Ministry of Education and Science of Ukraine
Sumy National Agrarian University

Chair of philosophy and socio-humanities
Faculty of Food Technologies

MODULE SYLLABUS

Philosophy of science and innovational development

(compulsory)

Implemented in the "Veterinary medcine" Academic Program

Area of specialization 211 "Veterinary medcine"

at the (second (master's) level in higher education)

Sumy-2021

Author: _____ **(Perelomov A.Y.)**

Module syllabus agreed at the meeting of the Chair of philosophy and socio-humanities	Minutes No 12 dated June 23 2021 Head of department _____ **Shevel A.O.** (signature) (surname,initials)

Approved by:

Guarantor of the Academic program _____ _____
(signature) (full name)

Dean of the faculty
where the program is being implemented _____ Nechiporenko O.L.
(signature) (full name)

Syllabus review (attached) is provided by: _____ Kornienko O.M.
(full name)

_____ _____
(full name)

Representative of the Department of Education Quality assurance, licensing and accreditation _____ (N. Baranik)
(signature) **(full name)**

Registered in electronic data base 21 09 **2021**

Syllabus review data:

The academic year in which changes are made	The Academic program attachment number with changes description	Changes revised and approved		
		Minutes No and date of the department meeting	Head of Department	Guarantor of the Academic program

1. MODULE OVERVIEW

<table>
<tr><td>1.</td><td>Title</td><td colspan="4">Quality management</td></tr>
<tr><td>2.</td><td>Faculty / Department</td><td colspan="4">Faculty of Food technologies / Chair of philosophy and socio-humanities</td></tr>
<tr><td>3.</td><td>Type (compulsory or optional)</td><td colspan="4">Compulsory</td></tr>
<tr><td>4.</td><td>Program(s) to which module is attached</td><td colspan="4">Educational and professional program "Veterinary medcine" in the specialty 211 "Veterinary medcine"</td></tr>
<tr><td>5.</td><td>Level of the National Qualifications Framework</td><td colspan="4">The second (master's) level of higher education</td></tr>
<tr><td>6.</td><td>Semester and duration of module</td><td colspan="4">Full-time
1th semester, 15th week</td></tr>
<tr><td>7.</td><td>ECTS credits number</td><td colspan="4">4 (120 hours)</td></tr>
<tr><td rowspan="3">8.</td><td rowspan="3">Total workload and time allotment</td><td colspan="3">Directed study</td><td>Self-directed study</td></tr>
<tr><td>Lectures</td><td>Practical/seminar</td><td>Laboratory</td><td></td></tr>
<tr><td>16</td><td>-</td><td>30</td><td>74</td></tr>
<tr><td>9.</td><td>Language of instruction</td><td colspan="4">English</td></tr>
<tr><td>10.</td><td>Module leader</td><td colspan="4">Perelomov Anton Yuriyovych, assistant of the chair of philosophy and scoio-humanities
Hours of consultations - every Tuesday at 12.15, office 237 g</td></tr>
<tr><td>11.</td><td>Module leader contact information</td><td colspan="4">antonperelomov@gmail.com</td></tr>
<tr><td>12</td><td>Module description</td><td colspan="4">The objectives of studying the discipline of the "Philosophy of Science" are: to provide students with a weekend knowledge on the organization of research work, using general methods of scientific knowledge and applying formal logical laws and philosophical principles in the processing, comprehension and generalization of scientific research results.</td></tr>
<tr><td>13</td><td>Module aim</td><td colspan="4">The formation of students' general ideas about the history of the development of a particular branch of science and the philosophy of scientific knowledge in general, the methodology of scientific creativity, the basic provisions that characterize research as a qualified scientific search in a particular field of science.</td></tr>
<tr><td>14</td><td>Module Dependencies (prerequisites, co-requisites, incompatible modules)</td><td colspan="4">There are no special conditions</td></tr>
</table>

