



SILABUS FOR DISCIPLINE "ANDROLOGY"

1. General information

Branch of knowledge	22 Healthcare
Specialty	222 Medicine, the second (master's) level of higher education
Form of study	full-time study
The name of the discipline	Andrology
Department	Urology
E-mail	kaf_urology_FPGE@meduniv.lviv.ua
Teachers (<i>names, surnames, scientific degrees and titles of teachers who teach the discipline, contact email, Google scholar, Scopus</i>)	<p>Mytsyk Yulian Olehovich - doctor of medical sciences, professor mytsyk.yulian@gmail.com https://scholar.google.com.ua/citations?hl=en&user=hxeLSTkAAAAJ https://www.scopus.com/authid/detail.uri?authorId=56766002600</p> <p>Borzhievskyy Olexander Anatolyevich - PhD, Associate professor https://scholar.google.com.ua/citations?user=SW4UFLAAAAJ&hl=uk</p> <p>Nakonechnyi Yosyf Andriyovych - Doctor of Philosophy, Assistant nyosyf@ukr.net https://scholar.google.com.ua/citations?view_op=list_works&hl=uk&user=K57_OgMAAAAJ https://www.scopus.com/authid/detail.uri?authorId=57210103968</p>
Year of study (<i>year in which the study of the discipline is implemented</i>)	5
Type of course / module (<i>compulsory / optional</i>)	Elective
Number of credits ECTS	2
Number of hours (<i>lectures / practical classes / self-work</i>)	60 год (-/20/40)
Consultations	According to the schedule

2. ANNOTATION TO THE DISCIPLINE

Syllabus of the discipline "Andrology" - one of the elective disciplines in the system of higher medical education, knowledge of which is necessary for quality training of specialists in the field of health care. the study of the discipline lays an array of knowledge of students of instrumental methods of diagnosis, involves the integration of teaching with endocrinology, neurology, nephrology, functional diagnostics, etc., forms the ability to apply acquired knowledge in professional activities at the level of general practitioner.

In recent decades, andrology has been supplemented by new approaches in the diagnosis and treatment of various pathologies. In this regard, the standards of higher medical education require the

graduate of a higher medical educational institution to be able to use instrumental methods in the diagnosis of human diseases in a timely and sufficient manner.

Knowledge from the elective course "Andrology" allows the future specialist to develop skills and apply the acquired knowledge in the process of professional activity.

3. PURPOSE AND TASKS OF THE DISCIPLINE

The purpose of teaching the discipline elective course "Andrology" is the acquisition by students of medical faculty of knowledge on the anatomy and physiology of the male reproductive system, etiology and pathogenesis of major andrological diseases, their symptoms and diagnosis, acquaintance with modern methods of treatment and prevention in andrology.

In accordance with the requirements of the Standard of Higher Education, the discipline provides students with the acquisition of competencies:

- *general*:

- ability to abstract thinking, analysis and synthesis;
- ability to learn and master modern knowledge;
- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject area and understanding of professional activity;
- ability to adapt and act in a new situation;
- ability to make informed decisions;
- ability to work in a team;
- interpersonal skills;
- ability to communicate in the state language both orally and in writing;
- ability to communicate in a foreign language;
- skills of using information and communication technologies.
- certainty and persistence in the tasks and responsibilities;
- ability to act socially responsibly and consciously;
- the desire to preserve the environment;
- ability to act on the basis of ethical considerations (motives).

- *special* (professional, subject):

- skills of interviewing and clinical examination of the patient;
- ability to determine the necessary list of laboratory and instrumental studies and evaluate their results;
- ability to establish a preliminary and clinical diagnosis of the disease;
- ability to determine the necessary mode of work and rest in the treatment of diseases;
- ability to determine the nature of nutrition in the treatment of diseases;
- ability to determine the principles and nature of disease treatment;

- ability to diagnose emergencies;
- ability to determine the tactics of emergency medical care;
- emergency medical skills;
- ability to carry out medical and evacuation measures;
- skills of performing medical manipulations;
- ability to carry out sanitary and hygienic and preventive measures;
- ability to determine the tactics of management of persons subject to dispensary supervision;
- ability to keep medical records;
- ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population.

4. COMPETENCIES AND LEARNING OUTCOMES

Detailing of competencies according to NQF descriptors in the form of "Competence Matrix".

