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Medical Institute

Recommended by MCCN

#### **COURSE SYLLABUS**

#### **OCCUPATIONAL DISEASES**

**Recommended for education /specialty** 

31.05.01 Medicine

The development of the discipline is carried out within the framework of the implementation of the main professional educational program of higher education GT HE:

Medicine

2024

1. COURSE GOAL(s)

The discipline "Occupational diseases" is included in the program of the specialty 31.05.01 "**Medicine**" and is studied in the 9th semester of 5 the course. The discipline is implemented by the Department of Hospital Therapy with courses in endocrinology, Hematology and clinical laboratory diagnostics. The discipline consists of 4 sections and 4 topics and is aimed at studying the etiology, pathogenesis, clinic, differential diagnosis, treatment of diseases that develop when exposed to occupational hazards, measures to ensure favorable and safe working conditions, industrial ecology in order to prevent the development of occupational diseases.

**The goal** of the discipline "Occupational diseases" is to acquire students 'knowledge in occupational pathology, the ability to correctly make a diagnosis, to make a differential diagnosis with similar diseases, to determine the clinical and labor prognosis of a particular patient, to acquire knowledge about modern methods of examination, treatment and prevention of occupational diseases.

#### 2. REQUIREMENTS for LEARNING OUTCOMES:

Learning outcomes of the discipline "**Occupational diseases**" is aimed at the formation of the following competencies:

Table 2.1 The list of competencies formed by students during the learning of the discipline (results of the learning of the discipline)

Compe-	Competence Name	Indicator of Competence Achieve-
tence		ment
PC-2	Being able to examine a patient in	PC-2.1. Mastering the skills to collect
	order to determine a diagnosis	complaints, anamnesis of the patient's
		life and disease, as well as conduct a
		complete physical examination of the
		patient (examination, palpation, per-
		cussion, auscultation).
		PC-2.2. Being able to make a prelimi-
		nary diagnosis and make up a plan of
		laboratory and instrumental examina-
		tions of a patient.
		PC-2.3. Being able to refer a patient to
		a laboratory examination in case there
		are medical indications in accordance
		with the current procedures for the pro-
		vision of medical care, clinical guide-
		lines (treatment protocols) on the provi-
		sion of medical care taking into account
		the medical care standards.
		PC-2.4. Being able to refer a patient to
		an instrumental examination in case
		there are medical indications in accord-
		ance 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. PC-2.5. Being able to refer a patient to consult with a medical specialist if there is a medical indication 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. PC-2.6. Being able to refer a patient to be provided with specialized medical care. PC-2.6. Being able to refer a patient to be provided with specialized medical care in an inpatient setting or in a day hospital in case there are medical indications in accordance with the current procedures for the provision of medical care taking into account the standards of medical care taking into account the current international statistical classification of diseases and problems related to health (ICD).
PC-3	Being able to prescribe treatment and monitor its efficacy and safety	PC-3.1. Being able to develop a treat- ment plan for a disease or condition taking into account the diagnosis, age and clinical picture 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. PC-3.2. Being able to prescribe medic- inal drugs, medical devices and medi- cal nutrition taking into account the di- agnosis, age and clinical picture of the disease and in accordance with the cur- rent procedures for the provision of medical care, clinical guidelines (treat- ment protocols) on the provision of medical care taking into account the

		standards of medical care. PC-3.3. Being able to prescribe non- drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the cur- rent procedures for the provision of medical care, clinical guidelines (treat- ment protocols) on the provision of medical care taking into account the standards of medical care.
PC-4	Being able to implement and to monitor the effectiveness of the patient's medical rehabilitation, including in the implementation of individual rehabilitation or re- habilitation programs for the dis- abled, to assessment the patient's ability to carry out work activities	PC-4.1. Being able to carry out an ex- amination of temporary disability and work as part of a medical commission carrying out an examination of tempo- rary disability; PC-4.2 Being able to prepare the nec- essary medical documentation for the implementation of medical and social expertise in federal state institutions of medical and social expertise; PC-4.7 Being able to refer a patient with a persistent impairment of body functions due to diseases, conse- quences of injuries or defects to medi- cal and social examinations;
PC-5	Being able to conduct and to monitor the effectiveness of measures for the prevention and formation of a healthy lifestyle and sanitary and hy- gienic education of the popula- tion	PC-5.11 Able to evaluate the effective- ness of preventive work with patients;

#### 3. THE PLACE OF DISCIPLINE IN THE STRUCTURE GT HE

Discipline "*Occupational diseases*" is the main part of the block *Block 1* of curriculum.

