Federal State Autonomous Educational Institution of Higher Education
**«Peoples' Friendship University of Russia»**

***Medical Institute***

Recommended MCSD

# SYLLABUS
(STUDY GUIDE)

**Subject**

## Infectious Diseases

**Recommended for the direction of training (specialty)**

## 31.05.01 General Medicine

**Program (profile, specialization)**

**General Medicine**

**1. Goals and objectives of the discipline**- To increase the knowledge of infectious diseases: A general practitioner should be able to identify or suspect an infectious disease, make a preliminary diagnosis, conduct a complex of diagnostic, medical and preventive measures at the pre-hospital stage, carry out follow-up and rehabilitation, and monitor contagious individuals.

**To achieve this goal, the following tasks will be carried out**:
1. Conduct a review of the topics studied in practically with patient management, clinical rounds, clinical analysis and the development of practical skills.
2. Conduct a control of theoretical knowledge: characterization of various forms of infectious diseases, differential diagnostics of manifestations and emergencies in infectious diseases.
3. Enhancing communication skills with the patient, history clerking in infectious diseases.

**2. Infectious diseases discipline in the accordance with the Educational Program (EP) for Higher Education(HE):**

This discipline belongs to the first division of the curriculum.
Table 1 shows the previous and subsequent disciplines aimed at forming the competencies of the discipline in accordance with the competency matrix of the EP for HE.

Tab № 1

**Prior and subsequent disciplines aimed at building competences**

| № | Code and name of competence | Previous discipline | Subsequent discipline (group of discipline) |
|---|---|---|---|
| General competence | | | |
| 1 | GC-1. (GC-1.1., GC-1.2.) | Biology, Immunology, Pathophysiology, Hygiene | Internal medicine, Clinical pharmacology, Public health |
| Professional competence | | | |
| 1 | PC-5. (PC-5.2., PC-5.6., PC-5.7., PC-5.8., PC-5.9., PC-5.11.) | Histology, embryology, cytology, Microbiology, Virology, Pathological anatomy, clinical pathological anatomy | Hospital therapy |

**Necessary requirements**: the student must have knowledge, skills and competencies obtained in the study of biology, immunology, pathophysiology, hygiene, histology, embryology, cytology, microbiology, virology, pathological anatomy, clinical pathological anatomy

**3. Requirements for the results of the discipline:**

The process of studying the discipline is aimed at the formation of the following competencies:

Tab № 2

**Developed competencies**

| Competencies | Name of competencies | Competence achievement indicators |
|---|---|---|
| GC-1. | Being able to implement | UC-1.1. Analysing scientific and technical |

| | | |
|---|---|---|
| | critical analysis of problem situations based on systems approach, develop an action strategy | literature and regulatory documents of medical institutions.<br>UC-1.2. Assessing in a critical way the reliability of information sources, working with contradictory information from different sources. |
| PC-5. | Being able to carry out preventive measures and measures to promote a healthy lifestyle and sanitary and hygiene education among population and monitor their effectiveness | PC-5.2. Being able to organize and monitor the immunization of the adult population against infectious diseases in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of medical care.<br>PC-5.6. Being able to monitor observing preventive measures.<br>PC-5.7. Being able to determine medical indications to introduce restrictive measures (quarantine) and indications for referral to a medical specialist in the event of infectious (parasitic) diseases.<br>PC-5.8. Being able to issue and send an emergency notification to the territorial body of the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing when an infectious or occupational disease is detected.<br>PC-5.9. Being able to carry out anti-epidemic measures in the event of the occurrence of a focus of infection, including quarantine measures when especially dangerous (quarantine) infectious diseases are detected.<br>PC-5.11. Being able to assess the effectiveness of preventive patient care. |

**After completing the discipline, the medical student must enquire the following knowledge and skills**

- the structure, principles and organization of medical care involved with infectious diseases. This includes isolation wards in hospitals;
- principles of interaction of macro-and microorganism and factors contributing to the emergence of an infectious disease;
- etiology, pathogenesis and pathomorphology of infectious diseases;
- manifestations and complications in infectious diseases that occur in a typical form in different age groups;
- the main methods of laboratory and instrumental diagnostics, rules of isolates collection;
- criteria for diagnosis in infectious diseases;
- modern classification of infectious diseases, rules for the formulation of diagnosis;
- indications for outpatient treatment and hospitalization of patients;
- rules for the transporting a patient to the hospital, isolation rules for the hospitalization of patients;
- basic principles of treatment of infectious diseases, rational choice of medicines in the treatment of patients;