№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
Integral competence					
Ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.					
General competencies					
1.	Ability to abstract thinking, analysis and synthesis	Have an abstract thinking, analysis and synthesis	Be able to abstract think, analyze and synthesize knowledge	The ability to effectively use the results of abstract thinking	Be responsible for the results of abstract thinking, analysis and synthesis
2.	Ability to learn and master modern knowledge	Have modern knowledge	Be able to learn and use modern knowledge	Ability to use modern knowledge	Be responsible for the results of the use of modern knowledge
3.	Ability to apply knowledge in practical situations	Have specialized conceptual knowledge acquired in the learning process.	Be able to solve complex problems and problems that arise in professional activities.	Clear and unambiguous communication of own conclusions, knowledge and explanations that substantiate	Responsible for making decisions in difficult conditions

№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
				them to specialists and non-specialists.	
4.	Knowledge and understanding of the subject area and understanding of the profession	Have deep knowledge of the structure of professional activity.	Be able to carry out professional activities that require updating and integration of knowledge.	Ability to effectively form a communication strategy in professional activities	To be responsible for professional development, ability to further professional training with a high level of autonomy.
5.	Ability to adapt and act in a new situation	Have deep knowledge of adaptation and action in a new situation	Be able to use the acquired knowledge to adapt and act in a new situation	Communicate effectively in a new situation	Take responsibility for acting in a new situation
6.	Ability to make informed decisions	Have deep knowledge to justify the decision	Be able to make informed decisions based on knowledge	Use the acquired knowledge to justify the decision	Be responsible for informed decisions
7.	Ability to work in a team	Know the methods of teamwork	Be able to work in a team	Use the acquired knowledge in teamwork	Be responsible for teamwork
8.	Interpersonal skills	Have interpersonal skills	Be able to use the skills of interpersonal interaction	Use the acquired knowledge for interpersonal interaction	Be responsible for interpersonal interaction
9.	Ability to communicate in the state language both orally and in writing	Have the skills to communicate in the state language both orally and in writing	Be able to communicate in the state language both orally and in writing	Use knowledge of the state language	Be responsible for communicating in the state language both orally and in writing
10.	Ability to communicate in a foreign language	Have the skills to communicate	Be able to communicate in a foreign language	Use knowledge of a foreign language	Be responsible for communicating

No	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
		in a foreign language			in a foreign language
11	Skills in the use of information and communication technologies	Have deep knowledge in the field of information and communication technologies used in professional activities	Be able to use information and communication technologies in a professional field that requires updating and integration of knowledge.	Use information and communication technologies in professional activities	Be responsible for the development of professional knowledge and skills.
12	Definiteness and persistence in terms of tasks and responsibilities	Have persistence in the tasks and responsibilities	Be able to persistently perform tasks and responsibilities	Communicate with others in the performance of tasks and responsibilities	Be responsible for the performance of their duties and tasks
13	The ability to act socially responsibly and consciously	Have deep knowledge for social responsibility	Be able to act socially responsibly and consciously	Establish appropriate links for social and conscious responsibility	Be responsible for social actions
14	The desire to preserve the environment	Have in-depth knowledge of environmental protection	Be able to analyze the preservation of the environment	Use the acquired knowledge to preserve the environment	Be responsible for preserving the environment
15	Ability to act on the basis of ethical considerations (motives)	Have in-depth knowledge of ethical relations	Be able to use knowledge of ethical relations	Communicate effectively on the basis of ethical considerations (motives)	Be responsible for the actions of ethical considerations (motives)
Special (professional, subject) competencies					
1.	Skills of interviewing and clinical examination of the patient	Have in-depth knowledge of interviewing and clinical examination of the patient	Be able to use knowledge for interviewing and clinical examination of the patient	Use the acquired knowledge for interviewing and clinical examination of the patient	Responsible for interviewing and clinical examination of the patient