Within the framework of the educational program, students also learn other disciplines and/or practices that contribute to achieving the planned results of mastering the discipline "Occupational Diseases".

Table 3.1 The list of components of the GT HE, contributing to the achievement of the planned results of the development of the discipline

Code	Name of the	Provious discipling	Subsequent discipline
Coue	competence	r revious discipline	Subsequent discipline

	A 1 *1*/		TT 1 11 11 11 11 11 11
PC-2	Ability to examine a patient to estab-	Medical Enzymol- ogy**; Molecular	Telemedicine; General medical skills; Urgent
	lish a diagnosis	genetics in practi-	conditions; Obstetrics
	lisii a diagnosis	cal biology and	and gynecology; Infec-
		medicine**; Oph-	tious diseases; Pediat-
		thalmology; Pro-	rics; Maxillofacial sur-
		paedeutics of inter-	
		nal diseases; Medi-	gery; Sectional course; Endocrinology: Psy
		cal Elementology;	Endocrinology; Psy- chiatry, medical psy-
		Obstetrics and gy-	chology; Phthisiology;
		necology; Immu-	Outpatient therapy;
		nology; Otorhino-	Anesthesiology, inten-
		laryngology; Gen-	sive care, intensive
		eral Surgery; Fac-	care; Hospital surgery,
		ulty therapy; Fac-	pediatric surgery; On-
		ulty Surgery; Mi-	cology, radiation ther-
		crobiology, virol-	apy; Traumatology, or-
		ogy; Pathophysiol-	thopedics; Reproduc-
		ogy, clinical patho-	tive health; Cardiology
		physiology; Neurol-	in Quests; Hospital
		ogy, medical genet-	therapy; Endoscopic
		ics, neurosurgery;	urology; Allergology;
		Evidence-based	Practice of obstetric
		medicine; Radiation	and gynecological pro-
		diagnostics; Derma-	file: assistant obstetri-
		tovenerology; Mo-	cian; General medical
		lecular genetic	practice: Assistant pe-
		methods; Pathologi-	diatrician
		cal anatomy, clini-	
		cal pathology anat-	
		omy; Urology; Sur-	
		gical practice : As-	
		sistant surgeon ;	
		Obstetric and gyne-	
		cological practice:	
		assistant to a gyne-	
		cologist;	
PC -3	Ability to prescribe	Introduction to Nu-	Telemedicine; Outpa-
	treatment and moni-	tritionology**;	tient Cardiology**;
	tor its effectiveness	Ophthalmology;	Obstetrics and gyne-
	and safety	Obstetrics and gy-	cology; Infectious dis-
		necology; Otorhi-	eases; Clinical Phar-
		nolaryngology;	macology; Pediatrics;
		Faculty therapy;	Maxillofacial surgery;
		Pharmacology;	Endocrinology; Psy-
		Faculty Surgery;	chiatry, medical psy-
		Fundamentals of	chology; Phthisiology;
			Outpatient therapy;

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PC-4	Being able to im- plement and to monitor the effec- tiveness of the pa- tient's medical reha-	Integrative medi- cine**; Neurology, medical genetics, neurosurgery; Dermatovenerol- ogy; The basics of therapeutic nutri- tion; Clinical Tri- als**; Urology; Surgical practice : Assistant surgeon ; Practice of obstet- ric and gynecologi- cal profile: assis- tant to a gynecol- ogist; Organization of special patient care; Faculty ther- apy; Faculty Sur- gery; Public health	Hospital surgery, pedi- atric surgery; Oncol- ogy, radiation therapy; Traumatology, ortho- pedics; Reproductive health; Cardiology in Quests; Geriatrics and palliative medicine; Hospital therapy; En- doscopic urology; Al- lergology; Obstetric and gynecological practice: assistant ob- stetrician; General medical practice: As- sistant pediatrician <i>Examination of tempo- rary disability**;</i> En- docrinology; Forensic medicine; Outpatient therapy; Hospital sur-
	bilitation, including in the implementa- tion of individual rehabilitation or re- habilitation pro- grams for the disa- bled, to assessment the patient's ability to carry out work activities	gery; Public health and healthcare, health economics; Medical rehabilita- tion; Neurology, medical genetics, neurosurgery; Sur- gical practice : As- sistant surgeon	therapy; Hospital sur- gery, pediatric surgery; Traumatology, ortho- pedics; Hospital ther- apy;
PC-5	Being able to con- duct and to monitor the effec- tiveness of measures for the prevention and formation of a healthy lifestyle and sani- tary and hygienic education of the population	Introduction to Nu- tritionology**; Ophthalmology; Propaedeutics of internal diseases; Organization of special patient care; Obstetrics and gynecology; Epidemiology; Hy- giene; Neurology, medical genetics, neurosurgery; Dermatovenerol- ogy; Fundamentals of psychophysiol- ogy**; Urology;	Outpatient Cardiol- ogy**; Obstetrics and gynecology; Infectious diseases; Pediatrics; Endocrinology; Phthisiology; Outpa- tient therapy; Repro- ductive health; Endo- scopic urology; Gen- eral medical practice: Assistant pediatrician

