, classroom observation |
| U6 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, practical examination, classroom observation |
| U7 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practical skills, practical examination, classroom observation |
| U8 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, practical examination, classroom observation |
| U9 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, practical examination, classroom observation |
| U10 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | booklet of practical skills, practical examination, classroom observation |
| U11 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, practical examination, classroom observation |
| U12 | diagnose and treat periodontal disease in the basic range | F.U17 | booklet of practical skills, practical examination, classroom observation |
| U13 | carry out prosthetic rehabilitation in simple cases in the field of clinical and laboratory procedures | F.U22 | booklet of practical skills, practical examination, classroom observation |
| U14 | map anatomic occlusal conditions and analyze occlusion | C.U12 | booklet of practical skills, practical examination, classroom observation |
| U15 | design prosthetic restorations in accordance with the principles of their laboratory performance | C.U13 | booklet of practical skills, practical examination, classroom observation |

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|--|--|-------|---|
| U16 | plan the basic stages of preventive care in patients in the area of periodontological needs | C.U15 | booklet of practical skills, practical examination, classroom observation |
| U17 | plan the basic stages of preventive care in patients in the area of orthodontic needs | C.U16 | booklet of practical skills, practical examination, classroom observation |
| U18 | select restorative, prosthetic and connective biomaterials based on material properties and clinical conditions | C.U11 | booklet of practical skills, practical examination, classroom observation |
| U19 | provide assistance in the event of damage to the orthodontic appliance | F.U19 | booklet of practical skills, practical examination, classroom observation |
| U20 | make simple orthodontic appliances | F.U20 | booklet of practical skills, practical examination, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K6 | use objective sources of information | O.K7 | classroom observation |
| K7 | promote health-promoting behaviors | O.K6 | classroom observation |
| K8 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |
| K9 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |

Calculation of ECTS points

Semester 3

| Activity form | Activity hours* |
|----------------------------|-----------------|
| e-learning | 8 |
| seminar | 14 |
| simulations | 56 |
| preparation for classes | 30 |
| preparation for colloquium | 30 |

| | |
|-----------------------------------|---------------------|
| preparation for test | 30 |
| Student workload | Hours 168 |
| Workload involving teacher | Hours 78 |
| Practical workload | Hours 56 |

* hour means 45 minutes

Semester 4

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 8 |
| seminar | 14 |
| simulations | 60 |
| preparation for classes | 30 |
| preparation for test | 30 |
| preparation for colloquium | 30 |
| Student workload | Hours 172 |
| Workload involving teacher | Hours 82 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Semester 5

| Activity form | Activity hours* |
|----------------------------|-----------------|
| e-learning | 10 |
| seminar | 5 |
| simulations | 50 |
| preparation for classes | 30 |
| preparation for colloquium | 30 |
| preparation for test | 30 |

| | |
|-----------------------------------|---------------------|
| preparation for examination | 50 |
| Student workload | Hours 205 |
| Workload involving teacher | Hours 65 |
| Practical workload | Hours 50 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|-------------------------------------|
| 1. | History taking. Examination of the patient. Basic diagnostic tests in dentistry. Ergonomy in dentistry. Regional anesthesia. Dental materials used in conservative dentistry. Tooth anatomy: anterior & posterior. Roots anatomy. Tooth notation. Radiology in dentistry. | W10, W11, W3, W9, U18, U2, U3, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar, e-learning, simulations |
| 2. | Introduction to cariology. Clinical and histological features, diagnosis, prevention. Non operative management of caries. Operative management of caries. Cavity preparation for composite, cgj; Black's classification - classes I-V. Root caries. Noncarious cavities. Trauma of the teeth. | W1, W11, W15, W16, W4, W5, W6, U1, U10, U2, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar, e-learning, simulations |
| 3. | Introduction to endodontics. Endodontic equipment: burs, instruments and irrigants. Morphology and function of endodontium. Sensibility tests. Biological pulp treatment. Pulp diseases. Periapical tissues diseases. Morphology of pulp chambers and root canals. Access preparation in particular groups of teeth. Morphology of apical portion of root canal. Working length: definition, methods of calculation. Root canal preparation using standardize technique. Cold lateral condensation of gutta-percha. Obturation of the root canal in maxillary central incisor. | W15, W16, W2, W3, W5, W6, U10, U11, U2, U4, U5, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar, e-learning, simulations |

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|----|---|---|----------------------------------|
| 4. | Dental posts, clinical and laboratorial aspects. Indications for crowns and bridges, introduction to temporary crowns, classification of prosthetic crowns, principles of tooth preparation: chamfer; finishing line shoulder, vital pulp preservation Classification of impression materials, classification of impression methods, bite registration. Temporary crown (materials and method), cements for temporary crowns, shade guides – principles of choosing tooth colors. Metal-ceramic crown lab fabrication, CAD/CAM crowns. Dental bridges – biomechanical principals. Complete denture: - maxillary and mandibular impressions. Diagnostic/study casts. Individual impression trays. | W5, W6, W9, U11, U13, U14, U15, U2, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar, e-learning, simulations |
| 5. | Etiopathogenesis of periodontal diseases. Entities. Periodontal examination, indices, data collection. Prevention of periodontal diseases. Diagnosis of basic periodontal diseases. Disease entities. Therapeutic concepts and treatment. | W12, W13, W14, W5, W7, U1, U12, U16, U2, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | seminar, e-learning, simulations |
| 6. | Introduction to Orthodontics: Prevention, diagnosis. Basic therapeutic concepts. | W8, U17, U19, U20, K5, K6, K9 | seminar, e-learning, simulations |

Course advanced

Semester 3

Teaching methods:

classes in simulated conditions, demonstration, e-learning, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|---|---|
| e-learning | test | Final exam at the end of 5th semester. The theoretical part- The test consists of 100 questions which cover the whole material of the course. The practical part: identification of dental situations on models, instruments, dental materials |
| seminar | oral answer, test | Colloquium I - written test (50 questions). Oral answers from the subject of the seminar, assessed immediately after the student's speech. Written test - a short card from a given topic of the seminar, unannounced, allowing students to check the knowledge before part of the practical exercises (simulation). |
| simulations | booklet of practical skills, practical examination, classroom observation | Booklet of practical procedures, signed by an assistant at the end of the class. Assessment of each of the required dental procedures. System for assessing dental procedures: Elements of credit: 1. Performed during classes. 2. Theoretical knowledge during classes, attitude to the assistant. 3. Ergonomics. 4. Marginal tightness (in the case of fillings). 5. Performance aesthetics. Failure to perform the indicated work - no credit. Active participation in simulations. |

Semester 4

Teaching methods:

classes in simulated conditions, demonstration, e-learning, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|--|--|
| e-learning | test | Final exam at the end of 5th semester. The theoretical part- The test consists of 100 questions which cover the whole material of the course. The practical part: identification of dental situations on models, instruments, dental materials. |
| seminar | oral answer, test | Colloquium II - written test (50 questions). Oral answers from the subject of the seminar, assessed immediately after the student's speech. Written test - a short card from a given topic of the seminar, unannounced, allowing students to check the knowledge before part of the practical exercises (simulation). |
| simulations | booklet of practical skills, classroom observation | Booklet of practical procedures, signed by an assistant at the end of the class. Assessment of each of the required dental procedures. System for assessing dental procedures: Elements of credit: 1. Performed during classes. 2. Theoretical knowledge during classes, attitude to the assistant. 3. Ergonomics. 4. Marginal tightness (in the case of fillings). 5. Performance aesthetics. Failure to perform the indicated work - no credit. Active participation in simulations. |

Semester 5**Teaching methods:**

classes in simulated conditions, demonstration, e-learning, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|--|--|
| e-learning | test | Final exam at the end of 5th semester. The theoretical part- The test consists of 100 questions which cover the whole material of the course. The practical part: identification of dental situations on models, instruments, dental materials |
| seminar | oral answer, test | Colloquium III - written test (50 questions). Oral answers from the subject of the seminar, assessed immediately after the student's speech. Written test - a short card from a given topic of the seminar, unannounced, allowing students to check the knowledge before part of the practical exercises (simulation). |
| simulations | booklet of practical skills, classroom observation | Booklet of practical procedures, signed by an assistant at the end of the class. Assessment of each of the required dental procedures. System for assessing dental procedures: Elements of credit: 1. Performed during classes. 2. Theoretical knowledge during classes, attitude to the assistant. 3. Ergonomics. 4. Marginal tightness (in the case of fillings). 5. Performance aesthetics. Failure to perform the indicated work - no credit. Active participation in simulations. |

Entry requirements

Required credit in Propaedeutics to Medicine and Dentistry.
Lectures, seminars and simulations are obligatory.

Medical Psychology

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 3</p> | <p>Examination graded credit</p> <p>Activities and hours classes: 45</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | The course aims to give an overview and introduction to medical psychology. |
| C2 | The student learns about different perspectives and the level of analysis in psychology, about memory, attention, intelligence, learning, thinking process. |
| C3 | The course introduces a student with the basics of developmental psychology and personality characteristics. |
| C4 | The focus will be turned also on topics such as understanding psychological characteristics of different groups of dental patients (children, adults, elderly). |
| C5 | The student is intended to convey understanding of problems of dental pain and anxiety, role of emotions and empathy in dental practice, too. |
| C6 | The course aims to give a knowledge of stress, burnout syndrome, coping and adaptation process according to health psychology. |
| C7 | It will also focus on a basic psychological knowledge of psychopathology. |
| C8 | Finally, the course will enable to gain verbal and non-verbal communication skills in dental practice. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | basic psychological mechanisms of human functioning in health and disease | D.W6 | multiple choice test |
| W2 | patterns of human mental development and the role of the patient's family in the treatment process | D.W7 | multiple choice test |
| W3 | mechanisms of coping with stress and its role in the etiopathogenesis and course of diseases | D.W9 | multiple choice test |
| W4 | mechanisms of addiction to psychoactive substances, as well as treatment goals and methods | D.W10 | multiple choice test |
| W5 | principles of motivating the patient to health-promoting behaviors and informing about unsuccessful prognosis | D.W11 | multiple choice test |
| W6 | issues related to the adaptation of patients and their families to disease as a difficult situation and to related events, including dying and family mourning processes | D.W8 | multiple choice test |
| W7 | principles of the therapeutic team's functioning | D.W13 | classroom observation |
| Skills - Student can: | | | |
| U1 | build an atmosphere of trust throughout the entire diagnostic and treatment process | D.U4 | classroom observation, multiple choice test |
| U2 | talk to the adult patient, child and family using active listening and empathy techniques | D.U6 | classroom observation, multiple choice test |
| U3 | apply basic psychological motivational and supportive interventions | D.U8 | classroom observation, multiple choice test |
| U4 | plan the work of the dental team and the equipment of the dental office in accordance with the principles of ergonomics and safety at work | D.U14 | classroom observation, multiple choice test |

| | | | |
|--|--|-------|-----------------------|
| U5 | work in a multidisciplinary team, in a multicultural and multinational environment | D.U10 | classroom observation |
| U6 | identify risk factors for violence, recognize violence and respond accordingly | D.U7 | classroom observation |
| U7 | recognize the premises for taking medical action without the patient's consent or with the use of coercion towards the patient and apply the measures provided for in the generally applicable law | D.U9 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|--------------------|
| classes | 45 |
| preparation for classes | 8 |
| preparation for test | 20 |
| preparation of multimedia presentation | 5 |
| consultations with lecturer | 2 |
| Student workload | Hours 80 |
| Workload involving teacher | Hours 45 |
| Practical workload | Hours 45 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------|
| 1. | Introduction to medical psychology. | W1, W7, U1, U6, U7 | classes |
| 2. | Basic psychological constructs: memory, attention, perception, intelligence, How to learn efficiently? | W2 | classes |
| 3. | Theory of human development. | W2 | classes |
| 4. | Personality and motivation theories. | W5 | classes |

| | | | |
|-----|---|--------------------|---------|
| 5. | Stress and concept of homeostasis. Psychological mechanisms of adaptation and coping with stress. Relaxation method. | W3, K1 | classes |
| 6. | Role of emotions. Characteristics and functions of pain - general issues. Psychology in dental care, problems of dental pain and anxiety. | W1, W3, K1 | classes |
| 7. | Empathy in students of dentistry. Role of empathy. | W5, U1, U2 | classes |
| 8. | Working burnout in dental practice. Therapy in burnout. | U3, U5 | classes |
| 9. | General review of abnormal psychology: mental disorders. | W1 | classes |
| 10. | Psychological mechanisms of addiction. | W4, U1, U3 | classes |
| 11. | Mental disorders in elderly people. Patients with organic brain damages: general neuropsychological characteristics. | W6, U3, K1 | classes |
| 12. | Mood disorders (depression, mania), problem of suicide. Anxiety disorders. Eating disorders. Psychosis: symptoms, delusions, hallucinations. Mental disorders in children and young people. | W1, W3, U1, U3, K1 | classes |
| 13. | Introduction to theory of communication. Common mistakes in communication. Tell-Show-Do Techniques. | W5, U1, U2, U3, U4 | classes |
| 14. | Non-verbal communication. Ways of communicating with different patients: elderly people, children, difficult patients. | W5, U1, U2 | classes |

Course advanced

Teaching methods:

case study, classes / practicals, discussion, educational film, problem solving method, case study method, presentation, group work, lecture with multimedia presentation, PBL Problem Based Learning

| Activities | Examination methods | Credit conditions |
|------------|---|---|
| classes | classroom observation, multiple choice test | A student is obliged to actively participate in the classes, prepare oral presentations and pass themultiple choice test. Manner of completion: - Speeches and presentations on the chosen topics, - Activity during the classes, - Writing exam consisting of: a) multiple-choice test, b) short case study. |

Sociology of medicine in dentistry

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 3</p> | <p>Examination graded credit</p> <p>Activities and hours classes: 20</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|-----|---|
| C1 | To present the student the modern concept of the influence of environment on health, considering the role of family of the patient and his social ties. |
| C2 | To show the factors that influence inequalities in health. |
| C3 | To show the students socio - cultural differences in behaviour, considering gender differences in behaviour. |
| C4 | To show the concepts of health, illness, disability as a social construct and to present social attitudes against disease and disability. |
| C5 | To present the social consequences of the disease and the medical intervention. |
| C6 | To present the concept of the "role of the patient" |
| C7 | To present the role of verbal and non-verbal communication between the dentist and the patient. |
| C8 | To show the concept of the social role based on the example of the dentist and to underline the role of the mutual trust in the dentist - patient relations |
| C9 | To present the concept of the health - related quality of life |
| C10 | To understand functioning of medical institutions as the examples of social institutions. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | the current views on the social dimension of health and disease, the impact of the social environment (family, social networks) and social inequalities and socio-cultural differences on health, and the role of social stress in health and self-destructive behaviors; | D.W1 | written examination, classroom observation |
| W2 | forms of violence, models explaining domestic and institutional violence, the social determinants of the various forms of violence and the role of the doctor and the dentist in recognizing it | D.W2 | written examination, classroom observation |
| W3 | social attitudes towards the importance of health, disease, disability and old age, the social consequences of disease and disability and social and cultural barriers, and the concept of quality of life as determined by the state of health | D.W3 | written examination |
| W4 | the importance of verbal and non-verbal communication in the process of communicating with the patient and the notion of trust in the interaction with the patient | D.W4 | written examination |
| W5 | functioning of health care system entities and social role of a physician and a dentist | D.W5 | written examination |
| W6 | principles of motivating the patient to health-promoting behaviors and informing about unsuccessful prognosis | D.W11 | written examination |
| Skills - Student can: | | | |

| | | | |
|--|--|-------|--|
| U1 | take into account the subjective needs and expectations of the patient resulting from socio-cultural conditions in the process of therapeutic management | D.U1 | written examination |
| U2 | recognize and respond to signs of anti-health and self-destructive behavior | D.U2 | written examination |
| U3 | choose treatment that minimizes the social consequences for the patient | D.U3 | written examination, classroom observation |
| U4 | build an atmosphere of trust throughout the entire diagnostic and treatment process | D.U4 | written examination, classroom observation |
| U5 | talk to the adult patient, child and family using active listening and empathy techniques | D.U6 | written examination |
| U6 | identify risk factors for violence, recognize violence and respond accordingly | D.U7 | written examination, classroom observation |
| U7 | use and process information using IT tools and modern sources of medical knowledge | D.U13 | written examination |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | written examination, classroom observation |
| K2 | promote health-promoting behaviors | O.K6 | written examination, classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|--------------------|
| classes | 20 |
| preparation for classes | 3 |
| preparation of multimedia presentation | 3 |
| preparation for examination | 4 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 20 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|----------------|-----------------------------|------------|
|-----|----------------|-----------------------------|------------|

| | | | |
|-----|--|------------------------------------|---------|
| 1. | Sociological concepts of health and illness. Psychosocial dimensions of subjective health. Illness and sickness role. Symbolic meaning of illness. Psychosocial indicators of health (well-being). Scales measuring different dimensions of the oral cavity health. | W1, W3, U1 | classes |
| 2. | Cultural and social determinants of health and health-related behaviors. Lifestyle and health-damaging behaviors (poor diet, lack of knowledge about the hygiene of mouth). Lay self-care in health. Socialization of dental health attitudes and behaviors. Health education. | W1, W5, U1, U2, K1, K2 | classes |
| 3. | Social inequalities in health; (gender, age, socio-economic status, ethnic minorities). Illness as a stressful life event. Social stress and dental health outcome Psychosocial consequences of chronic dental problems. Psychosocial dimensions and indicators of the oral cavity health. | W1, W5, U1, U2, K2 | classes |
| 4. | Family and dental health. The role of the family in creation of healthy lifestyle. Functions of the family (social support). Early experience during family life and health outcomes in adulthood. Role of social network (ties) in health status. Role of social capital. | W6, U5, K2 | classes |
| 5. | Pathological role of the family environment. Physical and psychological abuse. | W2, U6 | classes |
| 6. | Disability as a social construct. Stigma. Changes in the facial region and oral cavity disorders as a stigmatizing condition. Living with stigmatizing disease. | W3, K2 | classes |
| 7. | Functional status and health-related quality of life in patients with chronic conditions (dental caries, paradontosis). Scales measuring different dimensions of quality of life in patients with dental problems. | W3, U1, K1 | classes |
| 8. | Decision-making process in seeking professional help. Types of relation between the dentist and the patient. Doctor-centered model vs Patient-centered model. Professional role of the dentist. Job stress in medical profession. Communication between physician and patient (types of questions, language, verbal and non-verbal communication). | W4, W5, W6, U1, U3, U4, U5, U7, K1 | classes |
| 9. | Patient satisfaction with the medical care. Problems with the doctor – patient relations. Dentophobia and the ways to minimize it. | W4, U3, U4, U5, U7, K1 | classes |
| 10. | The theory of institution. Hospital as an institution. | W5 | classes |

Course advanced

Teaching methods:

case study, textual analysis, discussion, case study method, group work, seminar, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|---|---|
| classes | written examination, classroom observation | <p>1. Attendance on each class - absence is available only because of illness and should be confirmed by an appropriate medical leave. Each absence requires an oral/written credit the person leading classes. 2. Power Point presentation - prepared and presented by each student based on the article delivered. Presentation should last approx. 25 minutes. 3. Active participation during seminars. 4. Written final exam: the exam will have form of test consisting of multiple-choice questions, filling gaps, true/false questions as well as open questions with short answer. The exam will check the sociological knowledge acquired during course (comprising both terms and theories presented during classes as well as concepts in articles for students' presentations). Student's evaluation: Student may achieve maximum 60 points from the whole course: 1. PP presentation - max. 15 p. 2. Active participation during seminars - max. 10 p. 3. Final exam - max. 33 p. In order to pass the course, student has to achieve 60% of the maximum points. Assessment of PP presentation: 5 p. - adequate summary of terms in the given article; 3 p. - additional sources, e.g. adequate data from other research illustrating article's terms; 4 p. - presentation skills (e.g. presenting by own words, not reading slides), visual traits of presentation, overall preparation to presentation 3 p. - critical, subjective thoughts concerning presented topic in conclusion part, critical thinking questions to the rest of the group</p> |

Entry requirements

No requirements

Dental occlusion and function of the jaw

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 3</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 6, seminar: 8, classes: 24</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | The aim of education is to combine knowledge of the anatomy of the stomatognathic system with physiological functions of oral tissues and organs including familiarization with the process of occlusion system development and types of malocclusion. |
| C2 | Another goal is to learn how to transfer clinical articulometric data to diagnostic instruments used in dentistry . |
| C3 | An additional aim of education is to familiarize the student with clinical and laboratory materials used in dentistry. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|---|-------|--|
| W1 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | oral answer, multiple choice test |
| W2 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral answer, multiple choice test |
| W3 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | oral answer, multiple choice test |
| Skills - Student can: | | | |
| U1 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation, oral answer |
| U2 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, oral answer, multiple choice test |
| U3 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | oral answer, multiple choice test |
| U4 | perform differential diagnosis of the most common diseases of adults | E.U1 | oral answer, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K2 | use objective sources of information | O.K7 | classroom observation, oral answer |
| K3 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, oral answer |
| K4 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K5 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-------------------------|------------------------|
| e-learning | 6 |
| seminar | 8 |
| classes | 24 |
| preparation for classes | 8 |

| | |
|-----------------------------------|--------------------|
| preparation for classes | 12 |
| preparation for test | 30 |
| Student workload | Hours 88 |
| Workload involving teacher | Hours 38 |
| Practical workload | Hours 24 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------|
| 1. | Anatomy of the masticatory organ – bones, muscles, joints, nerves and blood vessels. | W1, K1, K2 | e-learning |
| 2. | Physiology of temporomandibular joints, jaw movements and function. | W1, W2, K2 | e-learning |
| 3. | Teeth, periodontium, occlusion, tooth contacts and jaw position, articulators and facebow systems. | W1, W3, K2 | e-learning |
| 4. | Anatomy of the masticatory organ | W1, U1, U2, K2 | seminar |
| 5. | Bones, muscles and temporomandibular joint anatomy. | W1, W2, U1, U2, K1, K2 | classes |
| 6. | Clinical examination of jaw function. | W1, W2, U1, U2, U3, U4, K1, K2, K3, K4 | seminar |
| 7. | The examination of muscles and jaw function. | W1, W2, W3, U1, U3, U4, K1, K2, K3, K4, K5 | classes |
| 8. | Normal dental and skeletal development, tooth numbering, Angle'a Classes, dental age. | W1, W2, W3, U3, U4, K2, K3 | seminar |
| 9. | Plaster study cast analysis - tooth numbering, dental age assessment, classification of malocclusion. | W1, W2, W3, U1, U3, U4, K1, K2, K3, K4, K5 | classes |
| 10. | Clinical examination of the jaw function, interarch relationships of teeth, selected anthropometric points, vertical dimension calculating. | W1, W2, W3, U1, U2, U3, K2, K3 | seminar |
| 11. | Alginate impression taking, plaster cast preparation, rest position and vertical dimension calculating. | W1, U1, U2, K1, K2, K3, K4, K5 | classes |
| 12. | Articulators and evaluation of study casts, facebow systems, occlusal records. | W1, W2, U1, U2, K2, K3 | seminar |
| 13. | Arbitrary hinge axis facebow use in phantom patient, registration of occlusion. | W1, W2, W3, U1, U2, U4, K1, K2, K3, K4, K5 | classes |
| 14. | Average value articulators, articulometric parameters | W1, W2, U1, U2, U3, U4, K2, K3 | seminar |
| 15. | Plaster casts preparation, articulation to the average value articulators. | W1, U1, K1, K2, K3, K4, K5 | classes |

| | | | |
|-----|--|----------------------------|---------|
| 16. | Dental arches and tooth anatomy, types of occlusion, Andrew's keys of occlusion. | W1, W2, U1, U2, K2, K3 | seminar |
| 17. | Wax-up of occlusal surfaces of teeth 15 and 16 - part I. | W1, U1, K1, K2, K3, K4, K5 | classes |
| 18. | Oral cavity physiology and function. Periodontal health. | W1, U2, K2, K3 | seminar |
| 19. | Wax-up of occlusal surfaces of teeth 15 and 16 - part II. | W1, U1, K1, K2, K3, K4, K5 | classes |

Course advanced

Teaching methods:

preclinical classes, classes in simulated conditions, demonstration, discussion, e-learning, problem solving method, seminar, simulated patient, lecture, lecture with multimedia presentation, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|------------|--|---|
| e-learning | multiple choice test | The multiple choice test consists of 40 questions which cover the whole material of the course (seminars, classes, lectures) - 60% positive answers to pass is required. |
| seminar | oral answer, multiple choice test | Theory on each seminars passed, attendance in all seminars. The multiple choice test consists of 40 questions which cover the whole material of the course (seminars, classes, lectures) - 60% positive answers to pass is required. |
| classes | classroom observation, oral answer, multiple choice test | Theory on each classes passed, attendance in all classes, all procedures made. The multiple choice test consists of 40 questions which cover the whole material of the course (seminars, classes, lectures) - 60% positive answers to pass is required. |

Immunology

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard groups B. Scientific basis for medicine, E. General clinical sciences (non-invasive)</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 4</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 4, seminar: 6, classes: 15</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | The course aims at presenting the general concepts of immunological processes and mechanisms underlying human immunity, with the special emphasis on those, which understanding is important in the dental profession. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|---|-------|---|
| W1 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | theoretical colloquiums, multiple choice test |
| W2 | symptoms of hepatitis, HIV infection and acquired immune deficiency syndrome (AIDS) in infectious and parasitic diseases | E.W8 | theoretical colloquiums, multiple choice test |
| W3 | immunological aspects of transplantation and blood therapy | E.W16 | theoretical colloquiums, multiple choice test |
| W4 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | theoretical colloquiums, multiple choice test |
| W5 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | theoretical colloquiums, multiple choice test |
| W6 | life-threatening conditions | E.W18 | theoretical colloquiums, multiple choice test |
| W7 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | theoretical colloquiums, multiple choice test |
| W8 | health education issues | O.W3 | theoretical colloquiums, multiple choice test |
| W9 | the role and importance of body fluids, including saliva | B.W6 | theoretical colloquiums, multiple choice test |
| Skills - Student can: | | | |
| U1 | interpret the results of laboratory tests | E.U4 | practical colloquiums, classroom observation |
| U2 | qualify the patient for vaccination | E.U7 | practical colloquiums, classroom observation |
| U3 | plan the management of exposure to blood-borne infections | E.U6 | practical colloquiums, classroom observation |
| U4 | recognize the risk of life threat | E.U8 | practical colloquiums, classroom observation |
| U5 | apply knowledge of genetics and molecular biology in clinical work | B.U5 | practical colloquiums, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K2 | promote health-promoting behaviors | O.K6 | classroom observation |
| K3 | use objective sources of information | O.K7 | classroom observation |
| K4 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 4 |
| seminar | 6 |
| classes | 15 |
| preparation for classes | 10 |
| preparation for colloquium | 10 |
| preparation for examination | 15 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 25 |
| Practical workload | Hours 15 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------------------|
| 1. | Organization and function of immune system. Primary and secondary lymphatic organs. Innate and acquired immunity. Cytokines. Recognition of pathogens by innate immune cells and lymphocytes. | W1, W5, K1, K2, K3 | classes, e-learning |
| 2. | Antigens. Immunoglobulins. Complement. Immunoglobulin superfamily. Primary and secondary humoral response against T-dependent and T-independent antigens. Monoclonal antibodies. Antisera. Human gammaglobulin. | W1, W2, W3, W4, W5, W6, W7, W8, W9, U3, U4, K1, K2, K3, K4 | classes, e-learning |
| 3. | Induction of antigen-specific response, antigen presentation by APC cells. MHC complex. | W1, W2, W4, W5, U3, U4, K1, K2, K3 | e-learning |
| 4. | Subpopulations of lymphocytes. Mechanism of humoral immune response. | W1, W2, W3, W5, W6, U1, U2, U3, U4, K1, K2, K3 | seminar, e-learning |
| 5. | Allergic reactions based on humoral immunity (type I, II and III hypersensitivities). | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, K1, K2, K3, K4 | classes |
| 6. | Cellular response. Cells of innate and antigen-specific cellular immune response (phagocytes, NK cells, T lymphocytes). Toll-like receptors (TLR). Delayed-type hypersensitivity. Cytotoxic reactions involving CD8+ T lymphocytes. | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, K1, K2, K3, K4 | classes, seminar, e-learning |
| 7. | Mucosa-associated lymphatic tissue (MALT), defense mechanisms of saliva, pathomechanism of periodontitis. | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, K1, K2, K3, K4 | classes, seminar, e-learning |

| | | | |
|-----|---|--|---------|
| 8. | Active and passive immunization. Vaccinations. | W1, W2, W3, W4, W5, W6, U2, U3, K1, K2, K3 | classes |
| 9. | Immune tolerance and self-tolerance. Regulation of immune response. | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, K1, K2, K3, K4 | seminar |
| 10. | Immune mechanisms in bacteria, virus and parasite infections. | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, U5, K1, K2, K3, K4 | classes |

Course advanced

Teaching methods:

laboratories (labs), demonstration, discussion, e-learning, educational film, presentation, seminar, lecture

| Activities | Examination methods | Credit conditions |
|------------|--|---|
| e-learning | multiple choice test | multiple choice test with one correct answer; mark scale: 0-50% NDST; 51-60% DST; 61-70% DST+; 71-80% DB; 81-90% DB+; 91-100% BDB |
| seminar | theoretical colloquiums, classroom observation | multiple choice test with one correct answer, credit; mark scale: 0-50% NDST; 51-60% DST; 61-70% DST+; 71-80% DB; 81-90% DB+; 91-100% BDB |
| classes | practical colloquiums, classroom observation | credit |

Entry requirements

WL-ED2.BioCH, WL-ED2.HumPhys; The presence on seminars and lab classes is mandatory

General radiology

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|--|---|

| | | |
|-----------------------------|--|-------------------------------------|
| Period Semester 4 | <p>Examination graded credit</p> <p>Activities and hours e-learning: 8, classes: 7</p> | Number of ECTS points 1.0 |
|-----------------------------|--|-------------------------------------|

Goals

| | |
|----|--|
| C1 | Basic of Radiology and diagnostic methods. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | principles of radiological diagnosis | F.W18 | credit |
| Skills - Student can: | | | |
| U1 | interpret the results of additional tests and consultations | F.U6 | credit |
| Social competences - Student is ready to: | | | |

| | | | |
|----|--|------|--------|
| K1 | to be guided by the well-being of a patient | O.K2 | credit |
| K2 | respect medical confidentiality and patients' rights | O.K3 | credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 8 |
| classes | 7 |
| preparation for classes | 10 |
| Student workload | Hours 25 |
| Workload involving teacher | Hours 15 |
| Practical workload | Hours 7 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|---------------------|
| 1. | Basic principles of rad. Physics. Basic principles of CT, CT-cone beam. Basic principles of USG. Basic principles of MR. Anatomy and pathol. of cranial nerves Pathology of the neck ANGIO-lab CT-lab Conv. Lab MR-lab | W1, U1, K1, K2 | classes, e-learning |

Course advanced

Teaching methods:

case study, classes / practicals, clinical classes, laboratories (labs), e-learning, presentation, seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------|---------------------|---|
| e-learning | credit | Attendance - no more than 2 days of absences are allowed [on both together] |
| classes | credit | Attendance - no more than 2 days of absences are allowed [on both together] |

Entry requirements

no

Epidemiology and environmental medicine

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group G. Legal and organizational basis for medicine</p> |
|---|--|

| | | |
|-----------------------------|---|-------------------------------------|
| Period Semester 4 | Examination graded credit Activities and hours classes: 30 | Number of ECTS points 2.0 |
|-----------------------------|---|-------------------------------------|

Goals

| | |
|----|--|
| C1 | To acquire knowledge and skills related to population health assessment, identification of factors related to health status and disease prevention strategies for communicable and non-communicable diseases in the course of natural history of the disease, as well as to familiarize students with different study types and results interpretation based on the epidemiological research and reliability assessment. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | the rules of conducting scientific research and spreading their results | O.W4 | written credit |

| | | | |
|--|---|-------|--|
| W2 | basic concepts related to health, lifestyle and health of the population | G.W4 | written credit |
| W3 | methods for determining the health needs of society | G.W5 | written credit |
| W4 | health situation in the Republic of Poland and the world | G.W6 | written credit |
| W5 | indicators of the state of health of the population and the principles of their assessment | G.W14 | written credit |
| W6 | principles of disease prevention and improvement of health condition | G.W15 | written credit |
| W7 | principles of epidemiological development of an infectious disease outbreak | G.W16 | written credit |
| W8 | rules of conduct in the event of an epidemiological threat | G.W20 | written credit |
| Skills - Student can: | | | |
| U1 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, written credit |
| U2 | analyze population health data, epidemiological data and determine population health status based on it | G.U1 | project, written credit |
| U3 | describe selected health phenomena on a population scale and forecast their impact on healthcare functioning | G.U2 | project, written credit |
| U4 | assess the scale of health problems and indicate health priorities and determine their importance in health policy | G.U3 | project, written credit |
| U5 | analyze the determinants of the epidemiological situation in the aspect of social and demographic processes | G.U4 | written credit |
| U6 | design epidemiological studies | G.U18 | classroom observation, project, written credit |
| U7 | carry out an epidemiological inquiry | G.U19 | project, written credit |
| U8 | interpret basic epidemiological indicators, define and evaluate the reliability and relevance of screening tests | G.U17 | written credit |
| U9 | confirm or exclude the relationship of environmental factors with the etiology of the disease, including occupational disease | G.U14 | project |
| U10 | create simple research programs in the field of prevention and treatment | G.U5 | classroom observation, project |
| U11 | work in a team and lead a team in a dental office | G.U11 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation |
| K2 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation, project |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|------------------------|
| classes | 30 |
| preparation for examination | 10 |
| preparation for classes | 12 |
| preparation of multimedia presentation | 3 |
| information collection | 5 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|--|--|-------------------|
| 1. | Demographical factors related to health status | W3, W4, U5 | classes |
| 2. | Criteria for the epidemiological assessment of population health. The indicators of disease burden (incidence, prevalence). Data sources for population health assessment. | W2, W3, W4, W5, U2, U3, U4, U5, U8, K1 | classes |
| 3. | Criteria for the oral health assessment in population research. Methods of the assessment of disease frequency in different population groups (standardization). | W2, W3, W4, W5, U2, U3, U4, K1 | classes |
| 4. | Diseases of oral cavity and disease burden (DALY, QALY). | U11, U4, U8 | classes |
| 5. | Epidemiological research. Interpretation of research results – example of dental carries. The identification of risk factors and populations at risk. | W1, U1, U4, U6, U9 | classes |
| 6. | The role of environment in oral health. Planning, carrying out and results interpretation of case-control study – oral cancer example. | W1, U1, U6, U9, K1, K2 | classes |
| 7. | The use of cohort study in establishing the causal relationship- cardiovascular disease example. Attributable risk. | W1, U1, U6, U9, K1, K2 | classes |
| 8. | Randomized controlled trial in assessment of effectiveness of dental treatment and prevention actions. | W1, U1, U10, U6, U9, K1, K2 | classes |
| 9. | Natural history of the disease and prevention (primary, secondary and tertiary prevention). The factors influencing the population health. | W2, W6, U10, U8 | classes |

| | | | |
|-----|---|----------------|---------|
| 10. | Early detection of the disease. The idea of screening - the validity of screening tests. | W6, U8 | classes |
| 11. | The epidemic triad. The role of dentist in triad. The dental office as a potential part of epidemiological chain of infection. Nosocomial infections. | W6, W8, U5 | classes |
| 12. | The burden of communicable diseases and methods of their spread control. The rules for the epidemiological outbreak assessment. | W7, W8, U2 | classes |
| 13. | The case study - disease outbreak. | W7, W8, U7 | classes |
| 14. | Does every relationship is a causal one? The rules for the causality judging. | W1, U1, U9, K1 | classes |
| 15. | The relationship between oral health and general health - the critical appraisal of published papers. | W1, U1, K1, K2 | classes |

