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Khanty-Mansiysk Autonomous Okrug-Ugra
 "Surgut State University"

Approved by
 Deputy Rector for Academic Affairs
 _____ E.V. Konovalova

“ 31 ” August 2020

Professional Practice, Academic Research Work

Syllabus

Department	Internal diseases		
Curriculum	s310501-ЛечДело-Ин-20-1.pli.xml Specialty 31.05.01 General Medicine		
Qualification	General Practitioner		
Form of education	Full-time		
Total (in credits)	2		
Total academic hours	72	Control:	
including:		Credit, 10 th term	
Classes	16		
Self-study	56		
Control hours	0		

Course outline in terms

Academic year (Term)	5 (5.10)		Total	
	Cur	Syl		
Weeks	21,3			
Types of classes	Cur	Syl	Cur	Syl
Lectures	-	-	-	-
Practical	16	16	16	16
Self-study	56	56	56	56
Control hours	-	-	-	-
Total	72	72	72	72

The Syllabus is compiled by:

PhD in Medical Sciences, Associate Professor, Matveeva A.M......

PhD in Medical Sciences, Associate Professor, Vishniak D.A......

The Syllabus

Professional Practice, Academic Research Work

Developed in accordance with Federal State Educational Standard:

Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on February, 9, 2016 №95)

Based on the Curriculum:

31.05.01 GENERAL MEDICINE

Specialization: General Medicine

Approved by the Academic Council of Surgut State University, “ 31 ” August 2020

The Syllabus was approved by the department Internal diseases

24 August 2020, Rec.12/1

Head of Department, PhD in Medical Sciences , Associate Professor, Ariamkina O.L.

Chairman of Academic and Scientific Council, PhD in Medical Sciences (Medicine), Senior Lecturer

Lopatskaya Zh.N.

24 August 2020, Rec.9

The **aim** of the practice is to consolidate and deepen the theoretical training of the student and acquire practical skills and competences in the field of professional activity aimed at the formation and development of professional competence, the formation of professionally significant personal qualities.

2. OBJECTIVES OF THE PRACTICE

1. To form the ability and willingness to implement ethical and deontological aspects of medical activities in communication with colleagues, medical staff, adults and adolescents, their parents and relatives;
2. To form the ability and willingness to analyze medical information, based on the comprehensive principles of evidence-based medicine, based on finding solutions using theoretical knowledge and practical skills in order to improve professional activities;
3. To form the ability and willingness to analyze the results of their own activities to prevent medical mistakes, while being aware of the disciplinary, administrative, civil, criminal liability;
4. To form the ability and willingness to conduct and interpret a survey, physical examination, clinical examination, the results of modern laboratory and instrumental studies, morphological analysis of biopsy, surgical and sectional material, and the ability to comprise an outpatient medical record;
5. To form the ability and willingness to conduct pathophysiological analysis of clinical syndromes, to substantiate pathogenetically justified methods (principles) of diagnosis, treatment, rehabilitation and prevention among adults and adolescents, taking into account their age and sex groups;
6. To form the ability and willingness to resolve issues of examination of the ability to work (stable and temporary) patients, issue the appropriate medical documentation, determine the need to refer the patient to medical and social expertise, to prevent disability among adults and adolescents.

3. COURSE OVERVIEW

Course code (in curriculum)	Б2.Б.02.05(II)
	Assumed background (courses and practices):
	Immunology
	Pathophysiology
	Clinical Pathophysiology
	Hygiene
	Public health and Health care, Economy of Public Health
	Epidemiology
	Medical Rehabilitation
	Clinical Pharmacology
	Neurology, Medical Genetics, Neurosurgery
	Internal Diseases Propaedeutics, X-Ray Diagnostics
	Faculty Therapy, Professional Diseases
	Hospital therapy, endocrinology
	Psychiatry, medical psychology
	General surgery, radiology
	Faculty surgery, urology
	Russian
	Educational Practice, primary professional and research skills practice
	Educational Practice, Clinical practice (therapeutic patient care, surgical patient care)
	Professional Practice (nursing staff assistant)
	Professional Practice (ward nurse assistant)
	Professional Practice (procedural nurse and physician assistant)
	Professional Practice, Clinical Practice, General Practitioner Assistant (hospital)
	Post-requisite courses and practice:
	Ambulatory Therapy
	Clinical pharmacology
	Forensic medicine
	Hospital therapy, endocrinology
	Anaesthesiology, resuscitation, intensive care
	hospital surgery, paediatric surgery
	disaster Medicine
	Clinical surgery