No	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
2.	Ability to determine the required list of laboratory and instrumental studies and evaluate their results	Have in-depth knowledge of laboratory and instrumental research and evaluation of their results	Be able to use laboratory and instrumental research	Use the acquired knowledge to evaluate laboratory and instrumental research	Be responsible for the evaluation of laboratory and instrumental research
3.	Ability to establish a preliminary and clinical diagnosis of the disease	Have special knowledge before establishing a preliminary and clinical diagnosis of the disease	Be able to establish a preliminary and clinical diagnosis of the disease	Justify the establishment of preliminary and clinical diagnosis of the disease	Be responsible for establishing a preliminary and clinical diagnosis of the disease
4.	Ability to determine the required mode of work and rest in the treatment of diseases	Have the knowledge to determine the necessary mode of work and rest in the treatment of diseases	Be able to prescribe the necessary mode of work and rest in the treatment of diseases	Justify the necessary mode of work and rest in the treatment of diseases	Be responsible for prescribing the necessary mode of work and rest in the treatment of diseases
5.	Ability to determine the nature of nutrition in the treatment of diseases	Have the knowledge to determine the nature of nutrition in the treatment of diseases	Be able to prescribe the necessary diet in the treatment of diseases	Justify the necessary diet in the treatment of diseases	Be responsible for the prescribed diet in the treatment of diseases
6.	Ability to determine the principles and nature of disease treatment	Have the knowledge to determine the principles and nature of disease treatment	Be able to prescribe appropriate treatment of diseases	Justify appropriate treatment of diseases	Be responsible for the prescribed treatment
7.	Ability to diagnose emergencies	Have special knowledge for	Be able to diagnose emergencies	Justify the diagnosis of emergencies	Be responsible for diagnosing emergencies

Nº	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
		diagnosing emergencies			
8.	Ability to determine the tactics of emergency medical care	Have specialized knowledge to determine the tactics of emergency medical care	Be able to determine the tactics of emergency medical care	Justify the tactics of emergency medical care	Be responsible for determining the tactics of emergency medical care
9.	Emergency care skills	Have knowledge of emergency medical care	Be able to provide emergency medical care	Justify the provision of emergency medical care	Be responsible for providing emergency medical care
10	Skills to perform medical manipulations	Have the knowledge to perform medical manipulations	Be able to perform medical manipulations	Use the acquired knowledge to perform medical manipulations	Be responsible for performing medical manipulations
11	ability to determine the tactics of management of persons subject to dispensary supervision	Have knowledge of determining the tactics of management of persons subject to dispensary supervision	Be able to identify groups of persons of dispensary supervision	Justify the definition of persons subject to dispensary supervision	To be responsible for the tactics of conducting persons subject to dispensary supervision
12	Ability to keep medical records	Have knowledge of medical records	Be able to keep medical records	Use the acquired knowledge in maintaining medical records	Be responsible for keeping medical records

**5. CURRICULUM OF THE DISCIPLINE
«ANDROLOGY»**

Topic	Lectures	Practical (seminar) classes	CPC	Individual work
Elective course "Andrology"				

Topic 1. Andrology as a branch of medicine. Congenital anomalies of sex. The issue of sex correction.		2	4	-
Topic 2. Disorders of sexual development in men. Periods of formation of sexual function. Hypogonadism.		2	4	
Topic 3. Inflammatory diseases of the male genitalia.		2	4	
Topic 4. Modern methods of diagnosis and treatment of inflammatory diseases of the male genitalia.		2	4	
Topic 5. Traumatic injuries of the male genitalia. Priapism. Peyronie's disease.		2	4	
Topic 6. Tumors of the male genitalia.		2	4	-
Topic 7. Clinical and laboratory diagnosis of infertile married couple. Etiopathogenesis and treatment of male infertility. Immunoandrology.		2	4	
Topic 8. Immunoandrology.		2	4	
Topic 9. Male sexual dysfunction, erectile and ejaculatory disorders.		2	4	
Topic 10. Modern methods of treatment of erectile dysfunction, premature ejaculation, orgasm-associated pain.		2	4	
Total hours 60 / 2.0 ECTS credit	-	20	40	
Final control				Credit

Thematic plan of practical classes

№	TOPIC	Number of hours
1.	Andrology as a branch of medicine. Congenital anomalies of sex. The issue of sex correction.	2
2.	Disorders of sexual development in men. Periods of formation of sexual function. Hypogonadism.	2
3.	Inflammatory diseases of the male genitalia.	2
4.	Modern methods of diagnosis and treatment of inflammatory diseases of the male genitalia.	2
5.	Traumatic injuries of the male genitalia. Priapism. Peyronie's disease.	2
6.	Tumors of the male genitalia.	2
7.	Clinical and laboratory diagnosis of infertile married couple. Etiopathogenesis and treatment of male infertility. Immunoandrology.	2