\* - filled in in accordance with the matrix of competencies and standard work HE program(me) mastering

\*\* - elective disciplines /practices

### 4. VOLUME OF DISCIPLINE AND VOLUME OF TRAINING SESSIONS

The total labor intensity of the discipline "Occupational diseases" is 2 credits.

Table 4.1. Types of educational work by periods of mastering GT HE for FULLtime education

Classroom training (total)	Total	Semesters
	Hours	9
Classroom training (total) (academic hours).	51	51
Including:		
The lectures (L)	0	0
Practical (laboratory) sessions	51	51
Seminars (S)	0	0
Laboratory classes (LC)		
Self-study (academic hours)	18	18
Control (exam/test with assessment) (academic	3	3
hours).		
Total workload (academic hours)	72	72
Total workload (credit units)	2	

#### 5. THE CONTENTS OF THE DISCIPLINE

Number of section	Name of section discipline		Contents	Type of educational work*
Section 1.	Occupational dis- eases of respiratory system. Pneumoconiosis.	1.1	Introduction to the clinic of occupa- tional diseases and its tasks. Issues of diagnostics and medical prevention. Principles of organ- ization and conduct of medical exami- nations of workers	LC

5.1. The content of sections discipline (Moduls) of Academic work.

Section 2	Vibration disease	2.1	of industrial enter- prises, issues of ex- amination of work- ing capacity, medi- cal examination. Pneumoconiosis, classification. Sili- catoses, anthracosis, pneumoconiosis of electric welders, aluminosis, pneu- moconiosis from exposure to plant dust. Berylliosis. Dust bronchitis. Professional bron- chial asthma. Bron- choallergoses.	
Section 2.	Vibration disease. Noise sickness (chronic occupa- tional sensorineural hearing loss).	2.1	Clinical picture of diseases associated with exposure to lo- cal vibration and whole-body vibra- tion. Stage of dis- ease, diagnosis, treatment, preven- tion, prognosis.	LC
Section 3.	Occupational dis- eases of the muscu- loskeletal system	3.1	sis of occupational diseases of the mus- culoskeletal system caused by physical overstrain and mi- crotraumatization in workers of indus- trial enterprises and agricultural indus- tries.	LC
Section 4.	Domestic poisoning	4.1	Classification. Methods of diagno- sis. Basic clinical syndromes. General principles of emer- gency treatment: prevention of fur- ther contact with the poison, its ab- sorption, excretion	LC

of the poison from the body, antidotes,
treatment of syn-
dromes associated
with intoxication.

\* - filled in only by FULL-time study: L- lectures; LC - laboratory classes; S- seminars

#### 6. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE:

Type of class- room	Equipment of the classroom	Specialized educational/laboratory equipment, software and materials for the development of the discipline (if is necessary)
Lecture class- room	An auditorium for conducting lec- ture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of	Laptop and Multimedia pro- jectors
Computer class	multimedia presentations.A computer classroom for conduct-ing classes, group and individualconsultations, ongoing monitoringand intermediate certification,equipped with personal computers(in the amount of 8 pcs.), a black-board (screen) and multimediapresentation equipment.	
Seminar class- room	An auditorium for conducting semi- nar-type classes, group and individ- ual consultations, ongoing monitor- ing and intermediate certification, equipped with a set of specialized furniture and multimedia presenta- tion equipment.	Magnetic Market Board
Self-studies Classroom	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to EIOS.	