15	The policy of academic integrity	According to the Code of Academic Integrity of Sumy NAU, academic integrity is a set of principles, rules of conduct of participants in the educational process, aimed at forming an independent and responsible personality, able to solve problems in accordance with the educational level in accordance with law and public morality. Observance of academic integrity by applicants for higher education presupposes independent performance of educational tasks, tasks of current and final control, learning outcomes. It is expected that higher education students will adhere to the principles of academic integrity, aware of the consequences of its violation, as determined by the regulations of Sumy National Agrarian University, including the Code of Academic Integrity, Regulations on Prevention and Detection of Academic Plagiarism in Sumy NAU.https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/) For violation of academic integrity, applicants for higher education may be held liable for such academic liability, namely: - academic fraud (using the phone when writing written works) will lead to re-submission of work; - write-off - from the first warning to the cancellation of work; - Plagiarism will lead to the cancellation of work
16	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=3973

2. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

MLOs: On successful completion of the module the learner will be able to:	**How assessed**
MLOs 1. Know the history of formation and development of science as a socially significant phenomenon, the basic concepts, principles and categories of scientific knowledge, philosophical foundations, which guided scientists in creating their innovative theories.	Multiple selection test
MLOs 2. Be able to defend own scientific position based on the theoretical and methodological basis of the fundamental sciences	Multiple selection test
MLOs 3. Be able to analyze the most important theoretical problems of modern science	Individual task
MLOs 4. Be able to link the development of science with the development of spiritual and creative potential of mankind, aimed at the formation and practical use of innovations	Multiple selection test
MLOs 5. Apply the acquired knowledge in scientific activities; apply practical skills of analysis of a method.	Multiple selection test

3. MODULE INDICATIVE CONTENT

Autumn semester

Topics	Distribution of hours				Learning resources
	Directed study			Self-directed study	
	Lectures	Practicals	Labs		
Topic 1. Philosophy of science as a branch of philosophical knowledge. 1. Philosophy of science as a special philosophical discipline. 2. Specificity of the philosophical problems of science. 3. Historical types of interrelation between philosophy and science.	2		4	10	1, 2, 3
Topic 2. Philosophical analysis of the essence of science and its social functions. 1. Classical science, its characteristics. 2. Non-classical science, its features. 3. Post-classical science, its main features.	2		4	10	1, 2, 3, 5
Topic 3. The phenomenon of science. The basic forms of the existence of science. 1. Features of scientific knowledge. 2. Science as an activity. 3. Science as a social institution. 4. Functions of science.	2		4	10	2, 3, 4, 5
Topic 4. Structure and methods of scientific knowledge. 1. Empirical and theoretical levels, discrimination criteria. 2. Empirical level, its forms and methods. 3. Theoretical level, its forms and methods. 4. Fundamentals of scientific knowledge (ideals and norms of research, the scientific picture of the world, philosophical foundations)	2		4	10	2, 3, 4, 5
Topic 5. Science as a public institution. Ethics of science. 1. Ethical norms and values of science. 2. Main topics of ethical discussion of scientific and technical activities 3. Scientific knowledge: freedom and control.	2		4	10	3, 4, 5
Topic 6. The role of biology in the formation of a modern scientific picture of the world. 1. Specificity of philosophical and methodological problems of biology. 2. Reductionism of vitalism in the history of biology. 3. The idea of development in biology (transformism, Saltationism, evolutionism).	2		4	10	1, 2, 3, 4

Theme 7. Theories of the origin and development of life. 1. The essence of the living. 2. Abiogenic concepts of the origin of life. 1. 3. Biogenic concepts of the origin of life.	2		4	10	1, 2, 3, 4
Topic 8. The phenomenon of innovation and its research 1. Methodological individualism 2. Social nature of innovations 3. Motivation of personality	2		2	4	1, 2, 3, 5
Total	16		30	74	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLOs 1.	Lectures-discussions, use of electronic teaching aids (multimedia equipment), thematic discussion, individual and group work, analysis of specific production situations, testing.	10	Independent work with the textbook, performance of individual tasks	15
MLOs 2.	Lectures-discussions, use of electronic teaching aids (multimedia equipment), thematic discussion, individual and group work, analysis of specific production situations, testing.	10	Independent work with the textbook, performance of individual tasks	15
MLOs 3.	Lectures-discussions, use of electronic teaching aids (multimedia equipment), thematic discussion, individual and group work, analysis of specific production situations, testing.	10	Independent work with the textbook, performance of individual tasks	15

MLOs 4.	Lectures-discussions, use of electronic teaching aids (multimedia equipment), individual and group work, analysis of specific production situations, testing.	10	Independent work with the textbook, performance of individual tasks	15
MLOs 5.	Lectures-discussions, use of electronic teaching aids (multimedia equipment), thematic discussion, individual and group work, analysis of specific production situations, testing.	6		14