8.	Immunoandrology.	2
9.	Male sexual dysfunction, erectile and ejaculatory disorders.	2
10.	Modern methods of treatment of erectile dysfunction, premature ejaculation, orgasm-associated pain.	2
	Total	20

Thematic plan of independent work of students

№ z.p.	TOPIC	Number of hours	type of control
1.	Congenital anomalies accompanied by puberty disorders.	4	Current control in practical classes
2.	Male hypogonadism.	4	
3.	Basics of decoding spermograms.	4	
4.	Endocrinological disorders in sexology.	4	
5.	Minimally invasive reproductive technologies.	4	
6.	Malignant processes in andrology.	4	
7.	Sexual health of a married couple.	4	
8.	Priapism.	4	
9.	Sexually transmitted infections.	4	
10.	Pathophysiological aspects of premature ejaculation.	4	
	Total	40	

6. TYPES OF CONTROL (CURRENT AND FINAL)

Current control carried out at each practical lesson in accordance with specific goals, during the individual work of the teacher with the student for those topics that the student develops independently and they are not part of the structure of the practical lesson. Objective (standardized) control of theoretical and practical training of students is applied.

The following means of diagnosing the level of preparation of students are used: testing, solving situational problems, control of practical skills.

At each practical lesson, the student answers 20 questions (tests on the topic of practical training, standardized questions, knowledge of which is necessary to understand the current topic of practical training and independent work related to the current lesson; demonstrates knowledge and skills of practical skills).

The form of final control when studying the elective course "Andrology" is a semester test, which consists in assessing the student's mastery of educational material solely on the basis of the results of his performance of certain types of work in practical classes. Semester credit in the discipline is conducted after the end of its study, before the examination session.

Methods and tools of standardized assessment when compiling the final control

Regulations for the semester test

The form of final control is standardized, includes control of theoretical and practical training and is conducted at the last lesson based on learning outcomes.

Current control is carried out during training sessions and aims to check the assimilation of educational material by students.

Forms of assessment of current educational activities are standardized and include control of theoretical and practical training.

Evaluation of current educational activities. During the assessment of mastering each topic for the current educational activity of the student, grades are given on the 4th point (national). This takes into account all types of work provided by the discipline program. The student must receive a grade from each topic for further conversion of grades into points on a multi-point (200-point) scale. are estimated at 2 points. The maximum sum of points for the whole test is 22 points, the minimum number of points that a student must score to enroll in the theoretical part of the practical lesson is 9 points (50% of correct answers).

In each practical lesson, the teacher evaluates the knowledge of each student on a four-point scale.

Excellent ("5")- The student correctly answered 90-100% of the tests of format A. Correctly, clearly and logically and fully answers all standardized questions of the current topic, including questions of the lecture course and independent work. Closely connects theory with practice and correctly demonstrates the performance (knowledge) of practical skills. Solves situational problems of increased complexity, is able to summarize the material. Performed the planned individual work.

Good ("4") -The student correctly answered 70-89% of the tests of format A. Correctly, and essentially answers the standardized questions of the current topic, lecture course and independent work. Demonstrates performance (knowledge) of practical skills. Correctly uses theoretical knowledge in solving practical problems. Is able to solve easy and medium situational problems. Has the necessary practical skills and techniques to perform them in excess of the required minimum.

Satisfactory ("3") -The student correctly answered 50-69% of the tests of format A. Incomplete, with the help of additional questions, answers the standardized questions of the current topic, lecture course and independent work. Cannot build a clear, logical answer on their own. During the answer and

demonstration of practical skills the student makes mistakes. The student solves only the easiest problems.

Unsatisfactory ("2") -The student answered less than 50% of the tests of format A. Does not know the material of the current topic, can not build a logical answer, does not answer additional questions, does not understand the content of the material. Makes significant, gross mistakes when answering and demonstrating practical skills.

At each practical lesson, student knowledge is assessed on a four-point scale ("5",

Control of solving situational problems is carried out in a practical lesson by assessing the quality and completeness of their implementation, the ability to interpret the results. For the practical part of the lesson the student can type:

4 points, if the work is done in full and the student freely and correctly explains the situational task and gives an assessment;

2 points, if the work is done with some errors, the student can not fully explain the situational task and give an assessment;

0 points if the work is not completed or the student cannot explain the situational task and give an assessment.

