

Karta przedmiotu / Course description

Informacje ogólne o przedmiocie / General information about the course	
1. Kierunek studiów / Major of study: medical biotechnology	2. Poziom kształcenia / Study level: level 1 3. Forma studiów / Form of study: stationary
4. Rok / Year: II	5. Semestr / Semester: IV
6. Nazwa przedmiotu / Course name: Medical Parasitology	
7. Status przedmiotu / Course status: Facultative	
8. Jednostka realizująca przedmiot, adres, e-mail: Name of Department, mailing address, e-mail: Department of Parasitology, 41-218 Sosnowiec, Jedności 8, solarzk@sum.edu.pl	
9. Treści programowe przedmiotu Course contents: The subject aims to provide students with the knowledge, critical understanding, practical competencies and expertise in biology of the most important parasites of man. This subject looks at the importance of human parasites, including medical aspects, parasite biology, life-cycles, ecology, host responses, principles of parasite epidemiology and transmission as well as the strategies for parasite detection, diagnosis and control. It will concentrate also on the population biology, ecology, epidemiology, diagnostics and control of parasitic protozoa, helminths of medical impact, and selected arthropods, including the principal vectors and reservoirs of infectious diseases of man. Moreover the module/subject aims to provide students with the basic knowledge on the molecular biology and biochemistry of parasites, different interactions between parasites and the immune system of human hosts, and also on the most important parasitic diseases of man with an emphasis on the practical methods used in diagnosis, control and treatment, on the transmission and control of vectors of parasites, on and on new methods or techniques used in modern parasitology, including studies of parasites, their biology, vectors, hosts and studies on parasitic arthropods and diseases transmitted by them.	
10. liczba godzin z przedmiotu / Number of hours for the course	30
11. liczba punktów ECTS dla przedmiotu / Number of ECTS points for the course	2
12. Formy i tematy zajęć / Forms and topics of classes	Liczba godzin Number of hours
	30
12.1. Lectures	15
Introduction to molecular biology of parasites and vectors which transmit them, including the most important protozoans, cestodes, trematodes and nematodes.	3
Biological, molecular, genetic, immunological and epidemiological importance of protozoan and helminth parasites of man, including host-parasite interactions and new strategies for control of parasites or vectors, virulence of parasites, mechanisms of drug resistance and vaccine strategies.	3
Cell biology of parasites, including life cycles, cell cycles, organelles and surface molecules of parasites, and mechanisms of infection.	3
Molecular approaches to diagnosis, taxonomy and identification of parasites and vectors which transmit them.	3
	3

Parasitic arthropods – life cycles, medical importance, transmission of diseases and control strategies. Molecular aspects of the selected arthropod-borne diseases, including modern techniques in the study, diagnosis and treatment.	15
12.2. Seminars	3
Fundamental biology and life cycles of human parasitic protozoans, helminths and their vectors; biology and life cycles of human parasitic arthropods; differences of molecular biology, cell biology and biochemistry between parasites and their vectors and/or hosts.	3
Diagnostic parasitology techniques, including diagnostic methods of molecular biology and a range of immunological techniques.	3
Zoonotic relationships in the transmission of parasitic protozoans and helminths, epidemiology of human parasitic diseases, adaptations of parasites, vector biology and control.	3
Medical importance of major human parasitic protozoans, helminths and their vectors; immunology of parasitic infections; most important parasitic diseases of man – preventive treatment, vaccination and therapy.	3
Major human parasitic arthropods – medical importance, transmission of diseases and control.	0
12.3 Laboratory classes	
13. Literatura / Readings Basic references 1. Marr, J., Nilsen, T. W., Komuniecki, R. W., 2003. Molecular Medical Parasitology. Academic Press. 2. Bogitsh, B. J., Oeltmann, T. N., Carter, C. E., 2005. Human Parasitology. Third Edition. Academic Press. 3. Baveya V., Baveja C. P., 2019. Medical Parasitology. Arya Publishing Company. 4. Jayaram C. K., Paniker M. D., Sougata, Ghosh M. D., 2013. Paniker's Textbook of Medical Parasitology (7th Edition). Jaypee Brothers Medical Publishers Ltd. 6. Moore, J., 2002. Parasites and the Behavior of Animals (Oxford Series in Ecology and Evolution). Oxford University Press. 10. Apurba S. S., Sandhya B. K., Reba K., 2014. Essentials of Medical Parasitology. Jaypee Brothers Medical Publishers Ltd. 11. Morand, S., Beaudeau, F., Cabaret, J., 2011. New Frontiers of Molecular Epidemiology of Infectious Diseases. Springer Science. 12. John, D. T., Petri, W. A., Markell, E. K., Voge, M., 2006. Markell and Voge's Medical Parasitology. Elsevier Health Sciences. 13. Garcia L. S., 2016. Diagnostic Medical Parasitology. ASM Press, 6 edition. 14. Subhash Ch. P., 2013. Textbook of Medical Parasitology. All India Publishers and Distributors, New Delhi. 15. Bartosik, K., Buczek, A., Cielecka, D., Cisowska, A., Grytner-Zięcina, B., Kiziewicz, B., Kosieliński, P., Kuźna-Grygiel, W., Myjak, P., Olszewski, T., Olszewski, K., Piasecki, W., Pokora, Z., Solarz, K., Stańczak, J., Turkowicz, M., Wojnicz, D., 2006. Parasitology for Medical Students (A. Buczek ed.). Koliber. 16. Bartosik, K., Buczek, A., Cielecka, D., Cisowska, A., Grytner-Zięcina, B., Kiziewicz, B., Kosieliński, P., Kuźna-Grygiel, W., Myjak, P., Olszewski, T., Olszewski, K., Piasecki, W., Pokora, Z., Solarz, K., Stańczak, J., Turkowicz, M., Wojnicz, D., 2007. Parasitology for Medical Students (A. Buczek ed.). Second Edition. Koliber.	

Additional references

1. Ash, L. R., Lawrence, R., Orihel, T. C., 2007. *Atlas of Human Parasitology*. American Society for Human Pathology Press.
2. Gullan, P.J., Cranston, P. S., 2000. *The Insects. An Outline of Entomology*. Second Edition. Blackwell Science Oxford.
3. Chatterjee K. D., 2009. *Parasitology: Protozoology and Helminthology*. CBS Publishers & Distributors Private Limited.

14. Kryteria oceny – szczegóły / [Detail evaluation criteria](#)

Zgodnie z zaleceniami organów kontrolujących / [In accordance with the recommendations of the inspection bodies](#)

Zaliczenie przedmiotu - student osiągnął zakładane efekty uczenia się / [Completion of the course – student has achieved the assumed learning outcomes](#)

Szczegółowe kryteria zaliczenia i oceny z przedmiotu są zamieszczone w regulaminie przedmiotu / [Detail criteria for completion and evaluation of the course are specified in the course regulations](#)