Course advanced

Teaching methods:

case study, textual analysis, brainstorm, discussion, problem solving method, assignments solving, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|--|---|
| classes | classroom observation, project, written credit | There is no absences allowed. In the case of absence student should made-up the material in the form indicated by teacher (essay, additional assignement, etc.). Student have to receive more than 50% for each of the following: presentation of the epidemiological description of the chosen disease; project based on disease outbrake and final writen test. |

Medical Biophysics

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group B. Scientific basis for medicine</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 4</p> | <p>Examination examination</p> <p>Activities and hours seminar: 6, classes: 36, e-learning: 6</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | To familiarize students with the laws and concepts in biophysics used to describe processes taking place in the human body, in particular with: (1) the basics of thermodynamics (solubility, diffusion, osmotic pressure, Donnan equilibrium), (2) biophysical description of cell, tissue and organ functioning and physiological processes in the human body, (3) physical description of fluid flow and functioning of the vascular and respiratory systems, (4) basic laws describing electrical and magnetic phenomena in the human body (resting and action potential of the cell membrane, electrical properties of tissues, effects of electric current flow in the body, safety limits for current/voltage values. |
| C2 | To familiarize students with the effects of physical factors such as temperature, gravity, pressure, acceleration, electromagnetic field and ionizing radiation on the human body, in particular with: (1) the sources of electromagnetic radiation and radiation properties depending on the source type, (2) influence of electromagnetic radiation on living organism and its application in diagnostics and therapy, (3) the phenomenon of radioactive decay and various types of ionizing radiation, interaction of ionizing radiation with living matter, (4) risk assessment methods of influence of various physical factors on the human body, (5) dose harmfulness of non-ionizing/ionizing radiation and other physical factors acting on the human body, radiation protection. |
| C3 | To familiarize students with the basics of physical methods used in diagnostics and therapy, in particular with: (1) analysis of biophysical phenomena and processes occurring in therapy and diagnostics, (2) physical background of non-invasive imaging methods, (3) physical description of selected therapeutic techniques e.g. ultrasounds and various types of electromagnetic radiation in a wide range of energies. |
| C4 | To familiarize students with the use of simple measuring instruments, accuracy of measurements and planning experiments to determine the physical parameters of the system, in particular with: (1) operation of selected diagnostic and therapeutic measuring instruments (e.g. multimeter, ECG apparatus, laser, ultrasound apparatus, spirometer, magnetotherapy device, dialyzer, apparatus for electrodiagnostics, X-ray tube, radiometer), (2) using dedicated software supporting or controlling the operation of these devices to assess the accuracy of the performed measurements, (3) using databases, including online ones, and searching for the information with the use of available tools, (4) performing a biophysical experiment and analyzing measurement results with the use of statistical programs, spreadsheets and graphic programs. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral examination, test |
| W2 | the rules of conducting scientific research and spreading their results | O.W4 | assignment report |
| W3 | the importance of the main and trace elements in the processes occurring in the body, including supply, absorption and transport | B.W1 | oral examination, test |
| W4 | the importance of electrolytes, buffer systems and chemical reactions in biological systems | B.W2 | oral examination, test |
| W5 | principles of statics and biomechanics in relation to the human body | B.W7 | oral examination, test |
| W6 | mechanics of the masticatory organ | B.W8 | oral examination, assignment report, test |
| W7 | tissue and organ imaging methods and principles of operation of diagnostic devices for this purpose | B.W9 | oral examination, assignment report, test |
| W8 | operating principles of ultrasonic devices | B.W10 | oral examination, assignment report, test |
| W9 | principles of lasers in dentistry | B.W12 | oral examination, test |

| | | | |
|--|--|-------|---|
| W10 | principles of photometry and optical fibers and the use of light sources in dentistry | B.W11 | oral examination, assignment report, test |
| W11 | principles of dental equipment operation | B.W13 | oral examination, assignment report, test |
| W12 | principles of acid-base balance and transport of oxygen and carbon dioxide in the body | B.W21 | oral examination, test |
| W13 | numerical value of basic physiological variables and changes in numerical values | B.W23 | oral examination, test |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | oral examination, assignment report, test |
| U2 | communicate and share knowledge with colleagues in a team | O.U8 | assignment report |
| U3 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | oral examination, assignment report, test |
| U4 | interpret physical phenomena occurring in the masticatory organ | B.U2 | oral examination, test |
| U5 | use the physical processes appropriate to the work of a dentist | B.U3 | oral examination, test |
| Social competences - Student is ready to: | | | |
| K1 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | assignment report |
| K2 | use objective sources of information | O.K7 | oral examination, assignment report, test |
| K3 | formulate conclusions from own measurements or observations | O.K8 | oral examination, assignment report |
| K4 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | assignment report |

Calculation of ECTS points

| Activity form | Activity hours* |
|------------------------------|-----------------|
| seminar | 6 |
| classes | 36 |
| preparation for classes | 12 |
| preparation for examination | 20 |
| participation in examination | 1 |
| information collection | 9 |
| e-learning | 6 |

| | |
|-----------------------------------|--------------------|
| Student workload | Hours 90 |
| Workload involving teacher | Hours 48 |
| Practical workload | Hours 36 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|---|---------------------|
| 1. | Structure of matter - atomic nucleus, atom, molecule, gases (partial pressure, Dalton's law, air composition, vapors, liquids (surface tension, viscosity), solids (bone and tooth structure), phase transitions (ebullism), gas solubility in liquids (Henry's law, aeroembolism, caisson disease, oxygen intoxication, nitrogen narcosis). Biophysical description of biological systems, the living organism as a thermodynamic system, mechanisms of heat transport, heat loss of the body, the body's heat balance, basal metabolic rate, work of the heart, lungs and kidneys, hyperthermia, hypothermia and cryotherapy, mechanisms of membrane transport, diffusion phenomenon, Fick's law, osmosis, van't Hoff's law, osmotic pressure, role of the osmotic pressure in transport through the wall of capillary vessel. | W1, W12, W13, W3, W4, U4, U5, K2 | seminar, e-learning |
| 2. | Mechanical properties of biological systems, gravity, overloads, traffic accidents, equilibrium and deformation of solids, Hooke's law, mechanical properties of bones. Fluid mechanics, hydrostatics, the effect of hydrostatic pressure on circulatory and respiratory systems functioning, velocity distribution of blood in vessel, laminar and turbulent flow, volumetric flow, vascular resistance, pulse wave, description of cardiovascular and respiratory systems functioning based on fluid mechanics, blood pressure measurements. | W1, W5, W6, U4, U5, K2 | seminar, e-learning |
| 3. | Electrical and magnetic properties of the biological substances, electrical conductivity of tissues and organs, electric model of tissue, bioimpedance measurements, electrodiagnostics and electrotherapy, the effect of electric current flow on the human body, electric shock, pacemaker and defibrillator, magnetic fields, diamagnetic and paramagnetic materials, application of magnetic fields in medicine. | W1, W11, W4, U3, U4, U5, K1, K2, K3, K4 | seminar, e-learning |

| | | | |
|----|--|--|---------------------|
| 4. | Types and sources of electromagnetic radiation, radio waves and microwaves, antennas, infrared radiation, visible light, photodynamic reactions, ultraviolet, physical background and properties of laser radiation, lasers, X-ray tube and its parameters, properties of X-ray radiation used in medicine, particle accelerators used in medicine. Influence of non-ionizing radiation on biological systems, application of electromagnetic radiation in the range of UV/VIS/IR in medicine, lasers in medicine, therapeutic application of electromagnetic fields in the range of low and high frequencies, specific absorption rate. Influence of ionizing radiation on biological systems, absorption law, quantities used in radiation protection and safety standards, law of radioactive decay, characteristics of radioactive sources applied in medicine, brachytherapy and teletherapy, radioactive isotopes in diagnostics, gamma camera, scintigraphy, single photon emission tomography, positron emission tomography. | W1, W10, W11, W8, W9, U3, U4, U5, K1, K2, K3, K4 | seminar, e-learning |
| 5. | Imaging diagnostics, X-ray apparatus, rentgenography, minimization of radiation doses and image optimization, pantomography, densitometry, computed tomography and principle of measurement, tomographic window, phenomenon of magnetic resonance, magnetic resonance tomography and principle of measurement, magnetic resonance spectroscopy, advanced ultrasound techniques (Doppler effect, higher harmonics, 3D and 4D imaging), types of contrast agents applied in various method of diagnostic imaging. | W1, W11, W7, U3, K2 | seminar, e-learning |
| 6. | Labs classes include self-implementation by students experiments with the use of devices and organ models built at the Biophysics Department. Individual exercises concern the following issues: methodology of physical experiment (error analysis), measurement and data analysis of selected physiological quantities, acquisition and computer processing of diagnostic images, mechanical properties of bones and teeth, model of the circulatory system, electrocardiography, ultrasonography, dental radiography, digital analysis of tooth color, polymerization kinetics, mechanics of jaw, dental drill. | W1, W10, W11, W2, W7, U1, U2, U3, U4, U5, K1, K2, K3, K4 | classes, e-learning |

Course advanced

Teaching methods:

laboratories (labs), seminar

| Activities | Examination methods | Credit conditions |
|------------|-------------------------|--|
| seminar | oral examination | Each answer is rated on a scale of 0-10 points. For getting credit it is necessary to get an average grade equal to 6 points. |
| classes | assignment report, test | Each exercise is rated on a scale of 0-10 points. For getting credit it is necessary to get an average grade equal to 6 points from all exercises. |
| e-learning | | |

Entry requirements

Knowledge in physics, mathematics and chemistry at the basic level. Ability to adapt this knowledge to solve problems in biophysics. Ability to prepare for classes with the use of given literature and other learning materials.

Practice in the field of assisting a dentist - summer internship

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group I. Professional practice</p> |
|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 4</p> | <p>Examination credit</p> <p>Activities and hours professional practice: 120</p> | <p>Number of ECTS points 4.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | The aim of the practice is to familiarize students with oral health care system and with basic dental procedures |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | organization of dentist practice and management principles in healthcare | O.W5 | booklet of practice |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practice |

| | | | |
|--|--|------|---------------------|
| U2 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practice |
| U3 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practice |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | booklet of practice |
| K2 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practice |
| K3 | promote health-promoting behaviors | O.K6 | booklet of practice |
| K4 | use objective sources of information | O.K7 | booklet of practice |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| professional practice | 120 |
| Student workload | Hours 120 |
| Workload involving teacher | Hours 120 |
| Practical workload | Hours 120 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--------------------------------|-----------------------|
| 1. | Preparation of the dental unit for oral procedures | W1, U1, U2, U3, K1, K2, K3, K4 | professional practice |
| 2. | Preparation of dental armamentarium (disinfection and sterilization) | W1, U1, U2, U3, K1, K2, K3, K4 | professional practice |
| 3. | Assistance to dental procedures | W1, U1, U2, U3, K1, K2, K3, K4 | professional practice |
| 4. | Administrative activities (patients registration, medical records, preparation of certificates) | W1, U1, U2, U3, K1, K2, K3, K4 | professional practice |

Course advanced

Teaching methods:

professional practice

| Activities | Examination methods | Credit conditions |
|-----------------------|----------------------------|--------------------------------|
| professional practice | booklet of practice | 120 h of professional practice |

Basics of medical imaging

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group B. Scientific basis for medicine</p> |
|--|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 4</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| G1 | The aim of the module is to familiarize a student with, in terms of knowledge with: (1) the concepts enabling the biophysical description of the medical imaging techniques, (2) the effects of physical factors on the human body, (3) the basics of physical methods used in the diagnosis, with particular emphasis on diagnostic imaging, (4) image processing techniques and (5) methods of estimating the risk of performing a diagnostic test. |
| G2 | To make students aware of the limitations associated with diagnostic imaging methods and side effects associated with the use of different imaging methods. In particular, familiarization with: (1) restrictions various imaging diagnostics methods, (2) characteristic artifacts for various imaging methods, (3) assessment of the harmfulness of ionizing and non-ionizing radiation used in a given diagnostic method as well as standards in this area for both patients and staff. |
| G3 | To develop skills in optimizing the procedure to achieve a specific diagnostic purpose and preparation for the use of imaging apparatus in clinical practice. In particular, familiarization with: (1) how to choose the optimal diagnostic procedure to solve a specific problem, (2) effective using basic diagnostic imaging devices, (3) explaining the course to the patient the test that awaits him, (4) cooperation with the team operating the imaging equipment and (5) use of the literature. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral examination |
| W2 | tissue and organ imaging methods and principles of operation of diagnostic devices for this purpose | B.W9 | essay |
| W3 | operating principles of ultrasonic devices | B.W10 | oral examination, essay |
| W4 | principles of photometry and optical fibers and the use of light sources in dentistry | B.W11 | oral examination, essay |
| W5 | principles of lasers in dentistry | B.W12 | oral examination, essay |
| W6 | principles of dental equipment operation | B.W13 | oral examination |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | oral examination |
| U2 | interpret physical phenomena occurring in the masticatory organ | B.U2 | oral examination |
| U3 | use the physical processes appropriate to the work of a dentist | B.U3 | oral examination |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | essay |
| K2 | formulate conclusions from own measurements or observations | O.K8 | oral examination |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 30 |
| preparation for examination | 10 |
| preparation of a report | 20 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------|
| 1. | Image representation, processing and analysis methods in medicine - digital image, image algebra, geometric transformations, image histograms, image filtration, Fourier transformation, operations on series of images. Image data recording standards - DICOM, archiving and sending of images - PACS, information systems in radiology - RIS. Optical imaging - lasers and optical fibers, endoscopic techniques, wireless endoscopy and virtual endoscopy. | W1, W2, W4, W5, W6, U1, K1 | e-learning |
| 2. | Classical radiology - physical basics, X-ray tube, X-ray image detectors in radiology, optimization of parameters in radiological examination, calculation of ionizing radiation doses, radiation protection, mammography, contrast radiology, vascular examinations in radiology, coronary angiography, retrograde chol-angio-pactreatography, digital subtractive angiography, layered radiology and pantomography, densitometry. Computed tomography - construction and tomograph operation principle, image reconstruction methods, quantitative computed tomography (bone density determination), image quality assessment, artifacts, spiral tomography and multi-row modern systems, three-dimensional tomography, the use of contrast media, static and dynamic tomography in cardiology. | W1, W2, U1, U2, K1, K2 | e-learning |
| 3. | Ultrasonography - characteristics of acoustic waves, interaction with biological systems, structure and principle of ultrasound machine operation, image presentation methods, 3D and 4D ultrasound, endoscopic and intraoperative systems, Doppler ultrasound, special ultrasound techniques, elastography, higher harmonics, intravascular ultrasound, studies of tissue movement, contrast media in ultrasound, artifacts. | W1, W3, U3, K1, K2 | e-learning |
| 4. | Magnetic resonance tomography - magnetic tissue properties, magnetization vector, effect of nuclear magnetic resonance, Larmor frequency, relaxation times, measuring techniques, induction law, free induction decay, excitation pulses, spin echo and gradient echo methods, construction of magnetic resonance tomograph, superconducting magnet, permanent magnet, gradient coils and RF coils, image reconstruction methods, fast imaging techniques, selection of parameters in the magnetic resonance examination, sequence of pulses, PD, T1 and T2 images, imaging of blood flow, diffusion measurements, chemical shift, magnetic resonance spectroscopy, special imaging techniques in magnetic resonance tomography, noise sources, resolving power, artifacts, contrast agents in magnetic resonance tomography, biological effects of electromagnetic fields. | W1, W2, U1, U2, K1, K2 | e-learning |
| 5. | Scintigraphy and emission tomography - construction and principle of gamma camera gamma, isotope characteristics, basics of radiochemistry, single photon emission tomography (SPECT), positron emission tomography (PET). | W1, W2, U1, U2, K1, K2 | e-learning |

| | | | |
|----|--|----------------|------------|
| 6. | New imaging diagnostics techniques - thermography, impedance tomography, tomography based on infrared radiation, optical coherence tomography. | W1, W2, K1, K2 | e-learning |
|----|--|----------------|------------|

Course advanced

Teaching methods:

lecture, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|-------------------------|---|
| e-learning | oral examination, essay | The condition of passing the course is a positive essay grade prepared by the student and passing an oral exam covering mainly problems related to the topic of the essay. Knowledge of the issues presented in lectures can also be checked. |

Entry requirements

Completing the course on biophysics or medical physics at the academic level. Ability to self-prepare an essay by using the internet and specific books.

Molecular Biology in Medicine

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2021/22</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group B. Scientific basis for medicine</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 4</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 10, classes: 20</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | 1. To provide students with the knowledge concerning molecular basics of normal cells functioning within tissues versus cell participation in the process of carcinogenesis |
| C2 | 2. To introduce basics of implantology |
| C3 | 3. To provide students with the skills allowing them to undertake research work in the area of cancer development with special emphasis to oral cancer and implantology |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | test |

| | | | |
|--|--|-------|---------------------------|
| W2 | issues in dentistry - at an advanced level | O.W2 | test |
| W3 | the rules of conducting scientific research and spreading their results | O.W4 | booklet of practice, test |
| W4 | the importance of the main and trace elements in the processes occurring in the body, including supply, absorption and transport | B.W1 | test |
| W5 | biochemical foundations of human body integrity | B.W3 | test |
| W6 | structure and functions of important chemical compounds present in the human body, in particular properties, functions, metabolism and energy of reactions of proteins, nucleic acids, carbohydrates, lipids, enzymes and hormones | B.W4 | booklet of practice, test |
| W7 | principles of statics and biomechanics in relation to the human body | B.W7 | booklet of practice, test |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | booklet of practice |
| U2 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practice |
| U3 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | booklet of practice |
| U4 | relate chemical phenomena to oral cavity processes | B.U1 | booklet of practice, test |
| U5 | apply knowledge of genetics and molecular biology in clinical work | B.U5 | booklet of practice, test |
| U6 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practice, test |
| Social competences - Student is ready to: | | | |
| K1 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | booklet of practice |
| K2 | use objective sources of information | O.K7 | booklet of practice |
| K3 | formulate conclusions from own measurements or observations | O.K8 | booklet of practice |
| K4 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | booklet of practice |
| K5 | formulate opinions on the various aspects of the professional activity | O.K10 | booklet of practice |

Calculation of ECTS points

| Activity form | Activity hours* |
|---------------|-----------------|
| e-learning | 10 |
| classes | 20 |

| | |
|-----------------------------------|--------------------|
| preparation for test | 20 |
| Student workload | Hours 50 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|---------------------|
| 1. | Cell functioning within tissues and the influence of cell specific niche on differentiation/proliferation program. The sources of normal and cancer cells. Cell cycle and proliferation (mitosis) -the cell cycle checkpoints, the regulation of cyclin and cyclin-dependent kinases, growth factors contribution, stem cells properties and stem cell niche architecture, the influence of cell/cell and cell/ECM interactions on properties of cells. Cell differentiation. The natural sources of cell cultures, primary and secondary normal and malignant cell cultures, the methods of propagation fo cell cultures | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5 | classes, e-learning |
| 2. | The regulation of the process of gene expression in the cell The molecular mechanism of replication, transcription and translation. Molecular bases of gene expression detection-the molecular mechanism of PCR reaction. RNA isolation with common methods (trizol) | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5 | classes, e-learning |
| 3. | The basics of cancerogenesis and impaired cell-cell interactions within tumours Cancer cell definition, cancer cells properties -deregulation of cell cycle progression, classes of dgenes involved in cancerogenesis The principles of polymerase chain reaction application and visualisation of obtained products by electrophoresis. Theoretical basics of migration and separation of charged particles (ions) under the influence of an electric field. The conduction of PCR and electrophoresis. | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5 | classes, e-learning |
| 4. | The current methods for detection of changed gene expression paying special attention to genes related to inflammation and cancerogenesis Molecular biology tools for the detection of changed gene expressions - cell migration, immunofluorescence, Western Blot, PCR data analysis with the use of programs for genes expression assessing, data presentation, estimation of statistical significance. | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5 | classes, e-learning |

| | | | |
|----|---|--|---------------------|
| 5. | The requirements for tissue implantology with special emphasis to tissue explants and cell reaction to artificial substrates the reaction of the cells to artificial substrates-contact guidance mechanism, molecular mechanism of cell migration in wound healing | W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5 | classes, e-learning |
|----|---|--|---------------------|

Course advanced

Teaching methods:

brainstorm, classes / practicals, computer classes, laboratories (labs), demonstration, discussion, e-learning, problem solving method, presentation, professional practice, lecture, PBL Problem Based Learning

| Activities | Examination methods | Credit conditions |
|------------|---------------------|-------------------|
| e-learning | test | attendance |
| classes | booklet of practice | attendance |

Entry requirements

Physiology course

Pathology

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups C. Preclinical course, E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination -</p> <p>Activities and hours classes: 57, e-learning: 16</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 14, classes: 58</p> | <p>Number of ECTS points 9.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Upon completion of this course, Students will: -distinguish between normal and abnormal physiologic functions, identify etiology, signs, and symptoms of diseases of all body systems, -understand pathophysiological changes, including how pathological processes are manifested, progress in the body, and primary and secondary effects, - develop skills of observation, interpretation, and integration needed to analyze human disease and explain the pathogenesis of the disease, - be able to describe the basic morphological changes in tissues and organs found in the course of various diseases - be able to explain the relationship between morphological changes in organs and abnormal physiological functions. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | pathomechanism of allergic diseases, selected hypersensitivity diseases, autoimmune diseases and immunodeficiencies | C.W11 | classroom observation, multiple choice test |
| W2 | the concept of health and disease, mechanisms of the formation and development of the disease process at the molecular, cellular, tissue and systemic level, clinical symptoms of the disease, prognosis and complications of the disease | C.W13 | classroom observation, multiple choice test |
| W3 | mechanisms of inflammation and wound healing | C.W14 | classroom observation, multiple choice test |
| W4 | basic disorders of hormone secretion regulation, water and electrolyte balance, acid-base balance, kidney and lung function, as well as mechanisms of development and effects of disorders in the cardiovascular system, including shock | C.W15 | classroom observation, multiple choice test |
| W5 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | classroom observation, multiple choice test |
| W6 | external and internal pathogens | C.W6 | classroom observation, multiple choice test |
| W7 | structure of the immune system and its role | C.W7 | classroom observation, multiple choice test |
| W8 | basics of immunodiagnosics and immunomodulation | C.W10 | classroom observation, multiple choice test |
| W9 | diagnostic methods used in pathomorphology and the role of laboratory tests in the prevention and diagnosis of organ and systemic disorders | C.W16 | classroom observation, multiple choice test |
| W10 | signs of death and post-mortem changes, as well as principles of autopsy technique and autopsy | C.W17 | classroom observation, multiple choice test |
| W11 | mechanisms leading to organ and body pathologies, including infectious, invasive, autoimmune, immunodeficiency, metabolic and genetic diseases | C.W30 | classroom observation, multiple choice test |
| W12 | influence of physical, chemical and biological factors. as well as avitaminoses and stress on the patient's body | C.W31 | classroom observation, multiple choice test |

| | | | |
|--|--|-------|---|
| W13 | humoral and cellular mechanisms of innate and acquired immunity, and mechanisms of hypersensitivity reactions and autoimmune processes | C.W8 | classroom observation |
| W14 | concepts of homeostasis, adaptation, resistance, resistance, propensity, susceptibility, compensatory mechanisms, feedback and the mechanism of "vicious circle" | C.W12 | multiple choice test |
| W15 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | classroom observation, multiple choice test |
| Skills - Student can: | | | |
| U1 | predict and explain the complex pathomechanisms of disorders leading to the emergence of diseases | C.U4 | classroom observation, multiple choice test |
| U2 | analyze the clinical course of diseases in pathological processes | C.U5 | classroom observation, multiple choice test |
| U3 | identify pathological changes in cells, tissues and organs with regard to circulatory disorders, retrograde changes, progressive changes and inflammations | C.U6 | classroom observation, multiple choice test |
| U4 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | classroom observation |
| U5 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation |
| U6 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation |
| U7 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation |
| U8 | identify pathological changes caused by HIV infection and observed in patients with acquired immune deficiency syndrome (AIDS) | C.U7 | classroom observation, multiple choice test |
| U9 | determine pathological changes of cells, tissues and organs according to basic mechanisms | C.U14 | classroom observation, multiple choice test |
| U10 | provide preliminary diagnosis of neoplastic lesions in the nose, throat and larynx | E.U13 | classroom observation, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation, multiple choice test |

Calculation of ECTS points

Semester 5

| Activity form | Activity hours* |
|---------------|-----------------|
| classes | 57 |
| e-learning | 16 |

| | |
|-----------------------------------|---------------------|
| preparation for classes | 35 |
| preparation for colloquium | 15 |
| Student workload | Hours 123 |
| Workload involving teacher | Hours 73 |
| Practical workload | Hours 57 |

* hour means 45 minutes

Semester 6

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 14 |
| classes | 58 |
| preparation for classes | 35 |
| preparation for colloquium | 15 |
| preparation for examination | 25 |
| Student workload | Hours 147 |
| Workload involving teacher | Hours 72 |
| Practical workload | Hours 58 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|---------------------|
| 1. | Pathophysiology - Pathogenesis processes in circulation. Heart failure. | W11, W12, W15, W2, W3, W5, W6, W7, W9, U1, U2, U3, U4, U6, U7, U9, K1 | classes, e-learning |
| 2. | Pathophysiology - Atherosclerosis. Coronary Artery Disease. Myocardial Infraction | W1, W11, W12, W2, W3, W4, W5, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes, e-learning |
| 3. | Pathophysiology - Pathophysiology of inflammation. Types of Hypersensitivity | W1, W11, W12, W2, W3, W4, W5, W6, W7, W8, U1, U2, U3, U4, U6, U7, U9, K1 | e-learning |

| | | | |
|-----|--|--|---------------------|
| 4. | Pathophysiology - Valvular heart disease. Hypertension: classification and complications. | W1, W11, W12, W2, W3, W4, W5, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 5. | Pathophysiology - Circulatory shock. MODS. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes, e-learning |
| 6. | Pathophysiology - Blood disorders. Anemias. | W1, W11, W12, W2, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | e-learning |
| 7. | Pathophysiology - Respiratory failure, ARDS. Pulmonary hypertension | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U7, U9, K1 | classes, e-learning |
| 8. | Pathophysiology - Obstructive lung diseases: Asthma, COPD. Restrictive lung disease (IPF). | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 9. | Pathophysiology - Pulmonary edema. Pulmonary embolism. | W1, W11, W12, W2, W3, W4, W5, W7, U1, U2, U3, U4, U7, U8, U9, K1 | classes |
| 10. | Pathophysiology - Autonomic nervous system examination (Ewing battery) | W2, W4, W5, U1, U2, U5, U6, U7, K1 | classes |
| 11. | Pathophysiology - Disorders of the esophagus, stomach, duodenum | W1, W11, W2, W3, W4, W5, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 12. | Pathophysiology - Disorders of the small intestine and colon. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 13. | Pathophysiology - Hyperbilirubinemias. Jaundice. Gallbladder diseases. Hepatitis. Liver cirrhosis | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, K1 | classes |
| 14. | Pathophysiology - Pancreatitis. Pathophysiology of pain. Types of pain: nociceptive and neuropathic, visceral vs somatic | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 15. | Pathophysiology - Diabetes mellitus | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 16. | Pathophysiology - HP axis. Pituitary adenoma. DI. SIADH. Obesity | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 17. | Pathophysiology - Thyroid disorders. Hyperthyroidism, Hypothyroidism, Goitre. Primary and secondary parathyroidism. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 18. | Pathophysiology - Cushing's Syndrome. Aldosteronism. Adrenocortical insufficiency. Disorders of adrenal medulla. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 19. | Pathophysiology - Clinical manifestation of altered kidney function. Glomerulonephritis and nephrotic syndrome. Nephrolithiasis. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U7, U9, K1 | classes |
| 20. | Pathophysiology - Acute kidney injury. Chronic kidney disease. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |

| | | | |
|-----|--|--|---------|
| 21. | Pathophysiology - Neurology: Parkinson's disease, Alzheimer's disease, Stroke, Myasthenia gravis, Epilepsy. | W1, W11, W12, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U6, U7, U9, K1 | classes |
| 22. | Pathomorphology - Introduction to pathomorphology | W10, W11, W2, W5, W6, W8, W9, U1, U2, U3, U9, K1 | classes |
| 23. | Pathomorphology - cellular pathology, cell death, hypertrophy, hyperplasia, metaplasia, accumulations. | W11, W12, W13, W14, W2, W6, W9, U1, U2, U3, U9, K1 | classes |
| 24. | Pathomorphology - types of acute and chronic inflammations, wound healing, AIDS | W1, W11, W12, W2, W3, W6, W9, U2, U3, U6, U7, U9, K1 | classes |
| 25. | Pathomorphology - hemodynamics: morphological aspects of oedema, hyperaemia, thrombus, blot cloth, infarct, shock. | W12, W14, W15, W2, W4, W9, U1, U2, U3, U6, U9, K1 | classes |
| 26. | Pathomorphology - general aspects of neoplasia, epithelial and non-epithelial neoplasms, bone neoplasms, hematological neoplasm. | W11, W2, W6, W9, U10, U2, U3, U6, U7, U9, K1 | classes |
| 27. | Pathomorphology - pediatric pathomorphology. | W11, W12, W14, W2, W6, W9, U1, U2, U6, U9, K1 | classes |
| 28. | Pathomorphology - oral pathology, dental cysts and neoplasms. | W12, W2, W3, W6, W9, U2, U3, U6, U9, K1 | classes |
| 29. | Pathomorphology - neck, salivary glands, nose, paranasal and thyroid non-neoplastic and neoplastic changes. | W1, W11, W12, W14, W2, W3, W4, W6, W9, U1, U10, U2, U3, U9, K1 | classes |
| 30. | Pathomorphology - cardiovascular and vessels pathology. | W12, W14, W2, W3, W4, W6, W9, U1, U2, U3, U9, K1 | classes |
| 31. | Pathomorphology- gastrointestinal and liver neoplastic and non-neoplastic changes. | W1, W11, W12, W13, W14, W2, W3, W4, W6, W7, U1, U2, U3, U9, K1 | classes |
| 32. | Pathomorphology- endocrine pathology. | W11, W12, W14, W2, W4, W9, U1, U2, U3, U9, K1 | classes |
| 33. | Pathomorphology- prostate, kidney and urinary tract pathology. | W14, W2, W3, W4, W6, W9, U1, U2, U3, U9, K1 | classes |
| 34. | Pathomorphology- female genital tract pathology. | W12, W2, W3, W6, U1, U2, U3, U9, K1 | classes |

Course advanced

Semester 5

Teaching methods:

case study, classes / practicals, dissection classes, demonstration, discussion, e-learning, seminar, lecture, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|-------------------|---|---|
| classes | multiple choice test | Evaluation and grade assignment Pathophysiology: 1st mid-term test 2nd mid-term test Remedial work Students who will be admitted to the final PATHOLOGY exam must obtain over 50% based on two Pathophysiology mid-term tests Pathomorphology: mid-term test, single choice, 40 questions mid-term test and the final exam (the Pathomorphology part) are based on the Robbins book and on lectures also; to take the final exam a student must collect at least 50% of points of the mid-term test PATHOLOGY - FINAL EXAM MCQs test, which includes material taught on Pathophysiology and Pathomorphology classes during the year course To get credit, Students must complete the course with over 50% based of the total test score |
| e-learning | classroom observation, multiple choice test | Evaluation and grade assignment Pathophysiology: 1st mid-term test 2nd mid-term test Remedial work Students who will be admitted to the final PATHOLOGY exam must obtain over 50% based on two Pathophysiology mid-term tests Pathomorphology: mid-term test, single choice, 40 questions mid-term test and the final exam (the Pathomorphology part) are based on the Robbins book and on lectures also; to take the final exam a student must collect at least 50% of points of the mid-term test PATHOLOGY - FINAL EXAM MCQs test, which includes material taught on Pathophysiology and Pathomorphology classes during the year course To get credit, Students must complete the course with over 50% based of the total test score |

Semester 6

Teaching methods:

case study, dissection classes, discussion, seminar, lecture, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|-------------------|---|---|
| e-learning | multiple choice test | Evaluation and grade assignment Pathophysiology: 1st mid-term test 2nd mid-term test Remedial work Students who will be admitted to the final PATHOLOGY exam must obtain over 50% based on two Pathophysiology mid-term tests Pathomorphology: mid-term test, single choice, 40 questions mid-term test and the final exam (the Pathomorphology part) are based on the Robbins book and on lectures also; to take the final exam a student must collect at least 50% of points of the mid-term test PATHOLOGY - FINAL EXAM MCQs test, which includes material taught on Pathophysiology and Pathomorphology classes during the year course To get credit, Students must complete the course with over 50% based of the total test score |
| classes | classroom observation, multiple choice test | Evaluation and grade assignment Pathophysiology: 1st mid-term test 2nd mid-term test Remedial work Students who will be admitted to the final PATHOLOGY exam must obtain over 50% based on two Pathophysiology mid-term tests Pathomorphology: mid-term test, single choice, 40 questions mid-term test and the final exam (the Pathomorphology part) are based on the Robbins book and on lectures also; to take the final exam a student must collect at least 50% of points of the mid-term test PATHOLOGY - FINAL EXAM MCQs test, which includes material taught on Pathophysiology and Pathomorphology classes during the year course To get credit, Students must complete the course with over 50% based of the total test score |

Pharmacology with elements of clinical pharmacology

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups C. Preclinical course, F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination -</p> <p>Activities and hours e-learning: 18, seminar: 6, classes: 28</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 18, seminar: 6, classes: 26</p> | <p>Number of ECTS points 6.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | to know basic rules of pharmacodynamics |
| C2 | to know general mechanisms of drug action |
| C3 | to know basic rules of pharmacodynamics as well as the effect of diseases on metabolism and elimination of drugs |
| C4 | to know basic rules of pharmacotherapy |
| C5 | to know most the important side effects of drugs |
| C6 | to know general problems of toxicology |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|------------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | the phenomenon of drug resistance development | C.W9 | multiple choice test, credit |
| W2 | mechanisms of drug action as well as pharmacokinetics and biotransformation of individual drug groups | C.W18 | multiple choice test, credit |
| W3 | indications and contraindications for the use of drugs, their dosage, side effects and toxic effects, and drug interactions | C.W19 | multiple choice test, credit |
| W4 | principles of therapy for viral, bacterial, fungal and parasitic infections | C.W20 | multiple choice test, credit |
| W5 | principles of preventing and combating pain and anxiety, as well as pharmacology of drugs used in life-threatening situations | C.W21 | multiple choice test, credit |
| W6 | rules for saving selected forms of ready-made and compounded drugs on a prescription | C.W22 | multiple choice test, credit |
| W7 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | multiple choice test, credit |
| W8 | issues in dentistry - at an advanced level | O.W2 | multiple choice test, credit |
| W9 | health education issues | O.W3 | multiple choice test, credit |
| W10 | basics of antibiotic therapy and antibiotic resistance | F.W13 | multiple choice test, credit |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | multiple choice test, credit |
| U2 | plan treatment for dental problems | O.U3 | multiple choice test, credit |
| U3 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | multiple choice test, credit |

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|--|---|-------|------------------------------|
| U4 | select drugs in appropriate doses and prescribe drugs as indicated | C.U8 | multiple choice test, credit |
| U5 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | multiple choice test, credit |
| U6 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | multiple choice test, credit |
| Social competences - Student is ready to: | | | |
| K1 | promote health-promoting behaviors | O.K6 | multiple choice test, credit |
| K2 | use objective sources of information | O.K7 | multiple choice test, credit |
| K3 | to be guided by the well-being of a patient | O.K2 | multiple choice test, credit |

Calculation of ECTS points

Semester 5

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 18 |
| seminar | 6 |
| classes | 28 |
| preparation for classes | 26 |
| Student workload | Hours 78 |
| Workload involving teacher | Hours 52 |
| Practical workload | Hours 28 |