The final grade for the lesson is determined by the sum of the results of test control and practical work as follows:

The sum of points	Score on a four-point scale
from 22 to 26	5
from 17 to 21	4
from 11 to 16	3
<9 points for test control or 0 points for the practical part	2

The material for independent work of students, which is provided in the topic of practical classes at the same time as classroom work, is evaluated during the current control of the topic in the relevant classroom. Assessment of topics that are submitted for self-study and are not included in the topics of classroom classes, are controlled during the final control.

The form of final control of academic performance in the study of the elective course "Andrology.

Semester test is a form of final control, which consists in assessing the student's mastery of educational material solely on the basis of the results of his performance of certain types of work in

practical classes. Semester credit in disciplines is held after the end of its study, before the examination session.

Scheme of accrual and distribution of points received by students:

Maximum number of points, which a student can earn for current academic activities in the discipline, is 200 points.

Minimum number of points, which must be scored by the student for the current educational activity in the discipline is 120 points.

Calculation of the number of points is carried out on the basis of the marks received by the student on a traditional scale during studying of discipline, by calculation of the arithmetic average (CA) rounded to two signs after a comma. The resulting value is converted into points on a multi-point scale as follows:

$$X = (CA * 200) / 5$$

Below is a table of recalculation on a 200-point scale:

4-point scale	200-point scale		4-point scale	120-point scale		4-point scale	120-point scale		4-point scale	120-point scale
5	200		4.45	178		3.92	157		3.37	135
4.97	199		4.42	177		3.89	156		3.35	134
4.95	198		4.4	176		3.87	155		3.32	133
4.92	197		4.37	175		3.84	154		3.3	132
4.9	196		4.35	174		3.82	153		3.27	131
4.87	195		4.32	173		3.79	152		3.25	130
4.85	194		4.3	172		3.77	151		3.22	129
4.82	193		4.27	171		3.74	150		3.2	128
4.8	192		4.24	170		3.72	149		3.17	127
4.77	191		4.22	169		3.7	148		3.15	126
4.75	190		4.19	168		3.67	147		3.12	125
4.72	189		4.17	167		3.65	146		3.1	124
4.7	188		4.14	166		3.62	145		3.07	123
4.67	187		4.12	165		3.57	143		3.02	121
4.65	186		4.09	164		3.55	142		3	120
4.62	185		4.07	163		3.52	141			
4.6	184		4.04	162		3.5	140			
4.57	183		4.02	161		3.47	139			
4.52	181		3.99	160		3.45	138		Less than 3	Not enough
4.5	180		3.97	159		3.42	137			
4.47	179		3.94	158		3.4	136			

Self-work of students is assessed during the current control of the topic in the relevant lesson. Assimilation of topics that are submitted only for independent work is controlled during the final control.

Points from the discipline are independently converted into both the ECTS scale and the 4-point (national) scale. ECTS scale scores are not converted to a 4-point scale and vice versa.

Scores of students studying in one specialty, taking into account the number of points scored in the discipline are ranked on the ECTS scale so:

ECTS assessment	Statistical indicator
A	The best 10% of students
B	The next 25% of students
C	The next 30% of students
D	The next 25% of students
E	The last 10% of students

Ranking with the assignment of grades "A", "B", "C", "D", "E" is carried out for students of this course who study in one specialty and have successfully completed the study of the discipline. Students who receive grades FX, F ("2") are not included in the list of ranked students. Students with an FX grade automatically receive an E score after retaking.

Discipline scores for students who have successfully completed the program are converted into a traditional 4-point scale according to the absolute criteria listed below in the table:

Points in the discipline	Score on a 4-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points that a student must score	3
Below the minimum number of points that a student must score	2

The ECTS score is not converted to the traditional scale, as the ECTS scale and the four-point scale are independent.

The objectivity of the assessment of students' learning activities is checked by statistical methods (correlation coefficient between ECTS assessment and assessment on a national scale).

7. Questions for the final control of knowledge with elective course "Andrology" for 5th year medical students

1. Collection of andrological anamnesis.
2. Assessment of the anatomical structure of the male reproductive system.
3. Assessment of the rate of sexual development in men.
4. Assessment of the functional state of the testicles, diagnosis of hypogonadism.