4. PLACE AND PERIOD OF PRACTICE

Semester	Place	Department	Period
X	Surgut District Clinical Hospital	Hospital departments	June-July

X	Divisional Clinical Hospital (station Surgut, Russian	
X	Outside Surgut (based on agreements and letters of	June-August
5. Mode of practice – stationary and outside		
6. Form of practice – discrete		
7. RESULTS UPON COMPLETION OF THE PRACTICE		
7.1 Competences upon completion of the practice		
Professional Competences:		
PC-20 - readiness for analysis and public presentation of medical issues on the basis of evidence-based		
PC-21 - ability to conduct/participate in scientific research		
PC-22 - readiness to apply new methods and techniques aimed at public health protection		
7.2 By the end of the course students must:		
Know:		
principles of discussing in the context of pluralism of opinions and the main ways of conflict resolution;		
the rights, duties and responsibilities of the doctor, the main diagnostic and therapeutic measures used in		
mathematical methods for solving intellectual problems and their application in medicine;		
the basic laws of physics, physical phenomena and laws underlying the processes occurring in the		
characteristics and biophysical mechanisms of the impact of physical factors on the body;		
the physical and chemical nature of the processes occurring in a living organism at the molecular, cellular, tissue and organ levels; analysis of the data obtained;		
regulations for introducing new methods and techniques in all areas of healthcare.		
Be able to:		
apply current labour regulations, apply labour law in specific practical situations;		
make calculations according to the results of the experiment, to conduct elementary statistical processing of experimental data;		
use physical, chemical and biological equipment;		
predict the outcomes of physical-chemical processes and chemical transformations of biologically important substances;		
take part in the introduction of new methods and techniques in healthcare.		
Have skills of:		
presenting an independent point of view, analyzing and logical thinking, public speaking, presenting moral and ethical arguments, conducting discussions and round tables;		
applying basic technologies of information transformation: text, table editors; Internet search;		
consolidating indices of development of health economics, methods of calculating indicators of medical		
participating in the scientific research (data collection, processing and analysis, presentation of results);		
medical recording;		
interpreting the results of laboratory, instrumental diagnostic methods;		
participating in the introduction of new surgical methods and techniques aimed at protecting the health		

8. STRUCTURE AND CONTENTS OF PRACTICE

The academic load of the Professional Practice, Academic Research Work is 72 hours, 2 credits.

Class Code	Topics /Class type	Term / Academic year	Academic hours	Competences	Literature	Interactive	Notes
1	Pre-practice instruction / Pr/	10	4	PC-20 PC-21			Research Work
2	The choice of research topic. Supervision. / Pr/	10	4				Research Work
3	Research outline / Self-study/	10	4	PC-20 PC-21			Research Work
4	Data collecting /Self-study/	10	32				Research Work
5	Data interpreting /Self-study /	10	10				Research Work
6	Results analysis /Self-study /	10	10				Research Work

7	Research report /Pr/	10	8	PC-20 PC-21 PC-22			
	Total		72				Report of Research Work

9. Form of certification (based on the results of Professional Practice, Academic Research Work)

Monitoring of the performance of the training programme of these types of training and work experience is carried out in the form of an evaluation, in which the main results of the work performed are evaluated.

9.1. The evaluation criteria for the evaluation of the results of the training are as follows: relevance of the subject of the study; relevance of the content to the topic; depth of the material; consistency of the presentation with the standards. At the teacher's discretion, abstracts may be presented at seminars, research conferences and also be used as credits for the topics covered.

9.2. The certification of work experience should take into account and assess:

Report on the practice and its protection; The level of development of the competence of the trainees;

Training for independent work; The level of theoretical knowledge and practical training; Knowledge of the subjects covered by the IND; The initiative of the trainee during the training period; Knowledge of statistical methods of analysis and basic research

9.3. The attestation assessment criteria are: relevance of the research topic; the content and detailed of study of the topic; essay presentation. The essays can be presented at seminars, conferences, as well as taken as credits for topics covered.