5. ASSESSMENT

5.1. Summative assessment

5.1.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
Spring semester			
1.	Module 1 - multiple choice test	20 points / 20%	For 6 weeks
2.	Module 2 - multiple choice test	20 points / 20%	For 12 weeks
3.	Intermediate certification is a multiple choice test	15 points / 15%	For 7 weeks
4.	Independent work - performance of an individual task	15 points / 15%	For 13 weeks
5.	Exam - the task of the ticket	30 points / 30%	According to the approved schedule

5.1.2. Grading criteria

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
	<12 points	12 - 14 points	15 - 17 points	18 - 20 points
Module 1 - multiple choice test	Less than 60% of correct answers	60% - 74% correct answers	75% - 89% correct answers	90-100% correct answers
Module 2 - multiple choice test	<12 points	12 - 14 points	15 - 17 points	18 - 20 points
	Less than 60% of correct answers	60% - 74% correct answers	75% - 89% correct answers	90-100% correct answers
Intermediate certification is a multiple choice test	<9 points	9 - 10 points	11- 13 points	14 - 15 points
	Less than 60% of correct answers	60% - 74% correct answers	75% - 89% correct answers	90-100% correct answers
Independent work - performance of an individual task	<9 points	9 - 10 points	11- 13 points	14 - 15 points
	Task requirements not met	The topic is not fully disclosed, the structure of the work is not	All the requirements of the task are met, but the topic is	All requirements of the task are fulfilled, creativity, thoughtfulness is

		sustained or some of its components are missing.	not sufficiently covered, there are grammatical and editorial errors	shown, own solution of a problem is offered
Exam - the task of the ticket	<18 points	18 - 22 points	23 - 26 points	27 - 30 points
	Task requirements not met	The answer is from 60% to 74% of the task	Tasks are completed from 75% to 89%, some tasks are incomplete	The task is performed in full in compliance with the requirements

5.1. Formative assessment

Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

No	Formative Assessment elements	Date
Spring semester		
1	Oral interview after studying each topic is OK	weekly
2	Oral feedback from the teacher to a written survey of current control	During 6 and 14 weeks
3	Oral feedback from teacher and students regarding cfulfillment of an individual task	For 13 weeks
4	Monitoring of student activity (teacher's assessment, student's self-assessment)	monthly

Self-assessment can be used both an element of formative and summative assessment.

5.3. Grading scale (final) - generally accepted for the university:

The sum of points for all types of educational activities	ECTS assessment	Score on a national scale (for the exam)
90 - 100	**A**	Excellent
82-89	**B**	Good
75-81	**C**	
69-74	**D**	Satisfactorily
60-68	**E**	
35-59	**FX**	Unsatisfactory with the possibility of reassembly
1-34	**F**	Unsatisfactory with mandatory re-study of the discipline

6. LEARNING RESOURCES

6.1. Key resources

1. Philosophy of science as a branch of philosophical knowledge.

Basic

1. Berdyayev N.N. Filosofiya svobody. Smysl tvorchestva. – M., 1989.
2. Bashlyar G. Novyy ratsionalizm. – M, 1987.
3. Vandishev V.M. Fílosofíya: yekskurs v ístoríyu vchen' í ponyat'. – Kiĭv, 2006.
4. Gusserl' E. Filosofiya kak strogaya nauka. – Novocherkassk, 1994.
5. Zelenov L.A., Vladimirov A.A., Shchurov V.A. Istoriya i filosofiya nauki. – M., 2008.
6. Ivin A.A. Sovremennaya filosofiya nauki. – M., 2005.
7. Illarionov S.V. Teoriya poznaniya i filosofiya nauki. – M., 2007.
8. Istoriya i filosofiya nauki / Pod red. A.S. Mamzina. – SPb., 2008.
9. Istoriya i filosofiya nauki: Vvedeniye v spetsial'nost' / Pod red. A. Ursula. – M., 2005.