- rules for dispensary observation and rehabilitation of patients with infectious diseases;
- specific and non-specific prophylaxis of infectious diseases;
- need to observe and report cases to institutions specialized in infectious diseases;
- organization of HIV and AIDS care;
- organization of outpatient care;
- the basics of medical and medical ethics and deontology.
- suspect infectious disease in a patient;
- history clerking, epidemiological present and past history);
- physical examination;
- laboratory and instrumental examination;
- interpret the results of laboratory and instrumental examination;
- identify the leading clinical and clinical-laboratory syndromes;
- evaluate the differential diagnostic significance of the existing symptoms and syndromes;
- make a differential diagnosis between diseases with similar clinical symptoms;
- assess the severity of an infectious disease;
- predict the course and outcome of an infectious disease;
- diagnose emergency cases,provide first medical assistance, as well as determine further medical approach in emergency cases;
- determine the indications for outpatient treatment and hospitalization of a patient;
- determine the indications for the consultation of other specialists;
- conduct a complex of medical and preventive measures at the prehospital stage and in the treatment of patients at home;
- to carry out dispensary observation of convalescent and rehabilitation, taking into account the severity of the disease and associated pathological conditions;
- to formulate a diagnosis in accordance with the standard of ICD-10.

**Medical student must demonstrate the ability and willingness to adapt**

- Methods of general clinical examination for the diagnosis and differential diagnosis of the main clinical syndromes in infectious diseases;
- algorithm of laboratory and instrumental examination in case of suspected infectious pathology;
- interpretation of the results of laboratory and instrumental diagnostic methods;
- an algorithm for setting a preliminary diagnosis in a patient with suspected infectious diseases;
- an algorithm for setting a detailed clinical diagnosis;
- proper management of medical records;
- handling of and working with medical history cards;
- the skills of diagnosing emergency conditions in infectious patients and providing emergency and first medical assistance in emergency and life-threatening conditions.

**4. Scope of discipline and types of task**

The total complexity of the discipline_____9 credits.

| Type of Lessons | Total hours | Semesters | | | |
|---|---|---|---|---|---|
| | | 9 | 10 | | |
| **Lesson activities (total)** | 192 | 108 | 84 | | |
| Including | - | - | - | - | - |
| *Lectures* | 2 | | | | |
| *Practical lessons (PL)* | 180 | 101 | 79 | | |
| *Seminars (S)* | | | | | |
| *Laboratory work (LW)* | | | | | |
| **Self study (total)** | 132 | 74 | 58 | | |
| Total hrs | 324 | 182 | 142 | | |

| | | | | | |
|---|---|---|---|---|---|
| credits | 9 | 5 | 4 | | |

**5. Content of discipline**

**5.1. Content of discipline's divisions**

| № | Division of discipline | Content |
|---|---|---|
| 1. | Speciality introduction | Study of the general pathology of infectious diseases. Organization of medical care in infectious diseases |
| 2. | Air borne infectious diseases | The etiology, pathogenesis, symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Influenza and other acute respiratory viral infections. Meningococcal infection. Diphtheria. Infectious mononucleosis Legionellosis. Mycoplasma infection. Herpetic infection. |
| 3. | Gastro-intestinal infectious disease | The etiology, pathogenesis, symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Typhoid fever, paratyphoid A, B. Dysentery. Cholera. Viral gastroenteritis. Amoebiasis. Food poisoning. Salmonellosis. Botulism Pseudotuberculosis. Yersiniosis. Enterovirus infections. Viral hepatitis A. Viral hepatitis E |
| 4. | Blood borne infectious diseases | The etiology, pathogenesis, clinical symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Rickettsiosis. Typhoid fever is Brill-Zinsser's disease. Endemic (flea) typhus. System tick-borne borreliosis (Lyme disease). Malaria. Tick-borne typhoid fever |
| 5. | Integumentary manifestations of infectious diseases | The etiology, pathogenesis, clinical symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Viral hepatitis B. Viral hepatitis D Viral hepatitis C. Viral hepatitis G. HIV infection. Erys |
| 6. | Zoonoses. | The etiology, pathogenesis, clinical symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Plague. Tularemia. Hemorrhagic fevers. Anthrax. Tetanus. Brucellosis. Chlamydial infection. Ornithosis. Ku fever (Coxiosis) Leptospirosis. Protozoa. Visceral leishmaniasis Protozoa. Trypanosomiasis. |
| 7. | Syndrome diagnosis. Emergency conditions in infectious diseases. | In this section, the objectives are aimed at differential diagnosis of both infectious and non-infectious diseases: Diarrheal syndrome. Meningeal syndrome. Respiratory diseases. Exanthems and enanthems. Rashes. Emergency conditions: Hypovolemic shock. Infectious-toxic shock. Meningitis. Cerebral edema |
| 8. | Helminthiases(worm infections) | The etiology, pathogenesis, clinical symptoms, diagnostics, treatment and prophylaxis of the following diseases are studied: Ascariasis. Trichocephalus. Enterobiosis. Ankylostomidosis. Strongyloidosis. Trichinosis. Filariatosis. Cestodoza. |