* hour means 45 minutes

Semester 6

| Activity form | Activity hours* |
|----------------------|-----------------|
| e-learning | 18 |
| seminar | 6 |
| classes | 26 |
| preparation for test | 26 |

| | |
|-----------------------------------|---------------------|
| preparation for examination | 26 |
| Student workload | Hours 102 |
| Workload involving teacher | Hours 50 |
| Practical workload | Hours 26 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------------------|
| 1. | General informations, requirements, requests and general remarks. Mechanism of drug action - general principles. Types of receptors. Absorption, distribution and fate of drugs - introduction to pharmacokinetics. | W1, W2, W3, W4, W5, W6, W9, U1, U2, K1, K2, K3 | classes, seminar, e-learning |
| 2. | Chemical mediators in autonomic nervous system. Cholinergic transmission. Cholinergic agonists and antagonists. Neuromuscular blocking drugs. Autonomic ganglia drugs. | U1, U4, U5, K1, K2, K3 | seminar, e-learning |
| 3. | Adrenergic transmission. Adrenergic receptors. Adrenoceptor agonists and antagonists. | U1, U4, U5, K1, K2, K3 | seminar, e-learning |
| 4. | Local hormones (autacoids) in inflammation and allergy - histamine, serotonin Nitric oxide and drugs. | U1, K1, K2, K3 | seminar |
| 5. | Bradykinin, angiotensin II, ACEI, ARB. Endothelin and its blockers. | U1, K1, K2, K3 | seminar |
| 6. | Eicosanoids and PAF (platelet activating factor) - drugs connected with eicosanoids | U1, U6, K1, K2, K3 | seminar |
| 7. | Non-steroidal anti-inflammatory drugs - treatment of gout - treatment of rheumatoid arthritis | U1, U6, K1, K2, K3 | seminar |
| 8. | Chemical transmission in the central nervous system - classification of psychotropic drugs Non-therapeutic drugs (alcohol, others) | U1, K1, K2, K3 | seminar |
| 9. | Anxiolytic and hypnotic drugs. Opioids. Treatment of pain. | W6, W8, U1, K1, K2, K3 | seminar |
| 10. | General anaesthesia agents. Local anaesthetic drugs. | U1, U6, K1, K2, K3 | seminar |
| 11. | Neuroleptic drugs and drugs used in affective disorders. | U1, K1, K2, K3 | seminar |
| 12. | Treating of motor disorders: epilepsy and Parkinsonism. | U1, K1, K2, K3 | seminar |

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|-----|---|-----------------------------|---------|
| 13. | Central nervous system stimulants and psychomimetics. Cannabinoids, LSD, heroine, amphetamine, cocaine. Treatment of drug abuse. | U1, K1, K2, K3 | seminar |
| 14. | Basic principles of chemotherapy. Sulphonamides. Antibacterial agents. Cell wall synthesis inhibitors (penicillin, cephalosporin, monobactams, carbapenems). | W10, W7, U1, U3, K1, K2, K3 | seminar |
| 15. | Inhibitors of bacterial protein synthesis (tetracyclines, macrolides, aminoglycosides, chloramphenicol, other antibiotics). Fluoroquinolones. Antifolate drugs. | W10, U1, K1, K2, K3 | seminar |
| 16. | Antimycobacterial agents. Treatment of tuberculosis and leprosy. Antifungal drugs. | W10, U1, K1, K2, K3 | seminar |
| 17. | Antiviral drugs. Antiprotozoal drugs and anthelmintic drugs. | U1, K1, K2, K3 | seminar |
| 18. | Cancer chemotherapy. Progress in cancer immunotherapy. | U1, K1, K2, K3 | seminar |
| 19. | The endocrine system - anterior pituitary hormones - hypothalamic hormones. | U1, K1, K2, K3 | seminar |
| 20. | Thyroid and parathyroid hormones. | U1, K1, K2, K3 | seminar |
| 21. | Adrenal steroids and related drugs. The reproductive system. Estrogens, androgens, anabolic hormones, contraceptives. | U1, K1, K2, K3 | seminar |
| 22. | Diabetes Mellitus. Insulin. Oral hypoglycaemic agents. | U1, K1, K2, K3 | seminar |
| 23. | Treatment of diarrhea, constipation, nausea vomiting. Treatment of gastroesophageal reflux disorder (GERD), role of H2 receptors. | U1, K1, K2, K3 | seminar |
| 24. | Peptic ulcers, antacids; antisecretory drugs. | U1, K1, K2, K3 | seminar |
| 25. | Agents used to treat liver and pancreas disorders; inflammatory bowel disease, hepatitis. | U1, K1, K2, K3 | seminar |
| 26. | Diuretics, antidiuretic drugs. | U1, K1, K2, K3 | seminar |
| 27. | Diseases of respiratory tract. Bronchodilator agents; agents used to treat asthma. | U1, K1, K2, K3 | seminar |
| 28. | Decongestants; cough suppressants; antimicrobial agents used to treat patients with respiratory tract infections. | U1, K1, K2, K3 | seminar |
| 29. | Anemia. Drugs affecting haematopoiesis. Septicaemia, bacteraemia. | U1, K1, K2, K3 | seminar |
| 30. | Introduction to cardiovascular pharmacology Treatment of congestive heart failure and acute heart failure. | U1, K1, K2, K3 | seminar |
| 31. | Antiarrhythmic drugs. Resuscitation, treatment of shocks. Endocarditis. | U1, K1, K2, K3 | seminar |
| 32. | Pharmacology of coagulation, fibrinolytic drugs. | U1, K1, K2, K3 | seminar |
| 33. | Pharmacology of platelets and endothelium. Antiplatelet drugs. | U1, K1, K2, K3 | seminar |

| | | | |
|-----|---|----------------|------------------|
| 34. | Classification of anti-hypertensive drugs, current concepts in treatment of hypertension. Basic and clinical pharmacology of ACE inhibitors and angiotensin receptor antagonists, adrenolytics, diuretics, calcium channel blockers, potassium channels openers, direct vasodilators. | U1, K1, K2, K3 | classes, seminar |
| 35. | Atherothrombosis – current concepts on prevention and treatment. Drugs used in the treatment of hyperlipidemias. Basic and clinical pharmacology of statins, fibrates, niacin, resins. Cholesterol-independent, pleiotropic effects of hypolipemic drugs. | U1, K1, K2, K3 | classes, seminar |
| 36. | Drugs used in the treatment of ischemic heart disease. Acute coronary syndrome. | U1, K1, K2, K3 | classes, seminar |

Course advanced

Semester 5

Teaching methods:

case study, discussion, seminar, lecture

| Activities | Examination methods | Credit conditions |
|------------|----------------------|-----------------------------|
| e-learning | credit | attendance on lectures |
| seminar | multiple choice test | passing I-III partial tests |
| classes | multiple choice test | passing I-III partial tests |

Semester 6

Teaching methods:

case study, discussion, e-learning, seminar, lecture, PBL Problem Based Learning

| Activities | Examination methods | Credit conditions |
|------------|----------------------|------------------------------|
| e-learning | credit | attendance on lectures |
| seminar | multiple choice test | passing III-VI partial tests |
| classes | multiple choice test | final test examination |

Entry requirements

biochemistry and physiology of organism

Internal diseases with physiotherapy and rehabilitation

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 5</p> | <p>Examination -</p> <p>Activities and hours e-learning: 15, clinical classes: 61</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 6</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 14, clinical classes: 60</p> | <p>Number of ECTS points 7.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | To familiarize students with the most important information about internal medicine |
| C2 | To familiarize students with the most important information about rehabilitation in internal medicine |
| C3 | Teaching of basic practical skills, including collecting interviews and full physical examination |
| C4 | To familiarize with issues in the field of infectious diseases related to the dental procedures, pulmonology, allergology and gastroenterology |
| C5 | Getting to know the issues of cardiovascular, urinary tract, connective tissue and environmental diseases |
| C6 | Teaching of practical skills in the field of internal medicine |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-----------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | health education issues | O.W3 | written examination, credit |
| W2 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | written examination, credit |
| W3 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | written examination, credit |
| W4 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | written examination, credit |
| W5 | symptoms of acute abdominal diseases, intoxication, infection and sepsis | E.W7 | written examination, credit |
| W6 | symptoms of hepatitis, HIV infection and acquired immune deficiency syndrome (AIDS) in infectious and parasitic diseases | E.W8 | written examination, credit |
| W7 | principles of immunization against infectious diseases in children and adults | E.W9 | written examination, credit |
| W8 | hormonal determinants of a woman's body in specific periods of life | E.W10 | written examination, credit |
| W9 | causes and mechanisms of cardiac and respiratory arrest as well as principles of resuscitation and post-resuscitation procedures | E.W17 | written examination, credit |
| W10 | life-threatening conditions | E.W18 | written examination, credit |
| W11 | methods used in medical rehabilitation, its goals and planning methodology | E.W19 | written examination, credit |

| | | | |
|------------------------------|--|-------|-----------------------------|
| W12 | cases in which the patient should be referred to the hospital | E.W20 | written examination, credit |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | written examination, credit |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | written examination, credit |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | written examination, credit |
| U4 | inspire the learning process of others | O.U6 | written examination, credit |
| U5 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | written examination, credit |
| U6 | communicate and share knowledge with colleagues in a team | O.U8 | written examination, credit |
| U7 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | written examination, credit |
| U8 | perform differential diagnosis of the most common diseases of adults | E.U1 | written examination, credit |
| U9 | evaluate and describe the somatic and mental state of the patient | E.U2 | written examination, credit |
| U10 | plan diagnostic and therapeutic procedures for the most common adult diseases | E.U3 | written examination, credit |
| U11 | interpret the results of laboratory tests | E.U4 | written examination, credit |
| U12 | identify normal and pathological structures and organs in additional imaging tests (X-ray, ultrasound, computed tomography - CT) | E.U5 | written examination, credit |
| U13 | plan the management of exposure to blood-borne infections | E.U6 | written examination, credit |
| U14 | recognize the risk of life threat | E.U8 | written examination, credit |
| U15 | describe and recognise signs of shock and acute circulatory failure | E.U9 | written examination, credit |
| U16 | recognize the symptoms of brain injuries and cerebrovascular diseases, dementia and consciousness disorders | E.U10 | written examination, credit |
| U17 | recognize diseases related to smoking addiction, alcoholism and other addictions | E.U17 | written examination, credit |
| U18 | diagnose diseases with enlarged lymph nodes of the neck and submandibular area and infectious diseases, with particular emphasis on lesions within the oral cavity | E.U18 | written examination, credit |

| | | | |
|--|---|-------|-----------------------------|
| U19 | perform basic medical procedures and procedures: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen therapy, assisted and substitute ventilation, placement of a oropharyngeal tube, preparation of the surgical field, hygienic and surgical hand disinfection, intravenous, intramuscular and subcutaneous injection, peripheral venous blood collection, collecting nasal, pharyngeal and dermal swabs, simple strip tests, measurement of blood glucose levels | E.U20 | written examination, credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | written examination, credit |
| K2 | respect medical confidentiality and patients' rights | O.K3 | written examination, credit |
| K3 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | written examination, credit |
| K4 | promote health-promoting behaviors | O.K6 | written examination, credit |
| K5 | formulate conclusions from own measurements or observations | O.K8 | written examination, credit |
| K6 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | written examination, credit |
| K7 | formulate opinions on the various aspects of the professional activity | O.K10 | written examination, credit |
| K8 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | written examination, credit |
| K9 | to be guided by the well-being of a patient | O.K2 | written examination, credit |

Calculation of ECTS points

Semester 5

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 15 |
| clinical classes | 61 |
| preparation for classes | 20 |
| Student workload | Hours 96 |
| Workload involving teacher | Hours 76 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 61 |
|---------------------------|--------------------|

* hour means 45 minutes

Semester 6

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 14 |
| clinical classes | 60 |
| preparation for classes | 20 |
| preparation for examination | 10 |
| Student workload | Hours 104 |
| Workload involving teacher | Hours 74 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|--|---|-------------------|
| 1. | <p>Semester 5 * Principles of medical procedure, Introduction to internal medicine examination. Rules for medical history taking * Medical examination of the cardiovascular system. * Diseases manifested by changes within head and neck, with particular emphasis on changes in the mouth. * Viral hepatitis. Liver Cirrhosis * Medical examination of the respiratory system. *Medical examination of the abdominal organ diseases. * Principles of medical and physical examination in musculoskeletal disorders. Osteoarticular diseases - introduction. * Medical and physical examination of the nervous system. Diagnosis of causes of unconsciousness.</p> <p>* Types of shock with special attention considering cardiogenic shock, medical treatment. * Left and right-sided heart failure.</p> <p>Clinical symptoms, diagnosis and treatment.</p> <p>* Ischemic heart disease. Myocardial infarction. Etiology, clinical symptoms, diagnostic methods, treatment. * Acquired and congenital heart defects. Rheumatic disease.</p> <p>*Endocarditis, myocarditis. Cardiomyopathies</p> | <p>W1, W10, W11, W2, W3, W4, W5, W6, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | e-learning |

| | | | |
|----|---|--|------------------|
| 2. | Semester 5 * Medical interview, purpose, analysis, interpretation of the patient data. Scheme of medical history. General symptoms. Symptoms from head and neck. Cardiovascular disorders. * Skin changes in internal diseases. Differential diagnosis of cyanosis and jaundice. * Physical examination of the abdomen, genitourinary system. * Aetiology and pathogenesis of chronic obstructive pulmonary disease. Types of allergic reactions. * Physical examination of head, neck and sense organs. Physical examination of the respiratory system. * Physical examination of the cardiovascular system. | W1, W2, W3, W4, W5, W6, W7, W8, W9 | clinical classes |
| 3. | * Hemorrhagic diathesis. Rules of anticoagulant treatment. * Inflammatory kidney disease. Nephrotic syndrome. Kidney failure. * Emergency medical procedures in internal medicine* Allergy tests interpretation. | W1, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning |
| 4. | Semester 6 * Aetiology of endocarditis and urinary tract infectio. Principles of diagnostics and prevention. * Aetiology, diagnostics and empirical therapy of infectious (viral and bacterial) diseases causing changes in the mouth. * Pituitary gland and adrenal gland diseases. * Thyroid and parathyroid gland diseases * Diabetes. *Physiotherapy in diseases of: circulatory system; respiratory system and inflammatory and degenerative musculoskeletal disorders. Basics of physical therapy. *In-hospital and out-of-hospital infections and infection in dental office. Aetiology; prevention and general principles of medical treatment. | W1, W10, W11, W12, W2, W3, W5, W6, W7, W8, W9, U1, U11, U12, U18 | clinical classes |

Course advanced

Semester 5

Teaching methods:

case study, brainstorm, classes / practicals, clinical classes, demonstration, discussion, problem solving method, case study method, group work, lecture, lecture with multimedia presentation, PBL Problem Based Learning, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|---------------------|---|
| e-learning | credit | Attendance at lectures (two excused absences allowed) |
| clinical classes | credit | Attendance at lectures (two excused absences allowed) |

Semester 6

Teaching methods:

case study, brainstorm, classes / practicals, demonstration, discussion, problem solving method, case study method, group work, lecture, PBL Problem Based Learning, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|---|
| e-learning | written examination | Attendance at lectures (two excused absences allowed) |
| clinical classes | written examination | Attendance at lectures (two excused absences allowed) |

Conservative dentistry with endodontics

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23, 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination -</p> <p>Activities and hours seminar: 10, clinical classes: 56</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 6</p> | <p>Examination credit</p> <p>Activities and hours seminar: 10, clinical classes: 54</p> | <p>Number of ECTS points 9.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 7</p> | <p>Examination -</p> <p>Activities and hours e-learning: 3, seminar: 8, clinical classes: 62</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|-----------------------------|--|-------------------------------------|
| Period Semester 8 | Examination credit Activities and hours e-learning: 3, seminar: 7, clinical classes: 62 | Number of ECTS points 8.0 |
|-----------------------------|--|-------------------------------------|

| | | |
|-----------------------------|--|-------------------------------------|
| Period Semester 9 | Examination - Activities and hours e-learning: 3, seminar: 10, clinical classes: 73 | Number of ECTS points 0.0 |
|-----------------------------|--|-------------------------------------|

| | | |
|------------------------------|--|--------------------------------------|
| Period Semester 10 | Examination examination Activities and hours e-learning: 3, seminar: 10, clinical classes: 72 | Number of ECTS points 11.0 |
|------------------------------|--|--------------------------------------|

Goals

| | |
|----|---|
| C1 | Integration and improvement of knowledge and skills acquired in the course of pre-clinical training, which will enable independent, proper preparation of the dental stand and ergonomic work. Mastering the principles of physical and physical examination and restoring the function of teeth - using all currently available means - in the patient's mouth. Acquaintance with the principles of prevention enabling maintaining a healthy mouth. Acquiring skills in therapeutic treatment in diseases of non-carious origin of mineralized tissues - abrasion, erosion, pathological tooth wear. Mastering the principles of pulp pathology prevention. Familiarization with the properties and indications for the use of filling materials. |
| C2 | Acquiring skills in the prevention of pulp and periapical tissue pathologies and therapeutic treatment in these cases. Getting to know the remedies and materials used in endodontics. Introduction to the basic concepts of aesthetic dentistry. Acquiring knowledge on the impact of dental tissue and apical periodontal disease on the general condition of the body. |
| C3 | Improving diagnostic, preventive and therapeutic skills in the field of karyology and endodontics. |
| C4 | Implemented basic principles of proper relations between doctors (students), doctor (student), and patient and doctor (student) and his supervisor (in accordance with the Code of Medical Ethics). |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-----------------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | oral answer, multiple choice test |
| W2 | rules for management of periapical tissue diseases | F.W6 | oral answer, multiple choice test |
| W3 | morphology of dental chambers and principles of endodontic treatment and instruments used in this treatment | F.W7 | oral answer, multiple choice test |
| W4 | health education issues | O.W3 | oral answer, multiple choice test |

| | | | |
|------------------------------|---|-------|--|
| W5 | organization of dentist practice and management principles in healthcare | O.W5 | oral answer, multiple choice test |
| W6 | indications and contraindications for performing procedures in the field of cosmetic dentistry | F.W11 | oral answer, multiple choice test |
| W7 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | oral answer, multiple choice test |
| W8 | principles of radiological diagnosis | F.W18 | oral answer, multiple choice test |
| W9 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral answer, multiple choice test |
| W10 | issues in dentistry - at an advanced level | O.W2 | oral answer, multiple choice test |
| W11 | pathomechanism of the impact of oral diseases on general health | F.W19 | oral answer, multiple choice test |
| W12 | pathomechanism of the effects of general diseases or therapies on the oral cavity | F.W20 | oral answer, multiple choice test |
| W13 | prevention of oral diseases | F.W21 | oral answer, multiple choice test |
| W14 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | oral answer, multiple choice test |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, classroom observation |
| U2 | plan treatment for dental problems | O.U3 | booklet of practical skills, OSCE examination, classroom observation |
| U3 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, classroom observation |
| U4 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, classroom observation |
| U5 | interpret the results of additional tests and consultations | F.U6 | booklet of practical skills, classroom observation |
| U6 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, OSCE examination, classroom observation, clinical case presentation |
| U7 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | booklet of practical skills, OSCE examination, classroom observation, clinical case presentation |
| U8 | proceed in case of general and local complications during and after dental procedures | F.U9 | booklet of practical skills, classroom observation |
| U9 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | booklet of practical skills, classroom observation |

| | | | |
|--|--|-------|--|
| U10 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, OSCE examination, classroom observation, clinical case presentation |
| U11 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practical skills, OSCE examination, classroom observation, clinical case presentation |
| U12 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | booklet of practical skills, classroom observation, clinical case presentation |
| U13 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | booklet of practical skills, classroom observation |
| U14 | describe dental and pantomographic images | F.U23 | booklet of practical skills, OSCE examination, classroom observation |
| U15 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | booklet of practical skills, classroom observation |
| U16 | determine the treatment of diseases of tissues of the stomatognathic system | F.U15 | booklet of practical skills, OSCE examination, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K2 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K3 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K5 | promote health-promoting behaviors | O.K6 | classroom observation |
| K6 | use objective sources of information | O.K7 | classroom observation |
| K7 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K8 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K9 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |
| K10 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K11 | formulate opinions on the various aspects of the professional activity | O.K10 | classroom observation |

Calculation of ECTS points

Semester 5

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| seminar | 10 |
| clinical classes | 56 |
| | |
| Student workload | Hours 66 |
| Workload involving teacher | Hours 66 |
| Practical workload | Hours 56 |

* hour means 45 minutes

Semester 6

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| seminar | 10 |
| clinical classes | 54 |
| professional practice | 120 |
| preparation for colloquium | 15 |
| | |
| Student workload | Hours 199 |
| Workload involving teacher | Hours 64 |
| Practical workload | Hours 174 |

* hour means 45 minutes

Semester 7

| Activity form | Activity hours* |
|----------------------------|--------------------|
| e-learning | 3 |
| seminar | 8 |
| clinical classes | 62 |
| preparation for colloquium | 15 |
| | |
| Student workload | Hours 88 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 73 |
| Practical workload | Hours 62 |

* hour means 45 minutes

Semester 8

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 3 |
| seminar | 7 |
| clinical classes | 62 |
| professional practice | 120 |
| preparation for colloquium | 15 |
| | |
| Student workload | Hours 207 |
| Workload involving teacher | Hours 72 |
| Practical workload | Hours 182 |

* hour means 45 minutes

Semester 9

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 3 |
| seminar | 10 |
| clinical classes | 73 |
| preparation for colloquium | 30 |
| | |
| Student workload | Hours 116 |
| Workload involving teacher | Hours 86 |
| Practical workload | Hours 73 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|--|---------------------|
| e-learning | 3 |
| seminar | 10 |
| clinical classes | 72 |
| preparation of multimedia presentation | 14 |
| preparation for examination | 50 |
| Student workload | Hours 149 |
| Workload involving teacher | Hours 85 |
| Practical workload | Hours 72 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|---|------------------|
| 1. | <p>1. Principles of work ergonomics in conservative dentistry. 2. rubberdam.</p> <p>3. Materials in the conservative treatment of teeth.</p> <p>4. A set of basic treatment instruments. 5. Small instruments: cariological and endodontic.</p> <p>6. Dental tools.</p> <p>7. Medical and dental management: interview, physical examination, diagnosis, preventive and therapeutic treatment plan, documentation.</p> <p>8. Basic and auxiliary research in conservative dentistry.</p> <p>9. Patient card - overview.</p> <p>10. Caries risk assessment, caries risk and caries activity, caries risk and caries treatment. The relationship between diagnostic information and the choice of therapeutic treatment.</p> <p>11. Clinical exercises - students treat patients qualified by class assistants.</p> | <p>W1, W10, W11, W12, W13, W14, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U15, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9</p> | clinical classes |

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|----|--|--------------------|---------|
| 2. | <p>SEMINAR I. Etiology of tooth decay: the role of bacteria, carbohydrates, influence of morphology and chemical structure of hard tooth tissues, the role of time.</p> <p>SEMINAR II. Caries prophylaxis: oral hygiene, diet, fluoride, protection of tooth surfaces with insulating layers. Fluorosis.</p> <p>SEMINAR III. The role of saliva in the carious process: organic and inorganic constituents of saliva, saliva functions, salivary tests. Disorders of secretion.</p> <p>SEMINAR IV. Caries pathology. Caries in enamel. Dentine caries. Types of dentin. Cementum caries. Clinical course and classification of dental caries: Acute caries. Chronic caries. Secondary caries. Atypical caries. Hidden caries. Rampant caries. Circular caries. Early childhood caries. Root caries. Classification of caries due to the severity of changes.</p> <p>SEMINAR V. Caries diagnosis: conditions for diagnosing carious lesions, methods of diagnosing early carious lesions, diagnostics of carious lesions within the crown, diagnostics of carious lesions within the root. New classifications of carious defects.</p> <p>SEMINAR VI. Non-invasive treatment of carious lesions. Minimally invasive treatment of carious lesions.</p> <p>SEMINAR VII. Preparation of carious cavities for non-adhesive filling (amalgam). Preparation of cavities for adhesive filling (adhesive amalgam, composite, compomer, ormocer and glass ionomer cement). Clinical aspects of the development of carious defects.</p> <p>SEMINAR VIII. Filling cavities with non-adhesive (amalgam) and adhesive materials (composite, compomer, ormocers and glass ionomer cement). Clinical aspects of cavity reconstruction (sandwich technique, inserts, layered reconstruction in lateral teeth, indirect restorations). Polymerization methods.</p> <p>SEMINAR IX. Complications of dental caries treatment: complete loss of filling, secondary caries, assessment of the filling margin, replacement and repair of the filling, tooth or filling fracture, post-operative hypersensitivity. Making decisions whether to repair or to replace fillings.</p> <p>SEMINAR X. Hard tissue defects of non-carious origin - teeth wear processes</p> | W3, W5, U3, K7, K8 | seminar |
|----|--|--------------------|---------|

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|----|--|---|---------|
| 3. | <p>SEMINAR I. Morphology and functions of endodontium and periapical tissues of the tooth, age-related changes in endodontium. Morphology of dental cavities and endodontic treatment.</p> <p>SEMINAR II. Etiology, prevention, etiogenesis and pathomechanism of endodontium diseases and periapical tooth tissues.</p> <p>SEMINAR III. Symptomatology and clinical diagnosis of endodontium diseases. Classifications of pulp diseases. SEMINAR IV. Symptomatology and clinical diagnostics of periapical diseases. tooth tissue. Classifications of periapical tissue diseases. Differential diagnosis. Diagnostics of facial pain of dental and non-dental origin.</p> <p>SEMINAR V. X-ray diagnostics in endodontics.</p> <p>SEMINAR VI. Fighting pain in endodontics. SEMINAR VII. Devices for increasing the treatment area in endodontic treatment. SEMINAR VIII. Endodontic instruments. SEMINAR IX. Endodontic treatment - biological pulp treatment, odontotropic preparations. SEMINAR X. Endodontic treatment - treatment involving pulp removal.</p> <p>SEMINAR XI. Methods for determining the working length of a tooth. Mechanical root canal treatment. SEMINAR XII. Chemical treatment of root canals. Materials and methods for decontaminating root canals. The smear layer and its role in endodontic treatment.</p> <p>SEMINAR XIII. Filling root canals - materials for final filling of root canals.</p> <p>SEMINAR XIV. Filling root canals - methods of filling root canal systems.</p> <p>SEMINAR XV. Complications in endodontic treatment.</p> | W12, W3, W5, W6, W9, U14, U16, U3, K7, K8 | seminar |
|----|--|---|---------|

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|----|---|---|---------|
| 4. | <p>SEMINAR I. First aid in endodontics - emergency treatment. SEMINAR II. Non-surgical endodontic retreatment</p> <p>SEMINAR III. Endodontic surgery. SEMINAR IV. Dentine hypersensitivity. SEMINAR V. Pathological tooth resorption.</p> <p>SEMINAR VI. Endo - perio syndrome. SEMINAR VII. Teeth abnormalities - anatomical structure, number, position, shape and color disorders. SEMINAR VIII. Disorders of the tooth tissue structure (enamel, dentine, cement, all tissues). Developmental defects of enamel and dentin. SEMINAR IX. Hard tissue defects of non-carious origin - acute mechanical injuries. Endodontic management in traumatic injuries of permanent teeth. SEMINAR X. Discussion of selected clinical cases. SEMINAR XI. Basic concepts of aesthetics in conservative dentistry. SEMINAR XII. Aesthetic reconstruction of anterior teeth: criteria for aesthetic restorations, methods of aesthetic reconstruction, reconstruction of erosive, and abrasive lesions, enamel hypoplasia. Making decisions whether to repair or replace fillings. SEMINAR XIII. Vital teeth whitening: tooth discoloration, tooth color assessment, whitening preparations, whitening techniques, whitening side effects. SEMINAR XIV. Discoloration and whitening of the endodontically treated teeth. SEMINAR XV. Restoration and reinforcement of the structure of endodontically treated teeth. SEMINAR XVI. Gerostomatology - specificity of endodontic treatment and reconstruction of hard tissues in elderly people. SEMINAR XVII. Focal disease - primary foci of dental origin. SEMINAR XVIII. Epidemiology of dental caries in adults - socioepidemiological studies of dental caries (civilization nature of tooth decay, dental health goals, epidemiological caries indicators, unification of dental indicators, practical application of socioepidemiological studies, dynamics of caries - international analysis, results of socioepidemiological studies) over caries Epidemiology in endodontics. SEMINAR XIX. A multimedia presentation on the latest developments in dentistry or presentation of clinical cases. The subject of the presentation is accepted by the assistant, presentation time 10 min, work in groups of 3-4 people. Part 1.</p> <p>SEMINAR XX. A multimedia presentation on the latest developments in dentistry or presentation of clinical cases. The subject of the presentation is accepted by the assistant, presentation time 10 min, work in groups of 3-4 people. Part 2.</p> | W10, W11, W12, W2, W3, W5, W6, W7, W9, U3, K7, K8 | seminar |
|----|---|---|---------|

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|----|--|--------------------------|------------|
| 5. | <p>1. Dental caries disease - etiology. 2. Dental caries disease - pathology. 3. Dental caries - non-invasive treatment methods - prevention. 4. Tooth caries disease - invasive methods of treatment. 5. Diseases of hard dental tissues of non-carious origin - fluorosis, signs of tooth wear.</p> | W1, W2, W5, U3 | seminar |
| 6. | <p>1. Radiological assessment of the root structure. Apex morphology. Isolation of the treatment field and adequate access to the root canal. Chemo-mechanical root canal preparation, part 1. Mechanical development: step-back, hybrid technique. Endodontic instruments. Working length and methods of its measurement. 2. Chemo-mechanical root canal preparation, part 2. Chemical root canal treatment. Antiseptics in root canal treatment. Root canal filling and tooth reconstruction after root canal treatment: lateral condensation, continuous wave technique. 3. Surgical and non-surgical methods of treating periapical tissues.</p> | W1, W2, W5, W6, U3 | seminar |
| 7. | <p>1. Resorption of hard dental tissues. 2. Diseases of hard dental tissues of non-carious origin - acute mechanical injuries. 3. Focal diseases with particular emphasis on their prevention. 4. Aesthetics in conservative dentistry.</p> | W1, W10, W11, W2, W7, U3 | e-learning |

Course advanced

Semester 5

Teaching methods:

case study, clinical classes, discussion, situation method, presentation, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|----------------------|---|
| seminar | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70% |
| clinical classes | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |

Semester 6

Teaching methods:

case study, clinical classes, demonstration, discussion, situation method, presentation, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|----------------------|---|
| seminar | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |
| clinical classes | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |

Semester 7

Teaching methods:

case study, clinical classes, discussion, situation method, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| e-learning | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |
| seminar | multiple choice test | Dwa kolokwia w formie testu. Każdy test obejmuje 25 pytań. Do każdego pytania jest 5 odpowiedzi, tylko jedna jest prawidłowa. Próg zaliczeniowy wynosi 70%. |
| clinical classes | booklet of practical skills, classroom observation, clinical case presentation | Active student participation in classes. Independent performance of an appropriate number of diagnostic, preventive and therapeutic procedures in accordance with the principles of medical art. Proceedings in accordance with the Chair's Regulations. 100% presence. |

Semester 8

Teaching methods:

case study, clinical classes, discussion, situation method, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| e-learning | multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |
| seminar | multiple choice test | Dwa kolokwia w formie testu. Każdy test obejmuje 25 pytań. Do każdego pytania jest 5 odpowiedzi, tylko jedna jest prawidłowa. Próg zaliczeniowy wynosi 70%. |
| clinical classes | booklet of practical skills, classroom observation, clinical case presentation | Active student participation in classes. Independent performance of an appropriate number of diagnostic, preventive and therapeutic procedures in accordance with the principles of medical art. Proceedings in accordance with the Chair's Regulations. 100% presence. |

Semester 9

Teaching methods:

case study, clinical classes, discussion, e-learning, situation method, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| e-learning | multiple choice test | test |
| seminar | oral answer, multiple choice test | Dwa kolokwia w formie testu. Każdy test obejmuje 25 pytań. Do każdego pytania jest 5 odpowiedzi, tylko jedna jest prawidłowa. Próg zaliczeniowy wynosi 70%. |
| clinical classes | booklet of practical skills, classroom observation, clinical case presentation | Active student participation in classes. Independent performance of an appropriate number of diagnostic, preventive and therapeutic procedures in accordance with the principles of medical art. Proceedings in accordance with the Chair's Regulations. 100% presence. |

Semester 10**Teaching methods:**

case study, clinical classes, demonstration, discussion, OSCE examination, e-learning, educational film, project method, situation method, group work, seminar, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| e-learning | multiple choice test | final test |
| seminar | oral answer, multiple choice test | Two tests in the form of a test. Each test includes 25 questions. There are 5 answers to each question, only one is correct. The pass threshold is 70%. |
| clinical classes | booklet of practical skills, OSCE examination, classroom observation, clinical case presentation | Active student participation in classes. Independent performance of an appropriate number of diagnostic, preventive and therapeutic procedures in accordance with the principles of medical art. Proceedings in accordance with the Chair's Regulations. 100% presence. |

Entry requirements

Attendance at clinical classes, seminars and lectures is mandatory

Anesthesiology and resuscitation

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 10, simulations: 20</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Introduction to the basics of the subject Anesthesiology and Intensive Care, in particular: - principles of perioperative safety, preparing the patient for surgery, performing general anesthesia, local anesthesia and controlled sedation. |
| C2 | Acquainting with current guidelines of cardiopulmonary resuscitation and management of life-threatening states in adult. |
| C3 | Awareing students of the need to systematically supplement and update their knowledge in this area, Acquaintance with the principles of cooperation in a group and taking responsibility for timely and reliable performance entrusted tasks. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|-----------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | written examination, credit |
| W2 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | written examination, credit |
| W3 | therapeutic methods of reducing and enduring pain as well as reducing anxiety and stress | F.W15 | written examination, credit |
| W4 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | written examination, credit |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | credit |
| U2 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | credit |
| U3 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | credit |
| U4 | communicate and share knowledge with colleagues in a team | O.U8 | credit |
| U5 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | credit |
| U6 | carry out a medical interview with the patient and his or her family | F.U1 | credit |
| U7 | interpret the results of additional tests and consultations | F.U6 | credit |
| U8 | collect and secure specimens for diagnostic tests, including cytological tests | F.U5 | credit |
| U9 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | credit |
| U10 | inspire the learning process of others | O.U6 | credit |
| U11 | carry out a dental physical examination of the patient | F.U2 | credit |
| U12 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | credit |
| U13 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | credit |
| U14 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | credit |
| U15 | proceed in case of general and local complications during and after dental procedures | F.U9 | credit |
| U16 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | credit |

| | | | |
|--|--|-------|--------|
| U17 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | credit |
| U18 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | credit |
| K2 | to be guided by the well-being of a patient | O.K2 | credit |
| K3 | respect medical confidentiality and patients' rights | O.K3 | credit |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | credit |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | credit |
| K6 | promote health-promoting behaviors | O.K6 | credit |
| K7 | use objective sources of information | O.K7 | credit |
| K8 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | credit |
| K9 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | credit |
| K10 | formulate conclusions from own measurements or observations | O.K8 | credit |
| K11 | formulate opinions on the various aspects of the professional activity | O.K10 | credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 10 |
| simulations | 20 |
| preparation for classes | 10 |
| preparation for examination | 6 |
| case analysis | 10 |
| Student workload | Hours 56 |
| Workload involving teacher | Hours 30 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 30 |
|---------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|-------------------------|
| 1. | Anaesthesia as a speciality; past, present, future. Evaluation of the patient before dental procedures. Endocarditis prophylaxis- recommendations | W1, W2, W3, W4, U1, U10, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K2, K3, K4, K5, K7, K8 | e-learning, simulations |
| 2. | Pediatric anaesthesia in dentistry. Different anesthesiological management of children during dental procedures. General anesthesia. Protection of airways. | W3, W4, U1, U10, U2, U3, U4, U5, U6, U7, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, simulations |
| 3. | Local anaesthesia in dentistry. Ability to perform local anesthesia. Side effects of local anesthesia drugs. Patient safety. | W1, W4, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U7, K1, K2, K3, K7, K9 | e-learning, simulations |
| 4. | Acute and chronic pain. Ability to treat acute pain during and after dental procedure. Ability to determine home treatment for chronic pain. | W3, W4, U1, U13, U14, U15, U16, U17, U18, U3, U4, U5, K1, K2, K3, K6, K7, K9 | e-learning, simulations |

Course advanced

Teaching methods:

case study, brainstorm, classes / practicals, clinical classes, e-learning, educational film, problem solving method, presentation, lecture

| Activities | Examination methods | Credit conditions |
|-------------|---------------------|--|
| e-learning | written examination | obligatory presence at lectures |
| simulations | credit | obligatory presence at clinical practice |

Entry requirements

completed and passed courses: physiology, anatomy, internal medicine, surgery, pediatrics, neurosurgery, neurology, radiology, orthopedics and traumatology,

General surgery with oncology

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 5</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 12, clinical classes: 44</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | To acquaint the student with basic concepts of perioperative care, various diseases which may require surgical intervention, particularly of the acute abdomen spectrum and the most common human cancers. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | written examination, classroom observation |
| W2 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | written examination, classroom observation |

| | | | |
|--|---|-------|--|
| W3 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | written examination, classroom observation |
| W4 | rules for dealing with victims in multi-organ injuries | E.W4 | written examination, classroom observation |
| W5 | symptoms of acute abdominal diseases, intoxication, infection and sepsis | E.W7 | written examination, classroom observation |
| W6 | methods of cytological diagnostics and cytodiagnostic criteria for diagnosis and differentiation of cancer and non-cancer diseases | E.W15 | written examination, classroom observation |
| W7 | life-threatening conditions | E.W18 | written examination, classroom observation |
| W8 | cases in which the patient should be referred to the hospital | E.W20 | written examination, classroom observation |
| W9 | immunological aspects of transplantation and blood therapy | E.W16 | classroom observation |
| Skills - Student can: | | | |
| U1 | perform differential diagnosis of the most common diseases of adults | E.U1 | written examination, classroom observation |
| U2 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | written examination, classroom observation |
| U3 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| U4 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | written examination, classroom observation |
| U5 | plan diagnostic and therapeutic procedures for the most common adult diseases | E.U3 | written examination, classroom observation |
| U6 | interpret the results of laboratory tests | E.U4 | written examination, classroom observation |
| U7 | identify normal and pathological structures and organs in additional imaging tests (X-ray, ultrasound, computed tomography - CT) | E.U5 | written examination, classroom observation |
| U8 | describe and recognise signs of shock and acute circulatory failure | E.U9 | written examination, classroom observation |
| U9 | recognize diseases related to smoking addiction, alcoholism and other addictions | E.U17 | written examination, classroom observation |
| U10 | recognize skin cancers and precancerous conditions | E.U15 | written examination, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |

| | | | |
|-----|--|-------|-----------------------|
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K6 | promote health-promoting behaviors | O.K6 | classroom observation |
| K7 | use objective sources of information | O.K7 | classroom observation |
| K8 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K9 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K10 | formulate opinions on the various aspects of the professional activity | O.K10 | classroom observation |
| K11 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 12 |
| clinical classes | 44 |
| preparation for classes | 15 |
| preparation for examination | 9 |
| Student workload | Hours 80 |
| Workload involving teacher | Hours 56 |
| Practical workload | Hours 44 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|---|------------------------------|
| 1. | Introduction to acute abdominal diseases: definition, symptoms, physical examination, diagnostic procedure, non-surgical causes of acute abdomen | W1, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

| | | | |
|-----|---|---|------------------------------|
| 2. | Basics of fluid therapy and surgical nutrition. Shock (types, diagnosis, treatment). Wound healing. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 3. | Acute appendicitis, Meckel diverticulitis, Acute cholecystitis. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 4. | Gastrointestinal obstruction. Acute diverticulitis. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 5. | Acute pancreatitis. Gastrointestinal perforation. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | clinical classes |
| 6. | Bleeding to the gastrointestinal tract. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 7. | Basics of the oncology. Esophageal and stomach cancer. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 8. | Pancreatic cancer. Gallbladder cancer. Lung cancer. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 9. | Colorectal cancer. Breast cancer. Melanoma. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 10. | Basic treatment of the abdomen, chest and head injuries. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U10, U2, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

Course advanced

Teaching methods:

case study, classes / practicals, clinical classes, discussion, case study method, presentation, group work, seminar, lecture

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| e-learning | written examination, classroom observation | Attendance at all classes. The final exam will consist of sixty single choice questions with 5 distractors. 60% of correct answers are required to pass the exam. |
| clinical classes | written examination, classroom observation | Attendance at all classes. The final exam will consist of sixty single choice questions with 5 distractors. 60% of correct answers are required to pass the exam. |

Entry requirements

Having a deep understanding of human anatomy, physiology, and biochemistry, particularly of the abdominal organs.