Additional

1. Istoriya i filosofiya nauki (Filosofiya nauki) / Pod red. YU. Kryaneva, L. Motorinoy. – M., 2007.
2. Karamova O.V. Filosofiya, metodologiya i istoriya ekonomicheskoy nauki. – M., 2007.
3. Kotenko V.P. Istoriya i filosofiya klassicheskoy nauki. – M., 2005.
4. Kokhanovskiy V.P. Osnovy filosofii nauki: Uchebnoye posobiye dlya aspirantov. – Rostov-na-Donu, 2006.
5. Kokhanovskiy V.P. Filosofiya nauki v voprosakh i otvetakh. – Rostov-na-Donu, 2007.
6. Lektorskiy V.A. Epistemologiya klassicheskaya i neklassicheskaya. 2-ye izd. – M., 2006.
7. Lipkin A.I. Filosofiya nauki. – M., 2007.
8. Naydysh V.M. Kontseptsii sovremennogo yestestvoznaniya / Izd. 2-ye, pererab. i dop. – M., 2004.
9. Nikitich L.A. Istoriya i filosofiya nauki. – M., 2008.
10. Nikiforov A. Filosofiya nauki. Istoriya i teoriya. – M., 2006.
11. Popper K.R. Znaniye i psikhofizicheskaya problema. – M., 2008.
12. Porus YA.P. Epistemologiya: nekotoryye tendentsii // Voprosy filosofii. – 1997. – №2.
13. Reale Dzh., Antiseri TS. Zapadnaya filosofiya ot istokov do nashikh dney. – SPb., 1997. CH. 2.
14. Rozin V.M. Metodologiya: Stanovleniye i sovremennoye sostoyaniye. – M., 2006.
15. Shvyrev B.C. Teoreticheskoye i empiricheskoye v nauchnom poznanii. – M., 1978.

2. The phenomenon of science. The basic forms of the existence of science

Basic

1. Vernadskiy V.I. Razmyshleniya naturalista. Nauchnaya mysl' kak planetarnoye yavleniye. – M., 1978.
2. Gaydenko P.P. Evolyutsiya ponyatiya nauki (XVII-XVIII vv.). – M., 1987.
3. Diskursy ezoteriki (filosofskiy analiz) / Otv. red. L.V. Fesenkova. – M., 2001.
4. Il'in V.V. Kriterii nauchnosti znaniya. – M., 1989.
5. Karpinskaya R. S., Liseyev I. K., Ogurtsov A. P. Filosofiya prirody: koevolyutsionnaya strategiya. – M., 1995.
6. Kasavin I.T., Sokuler ZA. Ratsional'nost' v poznanii i praktike. – M., 1996.
7. Kezin A. V Nauchnost': etalony, idealy, kriterii. – M., 1985,
8. Kosareva A.M. Predmet nauki. – M., 1977.
9. Lebedev S.A. Filosofiya nauki: slovar' osnovnykh terminov. – M., 2006.
10. Lektorskiy VA. Sub''yekt, ob''yekt, poznaniye. – M., 1980.

Additional

1. Nauka v kul'ture. – M., 1998.
2. Nenashev M.I. Vvedeniye v logiku. – M., 2004.
3. Sovremennyye filosofskiye problemy yestestvennykh, tekhnicheskikh i sotsial'no-gumanitarnykh nauk / Pod red. V.V. Mironova. – M., 2006.
4. Sotsial'naya dinamika sovremennoy nauki / Pod red. V.ZH. Kelle. – M., 1995.
5. Sotsiokul'turnyy kontekst nauki. – M., 1998.
6. Stepin B.C. Teoreticheskoye znaniye. Struktura, istoricheskaya evolyutsiya. – M., 2000.
7. Stepin B.C. Filosofiya nauki. Obshchiye problemy. – M., 2006.
8. Stepin V. S. Filosofskaya antropologiya i filosofiya nauki. – M., 1992.
9. Stepin B.C., Gorokhov V.T., Rozov M.A. Filosofiya nauki i tekhniki. – M., 1996.
10. Filatov V.P. Nauchnoye poznaniye i mir cheloveka. – M., 1989.