**5.2. Division of discipline and type of lesson**

| № | Division of discipline | Lecture. | Practicals | Lab work | Seminar | Self study | Total Hrs. |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | Speciality introduction | 2 | 4 | | | 3 | 9 |
| 2. | Air borne infectious diseases | | 22 | | | 13 | 35 |
| 3. | Gastro-intestinal infectious disease | | 35 | | | 26 | 61 |
| 4. | Blood borne infectious diseases | | 14 | | | 8 | 22 |
| 5. | Integumentary manifestations of infectious diseases | | 18 | | | 14 | 32 |
| 6. | Zoonoses. | | 28 | | | 22 | 50 |
| 7. | Syndrome diagnosis. Emergency conditions in infectious diseases. | | 24 | | | 2<br>12 | 40 |
| 8. | Helminthiases(worm infections) | | 38 | | | 26 | 64 |
| 9. | Clinical History Taking | | 7 | | | 4 | 11 |

**6. Laboratory works (if available) is not provided**

**7. Clinical practice**

| № | № Division of discipline | Topics | Total (hrs.) |
|---|---|---|---|
| 1. | Speciality introduction | Theory of the general pathology of infectious diseases. | 3 |
| | | Medical care of patients with infectious disease | 3 |
| | | Ward rounds | 2 |
| | | Medical case history analysis | 2 |
| 2. | Air borne infectious diseases | Influenza and other acute respiratory viral infections. | 4 |
| | | Meningococcal infection | 4 |
| | | Diphtheria | 4 |
| | | Infectious mononucleosis | 3 |
| | | Legionellosis | 3 |
| | | Mycoplasma infection | Self study. |
| | | Herpetic infection | 4 |
| 3. | Gastro-intestinal infectious disease | Typhoid fever, paratyphoid A, B. | 4 |
| | | Dysentery | 4 |
| | | Cholera | 4 |
| | | Viral gastroenteritis | Self study. |
| | | Amebiasis | 4 |
| | | Foodborne diseases | 3 |
| | | Salmonellosis | 4 |
| | | Botulism | 4 |
| | | Pseudotuberculosis | 2 |
| | | Yersiniosis | 2 |
| | | Enterovirus infections | Self study.. |
| | | Viral hepatitis A | 3 |
| | | Viral hepatitis E | 1 |
| 4. | Blood borne infectious diseases | Rickettsiosis. Typhoid fever Brill-Zinsser disease | 4 |
| | | Endemic (flea) typhus. | 3 |
| | | Systemic tick-borne borreliosis (Lyme disease) | 3 |