Microbiology and oral cavity microbiology with mycology

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups C. Preclinical course, F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-----------------------------|--|-------------------------------------|
| Period Semester 5 | <p>Examination examination</p> <p>Activities and hours seminar: 9, classes: 36</p> | Number of ECTS points 3.0 |
|-----------------------------|--|-------------------------------------|

Goals

| | |
|----|---|
| C1 | Presentation of issues related to microorganisms with particular emphasis on microorganisms that are important in oral cavity infections as well as those that pose a risk in dental practice. Preparing students to solve problems related to oral cavity infections and familiarizing with treatment and prevention options for these infections. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | types and species, as well as the structure of viruses, bacteria, fungi and parasites, their biological properties and pathogenic mechanisms | C.W1 | classroom observation, multiple choice test |

| | | | |
|--|---|-------|--|
| W2 | basics of epidemiology of viral and bacterial infections, fungal and parasitic infections and paths of their spread in the human body | C.W3 | multiple choice test |
| W3 | species of bacteria, viruses and fungi which are the most common etiological factors of infections | C.W4 | classroom observation, oral answer, multiple choice test |
| W4 | basic principles of disinfection, sterilization and aseptic management | C.W5 | classroom observation, multiple choice test |
| W5 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | multiple choice test |
| W6 | pathomechanism of the impact of oral diseases on general health | F.W19 | oral answer, multiple choice test |
| W7 | basics of antibiotic therapy and antibiotic resistance | F.W13 | classroom observation, multiple choice test |
| W8 | principles of therapy for viral, bacterial, fungal and parasitic infections | C.W20 | oral answer, multiple choice test |
| W9 | human physiological bacterial flora | C.W2 | multiple choice test |
| W10 | the phenomenon of drug resistance development | C.W9 | classroom observation |
| Skills - Student can: | | | |
| U1 | take an appropriately selected type of biological material for microbiological examination depending on the location and course of the infection | C.U1 | classroom observation, multiple choice test |
| U2 | interpret the results of microbiological, serological and antibiogram tests | C.U2 | classroom observation, oral answer, multiple choice test |
| U3 | select and perform appropriate tests indicating the number of bacteria in body fluids | C.U3 | classroom observation, oral answer, multiple choice test |
| U4 | identify pathological changes caused by HIV infection and observed in patients with acquired immune deficiency syndrome (AIDS) | C.U7 | classroom observation, multiple choice test |
| U5 | assess the risk of caries using bacteriological tests and saliva tests | F.U14 | classroom observation, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, oral answer |
| K2 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | multiple choice test |
| K3 | promote health-promoting behaviors | O.K6 | multiple choice test |

Calculation of ECTS points

| Activity form | Activity hours* |
|---------------|-----------------|
| seminar | 9 |

| | |
|-----------------------------------|--------------------|
| classes | 36 |
| preparation for examination | 30 |
| participation in examination | 2 |
| preparation for classes | 13 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 45 |
| Practical workload | Hours 36 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------------|
| 1. | The structure of a bacterial cell, differences in the cell wall structure of Gram-positive and Gram-negative bacteria. Microbiological examination (collection of specimens for microbiological examination, specimen preparation and staining methods, microscopy techniques, culture methods, bacterial identification tests). | W1, W10, U1, U2, K1 | classes |
| 2. | Methods of drug susceptibility testing of bacteria and the principles of rational chemotherapy for bacterial infections. | W7, W8, U2, K1 | classes |
| 3. | Gram-positive and Gram-negative bacteria important for dentists. | W3, W9, U2, K2 | classes, seminar |
| 4. | Flora in gingival sulcus and its participation in periodontal disease. Stages of plaque formation and its role in development of dental caries. | W1, W6, U2, U3, U5, K3 | classes |
| 5. | Salivary defense mechanisms, xerostomy complications and microbiological aspects of halitosis. | W5, W6, K3 | classes |
| 6. | Disinfection and sterilization of equipment and dental tools. | W4, U2, K1, K2 | classes |
| 7. | The structure and characteristics of viruses, techniques of viruses cultivation and identification. | W1, U1 | classes |
| 8. | The most important human pathogenic viruses (pathogens of the respiratory tract, mucous membranes and skin, viruses transmitted by blood). | W2, W3, U2, U4, K1, K2 | classes |
| 9. | The main antiviral drugs and their use principles. | W1, W8 | seminar |
| 10. | Characteristics of human pathogenic fungi, their classification, basics of mycological diagnostics, differences between superficial, organ and systemic mycosis, the main types of fungi involved in these processes. | W1, W3, U1, U2, K1 | classes |

| | | | |
|-----|--|--------------------|---------|
| 11. | Basic concepts concerning the epidemiology of parasitic infections. Biological characteristics of parasites and the mechanisms of their pathogenic impact on the human body. Selected protozoan and worm species which are the most common etiological agents of parasitic infections. | W1, W2, U1, U2, K1 | classes |
| 12. | The influence of bacterial, fungal and viral diseases of the oral cavity on the general state of human health. | W3, W6, K2 | seminar |

Course advanced

Teaching methods:

laboratories (labs), e-learning, seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------|---|---|
| seminar | oral answer, multiple choice test | Attendance in classes. Active participation in classes, i.e. performing a particular task (exercise) indicated by the teacher. At the end of the course passing the final exam from the material discussed in class (50 multiple choice test questions with one answer correct, 60% needed to pass). |
| classes | classroom observation, multiple choice test | Attendance in classes (maximum 2 excused absences are allowed); active participation in classes, i.e. performing a particular task (exercise) indicated by the teacher. At the end of the course passing the final exam from the material discussed in class (50 multiple choice test questions with one answer correct, 60% needed to pass). |

Physiology of pregnancy

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 5, clinical classes: 10</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Providing students with a basic resource of information on pregnancy physiology, enabling them to make simple diagnostic and therapeutic decisions. |
| C2 | Paying attention to assessing the correct course of pregnancy and recognizing the symptoms of departures from the normal state |
| C3 | Developing ethical, social and legal conditions for medical students and principles of health promotion based on scientific evidence and accepted standards of conduct in students |
| C4 | Developing students' conversation skills with the patient Making students aware of the need to systematically supplement their knowledge in the scope of knowledge discussed during the module: -know and understand the causes, symptoms and principles of diagnosis and therapeutic procedure in relation to the course of physiological pregnancy -has knowledge of the woman's reproductive functions, related disorders, procreation planning principles, and in particular: 1. Period of puberty and menopause. 2.Fertilization. Embryo and fetal development 3 Birth regulation. The women's sex cycle. 4. Monitor the development of pregnancy and the condition of the fetus during pregnancy and delivery. 5. Correct delivery - conditions and conduct. 6. Conducting physiological delivery. |
| C5 | In terms of skills: Recognizes the signs and symptoms indicating the normal course of pregnancy and the symptoms that prove its abnormalities (genital bleeding, uterine contractions) Interprets the results of a physical examination of a pregnant woman (blood pressure, pregnancy of a pregnant woman) and the results of laboratory tests that show the correct course of pregnancy He knows the correct delivery mechanism, recognizes the beginning of delivery and the incorrect duration Interprets signs and symptoms during the puerperium Sets recommendations and contraindications for the use of contraceptive methods Effectively uses sources of information on medical issues and verify their credibility, i.e. has the ability to self-study |
| C6 | In terms of social competence - shows respect for the patient and concern for his welfare - adheres to the principles of ethics - observes the patient's rights, including protection of personal data and intimacy - is aware of the need for systematic supplementation and updating of knowledge and is able to critically analyze data from literature (including English) - demonstrates problem-solving skills -can work in a group - effectively cooperates with representatives of other medical professions -can make self-assessment and recognize the limits of their own competences |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | credit |
| W2 | hormonal determinants of a woman's body in specific periods of life | E.W10 | credit |
| W3 | principles of dental care for a pregnant woman | E.W12 | credit |
| W4 | influence of nutrition in pregnancy and addiction of a pregnant woman on fetal development | E.W11 | credit |
| W5 | cases in which the patient should be referred to the hospital | E.W20 | credit |
| Skills - Student can: | | | |
| U1 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | oral answer |
| U2 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | oral answer |
| U3 | inspire the learning process of others | O.U6 | oral answer |

| | | | |
|--|--|-------|------------------------------------|
| U4 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | classroom observation, oral answer |
| U5 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation, oral answer |
| U6 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | oral answer |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | oral answer |
| K2 | to be guided by the well-being of a patient | O.K2 | oral answer |
| K3 | respect medical confidentiality and patients' rights | O.K3 | oral answer |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | oral answer |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | oral answer |
| K6 | promote health-promoting behaviors | O.K6 | oral answer |
| K7 | use objective sources of information | O.K7 | oral answer |
| K8 | formulate conclusions from own measurements or observations | O.K8 | oral answer |
| K9 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | oral answer |
| K10 | formulate opinions on the various aspects of the professional activity | O.K10 | oral answer |
| K11 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | oral answer |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 5 |
| clinical classes | 10 |
| preparation for classes | 10 |
| Student workload | Hours 25 |
| Workload involving teacher | Hours 15 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------------------|
| 1. | 1. Period of puberty and menopause. 2. Fertilization. Embryo and fetal development | W1, W2, W3, W4, W5, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 2. | Birth control. The women's menstruation cycle. | W1, W2, W3, W4, W5, U1, U2, U3, U4, U5, U6, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 3. | Monitor the development of pregnancy and the condition of the fetus during pregnancy and delivery. Normal delivery - conditions and conduct. Conducting physiological delivery. | W1, W5, U1, U2, U3, U4, U5, U6, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

Course advanced

Teaching methods:

case study, classes / practicals, clinical classes, classes in clinical skills room, demonstration, discussion, case study method, presentation, group work, seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|------------------------------------|-------------------|
| e-learning | credit | presence |
| clinical classes | classroom observation, oral answer | presence |

Entry requirements

Knowledge of the anatomy, physiology and pathophysiology of a woman's reproductive organ. Knowledge of aseptic principles.

Bioethics

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0223 Philosophy and ethics</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group D. Behavioral and social sciences with elements of professionalism</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 10</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Prepare students for recognition of moral dimension of dental practice. |
| C2 | Transfer knowledge about main theories of general ethics, typical methods of ethical reasoning, and their applications to moral deliberations in medicine. |
| C3 | Prepare students to self-reliant solving moral dilemmas of dental practice based on rational ethical argumentation. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|--|-------|-------------------------------|
| W1 | principles of altruism and clinical responsibility | D.W12 | classroom observation, credit |
| W2 | the imperative and the behavioral pattern of the doctor and dentist established by the professional self-governing organization of doctors and dentists | D.W14 | classroom observation, credit |
| W3 | patient rights | D.W15 | classroom observation, credit |
| W4 | principles of the therapeutic team's functioning | D.W13 | classroom observation, credit |
| Skills - Student can: | | | |
| U1 | comply with ethical standards in professional activities | D.U11 | classroom observation, credit |
| U2 | respect the rights of the patient | D.U12 | classroom observation, credit |
| U3 | take action to improve the quality of life of patients and prevent it from deteriorating in the future | D.U5 | classroom observation, credit |
| U4 | recognize the premises for taking medical action without the patient's consent or with the use of coercion towards the patient and apply the measures provided for in the generally applicable law | D.U9 | classroom observation, credit |
| U5 | critically analyse medical literature, including in English, and draw conclusions | D.U16 | classroom observation, credit |
| U6 | plan the work of the dental team and the equipment of the dental office in accordance with the principles of ergonomics and safety at work | D.U14 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation, credit |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation, credit |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation, credit |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation, credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|----------------------------|--------------------|
| seminar | 10 |
| preparation for classes | 10 |
| preparation for colloquium | 10 |
| Student workload | Hours 30 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 10 |
|-----------------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--------------------------------|------------|
| 1. | Bioethics and modern ethical theories and appropriate rules of ethical reasoning. | U1, U5, U6, K4 | seminar |
| 2. | Problem of patient's autonomy, its scope and limits; conditions of obtaining informed consent and surrogate consent for treatment. | W3, W4, U2, U3, U4, K2, K3, K4 | seminar |
| 3. | Ethical dimension of doctor-patient relationship in dental practice. | W1, W2, W4, U1, U3, K1, K4 | seminar |
| 4. | Concept of justice in healthcare and moral dimension of healthcare economy. | W1, W2, W3, U2, U3, K4 | seminar |
| 5. | Ethics of dental profession: domestic and european standards. | W1, W2, U1, U3, U5, K2, K4 | seminar |

Course advanced

Teaching methods:

case study, textual analysis, discussion, educational game, language conversation classes, case study method, simulated patient, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|-------------------------------|--|
| seminar | classroom observation, credit | Active and prepared participation in seminars. |

Medical rescue

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 5</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 7, seminar: 2, simulations: 6</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Preparing students for correct and independent recognition of internal and external life threatening situations. This preparation includes recognition of respiratory and circulatory failure, cardiac arrest, injury, and the ability to respond to these situations. |
| C2 | Acquiring practical skills in rescue activities with an adult patient and a child. |
| C3 | Developing awareness and ability to organize rescue operations and use available rescue resources. |
| C4 | Emergencies situations in dentistry. Classification of life threatening situations. |
| C5 | Respiratory distress. Basic airway, ventilation, oxygen therapy. Intubation. LMA. Cardiac arrest. Scenario. ALS |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|---|-------|---|
| W1 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | oral examination, test |
| W2 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral examination, test |
| W3 | organization of dentist practice and management principles in healthcare | O.W5 | classroom observation, clinical case presentation |
| W4 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | oral examination, test |
| W5 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | oral examination, test |
| W6 | life-threatening conditions | E.W18 | practical colloquiums, test |
| W7 | causes and mechanisms of cardiac and respiratory arrest as well as principles of resuscitation and post-resuscitation procedures | E.W17 | project, test |
| W8 | rules for dealing with victims in multi-organ injuries | E.W4 | test |
| Skills - Student can: | | | |
| U1 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation, clinical case presentation |
| U2 | recognize the risk of life threat | E.U8 | oral examination, classroom observation, test |
| U3 | evaluate and describe the somatic and mental state of the patient | E.U2 | oral examination, classroom observation, clinical case presentation, test |
| U4 | perform basic medical procedures and procedures: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen therapy, assisted and substitute ventilation, placement of a oropharyngeal tube, preparation of the surgical field, hygienic and surgical hand disinfection, intravenous, intramuscular and subcutaneous injection, peripheral venous blood collection, collecting nasal, pharyngeal and dermal swabs, simple strip tests, measurement of blood glucose levels | E.U20 | classroom observation |
| U5 | describe and recognise signs of shock and acute circulatory failure | E.U9 | oral examination, classroom observation, test |
| U6 | recognize the symptoms of brain injuries and cerebrovascular diseases, dementia and consciousness disorders | E.U10 | oral examination, classroom observation, test |

| | | | |
|--|--|-------|---|
| U7 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | oral examination, classroom observation, test |
| U8 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation |
| U9 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation |
| U10 | inspire the learning process of others | O.U6 | classroom observation |
| U11 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K5 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K6 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K7 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |
| K8 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|------------------------------|-----------------|
| e-learning | 7 |
| seminar | 2 |
| simulations | 6 |
| preparation for classes | 6 |
| preparation for classes | 6 |
| participation in examination | 2 |

| | |
|-----------------------------------|--------------------|
| Student workload | Hours 29 |
| Workload involving teacher | Hours 15 |
| Practical workload | Hours 6 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--|-------------|
| 1. | Emergency medicine - purpose, organization. Diagnosis and emergency procedures in life-threatening situations - acute respiratory failure, circulatory failure. | W1, W2, W3, W4, U10, U9, K4 | e-learning |
| 2. | Life-threatening conditions in adults. | W1, W4, W5, W6, W7, W8, U3, U5, K1, K5 | e-learning |
| 3. | Life-threatening conditions in children. | W1, W5, W6, W7, U2, U3, K1, K2, K3, K5 | e-learning |
| 4. | Emergency procedure in injuries. | W1, W2, W6, W8, U2, U3, U5, U6, K4, K5, K7 | seminar |
| 5. | Emergency procedures in acute respiratory failure, circulatory failure, central nervous system failure in adults and children (medical examination, open the airway, ventilation, oxygen therapy). | W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, U6, U7, U8, K1, K2, K3, K5 | simulations |
| 6. | Cardiopulmonary resuscitation of adults and children (AED, instrumental airway opening, ventilation with a AMBU bag). | W1, W6, W7, U1, U2, U3, U4, U5, K5, K6, K7, K8 | simulations |
| 7. | Emergency procedures for a trauma patient, accident victim (ABCDE examination, trauma test). | W6, W8, U1, U11, U2, U3, U4, U5, U6 | simulations |
| 8. | Methods of treatment of injuries (haemorrhage control, stabilization of fractures, sprains) | W8, U1, U2, U4, K1, K2, K8 | simulations |

Course advanced

Teaching methods:

case study, clinical classes, preclinical classes, classes in simulated conditions, demonstration, discussion, presentation, seminar, simulation, low fidelity simulation, simulated patient, lecture, practical classes, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|-------------|--|----------------------|
| e-learning | test | presence at lectures |
| seminar | oral examination, practical colloquiums | practical colloquium |
| simulations | classroom observation, clinical case presentation, project | exam |

Dental radiology

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 18, clinical classes: 22</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | Pathological findings in maxillo-facial regions -radiological diagnosis. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | principles of radiological diagnosis | F.W18 | exam - written test |
| Skills - Student can: | | | |
| U1 | describe dental and pantomographic images | F.U23 | exam - written test |
| Social competences - Student is ready to: | | | |

| | | | |
|----|--|------|---------------------|
| K1 | respect medical confidentiality and patients' rights | O.K3 | exam - written test |
| K2 | to be guided by the well-being of a patient | O.K2 | exam - written test |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 10 |
| seminar | 18 |
| clinical classes | 22 |
| preparation for classes | 10 |
| preparation for examination | 10 |
| analysis of the research material | 10 |
| Student workload | Hours 80 |
| Workload involving teacher | Hours 50 |
| Practical workload | Hours 32 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|---------------------------------------|
| 1. | Radiographic Anatomy in Dentistry Extraoral radiographic examination: panoramic imaging | W1, U1, K1, K2 | seminar, e-learning, clinical classes |
| 2. | Soft tissue calcifications and ossifications Dental caries | W1, U1, K1, K2 | seminar, e-learning, clinical classes |
| 3. | Intraoral projections | W1, U1, K1, K2 | seminar, e-learning, clinical classes |
| 4. | Radiographic evaluation in endodontic treatment. Application of CBCT in Endodontics Dental anomalies | W1, U1, K1, K2 | seminar, clinical classes |
| 5. | Extraoral radiographic examination : cephalometric and skull imaging Malignant neoplasms | W1, U1, K1, K2 | seminar, e-learning, clinical classes |
| 6. | Cysts Salivary glands, pathology of sinonasal cavities | W1, U1, K1, K2 | seminar, e-learning, clinical classes |

| | | | |
|----|--|----------------|---------------------------------------|
| 7. | Benign Tumors and Neoplasms (ch.24) Trauma - Traumatic Injuries to the facial bones (ch.27) | W1, U1, K1, K2 | seminar, e-learning, clinical classes |
|----|--|----------------|---------------------------------------|

Course advanced

Teaching methods:

case study, classes / practicals, clinical classes, computer classes, laboratories (labs), demonstration, discussion, e-learning, presentation, computer room, seminar, lecture, lecture with multimedia presentation, practical classes, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|------------------|---------------------|--|
| e-learning | exam - written test | exam-written test |
| seminar | exam - written test | Attendance on seminars and practicals - no more than 2 days of absences are allowed [on both together] |
| clinical classes | exam - written test | Attendance on seminars and practicals - no more than 2 days of absences are allowed [on both together] |

Entry requirements

no

Oral biochemistry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard groups C. Preclinical course, F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 12, seminar: 6, classes: 12</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Familiarizing students with basic/essential biochemical phenomena and processes indispensable to understand physiological and pathological phenomena taking place in oral cavity. |
| C2 | Training students to use modern sources of information and apply knowledge in practice, to analyze experimental data and to infer based on the obtained results; familiarizing students with basic molecular and cellular biology laboratory techniques of major cognitive and diagnostic value in dentistry. |
| C3 | Developing skills for searching for information in the field of oral cavity biochemistry, pointing at the necessity of using scientific literature as a indispensable/important tool for continuous self-learning. Developing skills for analyzing scientific texts and presenting crucial information in the form of multimedia presentations, papers. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | written examination, test, student presentation |
| W2 | issues in dentistry - at an advanced level | O.W2 | written examination, test, student presentation |
| W3 | the rules of conducting scientific research and spreading their results | O.W4 | classroom observation, assignment report |
| W4 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | written examination, test |
| W5 | pathomechanism of the impact of oral diseases on general health | F.W19 | written examination, test |
| Skills - Student can: | | | |
| U1 | plan treatment for dental problems | O.U3 | written examination, assignment report, test |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation, assignment report |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation, assignment report, student presentation |
| U4 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| U5 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, assignment report, student presentation |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | classroom observation, assignment report |
| K2 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, assignment report |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|-----------------|
| e-learning | 12 |
| seminar | 6 |
| classes | 12 |
| preparation for classes | 14 |
| preparation of multimedia presentation | 6 |

| | |
|-----------------------------------|--------------------|
| preparation for examination | 10 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 12 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------------------|
| 1. | Extracellular matrix - extracellular matrix proteins; general characteristics of collagens, structure and production of typical molecules of collagen fibers. Reinforcing/stabilizing bonds of collagen fibers. Non-collagen glycoproteins (elastin, fibronectin). Glycosylaminoglycans - structure and properties. Proteoglycans. Metalloproteinases - degradation of extracellular matrix proteins. Role of metalloproteinases in periodontal diseases. Chosen diseases related to collagen metabolism. | W1, W2, W4 | e-learning |
| 2. | Calcium and phosphate homeostasis. The mineralization of tooth tissues. The role of fluorine. | W1, W2 | e-learning |
| 3. | Mechanisms of saliva production and secretion. Composition and properties of saliva. Proteom of saliva. Properties of saliva proteins. Functions of saliva. Saliva as a diagnostic material. | W1, W2 | e-learning |
| 4. | Diagnostics of genetically determined diseases: inherited collagen disease (OI - Osteogenesis imperfecta). | W1, W2 | seminar, e-learning |
| 5. | Biological interactions between components of dental filling materials and human tissues (cytotoxicity). | W2, W3, W4, U1, U3, K1, K2 | classes, seminar |
| 6. | Techniques of genetic engineering and molecular biology in diagnostics of genetic diseases. | W1, W2, U3, U4, U5, K1, K2 | classes, seminar, e-learning |
| 7. | Exploiting of internet databases. | U5, K1 | classes |
| 8. | Gene expression testing methods. | W1, W2, U3, U5, K1, K2 | classes, seminar |
| 9. | Methods for cytotoxicity testing in cell cultures. | W2, W3, W4, W5, U2, U3, U4, U5, K1, K2 | classes, seminar |

Course advanced

Teaching methods:

laboratories (labs), e-learning, assignments solving, seminar, lecture with multimedia presentation, students' presentations

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| e-learning | written examination | Final MCQ test (50 questions) will cover the whole material of the course. |
| seminar | test, student presentation | Attendance at seminars is obligatory. In justified cases, confirmed by a relevant document (i.e. sick leave, Dean's justification), it is possible to make up for the absence (maximum 1 excused) in the form determined by the coordinator (method / time specified in the detailed regulations available on the website). Each seminar ends with a short quiz to test the knowledge. Each student is required to prepare and present 2 topics (based on the materials / publications provided). The final test contains a set of questions related to the topic of the seminar. |
| classes | classroom observation, assignment report | Attendance at all classes is obligatory. In justified cases, confirmed by a relevant document (i.e. sick leave, dean's justification), it is possible to make up for the absence (maximum 1 excused absence) in the form determined by the coordinator (method / time specified in the detailed regulations made available on the website. Students' laboratory work and laboratory report are assessed. The final test contains a set of questions related to the content of the lab classes. |

Entry requirements

Biochemistry with Chemistry course credit.
Obligatory attendance at classes.

Propaedeutics of oral surgery

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 10, simulations: 40</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | The aim of the programme is to prepare the students within the theoretical scope and practical skills in the field of oral surgery |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | practical colloquiums, multiple choice test |

| | | | |
|--|---|-------|--|
| W2 | principles of radiological diagnosis | F.W18 | practical colloquiums, multiple choice test |
| W3 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | practical colloquiums, multiple choice test |
| W4 | basics of antibiotic therapy and antibiotic resistance | F.W13 | practical colloquiums, multiple choice test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | practical colloquiums, multiple choice test |
| U2 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | practical colloquiums, multiple choice test |
| U3 | communicate and share knowledge with colleagues in a team | O.U8 | practical colloquiums, multiple choice test |
| U4 | plan treatment for dental problems | O.U3 | practical colloquiums, multiple choice test |
| U5 | carry out a medical interview with the patient and his or her family | F.U1 | practical colloquiums, multiple choice test |
| U6 | carry out a dental physical examination of the patient | F.U2 | practical colloquiums, multiple choice test |
| U7 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | practical colloquiums, multiple choice test |
| U8 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | practical colloquiums, multiple choice test |
| U9 | collect and secure specimens for diagnostic tests, including cytological tests | F.U5 | practical colloquiums, multiple choice test |
| U10 | interpret the results of additional tests and consultations | F.U6 | practical colloquiums, multiple choice test |
| U11 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | practical colloquiums, multiple choice test |
| U12 | proceed in case of general and local complications during and after dental procedures | F.U9 | practical colloquiums, multiple choice test |
| U13 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | practical colloquiums, multiple choice test |
| U14 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | practical colloquiums, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | practical colloquiums, multiple choice test |
| K2 | to be guided by the well-being of a patient | O.K2 | practical colloquiums, multiple choice test |
| K3 | respect medical confidentiality and patients' rights | O.K3 | practical colloquiums, multiple choice test |

| | | | |
|----|--|------|---|
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | practical colloquiums, multiple choice test |
|----|--|------|---|

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 10 |
| simulations | 40 |
| preparation for classes | 20 |
| preparation for examination | 15 |
| Student workload | Hours 85 |
| Workload involving teacher | Hours 50 |
| Practical workload | Hours 40 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|---|-------------------------|
| 1. | Surgical patient evaluation - 6th semester | U1, U10, U11, U14, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4 | e-learning, simulations |
| 2. | High-risk patient in oral surgery department - 6th semester | W1, W2, W3, W4, U1, U11, U12, U13, U14, U4, U5, U7, K2 | e-learning |
| 3. | Radiographic imaging of the maxillofacial region - 6th semester | W2, U10, U4 | e-learning |
| 4. | Local anaesthetics used in oral surgery - 6th semester | W1, W3, U13, U4, K2 | e-learning |
| 5. | Clinical anatomy of the orofacial region - 6th semester | W1, W2, U10, U6, U9 | simulations |
| 6. | Techniques of local anaesthesia - 6th semester | W1, U11 | simulations |
| 7. | Maxillary anaesthesia - 6th semester | W1, U11, U4 | simulations |
| 8. | Mandibular anaesthesia - 6th semester | W1, U11, U4 | simulations |
| 9. | Armamentarium for surgical procedures in oral cavity - 6th semester | U4, U9 | simulations |

| | | | |
|-----|---|-------------|-------------|
| 10. | Preoperative procedures in oral surgery. Basic surgical procedures for oral surgery - 6th semester | U11, U4, U9 | simulations |
| 11. | Simple and surgical extraction of teeth - 6th semester | U11, U4 | simulations |

Course advanced

Teaching methods:

educational film, presentation, group work, simulation, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|-------------|---|--------------------------|
| e-learning | multiple choice test | credit at the final test |
| simulations | practical colloquiums, multiple choice test | credit at the final test |

Entry requirements

Preclinical integrated dentistry 1/2

Medical law

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group G. Legal and organizational basis for medicine</p> |
|--|--|

| | | |
|-----------------------------|---|-------------------------------------|
| Period Semester 6 | <p>Examination graded credit</p> <p>Activities and hours e-learning: 10</p> | Number of ECTS points 1.0 |
|-----------------------------|---|-------------------------------------|

Goals

| | |
|----|--|
| C1 | Students are acquainted with basic solutions applicable in the area of medical law in Poland and principles of professional ethics of physicians and dentists. |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | the principles of professional liability of a dentist (moral, ethical, legal, material and professional), as well as the dentist's obligations towards the patient | G.W22 | credit |
| W2 | problems of medical error: diagnostic, technical, therapeutic and organizational | G.W23 | credit |

| | | | |
|-----|---|-------|--------|
| W3 | principles of liability for violation of the rules of practicing the profession of a dentist | G.W24 | credit |
| W4 | patient rights | G.W26 | credit |
| W5 | principles of medical ethics and deontology, ethical dilemmas of modern medicine resulting from the dynamic development of biomedical science and technologies, as well as the principles of ethical conduct of a dentist | G.W27 | credit |
| W6 | legal basis for the functioning of the medical professions and the professional self-government of doctors and dentists in the Republic of Poland | G.W28 | credit |
| W7 | legal regulations regarding conducting healthcare activities | G.W29 | credit |
| W8 | organizational and legal aspects of the functioning of the Polish healthcare system | G.W8 | credit |
| W9 | principles of managing medical entities | G.W9 | credit |
| W10 | principles of functioning, management and computerization of medicinal entities and other public health institutions | G.W10 | credit |
| W11 | principles of functioning of primary healthcare | G.W11 | credit |
| W12 | rules for negotiating and concluding contracts for the provision of health services in the public and private sectors | G.W12 | credit |
| W13 | legal basics of communication in medicine | G.W25 | credit |
| W14 | basic duties of the employee and employer | G.W30 | credit |
| W15 | rules for providing benefits in the event of sickness, maternity, accidents at work and occupational diseases | G.W31 | credit |
| W16 | rules for deciding on temporary inability to work, inability to work for disability purposes, as well as disability | G.W32 | credit |
| W17 | rules for keeping, storing and sharing medical records and protecting personal data | G.W34 | credit |
| W18 | the concept of public health and the objectives, tasks and structure of the health system | G.W1 | credit |
| W19 | etiology of occupational diseases specified in legal regulations, including those related to the profession of a dentist | G.W13 | credit |
| W20 | indicators of the state of health of the population and the principles of their assessment | G.W14 | credit |
| W21 | principles of planning and evaluation of preventive actions | G.W17 | credit |
| W22 | principles of ergonomic organization of work in the dental office and carrying out dental procedures | G.W18 | credit |
| W23 | principles of occupational health and safety in dentistry | G.W19 | credit |
| W24 | rules of conduct in the event of an epidemiological threat | G.W20 | credit |

| | | | |
|--|---|-------|--------|
| W25 | rules of dealing with corpses | G.W33 | credit |
| W26 | the rules for drawing up expert opinions in criminal matters | G.W37 | credit |
| W27 | forensic aspects of human ethology | G.W38 | credit |
| Skills - Student can: | | | |
| U1 | identify similarities and differences between ethical and legal standards | G.U23 | credit |
| U2 | apply the legal provisions relating to the pursuit of the profession of a dentist | G.U24 | credit |
| U3 | explain and apply the standards contained in the Code of Medical Ethics and international standards of medical ethics | G.U25 | credit |
| U4 | analyze various systems of financing health services in the Republic of Poland and other countries | G.U8 | credit |
| U5 | prepare competition offers related to the provision of health services | G.U9 | credit |
| U6 | organize and run a dental office | G.U10 | credit |
| U7 | provide the patient with necessary information on oral health promotion | G.U15 | credit |
| U8 | keep medical records | G.U26 | credit |
| U9 | issue medical certificates | G.U27 | credit |
| U10 | work in a team and lead a team in a dental office | G.U11 | credit |
| U11 | assess the consequences of facial and cranial injuries and qualify them in criminal and civil proceedings | G.U30 | credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | credit |
| K2 | respect medical confidentiality and patients' rights | O.K3 | credit |
| K3 | formulate opinions on the various aspects of the professional activity | O.K10 | credit |
| K4 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|-----------------|
| e-learning | 10 |
| analysis of the research material | 10 |
| preparation for classes | 4 |
| consultations with lecturer | 4 |

| | |
|-----------------------------------|--------------------|
| Student workload | Hours 28 |
| Workload involving teacher | Hours 10 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|---|------------|
| 1. | Legal responsibility of the medical staff (in Poland) - professional and civil responsibility. | W1, W10, W2, W3, W5, W7, W8, W9, U1, U2, U7, K3, K4 | e-learning |
| 2. | Legal responsibility of the medical staff (in Poland) - criminal and employee responsibility. | W1, W2, U1, U10, U2, U5, U8, U9, K3, K4 | e-learning |
| 3. | Patient rights at the different levels of legislation: genesis, idea, evolution, fundamental rules, legislation on the international, common & national level. Specifics of the doctor - patient relation on the legal and ethical grounds with the focus on dentistry. | W1, W18, W19, W2, W20, W21, W22, W23, W24, W25, W26, W27, W4, U1, U11, U2, K1, K2, K3, K4 | e-learning |
| 4. | Perspectives for medical law, the most important contemporary general problems: transplantation and organs donation, social context of medicine and its impact on law. | W11, W12, W13, W14, W15, W16, W17, W4, W6, U1, U3, U4, U6, K1, K2 | e-learning |

Course advanced

Teaching methods:

case study, case study method, lecture, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|---------------------|--|
| e-learning | credit | Attendance in class and discussion with class participants. Attendance requirements: two of four meetings (e-learning). |

Entry requirements

Not applicable.