In the process of attestation, the student should summarize the results of the study in the form of a report (5–7 minutes).

9.4. During the course of the certification, the trainee should summarize the results of the study in the form of a report (5-7 minutes). When protecting reports on practice, account is taken of the extent of implementation of the practice programme, the correctness of the presentation of documents, the content of the revocation characteristic, the correctness of the answers to the questions asked, the ability to analyse the documents attached to the report.

9.5. The result of the protection is a form of verification - a credit which reflects the quality of the report submitted and the level of theoretical and practical training of the trainee.

10. ASSESSMENT TOOLS

The assessment for the practice is credit

The results are assessed in a two-grading scale:

- pass
- fail

Grade	Assessment criteria
pass	<p>The student knows:</p> <ul style="list-style-type: none"> - the statistical analysis, the basics of evidence-based medicine; - current state of the problem under study; - how to implement the data into practice; - guidelines for practices and the educational process, publications, thesis at student conferences at various levels; <p>The student is able to:</p> <ul style="list-style-type: none"> - analyze, see the general and the particular, the stereotypical and specific features; - logically and concisely present the results of the study; - use the methods of statistical analysis and evidence-based medicine; - highlight the relevance of the problem, calculate the expected results, point out theoretical and practical significance, to outline the study; - set out the practical and theoretical significance of the results. <p>The student has skills of:</p> <ul style="list-style-type: none"> - applying methods of clinical applied research in the educational process and clinical practice; - presenting the results using statistical analysis based on evidence-based medicine; - doing research in the chosen field of study.
fail	<p>The student doesn't know:</p> <ul style="list-style-type: none"> - the statistical analysis, the basics of evidence-based medicine; - current state of the problem under study; - how to implement the data into practice; - guidelines for practices and the educational process, publications, thesis at student conferences at various levels; <p>The student is not able to:</p> <ul style="list-style-type: none"> - analyze, see the general and the particular, the stereotypical and specific features; - logically and concisely present the results of the study; - use the methods of statistical analysis and evidence-based medicine; - highlight the relevance of the problem, calculate the expected results, point out theoretical and practical significance, to outline the study; - set out the practical and theoretical significance of the results. <p>The student has no skills of:</p> <ul style="list-style-type: none"> - applying methods of clinical applied research in the educational process and clinical practice;

	<ul style="list-style-type: none"> - presenting the results using statistical analysis based on evidence-based medicine; - doing research in the chosen field of study.
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Questions:

Section 1. Clinical epidemiology

Stages of scientific research

Types of scientific research

- Methods of random grouping

Levels and degrees of evidence

- Methods of «blinding» research

Section 2. Biomedical statistics

The concept of population and sample

- Representativeness of the sample

- Mathematical characteristics of the sample

Types of statistical indicators: discrete and binary

Fashion, Median, Computation and Definition in Computer Programs

- Signs of normal distribution.

- Calculation of Excel, Asymmetry using Excel: Case Representation

The concept of interquartile intervals, sigma deviations.

- Parametric Methods of Comparative Statistics: The Student Criterion

Determination of the Student criterion using computer programs

Non-parametric methods of comparative statistics: Mann-Whitney and Wilcoxon method

Correlation coefficient and its meaning

The Pearson linear correlation, the essence of the method and the computation technique using computer programs

The Spearman rank correlation, the essence of the method and the computation method using computer programs

Method chi-square, substance and implementation by computer programs

Types of relative values: unit share, per cent, per thousand

Production Practice Diary Template RESEARCH WORK

<i>Date</i>	<i>Amount of work completed</i>	<i>Chief's signature</i>
	Date Workload Signature of supervisor The kit is in the unit. Five informed consent tests have been completed by the patient's legal representatives. Five patients have been examined. Five surveillance maps are completed. Clinical and laboratory scores are included in the Excel table.	

The hands-on skills table indicates the level of proficiency and the multiplicity of each skill, and is certified by the Senior/Branch or Practice Manager from the Department.