| | | | |
|---|---|---|---|
| | | Malaria | 4 |
| | | Tick-borne typhoid fever | Self study.. |
| 5. | Integumentary manifestations of infectious diseases | Viral hepatitis B | 4 |
| | | Viral hepatitis D | 2 |
| | | Viral hepatitis C | 4 |
| | | Viral hepatitis G | Self study. |
| | | HIV infection | 4 |
| | | Erysipelas | 4 |
| | | Control test | 1 |
| 6. | Zoonoses. | Plague | 3 |
| | | Tularemia | 2 |
| | | Hemorrhagic fevers | 2 |
| | | anthrax | 2 |
| | | Tetanus | 2 |
| | | Rabies | 2 |
| | | Brucellosis | 2 |
| | | Chlamydial infection. Ornithosis | 3 |
| | | Ku fever | 2 |
| | | Leptospirosis | 3 |
| | | Protozoa. Visceral leishmaniasis | 2 |
| | | Protozoa. Trypanosomiasis. | 3 |
| 7. | Syndrome diagnosis. Emergency conditions in infectious diseases. | Syndrome of jaundice. Differential diagnostics | 3 |
| | | Diarrheal syndrome. Differential diagnostics. | 3 |
| | | Meningeal syndrome. Differential diagnostics. | 3 |
| | | Respiratory syndrome. Differential diagnostics. | 3 |
| | | Exanthemes and enanthems in infectology. Differential diagnosis of rashes. | 3 |
| | | Emergency conditions in infectious diseases. Hypovolemic shock. | 3 |
| | | Infectious-toxic shock. | 3 |
| | | Meningitis. Edema is the swelling of the brain. | 3 |
| 8. | Helminthiases (worm infections) | Nematodose. | |
| | | Ascaridosis | 3 |
| | | Trichocephalosis | 3 |
| | | Enterobiosis | 3 |
| | | Ankylostomidosis | 3 |
| | | Strongyloidosis | Self study. |
| | | Trichinosis | 3 |
| | | Filariatosis | 3 |
| | | Cestodoza. | |
| | | Teniosis and cysticercosis | 3 |
| | | Teniarinhoz | Self study. |
| | | Diphyllobothriasis | 3 |
| | | Echinococcosis. Alveococcosis. | 3 |
| | | Hymenolepidosis | Self |

| | | | |
|---|---|---|---|
| | | | study.. |
| | | Trematodoza. | |
| | | Opisthorchiasis | 3 |
| | | Fasciolus | 4 |
| | | Schistosomiasis | 4 |
| | | Paragonymosis | Self study. |
| | | Test | 2 |
| | | In the 9th semester a complete medical history of a patient written by the student is under proposal | 7 |

**8. Material and technical support of the discipline:**
Clinical bases:
Infectious Clinical Hospital No. 1 - 500 beds
Infectious Clinical Hospital No. 2 - 900 beds
Use of wards, laboratories, class rooms, computers, multimedia systems, laboratory and instrumentation equipment. Sets of slides, tables, multimedia visual materials. Video films. Situational tasks, test tasks on given topics.

**9. Information support of the discipline**
a) The department is supported by software Microsoft office 2012
b) Databases, information and reference systems and search systems-
The educational portal of the PFUR is http://web-local.rudn.ru/ Educational and Scientific Information Library Center - http://lib.rudn.ru/

**10. Educational and methodological support of the discipline:**

**a) Basic sources**
1. Essentials of Clinical Infectious Diseases by William Floyd Wright
2. Harrison's infectious diseases 3rd edition by Dennis Kasper

**b) additional sources.**
1. Oxford Handbook of Infectious Diseases and Microbiology by Estee Torok, Ed Moran
2. Paniker's Textbook of Medical Parasitology C. K. Jayaram, M.D. Paniker, Sougata, M.D. Ghosh
3. Infectious Diseases in Critical Care Medicine...Burke A. Cunha
4. Infectious Disease Flashcards: Julie Harless
5. Microbial Diseases! All Parts Combined!Philip Carey
6. Human Parasites: Diagnosis, Treatment, Prevention Heinz Mehlhorn
7. Infectious and Tropical Diseases: A Handbook...Tao Sheng Kwan-Gett, Charles Kemp
8. Harrison's Principles of Internal Medicine, 19th Edition Textbook
9. Infectious Diseases A Clinical Short Course by Frederick S Southwick
10. Treatment and Prevention of Malaria: Antimalarial Drug Chemistry, Action and Use by Sanjeev Krishna
11. Johns Hopkins HIV Guide 2012
12. Understanding Hepatitis James L. Achord, M.D.
13. Lecture Notes: Medical Microbiology and Infection | Elliott Tom, Casey Anna
14. Tropical Medicine (Lecture Notes) 7th Edition Pdf Edited by Nick Beeching Geoff Gill
15. Kumar and Clark's Clinical Medicine10th Edition. Editors: Adam Feather David Randall Mona Waterhouse