Public Health

Karta opisu przedmiotu

Informacje podstawowe

| | |
|---|---|
| <p>Jednostka organizacyjna Wydział Lekarski</p> <p>Kierunek studiów Medical and Dental Program</p> <p>Poziom kształcenia jednolite magisterskie</p> <p>Forma studiów stacjonarne</p> <p>Profil studiów ogólnoakademicki</p> <p>Dyscypliny Nauki medyczne</p> <p>Klasyfikacja ISCED 0911 Stomatologia</p> <p>Przedmiot powiązany z badaniami naukowymi Tak</p> | <p>Cykl dydaktyczny 2020/21</p> <p>Rok realizacji 2022/23</p> <p>Języki wykładowe Angielski</p> <p>Blok zajęciowy obowiązkowy do zaliczenia w toku studiów</p> <p>Obligatoryjność obowiązkowy</p> <p>Forma weryfikacji uzyskanych efektów uczenia się zaliczenie na ocenę</p> <p>Grupa zajęć standardu G. Prawno-organizacyjne podstawy medycyny</p> |
|---|---|

| | | |
|-----------------------------------|---|---|
| <p>Okres Semestr 6</p> | <p>Forma weryfikacji uzyskanych efektów uczenia się zaliczenie na ocenę</p> <p>Forma prowadzenia i godziny zajęć seminarium: 12</p> | <p>Liczba punktów ECTS 1.0</p> |
|-----------------------------------|---|---|

Cele kształcenia dla przedmiotu

| | |
|----|---|
| C1 | Zaznajomienie studentów z rolą, zadaniami, funkcjami zdrowia publicznego |
| C2 | Przekazanie wiedzy na temat zasad promocji zdrowia, profilaktyki chorób, uwarunkowań zdrowia oraz metod diagnozy populacyjnej potrzeb zdrowotnych i ich możliwości realizacji |
| C3 | Zaznajomienie studentów ze strategią polityki zdrowotnej na szczeblu krajowym i międzynarodowym |
| C4 | Poznanie modeli ochrony zdrowia w Polsce i na świecie i ich zasad organizacji |

Efekty uczenia się dla przedmiotu

| Kod | Efekty w zakresie | Kierunkowe efekty uczenia się | Metody weryfikacji |
|-----|-------------------|-------------------------------|--------------------|
|-----|-------------------|-------------------------------|--------------------|

| Wiedzy - Student zna i rozumie: | | | |
|---|--|-------|--|
| W1 | pojęcie zdrowia publicznego oraz cele, zadania i strukturę systemu opieki zdrowotnej | G.W1 | zaliczenie pisemne |
| W2 | koncepcje i modele promocji zdrowia | G.W2 | zaliczenie pisemne |
| W3 | podstawowe pojęcia z zakresu profilaktyki, promocji zdrowia oraz higieny środowiskowej | G.W3 | zaliczenie pisemne |
| W4 | metody określania potrzeb zdrowotnych społeczeństwa | G.W5 | zaliczenie pisemne |
| W5 | strategię polityki zdrowotnej i społecznej Rzeczypospolitej Polskiej oraz Unii Europejskiej | G.W7 | zaliczenie pisemne |
| W6 | zasady planowania i ewaluacji działań profilaktycznych | G.W17 | obserwacja pracy studenta, ocena grupy, zaliczenie pisemne |
| Umiejętności - Student potrafi: | | | |
| U1 | opisywać wybrane zjawiska zdrowotne w skali populacyjnej oraz prognozować ich wpływ na funkcjonowanie opieki zdrowotnej | G.U2 | obserwacja pracy studenta, zaliczenie pisemne |
| U2 | oceniać skalę problemów zdrowotnych oraz wskazywać priorytety zdrowotne i określać ich znaczenie w polityce zdrowotnej | G.U3 | obserwacja pracy studenta, zaliczenie pisemne |
| U3 | identyfikować czynniki wpływające na politykę zdrowotną państwa | G.U6 | obserwacja pracy studenta, zaliczenie pisemne |
| U4 | planować działania z zakresu profilaktyki i promocji zdrowia oraz wdrażać działania promocyjne dotyczące zdrowia populacji | G.U7 | obserwacja pracy studenta, ocena grupy |
| U5 | analizować różne systemy finansowania świadczeń zdrowotnych w Rzeczypospolitej Polskiej i innych państwach | G.U8 | obserwacja pracy studenta, ocena grupy, zaliczenie pisemne |
| U6 | przekazywać pacjentowi informacje na temat czynników ryzyka i sposobów zapobiegania najczęstszym chorobom społecznym w Rzeczypospolitej Polskiej | G.U16 | obserwacja pracy studenta |
| Kompetencji społecznych - Student jest gotów do: | | | |
| K1 | propagowania zachowań prozdrowotnych | O.K6 | obserwacja pracy studenta, ocena grupy |

Bilans punktów ECTS

| Rodzaje zajęć studenta | Średnia liczba godzin* przeznaczonych na zrealizowane rodzaje zajęć |
|-----------------------------------|--|
| seminarium | 12 |
| przygotowanie do zajęć | 8 |
| konsultacje z prowadzącym zajęcia | 2 |
| przygotowanie do egzaminu | 8 |

| | |
|-------------------------------------|----------------------------|
| Łączny nakład pracy studenta | Liczba godzin 30 |
| Liczba godzin kontaktowych | Liczba godzin 12 |

* godzina (lekcyjna) oznacza 45 minut

Treści programowe

| Lp. | Treści programowe | Efekty uczenia się dla przedmiotu | Formy prowadzenia zajęć |
|-----|--|-----------------------------------|-------------------------|
| 1. | Pojęcie zdrowia publicznego. Założenia, zadania, funkcje zdrowia publicznego. Nowe miary obciążeń zdrowotnych. | W1, W4 | seminarium |
| 2. | Promocja zdrowia – definicje, koncepcje, modele. | W2, K1 | seminarium |
| 3. | Społeczne uwarunkowania zdrowia. Strategie zapobiegania chorobom na poziomie zdrowia publicznego. Podstawowe pojęcia z zakresu profilaktyki. | W3, U4, U6, K1 | seminarium |
| 4. | Metody określania potrzeb zdrowotnych społeczeństwa. Skala problemów zdrowotnych. Polityka zdrowotna państwa – strategia, czynniki, priorytety. | W4, W5, U1, U2, U3, K1 | seminarium |
| 5. | Programy zdrowia publicznego. Przepływ wiedzy i informacji w zdrowiu publicznym. Pacjent z perspektywy zdrowia publicznego. Zasady planowania i ewaluacji programów zdrowia publicznego. | W6, U4, K1 | seminarium |
| 6. | Modele ochrony zdrowia w Polsce i na świecie. Ekonomiczne uwarunkowania zdrowia publicznego. Modele finansowania ochrony zdrowia. | W1, U5 | seminarium |

Informacje rozszerzone

Metody nauczania:

Burza mózgów, Dyskusja, Praca w grupie, Seminarium, Wykład z prezentacją multimedialną

| Rodzaj zajęć | Formy zaliczenia | Warunki zaliczenia przedmiotu |
|--------------|--|---|
| seminarium | obserwacja pracy studenta, ocena grupy, zaliczenie pisemne | Egzamin końcowy w pierwszym terminie ma formę pisemną w postaci testu wielokrotnego wyboru. Liczba pytań testu: 30. Egzamin końcowy w drugim terminie odbywa się w odpowiedniej sesji poprawkowej, ma formę pisemną w postaci 4 pytań otwartych. Odpowiedzi na każde z pytań są punktowane w skali od 0 do 5 punktów (co 0,5 punktu). Kryterium zaliczenia dla każdego z terminów egzaminu końcowego $\geq 60\%$ poprawnych odpowiedzi. Kryteria oceny końcowej dla każdego z terminów egzaminu: 60,0% do 68,0% = dostateczny; >68,0% do 76,0% = dostateczny plus; >76,0% do 84,0% = dobry; >84,0% do 92,0% = dobry plus; >92,0% do 100% = bardzo dobry |

Dodatkowy opis

Warunkiem dopuszczenia do zaliczenia końcowego jest zaliczenie 100% przewidzianych harmonogramem seminariów.

Student jest zobowiązany uczestniczyć czynnie w zajęciach lub w uzasadnionych przypadkach dopuszcza się nieobecność na zajęciach z koniecznością zaliczenia danego tematu w terminie uzgodnionym z prowadzącym.

W przypadku niespełnienia powyższego warunku student traci możliwość przystąpienia do zaliczenia końcowego (co jest równoznaczne z utratą pierwszego lub drugiego terminu zaliczenia).

Student jest zobowiązany przychodzić punktualnie na zajęcia. Dopuszcza się maksymalnie 2 spóźnienia bez ponoszenia konsekwencji.

W przypadku 3 spóźnień student jest zobowiązany do zaliczenia jednego (wylosowanego) tematu spośród tematów, na których odnotowano spóźnienie.

Wymagania wstępne i dodatkowe

Obowiązkowa obecność na zajęciach. Warunkiem uczestnictwa w kursie jest uzyskanie zaliczenia z przedmiotu Epidemiologia i medycyna środowiskowa lub podobnego zawierającego odpowiednie kierunkowe efekty uczenia się, to znaczy G.W1-3,5,7,17; G.U2-3,6-8,16; O.K6.

Dental practice in a dental office - summer internship

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23, 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination credit</p> <p>Standard group I. Professional practice</p> |
|--|--|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination credit</p> <p>Activities and hours professional practice: 120</p> | <p>Number of ECTS points 4.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination credit</p> <p>Activities and hours professional practice: 120</p> | <p>Number of ECTS points 4.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | The aim of dental electives after third and fourth year is to gain more clinical experience by assisting and performing simple dental procedures under the qualified dentist supervision. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|--|-------|---------------------|
| W1 | health education issues | O.W3 | booklet of practice |
| W2 | organization of dentist practice and management principles in healthcare | O.W5 | booklet of practice |
| W3 | issues in dentistry - at an advanced level | O.W2 | booklet of practice |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practice |
| U2 | plan treatment for dental problems | O.U3 | booklet of practice |
| U3 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practice |
| U4 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practice |
| U5 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practice |
| U6 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practice |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | booklet of practice |
| K2 | respect medical confidentiality and patients' rights | O.K3 | booklet of practice |
| K3 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practice |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practice |
| K5 | promote health-promoting behaviors | O.K6 | booklet of practice |
| K6 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | booklet of practice |
| K7 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | booklet of practice |

Calculation of ECTS points

Semester 6

| Activity form | Activity hours* |
|-------------------------|------------------------|
| professional practice | 120 |
| Student workload | Hours 120 |

| | |
|-----------------------------------|---------------------|
| Workload involving teacher | Hours 120 |
| Practical workload | Hours 120 |

* hour means 45 minutes

Semester 8

| | |
|-----------------------------------|------------------------|
| Activity form | Activity hours* |
| professional practice | 120 |
| Student workload | Hours 120 |
| Workload involving teacher | Hours 120 |
| Practical workload | Hours 120 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|-----------------------|
| 1. | After third year: Dental examination of the patient Principles of keeping records in a dental office Active assistance in dental procedures Conducting oral hygiene instruction. Understanding the principles of local anesthesia in dentistry Extending the knowledge of instruments and dental apparatus. Extending the knowledge of sterilization principles and keeping records of its course in the dentist's office After fourth year: Performing basic dental treatment procedure under the supervision of the qualified dentist. | W1, W2, W3, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6, K7 | professional practice |

Course advanced

Semester 6

Teaching methods:

professional practice

| Activities | Examination methods | Credit conditions |
|-----------------------|---------------------|--|
| professional practice | booklet of practice | attendance to the assigned dental office to fulfil hours requirement confirmed with the signature the supervisor of the summer internship. |

Semester 8

Teaching methods:

professional practice

| Activities | Examination methods | Credit conditions |
|-----------------------|---------------------|--|
| professional practice | booklet of practice | attendance to the assigned dental office to fulfil hours requirement confirmed with the signature the supervisor of the summer internship. |

Entry requirements

no initial requirement to enter the course

Methodology of scientific research in medicine

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group C. Preclinical course</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | acquainting students with criteria and methodological requirements necessary to conduct scientific research in medical sciences |
| C2 | preparing students for involvement in design of a scientific research in compliance with the applicable rules of methodological correctness |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|------------------------------|--|------|--------------------------------|
| W1 | the rules of conducting scientific research and spreading their results | O.W4 | classroom observation, project |
| Skills - Student can: | | | |
| U1 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation, project |
| U2 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, project |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| seminar | 30 |
| analysis of the research material | 15 |
| preparation of a project | 5 |
| information collection | 10 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 15 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|------------|
| 1. | Introduction to research methodology. What is scientific research? | W1, U1, U2 | seminar |
| 2. | From the idea to its implementation - the process of planning a scientific research. | W1, U1, U2 | seminar |
| 3. | Setting research goals and hypotheses. | W1, U1, U2 | seminar |
| 4. | Which studies will be most appropriate to achieve the purpose of the study? The most important variables in the study - operationalization. | W1, U1, U2 | seminar |
| 5. | Population sampling - the importance of selection methods in the context of results generalization | W1, U1, U2 | seminar |
| 6. | Sample size estimation. | W1, U1 | seminar |
| 7. | Questionnaire as a research tool - advantages and disadvantages | W1, U1, U2 | seminar |
| 8. | The most important critical elements in the study plan | W1, U1, U2 | seminar |

| | | | |
|-----|---|------------|---------|
| 9. | Quality of diagnostic methods. Assessment of the accuracy of diagnostic tests. | W1, U1, U2 | seminar |
| 10. | Causality analysis in medical research. The role of confounders in determining the cause-effect relationship. | W1, U1, U2 | seminar |
| 11. | Generalization of the research results. . Selection of the method of statistical analysis of collected material | W1, U1, U2 | seminar |
| 12. | Rules for presenting research results, reports and publications. | W1, U1, U2 | seminar |

Course advanced

Teaching methods:

textual analysis, brainstorm, discussion, project method, group work, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|--------------------------------|---|
| seminar | classroom observation, project | <ul style="list-style-type: none"> • The student is required to participate in all seminars provided - in the event of a justified absence, the teacher may indicate to the student tasks that will be the basis for crediting the absence. • Based on the work at the seminars and self-education, the student is required to perform (individually or in small groups) practical tasks - each of them rated on a scale of 0-100%. |

Borderline problems of human existence: suicide, assisted suicide, euthanasia

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2022/23</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group C. Preclinical course</p> |
|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 6</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | The main purpose of this course is to inform students about ethical and legal problems that are related to death and dying in the era of medicalization. suicide |
| C2 | Providing students with knowledge on the most significant ethical and legal problems concerning death and dying, euthanasia and |
| C3 | Developing of sensitivity to ethical dimension of end-of-life decisions. |
| C4 | Developing ability and knowledge and being able to recognize that doctors, patients and patient's family could have different attitudes and perspectives on death and dying. |
| C5 | Developing in students holistic attitudes towards patients and ability to reconstruct his/her social and cultural context of life |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | signs of death and post-mortem changes, as well as principles of autopsy technique and autopsy | C.W17 | classroom observation, project |
| W2 | principles of preventing and combating pain and anxiety, as well as pharmacology of drugs used in life-threatening situations | C.W21 | classroom observation |
| Skills - Student can: | | | |
| U1 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | classroom observation |
| U2 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | oral examination, classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | oral examination, classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | oral examination, classroom observation |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | oral examination, classroom observation |
| K5 | use objective sources of information | O.K7 | oral examination, classroom observation |
| K6 | formulate conclusions from own measurements or observations | O.K8 | oral examination, classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|--------------------|
| seminar | 30 |
| preparation for classes | 15 |
| preparation of multimedia presentation | 15 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--------------------------------|------------|
| 1. | The phenomenon of suicide and its interpretations: medical, philosophical, religious | W1, W2, U2, K5, K6 | seminar |
| 2. | The concept and practice of euthanasia. | U1, U2, K2, K4, K5, K6 | seminar |
| 3. | Euthanasia of minors: the practice and ethical justification | U1, U2, K2, K5, K6 | seminar |
| 4. | The concept and history of palliative care | U1, U2, K1, K2, K3, K4, K5, K6 | seminar |
| 5. | The concept and practice of physician assisted suicide. | U2, K2, K3, K4, K5, K6 | seminar |
| 6. | The concept of "a duty to die" | U1, U2, K1, K2, K3, K4, K5, K6 | seminar |
| 7. | Euthanasia and organ transplantation: legal status and moral controversies | U1, U2, K1, K2, K3, K4, K5, K6 | seminar |
| 8. | The future of death. How the progress of medicine will impact the way we die? | U1, U2, K2, K3, K5, K6 | seminar |

Course advanced

Teaching methods:

case study, textual analysis, brainstorm, classes / practicals, discussion, e-learning, educational film, project method, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|--|--|
| seminar | oral examination, classroom observation, project | Presence is obligatory. A student can be absent two times, without any excuse. In case of further absence a student is obliged to additional work assigned by a teacher. Students activity impacts his final mark To pass, student has to receive 50% on his/her project |

Entry requirements

Block

Periodontal and oral mucosa diseases

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|---|

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|-------------------------------------|--|---|
| <p>Period Semester 7</p> | <p>Examination -</p> <p>Activities and hours seminar: 11, clinical classes: 62</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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| <p>Period Semester 8</p> | <p>Examination credit</p> <p>Activities and hours seminar: 10, clinical classes: 62</p> | <p>Number of ECTS points 8.0</p> |
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| <p>Period Semester 9</p> | <p>Examination -</p> <p>Activities and hours seminar: 13, clinical classes: 48</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

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|------------------------------|---|-------------------------------------|
| Period Semester 10 | Examination examination Activities and hours seminar: 12, clinical classes: 47 | Number of ECTS points 7.0 |
|------------------------------|---|-------------------------------------|

Goals

| | |
|----|---|
| C1 | The aim of the course is to familiarize students with the physiological and pathological lesions of oral mucosa and periodontium. |
| C2 | Students will be provided with knowledge in the diagnosis and treatment of oral mucosa and periodontal diseases. |
| C3 | Students will be familiarized with knowledge in oncological prophylaxis. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W2 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W3 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W4 | diagnostics and methods of treatment of periodontal and oral mucosa diseases | F.W9 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W5 | indications and contraindications for treatment using dental implants | F.W10 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |

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|-----|---|-------|---|
| W6 | basics of antibiotic therapy and antibiotic resistance | F.W13 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W7 | pathomechanism of the effects of general diseases or therapies on the oral cavity | F.W20 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W8 | prevention of oral diseases | F.W21 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W9 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W10 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W11 | health education issues | O.W3 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W12 | rules for dealing with cysts, precancerous conditions, and head and neck cancers | F.W8 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W13 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W14 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |

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|------------------------------|--|-------|---|
| W15 | principles of radiological diagnosis | F.W18 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| W16 | pathomechanism of the impact of oral diseases on general health | F.W19 | OSCE examination, written examination, practical examination, oral examination, theoretical colloquiums, test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U3 | plan treatment for dental problems | O.U3 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U4 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U5 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U6 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U7 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U8 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U9 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U10 | interpret the results of additional tests and consultations | F.U6 | booklet of practical skills, OSCE examination, practical examination, classroom observation |

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| U11 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U12 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U13 | proceed in case of general and local complications during and after dental procedures | F.U9 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U14 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U15 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U16 | diagnose and treat periodontal disease in the basic range | F.U17 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U17 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U18 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| U19 | describe dental and pantomographic images | F.U23 | booklet of practical skills, OSCE examination, practical examination, classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practical skills, classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | booklet of practical skills, classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | booklet of practical skills, classroom observation |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practical skills, classroom observation |
| K5 | promote health-promoting behaviors | O.K6 | booklet of practical skills, classroom observation |
| K6 | use objective sources of information | O.K7 | booklet of practical skills, classroom observation |
| K7 | formulate conclusions from own measurements or observations | O.K8 | booklet of practical skills, classroom observation |

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|----|--|------|--|
| K8 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | booklet of practical skills, classroom observation |
|----|--|------|--|

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| seminar | 11 |
| clinical classes | 62 |
| preparation for classes | 10 |
| preparation for colloquium | 10 |
| information collection | 10 |
| preparation for examination | 10 |
| Student workload | Hours 113 |
| Workload involving teacher | Hours 73 |
| Practical workload | Hours 62 |

* hour means 45 minutes

Semester 8

| Activity form | Activity hours* |
|-----------------------------|---------------------|
| seminar | 10 |
| clinical classes | 62 |
| preparation for colloquium | 10 |
| preparation for classes | 10 |
| preparation for examination | 10 |
| information collection | 10 |
| Student workload | Hours 112 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 72 |
| Practical workload | Hours 62 |

* hour means 45 minutes

Semester 9

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| seminar | 13 |
| clinical classes | 48 |
| preparation for classes | 10 |
| preparation for examination | 20 |
| information collection | 20 |
| | |
| Student workload | Hours 111 |
| Workload involving teacher | Hours 61 |
| Practical workload | Hours 48 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| seminar | 12 |
| clinical classes | 47 |
| preparation for colloquium | 10 |
| preparation for classes | 10 |
| preparation for examination | 35 |
| | |
| Student workload | Hours 114 |
| Workload involving teacher | Hours 59 |
| Practical workload | Hours 47 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|---|----------------------------------|
| 1. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Morphology and physiology of the oral mucosa. Primary and secondary lesions on the oral mucosa.</p> <p>Congenital defects and pigmented lesions.</p> | <p>W1, W2, W3, W4, W5, U1, U2, U3, U4, U8, K3, K5, K7</p> | <p>seminar, clinical classes</p> |
| 2. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Clinical and additional examination in oral mucosa diseases.</p> | <p>W1, W12, W15, W16, W2, W3, W4, U1, U10, U11, U15, U16, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | <p>seminar, clinical classes</p> |
| 3. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Saliva - composition, properties and role in the mouth.</p> <p>Salivation disorders. Mouth burning syndrome.</p> | <p>W1, W10, W12, W13, W14, W15, W16, W2, W3, W4, W5, W6, W7, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | <p>seminar, clinical classes</p> |
| 4. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Diseases of the oral mucosa: allergic, fungal, bacterial, viral.</p> <p>Aftoses, dermatoses.</p> | <p>W1, W10, W13, W14, W15, W16, W2, W3, W4, W5, W7, U1, U10, U12, U13, U14, U15, U16, U19, U2, U3, U4, U5, U6, U7, U8, U9</p> | <p>seminar, clinical classes</p> |
| 5. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Pre-neoplastic conditions and oncological prophylaxis.</p> | <p>W1, W12, W13, W14, W15, W16, W2, W3, W4, W5, W6, W7, U1, U10, U12, U14, U15, U16, U17, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | <p>seminar, clinical classes</p> |
| 6. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Inflammation of the oral mucosa after chemo- and radiation therapy. Changes in the oral cavity in hematopoietic system diseases.</p> | <p>W1, W10, W13, W14, W15, W16, W2, W3, W4, W5, W6, W7, U1, U10, U11, U12, U13, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | <p>seminar, clinical classes</p> |
| 7. | <p>Periodontal and oral mucosa diseases 1/2 and 2/2.</p> <p>Anatomy and physiology of periodontal tissues.</p> <p>Etiopathogenesis of periodontal diseases.</p> | <p>W1, W13, W14, W15, W2, W3, W4, W5, W9, U16, U5, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8</p> | <p>seminar, clinical classes</p> |

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|-----|--|--|---------------------------|
| 8. | Periodontal and oral mucosa diseases 1/2 and 2/2. Periodontal examination. Additional tests and X-ray diagnostics. Differential diagnosis of periodontal diseases. | W1, W12, W15, W2, W3, W4, W5, W7, U1, U10, U11, U15, U16, U18, U19, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |
| 9. | Periodontal and oral mucosa diseases 1/2 and 2/2. Treatment of periodontal diseases - non-surgical and surgical treatment. Treatment within the muco-gingival complex. Management of acute periodontal conditions. | W1, W10, W11, W13, W14, W16, W2, W3, W4, W5, W6, W7, W9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |
| 10. | Periodontal and oral mucosa diseases 1/2 and 2/2. Systemic antibiotic therapy in periodontal diseases. | W1, W10, W13, W14, W2, W3, W4, W5, W6, W7, W8, W9, U13, U14, U16, U17, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |
| 11. | Periodontal and oral mucosa diseases 1/2 and 2/2. Primary and secondary occlusal trauma. Prosthetic, orthodontic and implantological treatment in patients with periodontal diseases. | W1, W12, W13, W14, W15, W16, W2, W3, W4, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |
| 12. | Periodontal and oral mucosa diseases 1/2 and 2/2. Correlation of periodontal and systemic diseases. | W1, W12, W13, W14, W15, W16, W2, W3, W4, U1, U10, U11, U12, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |
| 13. | Periodontal and oral mucosa diseases 1/2 and 2/2. Oral lesions in children and adolescents. | W1, W12, W13, W14, W15, W2, W3, W4, W5, W6, W7, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, clinical classes |

Course advanced

Semester 7

Teaching methods:

case study, clinical classes, demonstration, discussion, case study method, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|------------|---|--|
| seminar | oral examination, theoretical colloquiums, test | Obligatory attendance, Periodontal diseases midterm test and Oral Mucosa Diseases midterm test |

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| clinical classes | booklet of practical skills, classroom observation | Obligatory attendance. Clinical treatment during each classes. Booklet of practical skills. |

Semester 8

Teaching methods:

case study, clinical classes, demonstration, discussion, case study method, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|--|
| seminar | written examination, oral examination, test | Obligatory attendance, Periodontal diseases midterm test and Oral Mucosa Diseases midterm test |
| clinical classes | booklet of practical skills, classroom observation | Obligatory attendance. Clinical treatment during each classes. Booklet of practical skills. |

Semester 9

Teaching methods:

clinical classes, demonstration, discussion, case study method, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|--|---|
| seminar | written examination, oral examination, test | Obligatory attendance. |
| clinical classes | booklet of practical skills, classroom observation | Obligatory attendance. Clinical treatment during each classes. Booklet of practical skills. |

Semester 10

Teaching methods:

case study, clinical classes, discussion, case study method, seminar, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|---|--|
| seminar | written examination, oral examination, test | Obligatory attendance. Periodontal diseases midterm test and Oral Mucosa Diseases midterm test. Final test exam. |
| clinical classes | booklet of practical skills, OSCE examination, practical examination, classroom observation | Obligatory attendance. Clinical treatment during each classes. Booklet of practical skills. Practical exam. |

Dental surgery

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 7</p> | <p>Examination -</p> <p>Activities and hours e-learning: 3, seminar: 5, classes: 52</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 3, seminar: 5, classes: 52</p> | <p>Number of ECTS points 6.0</p> |
|-------------------------------------|--|---|

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|-------------------------------------|--|---|
| <p>Period Semester 9</p> | <p>Examination -</p> <p>Activities and hours e-learning: 5, seminar: 8, clinical classes: 58</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|------------------------------|---|-------------------------------------|
| Period Semester 10 | Examination examination Activities and hours e-learning: 5, seminar: 7, clinical classes: 57 | Number of ECTS points 8.0 |
|------------------------------|---|-------------------------------------|

Goals

| | |
|----|--|
| C1 | The aim of the programme is to gain the ability to diagnose and to surgically treat oral disorders |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W2 | issues in dentistry - at an advanced level | O.W2 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W3 | health education issues | O.W3 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W4 | the rules of conducting scientific research and spreading their results | O.W4 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W5 | principles of preventive and therapeutic management in diseases of the masticatory organ in various periods of development | F.W2 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W6 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

| | | | |
|-----|---|-------|--|
| W7 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W8 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W9 | rules for management of periapical tissue diseases | F.W6 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W10 | rules for dealing with cysts, precancerous conditions, and head and neck cancers | F.W8 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W11 | diagnostics and methods of treatment of periodontal and oral mucosa diseases | F.W9 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W12 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W13 | basics of antibiotic therapy and antibiotic resistance | F.W13 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W14 | therapeutic methods of reducing and enduring pain as well as reducing anxiety and stress | F.W15 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W15 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

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|------------------------------|---|-------|--|
| W16 | prevention of oral diseases | F.W21 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W17 | rules for dealing with masticatory organ tissue diseases, injuries to teeth and jawbones | F.W22 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| W18 | indications and contraindications for treatment using dental implants | F.W10 | oral examination |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U3 | plan treatment for dental problems | O.U3 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U4 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U5 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U6 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U7 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

| | | | |
|-----|---|-------|--|
| U8 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U9 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U10 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U11 | collect and secure specimens for diagnostic tests, including cytological tests | F.U5 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U12 | interpret the results of additional tests and consultations | F.U6 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U13 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U14 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U15 | proceed in case of general and local complications during and after dental procedures | F.U9 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U16 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

| | | | |
|--|--|-------|--|
| U17 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U18 | determine the treatment of diseases of tissues of the stomatognathic system | F.U15 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U19 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| U20 | diagnose and treat periodontal disease in the basic range | F.U17 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| K2 | to be guided by the well-being of a patient | O.K2 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| K3 | respect medical confidentiality and patients' rights | O.K3 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| K5 | promote health-promoting behaviors | O.K6 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

| | | | |
|----|--|------|--|
| K6 | formulate conclusions from own measurements or observations | O.K8 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |
| K7 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | booklet of practical skills, practical examination, oral examination, practical colloquiums, oral answer, practical test, multiple choice test |

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 3 |
| seminar | 5 |
| classes | 52 |
| preparation for classes | 30 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 60 |
| Practical workload | Hours 52 |

* hour means 45 minutes

Semester 8

| Activity form | Activity hours* |
|-----------------------------|---------------------|
| e-learning | 3 |
| seminar | 5 |
| classes | 52 |
| preparation for classes | 30 |
| preparation for examination | 20 |
| Student workload | Hours 110 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 60 |
| Practical workload | Hours 52 |

* hour means 45 minutes

Semester 9

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 5 |
| seminar | 8 |
| clinical classes | 58 |
| preparation for classes | 30 |
| Student workload | Hours 101 |
| Workload involving teacher | Hours 71 |
| Practical workload | Hours 58 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 5 |
| seminar | 7 |
| clinical classes | 57 |
| preparation for classes | 30 |
| preparation for examination | 20 |
| Student workload | Hours 119 |
| Workload involving teacher | Hours 69 |
| Practical workload | Hours 57 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|---|--|
| 1. | Endodontic/periodontic surgery and atraumatic extractions - 9th and 10th semester | W1, W10, W11, W13, W16, W18, W2, W3, W6, W7, W8, W9, U1, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K5, K6, K7 | seminar, e-learning |
| 2. | Intraoral abscesses -7th and 8 th semester | W1, W12, W13, W14, W15, W2, W3, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U3, U4, U5, U6, U7, U8, U9, K2, K3, K4, K5, K6, K7 | seminar, e-learning, clinical classes |
| 3. | Extraoral abscess -7th and 8 th semester | W1, W12, W13, W15, W17, W2, W3, W4, W5, W6, W7, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | seminar, e-learning, clinical classes |
| 4. | Retained teeth -7th and 8 th semester | W1, W12, W13, W15, W2, W3, W4, W5, W6, W7, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U3, U4, U5, U6, U7, U8, U9 | seminar, e-learning, clinical classes |
| 5. | Preprosthetic surgery and biomaterials for bone replacement -7th and 8 th semester | W1, W10, W11, W12, W15, W2, W3, W4, W5, W6, W7, U1, U10, U11, U12, U13, U14, U15, U17, U18, U2, U20, U3, U4, U5, U6, U7, U8, U9, K1, K2, K4, K5 | classes, seminar, e-learning, clinical classes |
| 6. | Prophylactic and therapeutic use of antibiotics in oral surgery -7th and 8 th semester | W1, W13, W2, W6, U16, K5, K6 | e-learning, clinical classes |
| 7. | Pain management in oral surgery -7th and 8 th semester | W14, W15, U16, U17, U19, K2, K5 | e-learning, clinical classes |
| 8. | Osteomyelitis of the jaws -7th and 8 th semester | W1, W12, W13, W14, W17, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K7 | e-learning, clinical classes |

| | | | |
|-----|---|---|--|
| 9. | Granulomatous infections of the orofacial region - 9th and 10th semester | W1, W11, W12, W13, W16, W2, W3, W4, W6, W7, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | e-learning, clinical classes |
| 10. | Infections of orofacial region: complications - 9th and 10th semester | W12, W13, W6, U1, U2, U3, K1, K2, K4 | seminar, e-learning, clinical classes |
| 11. | Inflammatory odontogenic disorders of the maxillary sinuses. Langerhans cell histiocytosis - 9th and 10th semester | W12, W13, W16, W2, W3, W6, W7, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U20, U3, U4, U5, U6, U7, U8, U9 | classes, seminar, e-learning, clinical classes |
| 12. | Diseases of the salivary glands - 9th and 10th semester | W1, W10, W11, W12, W13, W2, W3, W6, W7, K2 | e-learning, clinical classes |
| 13. | Dental trauma - 9th and 10th semester | W11, W12, W17, W8, U1, U2, U3 | seminar, e-learning, clinical classes |
| 14. | Cysts of the maxillary region - 9th and 10th semester | W1, W10, W2, W3, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6, K7 | e-learning, clinical classes |
| 15. | Odontogenic tumours and tumour-like lesions of the jaws - 9th and 10th semester | W1, W10, W11, W2, W3, U1, U2, U3, U4, K1, K2, K3, K4, K5, K6, K7 | e-learning, clinical classes |
| 16. | Replantation and autotransplantation of a tooth - 9th and 10th semester | W15, W17, W2, W3, W4, W8, U1, U10, U12, U15, U2, U3, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | seminar, e-learning, clinical classes |
| 17. | Potentially malignant disorders of the oral mucosa - 9th and 10th semester | W1, W10, W11, W16, W2, W3, W4, U1, U10, U11, U12, U13, U16, U17, U2, U20, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | e-learning, clinical classes |