Levels of practical skills

I. To have a representation, to be professionally oriented, to know the evidence.

II. Participate, assess.

III. Executed under the guidance.

IV. Do it yourself.

No	Practical skill name	Recommended level	Achieved level
1.	Completion of informed consent for the study by the patient's legal representatives.	IV	
2.	Completion of patient monitoring protocols	IV	

3.	Adding clinical scores to the Exel table.	IV	
4.	Enter lab scores in the Exel table.	IV	

Student's signature _____ / _____

Signature of Training Supervisor _____

Report of Research Work

5nd year student _____ groups, specialty:
Full name _____

Terms of practice _____

Number of hours: 72

Head of practice from the Department (full name, position)

Output (conclusions)

Performance note (short description):

List of research topics on production practices RESEARCH WORK

1. Human characteristics as a subject of genetic research. Methods of studying human genetics: genealogical, cytogenetic, biochemical, twin, population-statistical, genetic somatic cells, methods of studying DNA.
2. Principles of chromosome mapping. Prenatal diagnosis of hereditary human diseases.
3. Prenatal diagnostic techniques and their capabilities.
4. Medical consultation, its medical significance. Types and ethanes of counselling. Monogenic, chromosomal and multi-factorial human diseases, the mechanisms of their occurrence and manifestations.
5. Hereditary diseases with non-traditional type of inheritance (mitochondrial diseases, diseases of imprinting, diseases of expansion of trinucleotide repeats). General approaches to the treatment of hereditary human diseases.

Students who are late for practice or do not show up for it on certain days, after the end of the practice, must work out all the missed hours in their free time under the supervision of the senior nurse of the Department, independently submit a diary and characteristics, a table of skills and self-analysis to the head of practices from the Department and decide whether to pass the final certification.

After conducting a test for local non-resident students, the heads of practices from the Department fill out statements and a report on the practice. The original statements are submitted to the educational and methodological part of the medical Institute, and copies are attached to the report and sent to the practice Department.

11. COURSE (MODULE) RESOURCES				
11.1. Recommended Literature				
6.1.1. Core				
	Authors	Title	Publish., year	Quantity

1.	Oslopov V.N., Bogoyavlenskaya O.V.	General Care of a Patient [M. : ГЭОТАР- Медиа, 2019.	https://www.studentlibrary.ru/book/ISBN9785970452349.html
2.	Claire Boyd. Chichester : Wiley- Blackwell.	Boyd, Claire Boyd. Clinical Skills for Nurses [Text] /	A John Wiley & Sons, Ltd., Publication, cop. 2013. 212 p. : ill. (Student Survival Skills Series) .
3.	D. Hagler ; Sharon L. Lewis [et al.] ; Prepared by Debra Hagler. 10th Edition	Clinical Companion to Medical-Surgical Nursing [Text] : Assessment and Management of Clinical Problems	/ . Amsterdam : Elsevier, cop. 2017. 804, [1] p. : ill.	
6.2. Internet resources				
6.3.1 Software				
6.3.1.1	Operational system Microsoft, applied programs pack Microsoft Office			
6.3.1.2	Internet access (Wi-Fi)			
6.3.2 Information Referral systems				
6.3.2.1	E-data bases: РГБ, Orbicon, Medline.			
6.3.2.2	Student Consultant http://www.studmedlib.ru			

12. SPECIAL CONDITIONS OF THE EDUCATIONAL PRACTICE, PRIMARY PROFESSIONAL AND RESEARCH SKILLS PRACTICE FOR INDIVIDUALS WITH DISABILITIES

In accordance with the requirements of the State Programme of the Russian Federation "Available Environment" 2011-2020 years, in particular, subprogramme 1, "ensuring the accessibility of priority facilities and services in vital spheres of life for people with disabilities and limited mobility» every medical organizations which are the clinical bases of the passing educational and professional practices have the characteristics of "barrier-free environment" for students with disabilities of the Medical Institute.

Currently, the University buildings are equipped by the main types of availability. The entrance is equipped by a ramp and handrails, the necessary information signs and icons are placed on the territory of the hospital complex. In the establishment there is a special sanitary and hygienic room for people with limited mobility. The building is equipped by a passenger-and-freight lift, that's why visiting the offices located on the ground, second and third floors of the University is absolutely available.