\* - the audience for independent work of students is **MANDATORY!** 

# 7. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Basic literature:

1. Analysis of morbidity and the basis for maintaining the health of economically active groups of the population (workers of metallurgical enterprises) [Text/electronic resource] : Educational and methodical manual / I.V. Pachgin, L.V. Maksimenko, D.I. Kicha. - Elec-tronic text data. - Moscow: RUDN Publishing House, 2015. - 59 p. - ISBN 978-5-209-06799-3: 49.84. http://lib.rudn.ru/MegaPro2/Web/SearchResult/ToPage/1 2. Occupational diseases [Electronic resource]: Textbook / Mukhin N.A. et al. - 2nd ed., reprint. and additional - M.: GEOTAR-Media, 2016. http://lib.rudn.ru/Mega-

Pro2/Web/SearchResult/ToPage/1

3. Occupational diseases [Electronic resource]: A guide for doctors / V.V. Kosarev, S.A. Babanov. - 3rd ed. (e-mail). - M.: BINOM. Laboratory of Knowledge, 2015. - 424 p. - ISBN 978-5-9963-3015-7. http://lib.rudn.ru/MegaPro2/Web/SearchResult/ToP-age/1

4.Occupational pathology : national guidelines / Edited by I. F. Izmerov. - Moscow: GEOTAR-Media, 2011. - 784 p. - ISBN 978-5-9704-1947-2. - Text: electronic // URL: https://www.rosmedlib.ru/book/ISBN9785970419472.html

Additional literature:

Electronic full-text materials:

1. Analysis of the morbidity of workers and examination of temporary disability at enter-prises [Text/electronic resource]: Textbook / I.V. Pachgin, D.I. Kicha, L.V. Maksimenko. - Electronic text data. - Moscow: RUDN Publishing House, 2017. - 176 p. -ISBN 978-5-209-07689-6: 125.50.

2. Hygiene [Electronic resource] : textbook /V. I. Arkhangelsky [et al.] ; ed. Melnichenko P. I. - M. : GEOTAR-Media, 2014. - 656 p. : ill. – Access mode: http://www.studentlibrary.ru/

3. Arkhangelsk V. I. Hygiene and human ecology[Electronic resource] :textbook / V. I. Arkhangelsky, V. F. Kirillov. - M.: GEOTAR-Media, 2016. - 176 p. : ill. - Access mode: http://www.studentlibrary.ru/

4. Kiryushin V. A. Occupational hygiene [Electronic resource] : textbook /Kiryushin V. A., Bolshakov A.M., Motalova T. V. - M. : GEOTAR-Media, 2011. – Access mode: http://www.studentlibrary.ru/

5. Dvoretsky L. I. Interdisciplinary clinical tasks /L. I. Dvoretsky. - M.: GEOTAR-Media, 2012. - Access mode: http://www.studentlibrary.ru/

6. Pathological anatomy [Electronic resource] : textbook : in 2 t. t. 2 : Private pathology / edited by V.S. Paukov. - M. : GEOTAR-Media, 2016. - 528 p. : ill. - http://www.studentlibrary.ru

7. Textbook of Clinical Occupational and Environmental Medicine Book . Linda Rosenstock and Mark R Cullen and Carl Andrew Brodkin and Carrie A Redlich. W.B. Saunders/ Second Edition, 2005- Pages 1285-1338/https://doi.org/10.1016/B978-0-7216-8974-6.X5001-5

8. Industrial and Occupational Health, second edition. S.K. Halder.2023 ISBN 13 : 9789354666469 <u>https://eduport-global.com/product/industrial-occupational-</u> health50195947 9. Handbook of Preventive and Social Medicine, Yash Pal Bedi ; Pragya Sharma. 17<sup>th</sup> Edition, 2019- 304p. ISBN 13 : 9789389261318. <u>https://eduport-global.com/prod-uct/handbook-preventive-social-medicine50129610</u>

10. Worker and Public Health and Safety. 2021. Издательство: MDPI - Multidisciplinary Digital Publishing Institute. 602 стр. ISBN: 9783036500942,9783036500959. https://directory.doabooks.org/handle/20.500.12854/76451

Printed publications:

1. Diagnostic and exposure criteria for occupational diseases Guidance notes for diagnosis and prevention of the diseases in the ILO List of Occupational Diseases (revised 2010) Copyright © International Labour Organization 2022/

2. Modern Occupational Diseases Diagnosis, Epidemiology, Management and Prevention by Ki Moon Bang (Author). Bentham Science Publishers (September 22, 2022)-389 pages

3. Guidance on risk assessment at work European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Publications Office, 1996.

4. Health and safety at work is everybody's business. Practical guidance for employers. Eu-ropean Commission Directorate-General for Employment, Social Affairs and Inclusion Unit B.3. European Union, 2016

5. "Occupational hygiene" I. N. Fedorovich, K. V. Fedorovich GEOTAR-Media, 2010. Moscow.

6. Occupational diseases - Artamonova V.G., Mukhin N.A. – Textbook, 2004

7. Labor protection and prevention of occupational diseases. [Text]: studies.manual / D. V. Marchenko. - Rostov n/A: Phoenix, 2008.