16. 4TH EDITION SHERRIS MEDICAL MICROBIOLOGY AN INTRODUCTION TO INFECTIOUS DISEASE. EDITORS: KENNETH J. RYAN, MD C. GEORGE RAY, MD

**11 Methodical instructions for students**

In accordance with the requirements of Federal standards for higher education, the teaching of the discipline "Infectious Diseases" provides a competence approach in the educational process, which is based on innovative psychological and pedagogical technologies aimed at improving the effectiveness and quality of the formation of the professional skills of students. The main forms of training are: lectures, practical clinical studies (conducted in the classrooms and in the wards of patients with infectious diseases), as well as self study of the student.

The list of topics for classroom activities determines the socio-economic and epidemiological significance of certain infectious and non-infectious diseases, prevention of which is within the competence of the doctor in health care centres and institutions.

Active and interactive forms of training were used in the developed program: discussions, analysis of clinical situations.

For successful completion of the discipline each student is provided with educational materials (thematic plans of lectures and practical clinical studies, educational-methodical literature, test, situational tasks).

Different types of academic work, including self study of the student, contribute to improving perception, self-improvement, self-realization, personal and subject reflection.

Subjects of lectures and practical clinical studies correspond to the content of the discipline program.

Lectures are read on the most important sections of the program. They are problematic in nature and form a systematic understanding of the topic, ensure their understanding of the basic principles and provisions of the discipline "Infectious Diseases", as well as their readiness to perceive scientific and technological innovations and technologies.

Practical clinical classes provide acquisition and consolidation of necessary skills, form professional competencies, readiness for independent and individual work, making responsible decisions in the framework of professional activities in health care centres and institutions

On the practical part of the lesson, the teacher pays attention to the student's ability to logical thinking and self-independence, using in his pedagogical activity an innovative personality-oriented approach to teaching.

The list of practical clinical topics determines the socioeconomic and epidemiological significance of certain infectious diseases in medical treatment facilities (currently HIV infection, parenteral hepatitis, tuberculosis, etc.), as well as the need for students to master the skills of managing patients with infectious disease.

Priority in the conduct of practical clinical sessions is an overview (system) principle, reflecting the general approaches to conducting a complex of diagnostic, therapeutic and preventive measures in the management of patients with infectious diseases.

Practical clinical studies are conducted with the aim of mastering the main theoretical, methodological and organizational sections of the program by the students, as well as developing and consolidating the practical skills in managing patients with infectious diseases in health care centres, as well as in emergency situations.

When conducting practical clinical classes on infectious diseases with students, it is mandatory to identify the initial (basic) level of knowledge with subsequent correction. The result of the lesson is self-understanding of the topics with the help of thematic test tasks. Self-study topics are monitored in a practical lesson using test control.

Individual subjects of sections of discipline students study independently. The content of independent work: reading the basic and recommended additional literature, solving case

study, which contributes to the development of cognitive activity, creative thinking of students, installs skills of independent search for information, and also forms the ability and readiness for self-improvement, self-realization and creative adaptation. Self study with basic and additional literature forms the ability to analyze medical and social problems, the ability to use natural science, biomedical and clinical sciences in various kinds of professional and social activities. Self study of students is conducted in off-hour hours and is about 1/2 of the total complexity of the discipline. Assessment of theoretical and practical knowledge of students is carried out using test control, solving situational problems. At the end of the 9th semester, a test is conducted, this includes written and oral. At the end of the 10th semester an intermediate certification is conducted in the form of a course exam.

## 12. Foundation of program evaluation for intermediate certification of students in this discipline (module)

Materials for assessing the level of adapting the educational material of the discipline "Infectious Diseases" (evaluation materials), including a list of competencies with an indication of the stages of their formation, a description of indicators and criteria for evaluating competencies at various stages of their formation, a description of the assessment scales, typical assessment tasks or other materials , necessary for assessing the knowledge, abilities, skills and (or) experience of activities that characterize the stages of the formation of competencies in the process of adapting the educational program, methodological materials that determine the procedures for assessing knowledge, skills and (or) experience of activities that characterize the stages of formation of competencies in full and available to students on the course page TUIS RUDN - https://esystem.rudn.ru/course/view.php?id=6535

This program is compiled in accordance with the requirements of the FSES HE.

**Developers:**

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