Course advanced

Semester 7

Teaching methods:

classes / practicals, clinical classes, discussion, seminar, participation in research, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|------------|---|---------------------------------------|
| e-learning | practical examination, practical colloquiums, oral answer, multiple choice test | final practical and theoretical tests |

| Activities | Examination methods | Credit conditions |
|------------|---|---------------------------------------|
| seminar | practical examination, practical test, multiple choice test | final practical and theoretical tests |
| classes | booklet of practical skills, practical colloquiums, oral answer, practical test | final practical and theoretical tests |

Semester 8

Teaching methods:

classes / practicals, discussion, seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------|--|---------------------------------------|
| e-learning | multiple choice test | final practical and theoretical tests |
| seminar | multiple choice test | final practical and theoretical tests |
| classes | booklet of practical skills, practical examination, oral examination | final practical and theoretical tests |

Semester 9

Teaching methods:

classes / practicals, discussion, seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|---------------------------------------|
| e-learning | multiple choice test | final practical and theoretical tests |
| seminar | multiple choice test | final practical and theoretical tests |
| clinical classes | booklet of practical skills, practical examination | final practical and theoretical tests |

Semester 10

Teaching methods:

discussion, seminar, participation in research, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|---------------------------------------|
| e-learning | multiple choice test | final practical and theoretical tests |
| seminar | multiple choice test | final practical and theoretical tests |
| clinical classes | booklet of practical skills, practical examination, oral examination | final practical and theoretical tests |

Entry requirements

Propedeutics of oral surgery (Introduction to oral surgery)

Prosthodontics

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 7</p> | <p>Examination -</p> <p>Activities and hours e-learning: 5, seminar: 12, clinical classes: 70</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 5, seminar: 12, clinical classes: 70</p> | <p>Number of ECTS points 7.0</p> |
|-------------------------------------|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 9</p> | <p>Examination -</p> <p>Activities and hours e-learning: 5, seminar: 7, clinical classes: 73</p> | <p>Number of ECTS points 0.0</p> |
|-------------------------------------|--|---|

| | | |
|------------------------------|---|--------------------------------------|
| Period Semester 10 | Examination examination Activities and hours e-learning: 5, seminar: 7, clinical classes: 72 | Number of ECTS points 11.0 |
|------------------------------|---|--------------------------------------|

Goals

| | |
|----|---|
| C1 | Transfer of theoretical knowledge and principles of clinical management in the field of patient diagnosis and treatment with complete missing teeth with the use of removable restorations. Knowledge of material science and laboratory stages related to the use of removable dentures. |
| C2 | Acquiring theoretical knowledge and principles of clinical management in the field of diagnostics and treatment of patients with partial dentition with the use of removable restorations. |
| C3 | Repeating knowledge of the fixed dentures |
| C4 | To familiarize students with additional tests recommended in dental treatment including radiology. |
| C5 | The principles of keeping medical records and ethical behavior towards to the patients. |
| C6 | Teaching practical skills in the field of basic prosthetic treatment in cases of stomatopathy, periodontal disease, temporomandibular disorders and patients after surgery |
| C7 | Teaching practical skills in the field of basic prosthetic treatment using fixed and removable immediate and early dentures |
| C8 | Transfer of theoretical basic knowledge of implant treatment. |
| C9 | Repetition of basic and supplementary materials used in prosthetic treatment |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | booklet of practical skills, OSCE examination, theoretical colloquiums, classroom observation, oral answer, multiple choice test, credit |
| W2 | occlusal normal conditions at various stages of individual development and deviations from norms | F.W1 | theoretical colloquiums, oral answer, test, written credit |
| W3 | methods of rehabilitation of the masticatory organ | F.W14 | OSCE examination, theoretical colloquiums, oral answer, assignment report, written credit, oral credit |
| W4 | principles of radiological diagnosis | F.W18 | OSCE examination, theoretical colloquiums, oral answer, multiple choice test |
| W5 | pathomechanism of the effects of general diseases or therapies on the oral cavity | F.W20 | theoretical colloquiums, oral answer, multiple choice test, oral credit |

| Skills - Student can: | | | |
|--|--|-------|--|
| U1 | plan treatment for dental problems | O.U3 | OSCE examination, theoretical colloquiums, classroom observation, oral answer, assignment report, multiple choice test |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, theoretical colloquiums, classroom observation, written credit, credit |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | theoretical colloquiums, classroom observation |
| U4 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | assignment report |
| U5 | carry out a medical interview with the patient and his or her family | F.U1 | theoretical colloquiums, classroom observation |
| U6 | carry out a dental physical examination of the patient | F.U2 | theoretical colloquiums, classroom observation, oral credit |
| U7 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | classroom observation |
| U8 | interpret the results of additional tests and consultations | F.U6 | OSCE examination, theoretical colloquiums, test, oral credit, credit |
| U9 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | OSCE examination, theoretical colloquiums, oral answer, test |
| U10 | proceed in case of general and local complications during and after dental procedures | F.U9 | OSCE examination, oral answer, test, multiple choice test, credit |
| U11 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | booklet of practical skills, oral answer |
| U12 | determine the treatment of diseases of tissues of the stomatognathic system | F.U15 | theoretical colloquiums, oral answer, assignment report, test, oral credit |
| U13 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | theoretical colloquiums, oral answer, assignment report, test |
| U14 | diagnose, differentiate and classify malocclusions | F.U18 | theoretical colloquiums, oral answer, assignment report, test |
| U15 | carry out prosthetic rehabilitation in simple cases in the field of clinical and laboratory procedures | F.U22 | booklet of practical skills, theoretical colloquiums, oral answer, oral credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |

| | | | |
|----|--|------|--|
| K2 | to be guided by the well-being of a patient | O.K2 | OSCE examination, theoretical colloquiums, classroom observation, test, multiple choice test, written credit, oral credit, credit |
| K3 | respect medical confidentiality and patients' rights | O.K3 | booklet of practical skills, classroom observation, oral answer |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation, assignment report |
| K6 | promote health-promoting behaviors | O.K6 | classroom observation, oral answer, assignment report |
| K7 | use objective sources of information | O.K7 | OSCE examination, theoretical colloquiums, classroom observation, assignment report, multiple choice test, written credit, oral credit, credit |
| K8 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, oral answer |

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 5 |
| seminar | 12 |
| clinical classes | 70 |
| preparation for classes | 40 |
| preparation for colloquium | 10 |
| preparation for classes | 20 |
| Student workload | Hours 157 |
| Workload involving teacher | Hours 87 |
| Practical workload | Hours 70 |

* hour means 45 minutes

Semester 8

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 5 |
| seminar | 12 |
| clinical classes | 70 |
| preparation for classes | 40 |
| preparation for colloquium | 20 |
| preparation for classes | 20 |
| | |
| Student workload | Hours 167 |
| Workload involving teacher | Hours 87 |
| Practical workload | Hours 70 |

* hour means 45 minutes

Semester 9

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 5 |
| seminar | 7 |
| clinical classes | 73 |
| preparation for classes | 40 |
| preparation for colloquium | 30 |
| preparation for classes | 20 |
| | |
| Student workload | Hours 175 |
| Workload involving teacher | Hours 85 |
| Practical workload | Hours 73 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 5 |
| seminar | 7 |
| clinical classes | 72 |
| preparation for classes | 40 |
| preparation for colloquium | 20 |
| preparation for classes | 20 |
| preparation for test | 20 |
| | |
| Student workload | Hours 184 |
| Workload involving teacher | Hours 84 |
| Practical workload | Hours 72 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|---|----------------------------|
| 1. | <p>7th semester; lectures</p> <p>1. Specificity of the clinical trial and planning principles prosthetic treatment. Additional Exams. Preparation for prosthetic treatment (conservative, periodontological, surgical and initial prosthetic procedure).</p> <p>2. Consequences of tooth loss in the stomatognathic system.</p> <p>Diagnostics and treatment principles in edentulous patients using total dentures.</p> <p>3. Diagnostics and treatment principles for partial missing tooth patients. Surveys of models. Planning partial dentures.</p> <p>4. Indications and methods prosthetic treatment, type of used dentures.</p> <p>5. The importance of reconstructing the occlusion in prosthetic treatment, type of correction methods.</p> | <p>W1, W2, W3, W4, W5, U1, U11, U12, U2, U5, U6, U8, K2</p> | <p>seminar, e-learning</p> |

| | | | |
|----|--|--|---------------------------------------|
| 2. | <p>7th and 8th semester; seminars and clinical classes Diagnostics and clinical examination and treatment edentulous patients or with partial toothless dentition. Additional exams used - relevant to rehabilitation prosthetic, interpretation of examinations, diagnosis, planning the stages of treatment and the type of use denture. Rules for fulfill medical records. Laboratory stages of making complete dentures and partial acrylic and framework. Dental materials connected used to fabricated total and partial (also framework) prostheses. Post rehabilitation medical care for patients.</p> | W1, W3, U1, U5, U6, K2 | seminar, clinical classes |
| 3. | <p>Semester 9; lectures 1. Prosthetic treatment with fixed dentures. Dental material and technologies used in fabrication of fixed prosthesis. 2. Diagnosis and treatment of temporomandibular disorders. 3. X-ray methods used in dental prosthetics as a supplemental examination in the diagnosis and planning of prosthetic treatment. 4. Prosthetic treatment with immediate and postoperative dentures. 5. Methods of implant and prosthetic treatment.</p> | W1, W3, W4, U1, U12, U14, U2, U3, U4, U5, U7, K2, K3, K6, K7, K8 | seminar, e-learning, clinical classes |
| 4. | <p>Semester 9 and 10; Seminars and clinical exercises Seminars; theoretical basis of dental prosthetics. The use of articulators in prosthetic treatment, articulometric data. Prosthetic treatment with fixed and immediate and early removable dentures. Stomatopathy; etiopathogenesis, diagnosis and principles of treatment. Prosthetic treatment in cases with periodontal disease. Prosthetic rehabilitation of patients with tissue defects within the facial part of the skull. Diagnostics and general principles of treatment of temporomandibular disorders. Principles of prosthetic treatment for children and adolescents and elderly patients. Principles of implant and prosthetic treatment. Clinical exercises with patients; clinical examination and additional examination, interpretation of outcomes, prosthetic treatment plan (with the use of removable or fixed dentures), clinical procedures, repeating knowledge of laboratory stages of fabrication of prosthetic restorations and dental materials. Rules of fulfilling of medical records, taking care after rehabilitation for a patient</p> | W1, W3, W4, W5, U1, U10, U11, U12, U13, U14, U15, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | seminar, e-learning, clinical classes |

Course advanced

Semester 7

Teaching methods:

case study, clinical classes, laboratories (labs), demonstration, discussion, e-learning, educational film, presentation,

seminar, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|--|
| e-learning | oral answer, test | attendance at all lectures |
| seminar | oral answer, test | Colloquium I; diagnostics, clinical procedures and laboratory work and materials science related to utilizing of full dentures. Required attendance at all seminars and positive score from oral answer from the given seminar problem, assessed immediately after completion of student statements. Single-choice test, in the form of 20 test questions, 70% of positive answers are required to pass the test |
| clinical classes | booklet of practical skills, classroom observation, oral answer, assignment report | Attendance required at all exercises, performance all required clinical procedures and laboratory works. Keeping a booklet of completed prosthetic procedures, signed by the Assistant at the end of the class. Assessment of each of the required clinical procedures. |

Semester 8

Teaching methods:

case study, classes / practicals, clinical classes, laboratories (labs), demonstration, educational film, presentation, seminar, simulated patient, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|---|--|
| e-learning | oral answer, test | Oral answer in the scope of lecture topics |
| seminar | theoretical colloquiums, test, oral credit | II colloquium; Indications for use of partial dentures, the specificity of examining a patient with partial missing teeth, clinical procedures and laboratory steps, and dental materials related to the implementation of partial dentures acrylic. Diagnostics and treatment of patients with partial denture using a framework, indications for the use of framework prostheses, clinical and laboratory stages and dental materials related to fabricating framework dentures. Single-choice test, in the form of 20 test questions, 70% of positive answers are required to pass the test III colloquium; rehabilitation of a patient with total dentures and removable partial dentures Single-choice test, in the form of 40 test questions, 70% of positive answers are required to pass the test. Presence required for all seminars, positive evaluation of the colloquium |
| clinical classes | booklet of practical skills, classroom observation, oral answer | Keeping a record of prosthetic procedures performed in booklet, signed by the Assistant at the end of the class. Assessment of each of the required dental procedures. Attendance at all clinical classes, implementation of practical activities provided for in the program. |

Semester 9

Teaching methods:

case study, classes / practicals, clinical classes, discussion, e-learning, professional practice, lecture, lecture with multimedia presentation, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|---|---|
| e-learning | theoretical colloquiums, test | Completion of oral tests in the scope of lectures |
| seminar | theoretical colloquiums, oral answer, written credit | Passing oral tests, which will be carried out during the last exercises in a given month by the Assistant, will last 30 minutes (as the preparation for the diploma exam) October: Applying technologies for fabrications of fixed dentures, clinical procedures and laboratory stages, dental materials November: Full dentures, denture repair, dental materials December: Partial acrylic and framework dentures, dental materials science January: Stomatopathy, diagnostics, and treatment |
| clinical classes | booklet of practical skills, theoretical colloquiums, oral answer | Keeping a register of prosthetic procedures in booklet signed by the Assistant at the end of each class. Assessment of each of the required dental procedures. Attendance at all clinical classes, implementation of practical activities provided for in the program. |

Semester 10

Teaching methods:

case study, classes / practicals, clinical classes, discussion, e-learning, case study method, professional practice, practical classes

| Activities | Examination methods | Credit conditions |
|-------------------|---|---|
| e-learning | OSCE examination, oral answer, test, multiple choice test, credit | Passing oral tests, which will be carried out during the last exercises in a given month by the Assistant, will last 30 minutes (as the preparation for the diploma exam) March: Temporomandibular disorders April: immediate and early dentures May: Implantology Practical exam OSCE - 60% of completed tasks required to pass the practical part Theoretical exam; 80 test questions, 60% of positive answers required to pass the test Theoretical resit exam (II term); oral |
| seminar | credit | attendance at all seminar |
| clinical classes | booklet of practical skills, OSCE examination, classroom observation, oral answer, multiple choice test, written credit | attendance at all clinical classes |

Entry requirements

Credit of subjects: Materials and dental equipment 1/2 and 2/2, Preclinical integrated dentistry 1/2, and 2/2 and Physiology of the masticatory system. Student attendance is mandatory.

Pediatrics

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 7</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 6, clinical classes: 30</p> | <p>Number of ECTS points 3.0</p> |
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Goals

| | |
|----|---|
| C1 | The aim of the education is to familiarize students with the most important issues of developmental medicine, stages and factors conditioning the child's proper development as well as causes, clinical symptoms and the principles of diagnosis and treatment of the most frequent diseases of the childhood. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-----------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | classroom observation, test |

| | | | |
|------------------------------|---|-------|-----------------------------|
| W2 | health education issues | O.W3 | classroom observation, test |
| W3 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | classroom observation, test |
| W4 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | classroom observation, test |
| W5 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | classroom observation, test |
| W6 | symptoms of acute abdominal diseases, intoxication, infection and sepsis | E.W7 | classroom observation, test |
| W7 | symptoms of hepatitis, HIV infection and acquired immune deficiency syndrome (AIDS) in infectious and parasitic diseases | E.W8 | classroom observation, test |
| W8 | principles of immunization against infectious diseases in children and adults | E.W9 | classroom observation, test |
| W9 | life-threatening conditions | E.W18 | classroom observation, test |
| W10 | cases in which the patient should be referred to the hospital | E.W20 | classroom observation, test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | classroom observation, test |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation, test |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation, test |
| U4 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation, test |
| U5 | evaluate and describe the somatic and mental state of the patient | E.U2 | classroom observation, test |
| U6 | interpret the results of laboratory tests | E.U4 | classroom observation, test |
| U7 | identify normal and pathological structures and organs in additional imaging tests (X-ray, ultrasound, computed tomography - CT) | E.U5 | classroom observation, test |
| U8 | qualify the patient for vaccination | E.U7 | classroom observation, test |
| U9 | recognize the risk of life threat | E.U8 | classroom observation, test |
| U10 | describe and recognise signs of shock and acute circulatory failure | E.U9 | classroom observation, test |

| | | | |
|--|--|-------|-----------------------------|
| U11 | recognize nasopharyngeal diseases, their etiology and pathomechanism | E.U12 | classroom observation, test |
| U12 | diagnose diseases with enlarged lymph nodes of the neck and submandibular area and infectious diseases, with particular emphasis on lesions within the oral cavity | E.U18 | classroom observation, test |
| U13 | diagnose headaches, facial pains and neurological diseases of adults and children causing problems in dental practice | E.U11 | classroom observation, test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K5 | promote health-promoting behaviors | O.K6 | classroom observation |
| K6 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K7 | use objective sources of information | O.K7 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| e-learning | 10 |
| seminar | 6 |
| clinical classes | 30 |
| preparation for classes | 10 |
| information collection | 10 |
| preparation for examination | 8 |
| participation in examination | 1 |
| Student workload | Hours 75 |
| Workload involving teacher | Hours 46 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|---------------------------------------|
| 1. | 1. Nutrition of infants and older children | W1, W10, W2, U13, U4, U5, K5 | seminar, clinical classes |
| 2. | 2. Acute and chronic diarrhea. Selected issues in pediatric gastroenterology | W1, W10, W2, W3, W4, W6, W8, W9, U1, U2, U3, U4, U5, U6, U7, U8, K1, K2, K3, K4, K5, K6, K7 | seminar, clinical classes |
| 3. | 3. Introduction to issues of developmental medicine. Newborn, prematurity, dystrophy. | W1, W10, W2, W3, W4, W5, W7, W9, U1, U2, U4, U5, U6, U7, U8, U9 | e-learning, clinical classes |
| 4. | 4. Acute and chronic diseases of the nervous system | W1, W10, W3, W4, W7, W9, U1, U2, U4, U5, U6, U7, K1, K2, K3, K4, K5, K6, K7 | clinical classes |
| 5. | 5. The main and non-characteristic symptoms occurring in diseases of the hematopoietic system in children | W1, W2, W3, W4, W5, W9, U1, U12, U2, U3, U4, U5, U6, U7, U8, U9, K1 | clinical classes |
| 6. | 6. The basics of diagnosis of congenital heart diseases | W1, W10, W2, W3, W4, W5, W9, U1, U2, U3, U4, U5, U6, U7, U9 | clinical classes |
| 7. | 7. The rules of conduct in the most common kidney diseases in children | W1, W2, W3, W4, W5, W6, W9, U1, U2, U3, U4, U5, U6, U7, U9, K1, K2, K3, K4, K5, K6, K7 | clinical classes |
| 8. | 8. Infectious diseases of childhood | W1, W10, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U2, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | seminar, clinical classes |
| 9. | 9. Avitaminosis and the vitamin D deficiency rickets | W1, W2, W3, U2, U4, U6, U9, K1, K2, K3, K4, K5, K6, K7 | seminar, clinical classes |
| 10. | 10. Diseases of respiratory system in children | W1, W2, W3, W4, W5, W7, W9, U1, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7 | seminar, e-learning, clinical classes |
| 11. | 11. Emergencies in pediatric endocrinology | W1, W10, W3, W4, W9, U2, U5, U6, U9, K1, K2, K3, K4, K5, K6, K7 | e-learning, clinical classes |
| 12. | 12. Selected diseases requiring surgical treatment in children | W1, W10, W3, W4, W6, W9, U1, U2, U5, U6, U9, K1, K2, K3, K4, K5, K6, K7 | clinical classes |

Course advanced

Teaching methods:

clinical classes, e-learning, seminar, lecture

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|---|
| e-learning | test | obligation to complete e-learning lectures |
| seminar | classroom observation | the obligation to attend and pass seminars |
| clinical classes | classroom observation | the obligation to participate and complete bedsides |

Entry requirements

Completions of pre-clinical components i.e. pathophysiology, pathomorphology are obligatory

Basics of psychiatry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 7</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 5, classes: 10</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | - Gaining knowledge about basic psychopathology |
| C2 | - Learning how to properly conduct a thorough interview |
| C3 | - Learning about basis of patient-doctor relationship |
| C4 | - Learning how to conduct a proper diagnose basing on clinical data |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|--|-------|-----------------------|
| W1 | issues in the field of medicine and natural sciences – in the basic scope | O.W1 | credit |
| W2 | neurological effects of chronic drug use | E.W6 | credit |
| W3 | influence of nutrition in pregnancy and addiction of a pregnant woman on fetal development | E.W11 | credit |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | credit |
| U2 | inspire the learning process of others | O.U6 | credit |
| U3 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | credit |
| U4 | communicate and share knowledge with colleagues in a team | O.U8 | credit |
| U5 | plan diagnostic and therapeutic procedures for the most common adult diseases | E.U3 | credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | use objective sources of information | O.K7 | classroom observation |
| K4 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K6 | promote health-promoting behaviors | O.K6 | classroom observation |
| K7 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| seminar | 5 |
| classes | 10 |
| preparation for classes | 10 |
| Student workload | Hours 25 |
| Workload involving teacher | Hours 15 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 10 |
|---------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|------------------------------|--|------------------|
| 1. | Norms in psychiatry | W1, W2, W3, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | classes, seminar |
| 2. | Psychopathology | W1, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | classes, seminar |
| 3. | Psychiatry in clinical cases | W1, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | classes, seminar |

Course advanced

Teaching methods:

case study, brainstorm, discussion, problem solving method, case study method, presentation, seminar

| Activities | Examination methods | Credit conditions |
|------------|-----------------------|--|
| seminar | credit | Attendance to classes and the teacher's assessment required, no absence allowed. |
| classes | classroom observation | |

Dermatology with venereology and allergology in dentistry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 7</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 14, clinical classes: 26</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | During the course of courses in dermatology and venereology, the student should acquire knowledge and skills. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-------------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | practical examination, credit |
| W2 | the rules of conducting scientific research and spreading their results | O.W4 | practical examination, credit |

| | | | |
|--|---|-------|-------------------------------|
| W3 | cases in which the patient should be referred to the hospital | E.W20 | practical examination, credit |
| W4 | life-threatening conditions | E.W18 | practical examination, credit |
| W5 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | practical examination, credit |
| W6 | symptoms of hepatitis, HIV infection and acquired immune deficiency syndrome (AIDS) in infectious and parasitic diseases | E.W8 | practical examination, credit |
| W7 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | practical examination, credit |
| W8 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | practical examination, credit |
| Skills - Student can: | | | |
| U1 | perform differential diagnosis of the most common diseases of adults | E.U1 | practical examination |
| U2 | diagnose and treat skin diseases: infectious, allergic and sexually transmitted | E.U14 | practical examination |
| U3 | recognise dermatoses and collagenoses with symptoms in the oral mucosa | E.U16 | practical examination |
| U4 | perform basic medical procedures and procedures: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen therapy, assisted and substitute ventilation, placement of a oropharyngeal tube, preparation of the surgical field, hygienic and surgical hand disinfection, intravenous, intramuscular and subcutaneous injection, peripheral venous blood collection, collecting nasal, pharyngeal and dermal swabs, simple strip tests, measurement of blood glucose levels | E.U20 | practical examination |
| U5 | interpret the results of laboratory tests | E.U4 | practical examination |
| U6 | recognize the risk of life threat | E.U8 | practical examination |
| U7 | recognize nasopharyngeal diseases, their etiology and pathomechanism | E.U12 | practical examination |
| U8 | recognize skin cancers and precancerous conditions | E.U15 | practical examination |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |

| | | | |
|-----|--|-------|-----------------------|
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K6 | promote health-promoting behaviors | O.K6 | classroom observation |
| K7 | use objective sources of information | O.K7 | classroom observation |
| K8 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K9 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K10 | formulate opinions on the various aspects of the professional activity | O.K10 | classroom observation |
| K11 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 14 |
| clinical classes | 26 |
| case analysis | 10 |
| Student workload | Hours 50 |
| Workload involving teacher | Hours 40 |
| Practical workload | Hours 36 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------------------|
| 1. | During the course of courses in dermatology and venereology, the student should acquire knowledge and skills. | W1, W2, W3, W4, W5, W6, W7, W8, U1, U2, U3, U4, U5, U6, U7, U8, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

Course advanced

Teaching methods:

case study, textual analysis, brainstorm, classes / practicals, clinical classes, demonstration, discussion, presentation, group work, lecture, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| e-learning | credit | The decision on the threshold for passing the test is made each time by the Head of the Department of Dermatology, taking into account the results obtained by all students. The decision on the form and date of the second date of the examination is made by the Head of the Department of Dermatology, taking into account the number of persons who did not obtain credit in the written test. |
| clinical classes | practical examination, classroom observation | The decision on the threshold for passing the test is made each time by the Head of the Department of Dermatology, taking into account the results obtained by all students. The decision on the form and date of the second date of the examination is made by the Head of the Department of Dermatology, taking into account the number of persons who did not obtain credit in the written test. |

Entry requirements

Classes in dermatology and venereology include exercises and lectures that take place in the Department of Dermatology, ul. Skawińska 8. Participation in the exercises is compulsory. It is allowed to be absent from one of the practice classes in the whole block. Students are required to prepare for the exercises with exercises and to actively participate in them. In the event of more than one absence, the assistant must be compensated for in the manner prescribed by the assistant. On the last day of the course there is a practical credit in dermatology and venereology. Absence may not be taken advantage of in the last class of the course for which credit is being given.

Orthodontics

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 7</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 6, seminar: 12, clinical classes: 60</p> | <p>Number of ECTS points 5.0</p> |
|-------------------------------------|--|---|

| | | |
|--------------------------------------|--|---|
| <p>Period Semester 10</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 18, clinical classes: 95</p> | <p>Number of ECTS points 8.0</p> |
|--------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Teaching craniofacial development and occlusion development in the context of malocclusion and orthodontic diagnostics. |
| C2 | Teaching the prevention of acquired malocclusion, interceptive procedures and early treatment of uncomplicated cases using so-called simple therapeutic procedures (preventive procedures). |
| C3 | Knowledge of indications for orthodontic treatment. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | occlusal normal conditions at various stages of individual development and deviations from norms | F.W1 | self-assessment, test, credit |
| W2 | principles of preventive and therapeutic management in diseases of the masticatory organ in various periods of development | F.W2 | self-assessment, test, credit |
| W3 | principles of construction and operation of mobile and fixed orthodontic appliances | F.W17 | self-assessment, test, credit |
| W4 | principles of radiological diagnosis | F.W18 | self-assessment, test, credit |
| Skills - Student can: | | | |
| U1 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, self-assessment, test |
| U2 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, self-assessment, test |
| U3 | diagnose, differentiate and classify malocclusions | F.U18 | booklet of practical skills, self-assessment, test |
| U4 | provide assistance in the event of damage to the orthodontic appliance | F.U19 | booklet of practical skills, self-assessment, test |
| U5 | make simple orthodontic appliances | F.U20 | booklet of practical skills, self-assessment, test |
| U6 | carry out treatment to prevent malocclusion during the period of deciduous teeth and early replacement of teeth | F.U21 | booklet of practical skills, self-assessment, test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | group assessment, self-assessment |
| K2 | to be guided by the well-being of a patient | O.K2 | group assessment, self-assessment |
| K3 | respect medical confidentiality and patients' rights | O.K3 | group assessment, self-assessment |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | group assessment, self-assessment |
| K5 | promote health-promoting behaviors | O.K6 | group assessment, self-assessment |
| K6 | use objective sources of information | O.K7 | group assessment, self-assessment |
| K7 | formulate conclusions from own measurements or observations | O.K8 | group assessment, self-assessment |
| K8 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | group assessment, self-assessment |

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 6 |
| seminar | 12 |
| clinical classes | 60 |
| Student workload | Hours 78 |
| Workload involving teacher | Hours 78 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| e-learning | 10 |
| seminar | 18 |
| clinical classes | 95 |
| Student workload | Hours 123 |
| Workload involving teacher | Hours 123 |
| Practical workload | Hours 95 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|----------------|-----------------------------|------------|
|-----|----------------|-----------------------------|------------|

| | | | |
|----|--|--|------------------|
| 1. | Introduction to the basics of orthodontics. Configuration of the norm and malocclusion. Indications for orthodontic treatment. Differential diagnosis. Orthodontics and general dentistry: treatment of adult patients. Orthodontics and orthognathic surgery. The importance of the function of the masticatory system in orthodontics. The specificity of orthodontic treatment in patients after cleft palate and / or lip. | W1, W2, W3, W4, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6, K7, K8 | e-learning |
| 2. | Classification of dental-occlusal relations. Diagnostics of malocclusion. History of orthodontics. Concepts of growth and development. Pre and postnatal period of growth and development. Growth intensity and growth potential. Assessment of bone and dental age. Etiology of malocclusion. Clinical examination of the patient. Study models assessment. Imaging diagnostics used in orthodontics. Cephalometric analysis. Preventive and therapeutic appliances. Prevention and health education in orthodontics. Methods of orthodontic treatment. Interdisciplinary cooperation. Cleft jaws. Genetically conditioned defects. | W1, W2, W3, W4, U1, U2, U3, U4, U5, U6 | seminar |
| 3. | Clinical examination of an orthodontic patient: medical documentation. Models, radiographs, dental maturity. Morphological analysis of models. Biological assessment of occlusion. Recognizing the symptoms of malocclusion in three dimensions. Virtual diagnostic models. | U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6, K7, K8 | clinical classes |

Course advanced

Semester 7

Teaching methods:

clinical classes, seminar, lecture

| Activities | Examination methods | Credit conditions |
|------------------|-----------------------------|--|
| e-learning | test | The presented issues included in the final test with a 65% threshold. |
| seminar | test | The presented issues included in the final test with a 65% threshold. |
| clinical classes | booklet of practical skills | A completed booklet of practical skills in accordance with the requirements provided by the Dean's Office. |

Semester 10

Teaching methods:

clinical classes, seminar, lecture

| Activities | Examination methods | Credit conditions |
|------------------|---------------------|-------------------|
| e-learning | credit | graded exam |
| seminar | self-assessment | graded exam |
| clinical classes | group assessment | graded exam |

Entry requirements

Completed: Occlusion and function of the jaws.

Pediatric dentistry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
|---|---|

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| <p>Period Semester 7</p> | <p>Examination credit</p> <p>Activities and hours seminar: 12, clinical classes: 104</p> | <p>Number of ECTS points 4.0</p> |
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| <p>Period Semester 10</p> | <p>Examination examination</p> <p>Activities and hours seminar: 18, clinical classes: 90</p> | <p>Number of ECTS points 7.0</p> |
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Goals

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| C1 | 1. Transfer of knowledge in the field of dentistry of developmental age with particular emphasis on morphological and functional differences of primary and permanent dentition. Discussing the principles of working with a child as a patient. |
| C2 | 2. To make students aware of problems related to the specifics of prevention, diagnosis and treatment of oral diseases in patients of developmental age, taking into account particular age groups. |
| C3 | 3. Presentation of the principles of preventive and therapeutic treatment of caries in developmental patients. Discussing the issue of non-carious lesions in this age group. |
| C4 | 4. To acquaint students with the specifics of endodontic treatment of milk teeth and permanent immature teeth, including the selection of methods, materials and instruments. |
| C5 | 5. Presentation of the rules of conduct in the case of dental trauma in patients of developmental age, including first aid. |
| C6 | 6. To familiarize with the most common irregularities in the morphological structure of teeth, including complex defects. |
| C7 | 7. Acquaintance with pharmacological and non-pharmacological methods of bearing anxiety and pain in children. Principles of pharmacotherapy, use of general anesthesia in pediatric dentistry. |
| C8 | 8. Presentation of the principles of x-ray diagnostics in pediatric dentistry including radiological protection. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
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| Knowledge - Student knows and understands: | | | |
| W1 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W2 | morphology of dental chambers and principles of endodontic treatment and instruments used in this treatment | F.W7 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W3 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W4 | principles of preventive and therapeutic management in diseases of the masticatory organ in various periods of development | F.W2 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W5 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W6 | therapeutic methods of reducing and enduring pain as well as reducing anxiety and stress | F.W15 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |

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| W7 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W8 | prevention of oral diseases | F.W21 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W9 | health education issues | O.W3 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W10 | organization of dentist practice and management principles in healthcare | O.W5 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W11 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W12 | issues in dentistry - at an advanced level | O.W2 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W13 | occlusal normal conditions at various stages of individual development and deviations from norms | F.W1 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W14 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W15 | indications and contraindications for performing procedures in the field of cosmetic dentistry | F.W11 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W16 | basics of antibiotic therapy and antibiotic resistance | F.W13 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W17 | methods of rehabilitation of the masticatory organ | F.W14 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W18 | principles of radiological diagnosis | F.W18 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| W19 | rules for dealing with masticatory organ tissue diseases, injuries to teeth and jawbones | F.W22 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| Skills - Student can: | | | |

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| U1 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U2 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U3 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U4 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U5 | proceed in case of general and local complications during and after dental procedures | F.U9 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U6 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U7 | assess the risk of caries using bacteriological tests and saliva tests | F.U14 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U8 | determine the treatment of diseases of tissues of the stomatognathic system | F.U15 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U9 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U10 | carry out treatment to prevent malocclusion during the period of deciduous teeth and early replacement of teeth | F.U21 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U11 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U12 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U13 | plan treatment for dental problems | O.U3 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |

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| U14 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U15 | interpret the results of additional tests and consultations | F.U6 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U16 | formulate research problems in the field of dentistry | F.U12 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| U17 | describe dental and pantomographic images | F.U23 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| K2 | respect medical confidentiality and patients' rights | O.K3 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| K3 | promote health-promoting behaviors | O.K6 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| K4 | to be guided by the well-being of a patient | O.K2 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| K5 | formulate conclusions from own measurements or observations | O.K8 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |
| K6 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practical skills, theoretical colloquiums, classroom observation, credit |

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-------------------------|-----------------|
| seminar | 12 |
| clinical classes | 104 |
| preparation for classes | 1 |

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| preparation for colloquium | 10 |
| Student workload | Hours 127 |
| Workload involving teacher | Hours 116 |
| Practical workload | Hours 104 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|---------------------|
| seminar | 18 |
| clinical classes | 90 |
| preparation for classes | 2 |
| Student workload | Hours 110 |
| Workload involving teacher | Hours 108 |
| Practical workload | Hours 90 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
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| 1. | <p>Semester 7</p> <p>Topic: Physiology of child development</p> <ul style="list-style-type: none"> - histological differences in the structure of primary and permanent teeth - resorption of mineralized tooth tissues (roots of primary teeth) - tooth eruption mechanism - eruption of primary and permanent teeth - teething symptoms - primary teeth anatomy - physiology and morphology of permanent teeth with an unformed and formed root | <p>W1, W11, W13, W14, W18, W19, W4, W5, W6, W8, U1, U11, U12, U17, U2, U6, U8, K1, K2, K3, K5</p> | <p>seminar, clinical classes</p> |
| 2. | <p>Semester 7</p> <p>Topic: The child as a patient in the dental office.</p> <ul style="list-style-type: none"> - physical and psychosocial development of the child - child's behavior in the dentist's office (without scale) - dental anxiety - communication with the child and his guardians - first visit of the child in the dentist's office - behavioral methods of shaping the child's behavior <p>Pharmacological premedication and analgesic treatment</p> <ul style="list-style-type: none"> - painkillers - local anesthesia - inhalation sedation with nitrous oxide - general anesthesia | <p>W11, W13, W4, W6, W7, W8, W9, U1, U11, U12, U13, U2, U3, U6, U9, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 3. | <p>Semester 7</p> <p>Topic: Dental examination of the child</p> <ul style="list-style-type: none"> - family and general medical history - dental history - clinical examination - course of visits and principles of treatment planning - additional tests in pediatric dentistry <p>The specificity of radiological diagnostics in developmental age dentistry</p> <ul style="list-style-type: none"> - legal regulations regarding dental radiology - diagnostic imaging in pediatric dentistry | <p>W10, W11, W13, W18, W3, W4, W6, W8, W9, U1, U11, U13, U14, U15, U17, U2, U3, U4, U6, U7, K1, K2, K3</p> | <p>seminar</p> |
| 4. | <p>Semester 7</p> <p>Topic: Etiology and epidemiology of tooth decay in developmental age. The caries process. Caries in children.</p> <ul style="list-style-type: none"> - etiological factors of dental caries - caries indicators, teeth status indicators (PUFA) - frequency and intensity of caries disease - caries disease epidemiology - caries of primary teeth - caries of permanent immature teeth | <p>W11, W13, W14, W19, W3, W4, W6, W7, W8, U1, U10, U11, U12, U16, U2, U5, U6, U7, U8, U9, K1</p> | <p>seminar, clinical classes</p> |