5. Assessment of age-related changes in hormonal and general metabolism in men.
6. Mastering the methods of clinical examination in men with inflammatory diseases of the genital organs.
7. Providing emergency medical care for inflammatory diseases of the male genitalia.
8. Mastering the methods of clinical examination of men with traumatic genital injuries.
9. Providing emergency medical care for genital injuries in men.
10. Mastering the methods of clinical examination of men with genital tumors.
11. Providing emergency medical care for male genital tumors.
12. Evaluation of the results of clinical-laboratory and instrumental diagnosis of infertility in men.
13. Choice of methods of treatment of male infertility.
14. The choice of treatment methods for infertile couples.
15. Selection of auxiliary reproductive biotechnological techniques in the treatment of infertile marriage.
16. Mastering the methods of clinical examination in men with complaints of erectile dysfunction, decreased libido.
17. Choice of treatment methods for men with erectile dysfunction.
18. Mastering the methods of clinical examination in men with complaints of ejaculatory disorders.
19. Choice of treatment methods for men with premature ejaculation, retrograde ejaculation, anejaculation, dysorgasmia.

8. Recommended literature

Basic

1. Vorobets DZ Infertility and erectile dysfunction of men: biochemical and clinical aspects: monograph / DZ Vorobets. Sparrow, NS Кочешкова. - Ternopil: Ukrmedknyha, 2008. –204 p.
2. Gorpinchenko II Erectile dysfunction / II Горпинченко, Я.О. Мирошников. - Lviv: Kvant, 2003. - P. 7-23.
3. Dedov II Age androgen deficiency in men / II Dedov. Dedov, S.Yu. Kalinchenko. - М .: Практ. honey, 2006. - 240 p.
4. Domoratsky VA Sexual disorders and their correction: a brief practical guide to the diagnosis and treatment of psychogenic sexual dysfunctions / VA Domoratsky. Доморацкий. - RND: Phoenix, 2003. - 216 p.
5. Imelinsky KI Sexology and sexopathology / K.I. Imelinsky. - М.: Медицина, 1986. - 267 с.
6. Kocharyan GS Syndrome of anxious expectation of sexual failure in men and its treatment / GS Kocharyan. Kocharyan. - Н.: Osnova, 1995. - 279 s.
7. Criteria for the diagnosis and treatment of mental disorders and behavioral disorders in adults: A clinical guide. - Н., 2000. - 256 p.
8. Kryshtal VV Sexology: textbook: in 4 parts / VV Kryshtal, EV Crystal, TV Crystal. - Н.: Folio, 2008. - 990 p.
9. Kryshtal VV Sexology. Учебное пособие / В.В. Crystal, S.R. Grigoryan. - М.: ПЕР СЭ, 2002. - 879 с.

Auxiliary

1. Lyulko A., Minkov N., Tsvetkov D. Fundamentals of surgical andrology. - К .: Здоров'я, 1993. - 328 с.
2. Mavrov II Sexual diseases / II Mavrov Mavrov. - М .: АСТ-Пресс книга, 2002. - 752 с.
3. Mazo EB Erectile dysfunction / EB Mazo, S.I. Hamidov. - М.: МИА, 2008. - 240 с.
4. Disorders of sexual development / Ed. MA Zhukovsky. - М .: Медицина, 1989. - 225 с.
5. Guide to andrology / Ed. OL Tikinsky. - L .: Medicine, 1990. - 416 p.
6. Guide to urology. ed. Н.А.Лопаткина. - М .: Medicine, 1998. - 672p.
7. Sexology and andrology / N.I. Boyko, Yu.A. Borisenko, A.A. Bystrov [et al.]; under common ed. I.I. Горпинченко. - К .: Абрис. - 1997. - 873 p.
8. Male sexual disorders: a manual / I.I. Горпинченко, Ю.М. Gurzhenko, SV Voizanova, DZ Sparrow, OV Shulyak - Lviv: Kvant, 2011. - 221 p. with.

Information resources

When studying the discipline, through the use of local and global computer networks, students use the following information resources and knowledge bases:

- Wikipedia (<http://uk.wikipedia.org>)

Electronic versions of educational and methodical support:

1. Methodical recommendations for practical classes and independent work on the elective course "Andrology" for students of the V course of the medical faculty in the specialty: 222 - "medicine", field of knowledge "Health care".

Access method: <https://new.meduniv.lviv.ua/kafedry/kafedra-urologiyi-fpdo/>