8. Clinical aspects in the expert work of a professional pathologist [Text]: [text-book.man-ual]/ V. V. Razumov, V. A. Zinchenk

ional hygiene [Text] : manual.practice. classes : studies. manual for students on spec. 060104.65 "Medico-prophylactic. the case" by discipline"Occupational hygiene" / V. A. Kiryushin, A.M. Bolshakov, T. V. Motalova. - M.: GEOTAR-Media, 2011

10. Occupational health and safety guidelines (English). Office of Environmental Affairs.Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/308631492969180329/Occupational-health-and-safety-guidelines.

11. Early Detection of Occupational Diseases. World Health Organization, Geneva, 1986

Resources of the Internet information and telecommunication network:

1. EBS RUDN and third-party EBS, to which university students have access on the basis of concluded contracts: - Electronic library system of RUDN – EBS RUDN http://lib.rudn.ru/MegaPro/Web - EBS "University Library online" http://www.biblio-club.ru - ABS Yurayt http://www.biblio-online.ru - EBS "Student Consultant" www.studentlibrary.ru - EBS "Doe" http://e.lanbook.com/

- EBS "Trinity Bridge"

2. Databases and search engines:

- electronic fund of legal and regulatory and technical documentation http://docs.cntd.ru/ - search engine Yandex https://www.yandex.ru/ - Google search engine https://www.google.ru/

- bibliographic database SCOPUS http://www.elsevierscience.ru/products/scopus/ 3. Association of Doctors and Specialists of Occupational Medicine http://amt-oha.ru/fkr

4. Standards of medical care (website of the Ministry of Health of the Russian Federation): 30 https://www.rosminzdrav.ru/ministry/61/22/stranitsa-979/stranitsa-983
5. Website of the Moscow Branch of the Society of Evidence-based Medicine Specialists http://www.osdm.msk.ru

6. Interregional Society of Evidence-based Medicine Specialists

7. Website of the Chief freelance therapist of the Ministry of Health and Social Development of Russia, Director of the Federal State Institution "Scientific Research Institute of Pulmonology" of the FMBA of Russia Alexander Grigoryevich Chuchalin – http://www.institute.pulmonology.ru 8. Russian Scientific Medical Society of Therapists - http://www.rsmsim.ru/

9. Interregional Society of Evidence-based Medicine Specialists. http://www.osdm.org/index.php

10 "Pubmed" - free full-text archive of biomedical and

biological sciences journal of Literature of the American National

Institute of the National Library of Health Medicine (NIH/NLM). http://www.ncbi.nlm.nih.gov/pubmed

*Learning toolkits for self- studies of the discipline/ module\*:* 

1. Methodological guidelines for the implementation and execution of control and selfstudies on the discipline "Professional diseases";

2. Questions for self-preparation of students for the class;

3. Textbooks in electronic form on a number of studied topics are posted on the pages of the department and the staff of the Department of Hospital Therapy in the TUIS of the RUDN, as well as on local resources of the electronic library system of the RUDN. 4. Recordings of classes are displayed in the TUIS.

5. The preparation of notes on various sections of the course, as well as the presentation of reports at the seminar, is provided as one of the forms of self- studies.

6. Extracurricular self- studies includes:

study of the material on the textbook, textbooks on paper and electronic media; preparation of an abstract message or presentation on a selected topic; preparation for the performance of control works and test tasks, writing a term paper (medical history).

\* - all learning toolkits for self- studies are placed in accordance with the current procedure on the discipline page in the **<u>RUDN LMS TUIS!</u>** 

#### 8. EVALUATION MATERIALS AND SCORE RATING SYSTEM FOR ASSESSING THE LEVEL OF COMPETENCE FORMATION IN THE DISCIPLINE

Evaluation materials and a score-rating system\* for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "Occupational Diseases" are presented in the Appendix to this Work Program of the discipline.

\* - OM and SRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN.

## The fund of evaluation funds for the interim certification of students in the discipline "Occupational diseases".

Materials for assessing the level of development of educational material of the discipline "Occupational Diseases" including a list of competencies indicating the stages of their formation, a description of indicators and criteria for evaluating competencies at various stages of their formation, a description of assessment scales, standard control tasks, situational tasks necessary for assessing knowledge, skills, skills and experience of activities that characterize the stages of competence formation in the process of mastering the educational program; methodological materials that define the procedures for evaluating knowledge, skills, skills and experience of activities that characterize the stages of competence formation, are developed in full and are available to students on the page of the discipline in the TUIS RUDN.

#### **DEVELOPERS:**

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