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| 5. | <p>Semester 7</p> <p>Topic: Clinical division and diagnosis of dental caries. Materials used to treat caries disease in children.</p> <ul style="list-style-type: none"> - caries process - clinical division of caries, classifications - caries diagnosis, methods of diagnosing early caries lesions, visual methods, radiological methods, methods based on optical phenomena (FOTI, DI-FOTI, QLF), electrical methods - materials used in pediatric dentistry, prefabricated steel crowns | <p>W1, W14, W19, W3, W4, W5, W7, W8, W9, U1, U10, U11, U15, U16, U2, U3, U4, U6, U7, U8, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |
| 6. | <p>Semester 7</p> <p>Topic: Therapeutic management in caries disease.</p> <ul style="list-style-type: none"> - treatment planning - caries risk assessment using selected methods - salivary tests, dmf, DMF indicators - ICDA's - dental treatment depending on the level of caries risk | <p>W1, W12, W13, W14, W15, W19, W3, W4, W6, W7, W8, W9, U1, U10, U11, U12, U13, U15, U16, U2, U4, U6, U7, U8, U9, K1, K2, K3, K4</p> | <p>seminar, clinical classes</p> |
| 7. | <p>Semester 7</p> <p>Topic: Non-invasive treatment of caries lesions. Operative treatment (invasive).</p> <ul style="list-style-type: none"> -remineralization, fluorine compounds, calcium and phosphate ions - minimally intervention dentistry - stripping, impregnation, povidone iodine - preparation of cavities for adhesive and non-adhesive restorations - deep caries treatment - methods of hard tissue reconstruction - minimally invasive methods of treatment of carious lesions (ART, PRR-I, PRR-II infiltration) | <p>W1, W10, W12, W14, W15, W19, W3, W4, W5, W6, W7, W8, U1, U10, U12, U13, U16, U2, U3, U4, U5, U6, U8, U9, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 8. | <p>Semester 7</p> <p>Topic: Caries prophylaxis in children.</p> <ul style="list-style-type: none"> - caries prevention - primary primary prevention, primary prevention, secondary prevention - oral hygiene - fluoride prophylaxis - non-fluoride prevention of tooth decay - limiting the influence of the bacterial factor of caries disease:mechanical biofilm removal, use of chemical methods | <p>W1, W10, W11, W3, W4, W5, W8, W9, U1, U10, U12, U13, U16, U2, U4, U6, U7, K1, K3, K4</p> | <p>seminar</p> |
| 9. | <p>Semester 7</p> <p>Topic: Lesions of hard tissues of non-cariou origin.</p> <ul style="list-style-type: none"> - abrasion - attrition - demastication - abfraction - erosion | <p>W1, W14, W17, W4, W6, W7, W8, W9, U1, U11, U12, U14, U16, U2, U3, U4, U5, U6, U8, U9, K1, K2</p> | <p>seminar, clinical classes</p> |
| 10. | <p>Semester 7</p> <p>Topic: Pathologies of craniofacial development.</p> <ul style="list-style-type: none"> - Causes of developmental abnormalities of the masticatory organ - Disorders of tooth eruption - Developmental disorders of the number and anatomical structure of teeth: reducing and increasing the number of teeth tooth size disorders tooth shape disorders | <p>W1, W10, W12, W13, W15, W17, W19, W2, W4, W5, W9, U1, U10, U15, U17, U2, U3, U4, U5, U6, U8, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 11. | <p>Semester 7</p> <p>Topic: Developmental defects of mineralized teeth tissues.</p> <ul style="list-style-type: none"> - enamel developmental disorders caused by environmental factors - enamel developmental abnormalities caused by genetic factors - tooth discoloration - dentine development disorders: regional odontodysplasia, dentin dysplasia, dentinogenesis imperfecta - cement development disorders | <p>W1, W12, W13, W14, W15, W17, W18, W19, W4, W5, W8, W9, U1, U2, U3, U4, U6, U8, K1, K2, K3, K4</p> | <p>seminar</p> |
| 12. | <p>Semester 7</p> <p>Topic: Oral cavity in selected genetic syndromes.</p> <ul style="list-style-type: none"> - ectodermal dysplasia - cleido-cranial syndrome - osteogenesis imperfecta - Down syndrome - calcium phosphate metabolism disorders | <p>W1, W12, W13, W14, W15, W17, W18, W19, W4, W5, W9, U1, U13, U14, U15, U17, U2, U3, U6, U8, K1, K2, K4</p> | <p>seminar, clinical classes</p> |
| 13. | <p>Semester 9</p> <p>Topic: Specificity of the pulp of primary and permanent immature teeth.</p> <ul style="list-style-type: none"> - characteristics of the pulp of primary and permanent teeth - features of primary and permanent teeth that play a role in the etiopathogenesis of pulpopathy and affect therapeutic management - pathogenesis of pulp diseases: harmful factors, pulpitis, pulp necrosis, osklerotic changes, proliferative pulpitis, inflammatory internal resorption, exchange internal resorption, obliteration of the tooth cavity, pseudotomas | <p>W1, W12, W13, W14, W18, W19, W2, W3, W4, W6, U1, U14, U15, U17, U2, U4, U6, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 14. | <p>Semester 9</p> <p>Topic: Diagnostics of pulpopathy and changes in periapical tissues. Classifications of pulp diseases.</p> <ul style="list-style-type: none"> - medical history - physical examination for pulp diseases - pulp vitality tests - assessment of the condition of periapical tissues - radiological examination in the diagnosis of pulp and periapical tissues diseases - classifications of pulp diseases of primary and permanent teeth - differentiation of acute and chronic inflammation of periodontal tissues diseases | <p>W1, W12, W14, W16, W18, W19, W2, W3, W5, W6, W7, U1, U13, U14, U17, U2, U3, U4, U5, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |
| 15. | <p>Semester 9</p> <p>Topic: General principles and medicaments used in endodontic treatment in children.</p> <ul style="list-style-type: none"> - methods of treating pulp diseases: vital, mortal - drugs and medicaments used in endodontics of developmental age: auxiliary materials, materials used to cover the pulp or fill root canals in primary and permanent teeth | <p>W1, W12, W14, W16, W18, W19, W2, W4, W5, W6, W7, U1, U13, U14, U15, U17, U2, U3, U4, U5, U6, U8, U9</p> | <p>seminar, clinical classes</p> |
| 16. | <p>Semester 9</p> <p>Topic: Treatment of pulp disease in primary teeth-part 1.</p> <ul style="list-style-type: none"> - indications and contraindications for endodontic treatment of primary teeth - intravital methods: indirect pulp treatment, direct pulp capping, pulp amputation (indications, technique, materials used) | <p>W1, W10, W13, W16, W2, W3, W4, W6, W7, U1, U12, U14, U15, U17, U2, U3, U4, U5, U8, U9, K1, K2, K4</p> | <p>seminar, clinical classes</p> |
| 17. | <p>Semester 9</p> <p>Topic: Treatment of pulp disease in primary teeth-part 2.</p> <ul style="list-style-type: none"> - intravital pulpectomy (indications and contraindications, technique, materials used) - mortal methods: pulpotomy after devitalization, pulp extirpation (when allowed, technique, materials used) | <p>W1, W14, W18, W19, W2, W4, W5, W6, U1, U2, U4, U6, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 18. | <p>Semester 9</p> <p>Topic: Specificity in the treatment of pulp diseases of permanent immature teeth. Biological treatment.</p> <ul style="list-style-type: none"> - indirect pulp treatment method (one- and two-stage treatment), (indications, technique, materials used) - direct pulp capping method (indications, technique, materials used) - partial intravital amputation (indications, contraindications, technique, materials used) - total intravital amputation (indications, contraindications, technique, materials used) - intravital pulp extirpation (indications, technique, materials used) | <p>W1, W12, W13, W18, W19, W2, W3, W4, W5, W6, W7, U1, U13, U14, U17, U2, U3, U4, U5, U6, U9, K1, K2, K4</p> | <p>seminar, clinical classes</p> |
| 19. | <p>Semester 9</p> <p>Topic: Treatment of pulp necrosis of permanent immature teeth. Apexification methods.</p> <ul style="list-style-type: none"> - apexification vis apexogenesis - apexification using Ca (OH)₂ based pastes - apexification using MTA or Biodentine - endodontic regenerative treatment - radiological assessment of the quality of endodontic treatment | <p>W1, W16, W18, W19, W2, W3, W5, W7, U1, U14, U15, U17, U2, U3, U4, U5, U6, U8, K1, K2, K4, K5, K6</p> | <p>seminar, clinical classes</p> |
| 20. | <p>Semester 9</p> <p>Topic: Traumatic dental injuries- introduction.</p> <ul style="list-style-type: none"> - etiology of traumatic dental injuries - epidemiology of traumatic dental injuries - classification of traumatic dental injuries - diagnosis and management of abused children - intraoral and peroral jewelry (piercing) | <p>W11, W14, W18, W19, W4, W6, W9, U1, U11, U14, U15, U17, U2, U3, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 21. | <p>Semester 9</p> <p>Topic: Examination of the patient after mechanical trauma.</p> <ul style="list-style-type: none"> - general medical and dental interview - Extra-oral clinical examination of the patient after injury - Clinical intraoral examination of the patient after injury - Radiological examination of the patient after injury - Planning the treatment of the patient after injury <p>Rules of conduct in traumatic dental injuries.</p> | <p>W1, W13, W14, W18, W19, W4, W6, W9, U1, U13, U14, U16, U17, U2, U4, U6, K1, K2, K5, K6</p> | <p>seminar, clinical classes</p> |
| 22. | <p>Semester 10</p> <p>Topic: Traumatic dental injuries of permanent teeth (part 1).</p> <p>Diagnosis and treatment in post-traumatic injuries of permanent teeth according to Andreasen.</p> <ul style="list-style-type: none"> enamel crack (infracture) enamel fracture enamel- dentin fracture uncomplicated enamel- dentin fracture complicated crown- root fracture uncomplicated crown- root fracture complicated root fracture Alveolar fracture | <p>W1, W12, W13, W14, W16, W18, W19, W6, W7, U1, U11, U14, U15, U17, U2, U3, U6, U9, K1, K2, K6</p> | <p>seminar, clinical classes</p> |

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| 23. | <p>Semester 10</p> <p>Topic: Traumatic dental injuries of permanent teeth (part 2).</p> <p>Diagnosis and treatment in post-traumatic injuries of permanent teeth according to Andreasen.</p> <p>-concussion (shock)</p> <p>- subluxation</p> <p>- extrusion</p> <p>- intrusion</p> <p>lateral luxation</p> <p>-</p> | <p>W1, W12, W13, W16, W18, W19, W2, W5, W6, W7, U1, U11, U14, U15, U17, U2, U3, U4, U6, U8, U9, K1, K2, K4, K5, K6</p> | <p>seminar, clinical classes</p> |
| 24. | <p>Semester 10</p> <p>Topic: Traumatic dental injuries of permanent teeth (part 3). Diagnostics, treatment procedures taking into account the degree of tooth root development.</p> <p>- total luxation (avulsion)</p> <p>Teeth immobilization after injury.</p> | <p>W1, W12, W13, W14, W16, W17, W18, W19, W3, W4, W5, W6, W7, U1, U14, U15, U17, U2, U3, U4, U5, U6, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |
| 25. | <p>Semester 10</p> <p>Topic: Traumatic dental injuries of primary teeth (part 1).</p> <p>Diagnosis and treatment in traumatic injuries of primary teeth according to Andreasen.</p> <p>enamel crack (infracture)</p> <p>enamel fracture</p> <p>enamel- dentin fracture uncomplicated</p> <p>enamel- dentin fracture complicated</p> <p>crown- root fracture without pulp involvement</p> <p>crown- root fracture with pulp involvement</p> <p>root fracture</p> <p>Alveolar fracture</p> | <p>W1, W12, W13, W14, W18, W19, W3, W4, W5, W6, W7, U1, U13, U15, U16, U17, U2, U3, U6, U9, K1, K2, K3, K4</p> | <p>seminar, clinical classes</p> |

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| 26. | <p>Semester 10</p> <p>Topic: Traumatic dental injuries of primary teeth (part 2). Diagnosis and treatment.</p> <p>concussion</p> <p>subluxation</p> <p>extrusion</p> <p>lateral luxation</p> <p>intrusion</p> <p>total luxation</p> <p>Complications after primary teeth injuries.</p> | <p>W1, W12, W13, W16, W18, W19, W3, W4, W6, W7, U1, U15, U17, U2, U3, U4, U6, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |
| 27. | <p>Semester 10</p> <p>Topic: Damage to the gums and oral mucosa as a result of injury. Diagnostics and procedures in the aftermath of post-traumatic permanent tooth damage:</p> <ol style="list-style-type: none"> 1. Complications after dental crown injuries. 2. Complications after tooth root fractures. 3. Complications after tooth dislocation: <ul style="list-style-type: none"> - pulp necrosis - resorption: internal and external - tooth cavity obliteration - inhibition of root development - decoronation <p>Prevention of traumatic dental injuries.</p> <ul style="list-style-type: none"> - Primary, secondary and tertiary prevention - Prevention of trauma to teeth during sports. Extraoral and intraoral protectors. | <p>W1, W10, W12, W13, W14, W18, W19, W4, W6, W7, U1, U13, U14, U16, U17, U2, U3, U6, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 28. | <p>Semester 10</p> <p>Topic: Dental care for children with disabilities and with systemic diseases (part 1).</p> <p>1. Oral diseases and general health</p> <p>The potential impact of infectious lesions on general health</p> <p>Dental management in chronically ill patients</p> <p>General principles of antibiotic prophylaxis before surgery at risk of bacteraemia</p> <p>2. Patient with physical and intellectual disabilities with particular emphasis:</p> <p>Down Syndrome, Cerebral Palsy and Sensory Disability.</p> <p>-</p> | <p>W10, W11, W12, W14, W16, W3, W7, W8, W9, U1, U11, U13, U14, U15, U2, U3, U4, U6, U7, U9, K1, K2, K4, K6</p> | <p>seminar, clinical classes</p> |
| 29. | <p>Semester 10</p> <p>Topic: Pediatric patient with systemic diseases: oral cavity image and dental management (part 2).</p> <p>Congenital heart disease</p> <p>infective endocarditis</p> <p>leukemias</p> <p>Anti cancer treatment</p> <p>Immunodeficiency</p> <p>Graft versus Host Disease (GvHD)</p> <p>Gastroesophageal reflux disease</p> <p>Inflammatory bowel disease</p> <p>Diabetes</p> <p>Hemorrhagic diathesis: Willebrand disease, hemophilia</p> | <p>W11, W12, W13, W14, W16, W19, W4, W6, W8, W9, U1, U11, U12, U13, U14, U15, U2, U3, U4, U6, U7, U8, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |

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| 30. | <p>Semester 10</p> <p>Topic: Pediatric patient with systemic diseases: oral cavity image and dental management (part 3).</p> <p>Hyperthyroidism Hypothyroidism Hyperparathyroidism Hypoparathyroidism Pituitary overactive Pituitary insufficiency Adrenal insufficiency Adrenal hyperfunction</p> <p>Acute renal failure Chronic renal failure Nephrotic Syndrome Bronchial asthma Cystic fibrosis Epilepsy</p> | <p>W11, W12, W14, W16, W3, W4, W6, W8, W9, U1, U13, U14, U15, U2, U3, U4, U6, U7, U8, K1, K2, K3, K4, K6</p> | <p>seminar, clinical classes</p> |
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Course advanced

Semester 7

Teaching methods:

clinical classes, seminar

| Activities | Examination methods | Credit conditions |
|------------------|-----------------------------|---|
| seminar | theoretical colloquiums | Positive assessment of the resultant grades: from seminars, clinical classes, opinion of the assistant and test colloquium. |
| clinical classes | booklet of practical skills | 1. Booklet of completed procedures, confirmed by the assistant's signature. 2. Student's assessment during classes including: theoretical knowledge and its application in practice, attitude towards the patient, active participation in classes. |

Semester 10

Teaching methods:

clinical classes, seminar

| Activities | Examination methods | Credit conditions |
|------------------|-----------------------|---|
| seminar | credit | Positive grades from seminars. |
| clinical classes | classroom observation | Presence on clinical classes and opinion of the assistant based on components: correctness of procedures, ability to apply theoretical knowledge in practice, attitude towards the patient. |

Entry requirements

mandatory presence

Sensory organ diseases with elements of neurology

Educational subject description sheet

Basic information

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|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|--|---|

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| <p>Period Semester 7</p> | <p>Examination -</p> <p>Activities and hours seminar: 20, clinical classes: 20</p> | <p>Number of ECTS points 0.0</p> |
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| <p>Period Semester 8</p> | <p>Examination examination</p> <p>Activities and hours clinical classes: 30, e-learning: 10</p> | <p>Number of ECTS points 3.0</p> |
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Goals

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|-----|--|
| C1 | - familiarizing the students with issues concerning diseases of the ear, nose, paranasal sinuses, pharynx, larynx and salivary glands |
| C2 | - knowledge of diseases of the nervous system that can cause ailments and symptoms in the facial skeleton |
| C3 | - the ability to conduct a neurological examination in order to evaluate craniofacial diseases |
| C4 | - the ability to provide emergency support in sudden nervous system symptoms |
| C5 | - knowledge of neurological diseases that may influence preventive/surgical treatment in the oral cavity |
| C6 | - creating proper ethical attitudes and the ability to communicate with patients and colleagues |
| C7 | - teaching the students how to recognise the most vital symptoms of laryngological diseases |
| C8 | - providing the knowledge on current treatment methods of the most serious laryngological diseases |
| C9 | - familiarizing the students with the principles of procedure in otolaryngological emergencies |
| C10 | - The aim of education is gaining knowledge and skills concerning diagnosis of ocular diseases, providing first aid in eye injuries, diagnosis of symptoms that require immediate specialist help and a proper choice of diagnostic tests with a interpretation of ophthalmological referral results |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---|
| Knowledge - Student knows and understands: | | | |
| W1 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | written examination, multiple choice test |
| W2 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | written examination, multiple choice test |
| W3 | life-threatening conditions | E.W18 | written examination, multiple choice test |
| W4 | cases in which the patient should be referred to the hospital | E.W20 | written examination, multiple choice test |
| W5 | diagnostic principles of eye diseases, including eye injuries | E.W13 | written examination, multiple choice test |
| W6 | the role of focus-related infections in eye diseases | E.W14 | written examination, multiple choice test |
| W7 | neurological effects of chronic drug use | E.W6 | written examination, multiple choice test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | written examination, multiple choice test |
| U2 | perform differential diagnosis of the most common diseases of adults | E.U1 | written examination, multiple choice test |

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| U3 | evaluate and describe the somatic and mental state of the patient | E.U2 | written examination, multiple choice test |
| U4 | plan diagnostic and therapeutic procedures for the most common adult diseases | E.U3 | written examination, multiple choice test |
| U5 | recognize the symptoms of brain injuries and cerebrovascular diseases, dementia and consciousness disorders | E.U10 | written examination, multiple choice test |
| U6 | diagnose headaches, facial pains and neurological diseases of adults and children causing problems in dental practice | E.U11 | written examination, multiple choice test |
| U7 | recognize the risk of life threat | E.U8 | written examination, multiple choice test |
| U8 | recognize diseases related to smoking addiction, alcoholism and other addictions | E.U17 | written examination, multiple choice test |
| U9 | diagnose diseases with enlarged lymph nodes of the neck and submandibular area and infectious diseases, with particular emphasis on lesions within the oral cavity | E.U18 | written examination, multiple choice test |
| U10 | communicate and share knowledge with colleagues in a team | O.U8 | written examination, multiple choice test |
| U11 | discuss and diagnose selected diseases of the optical and protective system of the eye | E.U19 | written examination, multiple choice test |
| U12 | provide preliminary diagnosis of neoplastic lesions in the nose, throat and larynx | E.U13 | written examination, multiple choice test |
| U13 | recognize nasopharyngeal diseases, their etiology and pathomechanism | E.U12 | written examination, multiple choice test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | written examination, multiple choice test |
| K2 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | written examination, multiple choice test |

Calculation of ECTS points

Semester 7

| Activity form | Activity hours* |
|-------------------------|--------------------|
| seminar | 20 |
| clinical classes | 20 |
| preparation for classes | 10 |
| Student workload | Hours 50 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 40 |
| Practical workload | Hours 20 |

* hour means 45 minutes

Semester 8

| Activity form | Activity hours* |
|-----------------------------------|------------------------|
| clinical classes | 30 |
| e-learning | 10 |
| Student workload | Hours 40 |
| Workload involving teacher | Hours 40 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|---|--|---------------------------------------|
| 1. | Stroke | W1, W3, W4, U1, U2, U5, K1 | e-learning, clinical classes |
| 2. | Tonsils and adenoids diseases | W1, W2, W3, W4, U1, U12, U13, U2, U3, U4, U7, K1 | seminar, clinical classes |
| 3. | Headaches | W1, W2, W3, W4, U1, U2, U3, U6, K1 | seminar, e-learning, clinical classes |
| 4. | Epilepsy | W1, W2, W3, W4, U1, U2, U3, U5, K1 | clinical classes |
| 5. | Degenerative brain diseases | W1, W2, W4, U1, U2, U3, U4, U5, K1 | e-learning, clinical classes |
| 6. | Selected diseases of the nervous system with symptoms in the facial skeleton and oral cavity | W1, W2, W3, W4, W7, U1, U2, U3, U6, K1 | seminar, clinical classes |
| 7. | History taking and neurological examination with an emphasis on evaluation of cranial nerves (3 h) | W1, W2, U1, U2, U3, K1 | e-learning, clinical classes |
| 8. | Clinical evaluation of patients with symptoms regarding cranial nerves (neuropathy, damage to the brain stem) (4 h) | W1, W2, W3, W4, U1, U2, U3, U5, K1 | clinical classes |
| 9. | Clinical evaluation of patients with neurological symptoms in the head (myasthenia gravis, myopathies, motor neurone disease, selected diseases of the extrapyramidal system) (4 h) | W1, W2, W3, W4, U1, U2, U3, U4, K1 | e-learning, clinical classes |

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| 10. | Supportive procedures in life-threatening situations and in acute diseases of the nervous system (stroke, epileptic seizure, status epilepticus, cerebral oedema, syncope, acute pain syndromes) - clinical evaluation and discussion (4 h) | W1, W2, W3, W4, U1, U2, U3, U5, U6, K1 | clinical classes |
| 11. | Malignant tumors of the oral cavity, pharynx and larynx. | W1, W2, W3, W4, U1, U2, U3, U4, U7, U8, U9, K1 | seminar, clinical classes |
| 12. | Ear diseases and their treatment | W1, W2, W4, U1, U2, U3, U4, K1 | seminar, clinical classes |
| 13. | Diseases of the nose and paranasal sinuses | W1, W2, W3, W4, U1, U2, U3, U4, U7, K1 | seminar, clinical classes |
| 14. | Diseases of the salivary glands | W1, W2, U1, U2, U3, U4 | seminar, clinical classes |
| 15. | Emergencies in otolaryngology | W1, W3, W4, U1, U2, U3, U4, U7, K1 | seminar, clinical classes |
| 16. | Lectures: include revision of the information in the field of ocular anatomy and physiology, discussing main eye diseases that result in so called "red eye", diseases that cause sudden decrease of vision (acute ophthalmological condition) and chronic ophthalmological diseases that also result in loss of vision (cataract, glaucoma, macular disease). Practicals: include practical classes with examining patients suffering from various ophthalmological diseases using slit-lamp microscopes and ophthalmic eye speculums. Furthermore, the students are taught practical procedures in case of eye injuries, eyelid inversion, rinsing the conjunctival sac and applying an eye dressing. | W5, W6, U10, U11, K2 | clinical classes |

Course advanced

Semester 7

Teaching methods:

textual analysis, classes / practicals, clinical classes, demonstration, discussion, educational film, problem solving method, case study method, group work, assignments solving, seminar, Mentoring

| Activities | Examination methods | Credit conditions |
|------------------|---------------------|-------------------|
| seminar | written examination | min. 60% pts. + 1 |
| clinical classes | written examination | min. 60% pts. + 1 |

Semester 8

Teaching methods:

case study, brainstorm, classes / practicals, clinical classes, discussion, educational film, case study method, presentation, group work, seminar, virtual patient, lecture, lecture with multimedia presentation, PBL Problem Based Learning, practical classes

| Activities | Examination methods | Credit conditions |
|------------------|----------------------|---|
| clinical classes | multiple choice test | Test exam covering "Sense organ disorders", including questions of neurology (15 questions), ophthalmology (15 questions) and laryngology (30 questions). |
| e-learning | multiple choice test | Test exam covering "Sense organ disorders" |

Entry requirements

Getting a credit for subjects: pathology, internal medicine diseases, general radiology, pharmacology Attendance at classes is obligatory, it is possible to have 1 absence at an otolaryngology seminar (2 hours) and at otolaryngology practicals (2 hours) and 1 absence at neurology practicals. It is obligatory to attend ophthalmology classes. It is possible to have 1 absence at practicals (2 hours).

Infectious Diseases

Educational subject description sheet

Basic information

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|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
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| <p>Period Semester 8</p> | <p>Examination examination</p> <p>Activities and hours e-learning: 10, seminar: 10, clinical classes: 10</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Knows and understand epidemiology, pathogenesis, clinical picture and treatment of selected infectious diseases. Knows methods of infectious diseases prophylaxis |
| C2 | Knows and understand prophylaxis, including post-exposure prophylaxis in the case of occupational exposure |
| C3 | Knows changes in the oral cavity caused by infectious diseases |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|---|-------|-------------------------------|
| W1 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | group assessment, oral answer |
| W2 | symptoms of acute abdominal diseases, intoxication, infection and sepsis | E.W7 | group assessment, oral answer |
| W3 | symptoms of hepatitis, HIV infection and acquired immune deficiency syndrome (AIDS) in infectious and parasitic diseases | E.W8 | group assessment, oral answer |
| W4 | principles of immunization against infectious diseases in children and adults | E.W9 | group assessment, oral answer |
| W5 | the role of focus-related infections in eye diseases | E.W14 | oral answer |
| Skills - Student can: | | | |
| U1 | plan the management of exposure to blood-borne infections | E.U6 | group assessment, oral answer |
| U2 | recognize the risk of life threat | E.U8 | group assessment, oral answer |
| U3 | diagnose diseases with enlarged lymph nodes of the neck and submandibular area and infectious diseases, with particular emphasis on lesions within the oral cavity | E.U18 | group assessment, oral answer |
| U4 | diagnose and treat skin diseases: infectious, allergic and sexually transmitted | E.U14 | oral answer |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | group assessment, oral answer |
| K2 | respect medical confidentiality and patients' rights | O.K3 | group assessment, oral answer |
| K3 | promote health-promoting behaviors | O.K6 | group assessment, oral answer |
| K4 | use objective sources of information | O.K7 | group assessment, oral answer |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------|-----------------|
| e-learning | 10 |
| seminar | 10 |
| clinical classes | 10 |
| preparation for classes | 10 |
| preparation for examination | 20 |

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|-----------------------------------|--------------------|
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|------------------------------|
| 1. | Current epidemiological problems of infectious diseases in Poland and on the World. New and reemerging infectious diseases | W1, W5, U2, U4, K3, K4 | seminar, clinical classes |
| 2. | HIV infection, AIDS | W3, U1, U2, K1, K2, K3, K4 | e-learning, clinical classes |
| 3. | Highly contagious infectious diseases (influenza, SARS, COVID-19) | W4, U2, K3, K4 | seminar, clinical classes |
| 4. | Selected infectious diseases of the Central Nervous System | W1, U2 | e-learning, clinical classes |
| 5. | Viral hepatitis | W2, W3, W4, U1, K3 | e-learning, clinical classes |
| 6. | Post-exposure prophylaxis of HIV, HBV, HCV | U1 | seminar, clinical classes |
| 7. | Immunoprophylaxis of infectious diseases | W4, K4 | e-learning, clinical classes |
| 8. | Sepsis and septic shock | W2, U2, K1 | seminar, clinical classes |
| 9. | Infectious diseases with changes in oral cavity | W1, U3 | seminar, clinical classes |

Course advanced

Teaching methods:

clinical classes, seminar, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------------|---------------------|--|
| e-learning | group assessment | Student must attend all bedside and seminar |
| seminar | oral answer | Concerning the knowledge: a written multiple-choice test |
| clinical classes | oral answer | Attendance |

Entry requirements

Fellows will be able and expected to: knows and understand epidemiology, pathogenesis, clinical picture and treatment of selected infectious diseases; knows methods of infectious diseases prophylaxis; knows and understand prophylaxis, including post-exposure prophylaxis in the case of occupational exposure; knows changes in the oral cavity caused by infectious diseases

Attendance at lectures, seminars and clinical classes is obligatory

Maxillofacial surgery

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24, 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination examination</p> <p>Standard groups F. Clinical curriculum-oriented (invasive) sciences, H. Clinical training</p> |
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| <p>Period Semester 8</p> | <p>Examination credit</p> <p>Activities and hours e-learning: 12, clinical classes: 55</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

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| <p>Period Semester 9</p> | <p>Examination -</p> <p>Activities and hours clinical classes: 55</p> | <p>Number of ECTS points 0.0</p> |
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|--------------------------------------|--|---|
| <p>Period Semester 10</p> | <p>Examination examination</p> <p>Activities and hours clinical classes: 5</p> | <p>Number of ECTS points 4.0</p> |
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Goals

| | |
|----|--|
| C1 | Students are taught to examine patients with pathologies of the face, oral cavity and neck. |
| C2 | The principles of clinical diagnostics with elements of differentiation diagnosis in patients with injuries of the facial skeleton and tumours of the face, oral cavity and the facial skeleton are explained. |
| C3 | The principles of diagnostics and surgical treatment of the pathologies of head and neck are taught. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W2 | issues in dentistry - at an advanced level | O.W2 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W3 | health education issues | O.W3 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W4 | the rules of conducting scientific research and spreading their results | O.W4 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W5 | organization of dentist practice and management principles in healthcare | O.W5 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W6 | occlusal normal conditions at various stages of individual development and deviations from norms | F.W1 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W7 | principles of preventive and therapeutic management in diseases of the masticatory organ in various periods of development | F.W2 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W8 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

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| W9 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W10 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W11 | rules for dealing with cysts, precancerous conditions, and head and neck cancers | F.W8 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W12 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W13 | basics of antibiotic therapy and antibiotic resistance | F.W13 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W14 | methods of rehabilitation of the masticatory organ | F.W14 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W15 | therapeutic methods of reducing and enduring pain as well as reducing anxiety and stress | F.W15 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W16 | principles of anesthesia in dental procedures and basic pharmacological agents | F.W16 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W17 | principles of radiological diagnosis | F.W18 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W18 | pathomechanism of the impact of oral diseases on general health | F.W19 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W19 | prevention of oral diseases | F.W21 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

| | | | |
|------------------------------|---|-------|--|
| W20 | rules for dealing with masticatory organ tissue diseases, injuries to teeth and jawbones | F.W22 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| W21 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U3 | plan treatment for dental problems | O.U3 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U4 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U5 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U6 | inspire the learning process of others | O.U6 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U7 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U8 | communicate and share knowledge with colleagues in a team | O.U8 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U9 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

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|-----|---|-------|--|
| U10 | carry out a medical interview with the patient and his or her family | F.U1 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U11 | carry out a dental physical examination of the patient | F.U2 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U12 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U13 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U14 | collect and secure specimens for diagnostic tests, including cytological tests | F.U5 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U15 | interpret the results of additional tests and consultations | F.U6 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U16 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U17 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U18 | proceed in case of general and local complications during and after dental procedures | F.U9 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U19 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U20 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

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|-----|--|-------|--|
| U21 | formulate research problems in the field of dentistry | F.U12 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U22 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U23 | determine the treatment of diseases of tissues of the stomatognathic system | F.U15 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U24 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U25 | diagnose, differentiate and classify malocclusions | F.U18 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U26 | carry out prosthetic rehabilitation in simple cases in the field of clinical and laboratory procedures | F.U22 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| U27 | describe dental and pantomographic images | F.U23 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

Social competences - Student is ready to:

| | | | |
|----|--|------|--|
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K2 | to be guided by the well-being of a patient | O.K2 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K3 | respect medical confidentiality and patients' rights | O.K3 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

| | | | |
|-----|--|-------|--|
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K6 | promote health-promoting behaviors | O.K6 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K7 | use objective sources of information | O.K7 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K8 | formulate conclusions from own measurements or observations | O.K8 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K9 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K10 | formulate opinions on the various aspects of the professional activity | O.K10 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |
| K11 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | booklet of practical skills, written examination, theoretical colloquiums, oral answer, clinical case presentation, credit |

Calculation of ECTS points

Semester 8

| Activity form | Activity hours* |
|--------------------------------|-----------------|
| e-learning | 12 |
| clinical classes | 55 |
| preparation for classes | 8 |
| conducting literature research | 2 |
| case analysis | 1 |
| preparation for test | 10 |

| | |
|-----------------------------------|--------------------|
| preparation for colloquium | 2 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 67 |
| Practical workload | Hours 56 |

* hour means 45 minutes

Semester 9

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| clinical classes | 55 |
| preparation for classes | 10 |
| preparation for test | 8 |
| case analysis | 5 |
| preparation for colloquium | 10 |
| conducting literature research | 2 |
| Student workload | Hours 90 |
| Workload involving teacher | Hours 55 |
| Practical workload | Hours 60 |

* hour means 45 minutes

Semester 10

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| clinical classes | 5 |
| case analysis | 5 |
| preparation for examination | 20 |
| Student workload | Hours 30 |
| Workload involving teacher | Hours 5 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 10 |
|---------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|---|------------------------------|
| 1. | Soft tissues injuries of the face.Treatment. Complications. Tetanus and rabies profilaxis. | W1, W12, W13, W14, W15, W16, W17, W18, W20, W3, W4, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U27, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 2. | Nasal, maxillary and naso-maxillary fractures. Symptomes, diagnostics, treatment. | W1, W10, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W21, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 3. | Orbital and zygomatic fractures. Symptoms. Diagnostics. Treatment. | W1, W10, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 4. | Mandibular fractures, symptoms, treatment. Injuries of the facial skeleton in children. Teeth injuries. | W1, W10, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

| | | | |
|----|---|---|------------------------------|
| 5. | Complications of the facial skeleton fractures. Multiorgan injuries of the face. Central nervous system injuries. Burns. | W1, W10, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 6. | Congenital malformations and syndromes. Symptoms, diagnostics, team approach in the treatment of congenital malformations. Basic principles of plastic surgery. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 7. | Temporo-mandibular joint disorders. Symptoms, diagnostics, treatment. | W1, W10, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 8. | Cranial nerves diseases. Symptoms, diagnostics, treatment. Inflammations of the head and neck region. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 9. | Benign neoplasms of the face and oral cavity. Haemangiomas. Odontogenic tumours. Symptoms, diagnostics, treatment. | W1, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

| | | | |
|-----|--|---|------------------------------|
| 10. | Lip cancer. Symptoms, diagnostics, treatment. Diagnostics of neck metastases. Neck dissections. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 11. | Malignant epithelial tumours of the oral cavity (cancer of the tongue, floor of the mouth, buccal mucosa, lower gingiva, primary cancer of the mandible). Symptoms, diagnostics, treatment. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 12. | Maxillary cancer. Symptoms, diagnostics, treatment. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 13. | Nonepithelial malignant tumours of the head and neck. Symptoms, diagnostics, treatment. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
| 14. | Salivary glands tumours. Symptoms, diagnostics, treatment. | W1, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W5, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |

| | | | |
|-----|--|--|------------------------------|
| 15. | Facial skin tumours. Symptoms, diagnostics, treatment. | W1, W11, W12, W13, W14, W15, W16, W17, W18, W19, W2, W20, W3, W4, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U2, U20, U21, U22, U23, U24, U25, U26, U27, U3, U4, U5, U6, U7, U8, U9, K1, K10, K11, K2, K3, K4, K5, K6, K7, K8, K9 | e-learning, clinical classes |
|-----|--|--|------------------------------|

Course advanced

Semester 8

Teaching methods:

case study, brainstorm, clinical classes, demonstration, discussion, educational film, problem solving method, case study method, group work, trip, lecture, lecture with multimedia presentation, practical classes, Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical topics passed, one case history presented and passed.

| Activities | Examination methods | Credit conditions |
|------------------|---|--|
| e-learning | credit | Obligatory attendance at all lectures |
| clinical classes | booklet of practical skills, theoretical colloquiums, oral answer | Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical topics passed, one case history presented and passed. |

Semester 9

Teaching methods:

case study, brainstorm, clinical classes, demonstration, discussion, problem solving method, case study method, group work, trip, lecture with multimedia presentation, practical classes, Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical topics passed, one case history presented and passed.

| Activities | Examination methods | Credit conditions |
|------------------|---|---|
| clinical classes | booklet of practical skills, theoretical colloquiums, oral answer | Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical test passed. |

Semester 10

Teaching methods:

clinical classes, practical classes, Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical topics passed, one case history presented and passed.

| Activities | Examination methods | Credit conditions |
|------------------|--|--|
| clinical classes | booklet of practical skills, written examination, clinical case presentation | Obligatory attendance in case of missed classes, obligatory retake test in case of test failure, all theoretical topics passed, one case history presented and passed, passed exam in oral surgery at the Department of Oral Surgery of the Institute of Stomatology of the Jagiellonian University. |

Clinical and experimental dentistry

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 30</p> | <p>Number of ECTS points 3.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|--|
| C1 | <p>The program of „Clinical and Experimental Dentistry” has been designed to give a profound foundation for the students to use “evidence based dentistry” tools in their everyday clinical practice. Students learn how to make clinical decision on the basis of data coming from articles from basic and clinical sciences. Students are taught to use medical data basis to search for the valuable information and use critical thinking methods to assess gathered information. The program includes teaching the basis of laboratory technique such as: flow cytometry, ELISA, immune-histo chemistry and molecular biology technique as PCR, RT-PCR. The meaning of basic models as: animal models and cell culture for the development of new treatment and drugs is discussed. Students are also taught how to make scientific presentation in Power Point, how to present your research or clinical data, how to analyse data basis and how to write scientific article using “Word” and „EndNote”.</p> |
|----|--|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | the rules of conducting scientific research and spreading their results | O.W4 | credit |
| W2 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | credit |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | credit |
| U2 | inspire the learning process of others | O.U6 | credit |
| U3 | communicate and share knowledge with colleagues in a team | O.U8 | credit |
| U4 | formulate research problems in the field of dentistry | F.U12 | credit |
| U5 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | credit |
| U6 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | credit |
| Social competences - Student is ready to: | | | |
| K1 | use objective sources of information | O.K7 | credit |
| K2 | formulate opinions on the various aspects of the professional activity | O.K10 | credit |
| K3 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | credit |
| K4 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | credit |
| K5 | formulate conclusions from own measurements or observations | O.K8 | credit |
| K6 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | credit |

Calculation of ECTS points

| Activity form | Activity hours* |
|--------------------------|--------------------|
| seminar | 30 |
| preparation for classes | 20 |
| preparation of a project | 15 |
| information collection | 10 |
| Student workload | Hours 75 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 30 |
|-----------------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|-----------------------|------------------------------------|-------------------|
|------------|-----------------------|------------------------------------|-------------------|

| | | | |
|----|---|--|---------|
| 1. | <p>Seminar 1. evidence based medicine – introduction. Posing a question why clinicians need science tools to be good practitioners? Introduction to basic terms of clinical and experimental dentistry: evidence based medicine, translational medicine.</p> <p>Seminar 2. Do we know how we treat? How are guidelines created? Why do we need guidelines? Benefits and pitfalls of basic science studies in dentistry. Benefits and pitfalls of clinical studies in dentistry.</p> <p>Seminar 3. How to design an experiment – basic science studies? How to design an experiment – clinical studies? Power analysis. Inclusion and exclusion criteria.</p> <p>Seminar 4. How to write the paper? Types of papers: reviews, original papers and their structures.</p> <p>Seminar 5. How to find the right paper and how to read it? Introduction to online databases – Medline, PubMed, Cochrane. Critical assessment of the value of scientific evidence. Explanation of the system of validation of papers IF (impact factor), index KBN/MNiSW, index Copernicus (IC)</p> <p>Seminar 6. Task oriented database searches: Students subdivided in groups are given problem oriented questions for which they need to find answers through medical database searches.</p> <p>Seminar 7. How to make an interesting presentation? Types of presentation and their structures. Practice of the public presentation</p> <p>Seminar 8. Ability to critically read, understand and present scientific papers. “Journal club” approach – each of the students present scientific paper in dentistry and answer questions of the viewers after the presentation.</p> <p>Seminar 9. scientific techniques: 1) Molecular biology in dentistry. Basics of PCR and how we can use it for diagnostics and science. Genetics and dentistry. 2) Animal models of oral diseases. Animal models of periodontal diseases. 3) Flow cytometry</p> <p>Seminar 10. Funding for clinical and experimental dentistry – national funds. Funding for clinical and experimental dentistry – European Union funds. Basic rules of applying for grants.</p> | W1, W2, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4, K5, K6 | seminar |
|----|---|--|---------|

Course advanced

Teaching methods:

textual analysis, classes / practicals, computer classes, demonstration, discussion, e-learning, problem solving method, project method, case study method, presentation, group work, computer room

| Activities | Examination methods | Credit conditions |
|-------------------|----------------------------|--------------------------|
| seminar | credit | |

Entry requirements

no initial requirements to enter the course

Disaster and Emergency Medicine

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group E. General clinical sciences (non-invasive)</p> |
|--|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 10, seminar: 10, simulations: 10</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|--|
| C1 | Preparing students for correct and independent recognition of internal and external life threatening situations. This preparation includes in particular the recognition and connection of diseases with performed dental procedures (life-threatening states caused by toxicological factors) and the ability to save lives in everyday situations. |
| C2 | Developing awareness and skills of organization and conducting cardiopulmonary resuscitation in adults and children. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | test |

| | | | |
|------------------------------|---|-------|---|
| W2 | organization of dentist practice and management principles in healthcare | O.W5 | test |
| W3 | rules for organizing rescue operations in disasters and failures, stages of rescue operations and the scope of assistance to victims | E.W5 | classroom observation, test |
| W4 | rules for dealing with victims in multi-organ injuries | E.W4 | classroom observation, test |
| W5 | etiopathogenesis and symptomatology of respiratory, circulatory, hematopoietic, genitourinary, immune, digestive, motor and endocrine glands diseases, with particular regard to disease entities whose symptoms occur in the oral cavity | E.W3 | test |
| W6 | relationship between morphological abnormalities and the function of changed organs and systems, as well as clinical symptoms and possibilities of diagnostics and treatment | E.W1 | classroom observation, test |
| W7 | life-threatening conditions | E.W18 | practical test, test |
| W8 | basic methods of medical examination and the role of additional examinations in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on oral tissues | E.W2 | classroom observation, practical test, test |
| W9 | cases in which the patient should be referred to the hospital | E.W20 | practical test, test |
| W10 | causes and mechanisms of cardiac and respiratory arrest as well as principles of resuscitation and post-resuscitation procedures | E.W17 | classroom observation, test |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | classroom observation, practical test, test |
| U2 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation |
| U3 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation |
| U4 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | classroom observation, practical test |
| U5 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| U6 | perform differential diagnosis of the most common diseases of adults | E.U1 | classroom observation, practical test, test |
| U7 | evaluate and describe the somatic and mental state of the patient | E.U2 | classroom observation, test |
| U8 | plan diagnostic and therapeutic procedures for the most common adult diseases | E.U3 | classroom observation, practical test, test |
| U9 | recognize the risk of life threat | E.U8 | classroom observation, practical test, test |
| U10 | describe and recognise signs of shock and acute circulatory failure | E.U9 | classroom observation, practical test, test |

| | | | |
|--|---|-------|---------------------------------------|
| U11 | perform basic medical procedures and procedures: temperature measurement, pulse measurement, non-invasive blood pressure measurement, oxygen therapy, assisted and substitute ventilation, placement of a oropharyngeal tube, preparation of the surgical field, hygienic and surgical hand disinfection, intravenous, intramuscular and subcutaneous injection, peripheral venous blood collection, collecting nasal, pharyngeal and dermal swabs, simple strip tests, measurement of blood glucose levels | E.U20 | classroom observation, test |
| U12 | recognize the symptoms of brain injuries and cerebrovascular diseases, dementia and consciousness disorders | E.U10 | classroom observation, practical test |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K6 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, test |
| K7 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K8 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation, test |

Calculation of ECTS points

| Activity form | Activity hours* |
|------------------------------|-----------------|
| e-learning | 10 |
| seminar | 10 |
| simulations | 10 |
| preparation for classes | 12 |
| preparation for classes | 10 |
| preparation for examination | 6 |
| participation in examination | 1 |

| | |
|-----------------------------------|--------------------|
| Student workload | Hours 59 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 10 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|------------|---|---|-------------------------|
| 1. | Emergency medicine - definitions, purpose, organization | W2 | e-learning, simulations |
| 2. | Selected clinical procedures in emergency medicine and rescue. | W4, W5, W6, K5 | simulations |
| 3. | Pathophysiology and management of body injuries. Prevention of injuries. | W1, W5, W7, W9 | simulations |
| 4. | Cardiopulmonary resuscitation of adults and children. | W10, W8, U10, U9, K8 | simulations |
| 5. | Contemporary threats. Principles of organizing rescue operations in individual, multiple accidents, mass casualty incidents, disasters and special situations, phases of rescue operations, triage algorithms. | W2, W3, W4, W9, U8, K2, K5, K7, K8 | simulations |
| 6. | Shock - types, pathophysiology, recognition and management. Management of selected clinical situations and life-threatening situations: loss of consciousness (syncope), electric shock, anaphylaxis, respiratory failure, asthma, choking, convulsions, burns, frostbite, injuries (haemorrhage, fractures, sprains), heart attack, stroke. Dealing with a victim of a traffic accident, rules for securing the place of accident, calling for help. | W1, W10, W4, W5, W6, W7, W8, U10, U11, U3, U7, U8, K1, K2, K6, K8 | seminar, simulations |
| 7. | Organization and procedures performed at the place of disaster, mass casualty incident. Special situations - terrorism, CBRN hazards, environmental threats. | W3, U4, U5, U6, U7, K5, K6, K7, K8 | seminar, simulations |
| 8. | Cardiopulmonary resuscitation of adults and children (AED, instrumental airway opening, ventilation with a AMBU bag). | W10, W7, W8, U1, U10, U2, U4, U5, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | simulations |
| 9. | Diagnosis and management of life-threatening conditions: anaphylactic shock, respiratory failure, asthma, choking, convulsions, heart attack, loss of consciousness, stroke. | W1, W5, W6, W7, W8, W9, U1, U10, U11, U12, U2, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | simulations |
| 10. | Emergency procedures for a trauma patient, accident victim. | W1, W2, W4, W5, W6, W7, W8, W9, U11, U4, U5, U7, U9, K1, K2, K3, K4, K5, K6, K7, K8 | simulations |

| | | | |
|-----|---|---|-------------|
| 11. | Rescue operations in mass casualty incident, disaster. Triage, psychological support, debriefing. | W10, W2, W3, W4, W8, W9, U1, U10, U11, U2, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8 | simulations |
|-----|---|---|-------------|

Course advanced

Teaching methods:

brainstorm, preclinical classes, demonstration, discussion, educational film, educational game, presentation, group work, seminar, simulation, low fidelity simulation, lecture, lecture with multimedia presentation, practical classes in simulated conditions

| Activities | Examination methods | Credit conditions |
|-------------|---------------------------------------|---|
| e-learning | test | Test - true/fals type test - 85% to pass |
| seminar | practical test, test | Test - true/fals type test - 85% to pass Practical test - simulation - recognition and treatment life treating patient condition in dentist office. To pass you have to properly recognize and treat simulated patient. |
| simulations | classroom observation, practical test | Practical test - simulation - recognition and treatment life treating patient condition in dentist office. To pass you have to properly recognize and treat simulated patient. |

Forensic Medicine

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0912 Medicine</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group G. Legal and organizational basis for medicine</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 15</p> | <p>Number of ECTS points 1.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | Knowledge of the tasks / scope of forensic medicine |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|-----------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | problems of medical error: diagnostic, technical, therapeutic and organizational | G.W23 | classroom observation |
| W2 | principles of liability for violation of the rules of practicing the profession of a dentist | G.W24 | classroom observation |

| | | | |
|--|--|-------|-----------------------|
| W3 | the principles of professional liability of a dentist (moral, ethical, legal, material and professional), as well as the dentist's obligations towards the patient | G.W22 | classroom observation |
| W4 | rules of dealing with corpses | G.W33 | classroom observation |
| W5 | issues related to serology and medical and forensic genetics | G.W35 | classroom observation |
| W6 | basics of medical and forensic toxicology | G.W36 | classroom observation |
| W7 | the rules for drawing up expert opinions in criminal matters | G.W37 | classroom observation |
| W8 | forensic aspects of human ethology | G.W38 | classroom observation |
| Skills - Student can: | | | |
| U1 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | classroom observation |
| U2 | apply the legal provisions relating to the pursuit of the profession of a dentist | G.U24 | classroom observation |
| U3 | evaluate posthumous changes | G.U28 | classroom observation |
| U4 | identify corpses on the basis of a dental examination | G.U29 | classroom observation |
| U5 | assess the consequences of facial and cranial injuries and qualify them in criminal and civil proceedings | G.U30 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | promote health-promoting behaviors | O.K6 | classroom observation |
| K2 | use objective sources of information | O.K7 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|--|--------------------|
| e-learning | 15 |
| preparation for classes | 5 |
| preparation of multimedia presentation | 5 |
| Student workload | Hours 25 |
| Workload involving teacher | Hours 15 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|----------------|-----------------------------|------------|
|-----|----------------|-----------------------------|------------|

| | | | |
|----|---|--|------------|
| 1. | <ul style="list-style-type: none"> • (General) thanatology • Medicolegal autopsy • Injuries, vital reactions of injury • Opinions in penal / civil proceedings. Child abuse • Death due to disease / external factor • Forensic genetics • Forensic toxicology • Medical malpractice • Post-mortem imaging including criminalistics issues | W1, W2, W3, W4, W5, W6, W7, W8, U1, U2, U3, U4, U5, K1, K2 | e-learning |
|----|---|--|------------|

Course advanced

Teaching methods:

classes / practicals, presentation, seminar, lecture with multimedia presentation

| Activities | Examination methods | Credit conditions |
|------------|-----------------------|-------------------|
| e-learning | classroom observation | attendance |

Endodontic treatment in dental operating microscope

Educational subject description sheet

Basic information

| | |
|--|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|--|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours e-learning: 3, seminar: 5, clinical classes: 22</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|----|---|
| C1 | Students learn the structure of the microscope and learn ergonomics at work |
| C2 | The technique of working in a surgical microscope |
| C3 | Students train root canal preparation with a step back technique and microscopic assessment |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|---------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | credit |

| | | | |
|--|---|------|-----------------------|
| W2 | morphology of dental chambers and principles of endodontic treatment and instruments used in this treatment | F.W7 | credit |
| Skills - Student can: | | | |
| U1 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K2 | use objective sources of information | O.K7 | classroom observation |
| K3 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| e-learning | 3 |
| seminar | 5 |
| clinical classes | 22 |
| preparation for classes | 12 |
| case analysis | 8 |
| practice | 10 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 40 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|-----------------------------|---------------------------------------|
| 1. | Construction of the microscope | W1, K3 | seminar, e-learning, clinical classes |
| 2. | Students evaluate developed tooth chambers and are to indicate the place of occurrence of all root canal mouths | W2, U1, K2 | seminar, e-learning, clinical classes |
| 3. | Students open tooth chambers and look for root canal orifices | W2, U1, K1 | seminar, e-learning, clinical classes |

Course advanced

Teaching methods:

preclinical classes, classes in simulated conditions, presentation, seminar, workshop, lecture

| Activities | Examination methods | Credit conditions |
|-------------------|-------------------------------|--------------------------|
| e-learning | credit | attendance |
| seminar | credit | attendance |
| clinical classes | classroom observation, credit | attendance |

Type and incidence of lesions on oral mucosa in elderly patients

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours clinical classes: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | The aim of the course is to familiarize students with the specifics of oral mucosa diseases in the elderly. |
| C2 | During classes, students will learn the examination and diagnostics of oral mucosa diseases in the elderly, including biology of aging, physiological changes occurring with age and health problems. |
| C3 | Students will be introduced to the principles of interdisciplinary treatment of the elderly patients. |
| C4 | During the course, students will be taught the issue of dealing with elderly patients, including the general state of health and mental attitude of patients. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|------|----------------------|---------|---------------------|
|------|----------------------|---------|---------------------|

| Knowledge - Student knows and understands: | | | |
|---|---|-------|-----------------------|
| W1 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | oral answer |
| W2 | pathomechanism of the impact of oral diseases on general health | F.W19 | oral answer |
| W3 | pathomechanism of the effects of general diseases or therapies on the oral cavity | F.W20 | oral answer |
| W4 | issues in dentistry - at an advanced level | O.W2 | oral answer |
| W5 | health education issues | O.W3 | oral answer |
| W6 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | oral answer |
| W7 | viral, bacterial and fungal flora of the oral cavity and its importance | F.W3 | oral answer |
| W8 | rules for dealing with cysts, precancerous conditions, and head and neck cancers | F.W8 | oral answer |
| W9 | diagnostics and methods of treatment of periodontal and oral mucosa diseases | F.W9 | oral answer |
| W10 | causes of complications of stomatognathic system diseases and rules of conduct in case of such complications | F.W12 | oral answer |
| W11 | prevention of oral diseases | F.W21 | oral answer |
| W12 | the specificity of dental care for a patient suffering from a general disease and the principles of cooperation with a doctor treating the underlying disease | F.W23 | oral answer |
| Skills - Student can: | | | |
| U1 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | classroom observation |
| U2 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | classroom observation |
| U3 | prescribe medicines, taking into account their interactions and side-effects | F.U10 | classroom observation |
| U4 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | classroom observation |
| U5 | plan treatment for dental problems | O.U3 | classroom observation |
| U6 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | classroom observation |
| U7 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | classroom observation |
| U8 | communicate and share knowledge with colleagues in a team | O.U8 | classroom observation |
| U9 | critically evaluate the results of scientific research and adequately justify the position | O.U9 | classroom observation |

| | | | |
|--|--|-------|-----------------------|
| U10 | carry out a medical interview with the patient and his or her family | F.U1 | classroom observation |
| U11 | carry out a dental physical examination of the patient | F.U2 | classroom observation |
| U12 | explain the nature of his or her ailment to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis | F.U3 | classroom observation |
| U13 | provide the patient or his or her family with information about unfavorable prognosis | F.U4 | classroom observation |
| U14 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | classroom observation |
| U15 | keep patient records on ongoing basis, provide referrals for examination or specialist treatment in dental and general medicine | F.U11 | classroom observation |
| U16 | present selected medical problems in oral or written form in a manner appropriate to the level of recipients | F.U13 | classroom observation |
| U17 | take appropriate medication during and after the dental procedure to relieve pain and anxiety | F.U16 | classroom observation |
| U18 | describe dental and pantomographic images | F.U23 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K2 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K3 | promote health-promoting behaviors | O.K6 | classroom observation |
| K4 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |
| K5 | implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment | O.K9 | classroom observation |
| K6 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K7 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K8 | use objective sources of information | O.K7 | classroom observation |
| K9 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-------------------------|-----------------|
| clinical classes | 30 |
| preparation for classes | 10 |

| | |
|--|--------------------|
| conducting literature research | 10 |
| preparation of multimedia presentation | 10 |
| Student workload | Hours 60 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 30 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|---|--|------------------|
| 1. | The specificity of oral mucosa diseases in the elderly. | W1, W10, W11, W12, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | clinical classes |
| 2. | Epidemiology of oral diseases in the elderly. | W1, W10, W11, W12, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | clinical classes |
| 3. | Dental surgery procedures in the elderly. | W1, W10, W11, W12, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | clinical classes |
| 4. | Dental prophylaxis in the elderly. Focal disease. | W1, W10, W11, W12, W2, W3, W4, W5, W6, W7, W8, W9, U1, U10, U11, U12, U13, U14, U15, U16, U17, U18, U2, U3, U4, U5, U6, U7, U8, U9, K1, K2, K3, K4, K5, K6, K7, K8, K9 | clinical classes |

Course advanced

Teaching methods:

case study, textual analysis, brainstorm, clinical classes, demonstration, discussion, case study method

| Activities | Examination methods | Credit conditions |
|-------------------|------------------------------------|--|
| clinical classes | classroom observation, oral answer | oral credit grade, attendance at all classes |

Entry requirements

The course Periodontology 1/2 passed.
Attendance is obligatory.

Machine systems in endodontic treatment

Educational subject description sheet

Basic information

| | |
|---|---|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2023/24</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory elective</p> <p>Examination graded credit</p> <p>Standard group F. Clinical curriculum-oriented (invasive) sciences</p> |
|---|---|

| | | |
|-------------------------------------|--|---|
| <p>Period Semester 8</p> | <p>Examination graded credit</p> <p>Activities and hours seminar: 30</p> | <p>Number of ECTS points 2.0</p> |
|-------------------------------------|--|---|

Goals

| | |
|-----|---|
| C1 | Introduction to rotary instruments in Endodontics |
| C2 | Detailed anatomy in the aspect of root canal treatment |
| C3 | Preparation of teeth for root canal treatment, isolation, flaring, initial canal preparation |
| C4 | Magnification in endodontic treatment. Dental loupes, operating microscope |
| C5 | Operating techniques with different types of rotary files. Rinsing protocols. Obturation. |
| C6 | Various radiological imaging techniques and modern technologies in endodontic treatment |
| C7 | Root canal retreatment and endodontic microsurgery. Assessment of indications, types of procedures |
| C8 | Pain in endodontics. Management of pain cases. Prevention and treatment of early and late peri- and postoperative complications |
| C9 | Root canal dressings, temporary fillings during treatment as well as materials and methods of tooth reconstruction after root canal treatment |
| C10 | Follow-up visits, prognosis assessment. Topic proposed by students during classes. Summary |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|-----------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | classroom observation, test |
| W2 | issues in dentistry - at an advanced level | O.W2 | classroom observation, test |
| W3 | rules for management of periapical tissue diseases | F.W6 | classroom observation, test |
| W4 | morphology of dental chambers and principles of endodontic treatment and instruments used in this treatment | F.W7 | classroom observation, test |
| W5 | principles of radiological diagnosis | F.W18 | classroom observation, test |
| W6 | symptoms, course and procedures in specific diseases of the mouth, head and neck, taking into account age groups | F.W4 | classroom observation, test |
| W7 | rules of conduct in the case of pulp and mineralized dental tissues, as well as trauma to the teeth and bones of the face | F.W5 | classroom observation, test |
| Skills - Student can: | | | |
| U1 | plan treatment for dental problems | O.U3 | classroom observation, test |
| U2 | determine the indications and contraindications for performing a specific dental procedure | F.U7 | classroom observation |
| U3 | proceed in case of general and local complications during and after dental procedures | F.U9 | classroom observation |

| | | | |
|--|---|-------|-----------------------------|
| U4 | describe dental and pantomographic images | F.U23 | classroom observation, test |
| U5 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | test |
| U6 | plan own learning activities and constantly learn in order to update own knowledge | O.U5 | test |
| U7 | interpret the results of additional tests and consultations | F.U6 | test |
| U8 | conduct treatment of acute and chronic, odontogenic and non-odontogenic inflammatory processes of soft tissues of the oral cavity, periodontium and jaw bones | F.U8 | test |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K2 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K3 | perceive and recognize own limitations, self-assess educational deficits and needs | O.K5 | classroom observation |
| K4 | use objective sources of information | O.K7 | classroom observation, test |
| K5 | formulate conclusions from own measurements or observations | O.K8 | classroom observation, test |
| K6 | assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others. | O.K11 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| seminar | 30 |
| case analysis | 10 |
| preparation for classes | 5 |
| preparation for examination | 5 |
| practice | 5 |
| Student workload | Hours 55 |
| Workload involving teacher | Hours 30 |
| Practical workload | Hours 15 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--|------------|
| 1. | Detailed anatomy in the aspect of endodontic treatment. Causes of pulp and periapical tissue diseases. Indications and workflow for rotary endodontics instruments. Root canal disinfection protocols. Preparation of teeth for treatment, isolation | W1, W2, W3, W4, W5, W6, U1, U2, U3, U5, U6, U7, K1, K2, K4, K5 | seminar |
| 2. | Magnification in endodontic treatment. Working principles for dental loupes, indications for using the operation microscope | W1, W2, U1, U2, U3, K1, K2, K3 | seminar |
| 3. | Root canal obturation methods. Root canal dressings. Pain treatment. Postoperative management and check-up protocols after root canal treatment | W1, W2, W3, W4, W5, W6, U1, U2, U3, U4, U5, U6, K1, K2 | seminar |
| 4. | Root canal retreatment, indications and contraindications for endodontic microsurgery. Diagnostic methods in endodontic including radiograph examination. Complications during and after treatment. | W1, W2, W4, W5, W6, W7, U4, U5, U6, U7, U8, K1, K2, K4, K5, K6 | seminar |

Course advanced

Teaching methods:

case study, brainstorm, preclinical classes, classes in simulated conditions, demonstration, discussion, practical classes

| Activities | Examination methods | Credit conditions |
|------------|-----------------------------|--|
| seminar | classroom observation, test | Credit with grade. Participation in all classes and passing the final test |

Entry requirements

not applicable

Integrated stomatology of adulthood

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group H. Clinical training</p> |
|---|--|

| | | |
|-------------------------------------|---|---|
| <p>Period Semester 9</p> | <p>Examination graded credit</p> <p>Activities and hours clinical classes: 70</p> | <p>Number of ECTS points 4.0</p> |
|-------------------------------------|---|---|

Goals

| | |
|-----|--|
| C1 | To know of the importance of ergonomic principles in dentistry. |
| C2 | To know and teach practical skills in the diagnosis and treatment of pulp diseases and periapical tissue diseases. |
| C3 | To know and teach practical skills in the field of dental surgery. |
| C4 | To know and teach practical skills in the diagnosis and treatment of dental hard tissue diseases: carious and no carious origin. |
| C5 | To know and teach of the proper application of additional tests used in dentistry, including radiology. |
| C6 | To know and teach rules of intra oral and extra oral examination of the patient. |
| C7 | To make students aware of problems related to the treatment of patients reporting pain and sudden dental problems. |
| C8 | Transfer of knowledge in the field of management of a patient with general diseases. |
| C9 | Teaching students various techniques of local anesthesia in the oral cavity. |
| C10 | To teach how to work in the team in the field of dental procedures. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|---|---------|--|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | test |
| Skills - Student can: | | | |
| U1 | plan treatment for dental problems | O.U3 | booklet of practical skills, classroom observation, practical test |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------|---------------------|
| clinical classes | 70 |
| case analysis | 7 |
| professional practice | 13 |
| preparation for classes | 7 |
| preparation for examination | 15 |
| Student workload | Hours 112 |

| | |
|-----------------------------------|--------------------|
| Workload involving teacher | Hours 70 |
| Practical workload | Hours 90 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|------------------|
| 1. | Medical history, intra-oral and extra-oral dental examination as well as documenting the obtained data in the individual patient's documentation: health and disease history. Principles of ergonomics in dentistry. Tasks and workflow of the dental team. Methods of work in a dental office with aspects of ergonomics. | W1, U1, K1 | clinical classes |
| 2. | Regional anesthesia, agents used for local anesthesia and their mechanism of action. Additional examinations in dentistry (with particular emphasis on dental radiology). The role of specialist and interdisciplinary consultations. Interdisciplinary dental treatment planning. | W1, U1, K1 | clinical classes |
| 3. | Prevention and treatment of dental caries. Etiology of dental caries disease. Preparation of cavities and reconstruction with appropriate temporary or permanent materials. | W1, U1, K1 | clinical classes |
| 4. | Etiology and symptomatology of pulp and periapical tissues diseases. Diagnosis and treatment of pulp and periapical tissue diseases. Complications in endodontic treatment. | W1, U1, K1 | clinical classes |
| 5. | Dental surgery procedures. Patients suffering from pain in the face and mouth. Proper oral hygiene. Issues related to the prevention of periodontal disease. Methods for detecting tartar and professional hygiene procedures. | W1, U1, K1 | clinical classes |

Course advanced

Teaching methods:

case study, brainstorm, clinical classes, discussion

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| clinical classes | booklet of practical skills, classroom observation, practical test, test | Credit with grade consisting of a single-choice test covering 100 questions and a written practical part consisting of 10 questions in which the student recognizes the clinical situation on the basis of displayed radiological photos or clinical photos |

Entry requirements

Required credit in Conservative Dentistry and Endodontics.

Integrated dentistry of developmental age

Educational subject description sheet

Basic information

| | |
|--|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group H. Clinical training</p> |
|--|--|

| | | |
|------------------------------|---|-------------------------------------|
| Period Semester 10 | <p>Examination graded credit</p> <p>Activities and hours clinical classes: 40</p> | Number of ECTS points 3.0 |
|------------------------------|---|-------------------------------------|

Goals

| | |
|----|---|
| C1 | The aim of education is to learn how to promote pro-health prophylaxis and the ability to recognize indications for multidisciplinary treatment in patients of developmental age. |
|----|---|

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|--|---------|-----------------------------|
| Knowledge - Student knows and understands: | | | |
| W1 | issues in dentistry - at an advanced level | O.W2 | booklet of practical skills |
| Skills - Student can: | | | |
| U1 | plan treatment for dental problems | O.U3 | booklet of practical skills |
| Social competences - Student is ready to: | | | |

| | | | |
|----|---|------|-----------------------------|
| K1 | to be guided by the well-being of a patient | O.K2 | booklet of practical skills |
|----|---|------|-----------------------------|

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| clinical classes | 40 |
| Student workload | Hours 40 |
| Workload involving teacher | Hours 40 |
| Practical workload | Hours 40 |

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|-----------------------------|------------------|
| 1. | Acquiring knowledge and skills of leading a patient during the developmental age, with particular emphasis on promoting health education for maintaining oral health, prevention and interceptive procedures with determining the optimal time of possible medical intervention. | W1, U1, K1 | clinical classes |

Course advanced

Teaching methods:

clinical classes

| Activities | Examination methods | Credit conditions |
|------------------|-----------------------------|--|
| clinical classes | booklet of practical skills | A completed booklet of practical skills in accordance with the requirements provided by the Dean's Office. |

Gerostomatology

Educational subject description sheet

Basic information

| | |
|---|--|
| <p>Department Faculty of Medicine</p> <p>Field of study Medical and Dental Program</p> <p>Study level long-cycle master's degree program</p> <p>Study form full-time</p> <p>Education profile general academic</p> <p>Disciplines Medical science</p> <p>ISCED classification 0911 Dental studies</p> <p>Subject related to scientific research Yes</p> | <p>Didactic cycle 2020/21</p> <p>Realization year 2024/25</p> <p>Lecture languages English</p> <p>Block obligatory for passing in the course of studies</p> <p>Mandatory obligatory</p> <p>Examination graded credit</p> <p>Standard group H. Clinical training</p> |
|---|--|

| | | |
|--------------------------------------|---|---|
| <p>Period Semester 10</p> | <p>Examination graded credit</p> <p>Activities and hours clinical classes: 45</p> | <p>Number of ECTS points 3.0</p> |
|--------------------------------------|---|---|

Goals

| | |
|----|---|
| C1 | The aim of the course is to familiarize students with the specifics of oral mucosa diseases in the elderly. |
| C2 | During classes, students will be introduced to physiological and pathological changes in the masticatory system related to age. |
| C3 | Students will be introduced to the principles of interdisciplinary treatment of the elderly. |

Subject's learning outcomes

| Code | Outcomes in terms of | Effects | Examination methods |
|---|----------------------|---------|---------------------|
| Knowledge - Student knows and understands: | | | |

| | | | |
|--|--|------|--|
| W1 | issues in dentistry - at an advanced level | O.W2 | written credit |
| W2 | health education issues | O.W3 | written credit |
| W3 | issues in the field of medicine and natural sciences - in the basic scope | O.W1 | written credit |
| Skills - Student can: | | | |
| U1 | provide professional dental care in the field of prevention, treatment, health promotion and health education | O.U2 | booklet of practical skills, classroom observation |
| U2 | plan treatment for dental problems | O.U3 | booklet of practical skills, classroom observation |
| U3 | conduct clinical proceedings based on knowledge and respecting the principles of humanitarianism | O.U4 | booklet of practical skills, classroom observation |
| U4 | communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient | O.U7 | booklet of practical skills, classroom observation |
| U5 | carry out diagnostics of the most common diseases, assess and describe the patient's somatic and mental state | O.U1 | classroom observation |
| Social competences - Student is ready to: | | | |
| K1 | to be guided by the well-being of a patient | O.K2 | classroom observation |
| K2 | to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures | O.K1 | classroom observation |
| K3 | respect medical confidentiality and patients' rights | O.K3 | classroom observation |
| K4 | take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease | O.K4 | classroom observation |
| K5 | promote health-promoting behaviors | O.K6 | classroom observation |
| K6 | use objective sources of information | O.K7 | classroom observation |
| K7 | formulate conclusions from own measurements or observations | O.K8 | classroom observation |

Calculation of ECTS points

| Activity form | Activity hours* |
|-----------------------------------|--------------------|
| clinical classes | 45 |
| preparation for classes | 10 |
| preparation for colloquium | 20 |
| Student workload | Hours 75 |
| Workload involving teacher | Hours 45 |

| | |
|---------------------------|--------------------|
| Practical workload | Hours 45 |
|---------------------------|--------------------|

* hour means 45 minutes

Study content

| No. | Course content | Subject's learning outcomes | Activities |
|-----|--|--|------------------|
| 1. | The specificity of oral mucosa diseases in the elderly. | W1, W2, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | clinical classes |
| 2. | Epidemiology of oral diseases in the elderly. | W1, W2, W3, U2, K5, K6, K7 | clinical classes |
| 3. | Dental surgery and prosthetic procedures in the elderly. | W1, W2, W3, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | clinical classes |
| 4. | Focal infections. | W1, W2, W3, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | clinical classes |
| 5. | Dental prophylaxis in elderly, including team treatment of oral mucosa diseases and oncological prophylaxis. | W1, W2, W3, U1, U2, U3, U4, U5, K1, K2, K3, K4, K5, K6, K7 | clinical classes |

Course advanced

Teaching methods:

case study, clinical classes, demonstration, case study method

| Activities | Examination methods | Credit conditions |
|------------------|--|---|
| clinical classes | booklet of practical skills, classroom observation, written credit | written credit grade, attendance at all classes |