11. Filosofiya: problemnyy kurs: Uchebnik / Pod red. S.A. Lebedeva. – M., 2002.

3. Structure and methods of scientific knowledge

Basic

1. Bazhenov L.B. Stroyeniye i funktsii yestestvennonauchnoy teorii. – M, 1978.
2. Vandishev V.M. Fílosofíya: yekskurs v ístoríyu vchen' í ponyat'. – Kiĭv, 2006.
3. Idealy i normy nauchnogo issledovaniya. – Minsk, 1981.
4. Karnap R. Filosofskiye osnovaniya fiziki. Vvedeniye v filosofiyu nauki. – M., 1971,
5. Kontseptsii sovremennogo yestestvoznaniya / Pod red. S.A. Lebedeva. – M,, 2007.
6. Kun T. Struktura nauchnykh revolyutsiy. – M., 1985.
7. Lebedev S.L. Induktsiya kak metod nauchnogo poznaniya. – M., 1980.
8. Lebedev S.A. Sovremennaya filosofiya nauki. – M., 2007.
9. Manchur Ye.L. Problemy sotsiokul'turnoy determinatsii nauchnogo znaniya. – M., 1987.
10. Merkulov I.P. Metod gipotez v istorii nauchnogo poznaniya. – M., 1984.

Additional

1. Nikitin Ye.P. Otkrytiye i obosnovaniye. – M., 1988.
2. Polani M. Lichnostnoye znaniye. – M., 1985.
3. Popper K. Logika i rost nauchnogo znaniya. – M., 1983.
4. Sovremennaya filosofiya nauki: Khrestomatiya / Sost. A.A. Pechenkin. – M., 1991.
5. Stepin B.C. Osnovaniya nauki i ikh sotsiokul'turnaya razmernost' // Nauka v kul'ture. – M., 1998.
6. Stepin B.C. Teoreticheskoye znaniye. – M., 2000.
7. Struktura i razvitiye nauki. – M., 1978,
8. Tulmin St. Chelovecheskoye ponimaniye. – M., 1984,
9. Feyyerabend P. Izbrannyye trudy po metodologii nauki. – M., 1990.
10. Filosofiya yestestvennykh nauk / Pod red. S.A. Lebedeva. – M., 2006.
11. Filosofiya matematiki i tekhnicheskikh nauk / Pod red. S.A. Lebedeva. – M., 2006.

4. Ethics of science

Basic

1. Avdulov A.N., Kul'kin A.M. Vlast', nauka, obshchestvo. Sistema gosudarstvennoy podderzhki nauchno-tekhnicheskoy deyatel'nosti: opyt SSHA. – M., 1994.
2. Bioetika: printsipy, pravila, problemy / Pod red. B.G. Yudina. – M, 1998.
3. Kommunikatsiya v sovremennoy nauke / Sb. perev. s angl. pod red. E.M. Mirskogo i V.N. Sadovskogo. – M., 1976.
4. Lyubutin K.N. Chelovek v filosofskom izmerenii (iz istorii problemy). – Sverdlovsk, 1991.
5. Naydysh V.M. Kontseptsii sovremennogo yestestvoznaniya / Izd. 2-ye, pererab. i dop. – M., 2004.
6. Nauka Rossii na poroge XXI veka: problemy organizatsii i upravleniya / Pod obshch. red. S.A. Lebedeva. M., 2000.
7. Nauchnaya deyatel'nost': struktura i instituty / Sb. pe-rev. s angl. i nem. pod red. E.M. Mirskogo i B.G. Yudina. – M., 1980.

Additional

1. 1. Pel'ts D., Endryus F. Uchenyye v organizatsiyakh / Per. s angl. – M., 1973.
2. Perminov V.YA. Problema prichinnosti v filosofii i yestestvoznanii. – M., 1979.
3. Popper K.R. Znaniye i psikhofizicheskaya problema. – M., 2008.
4. Problemy deyatel'nosti uchenogo i nauchnykh kollektivov: Mezhdunarodnyy yezhegodnik. – SPb., 1969–2002. – Vyp. 1–13.
5. Teyyar de Sharden P. Fenomen cheloveka. – M., 1987.
6. Sen-Mark F. Sotsializatsiya prirody. – M., 1977.
7. Sovremennaya zapadnaya sotsiologiya nauki. Kriticheskiy analiz / Otv. red. V.ZH. Kelle, Ye.Z. Mirskaya, A.A. Ignat'yev. – M., 1988.
8. Sovremennyye filosofskiye problemy yestestvennykh, tekhnicheskikh i sotsial'no-gumanitarnykh nauk / Pod red. V.V. Mironova. – M., 2006.
9. Sotsial'naya dinamika sovremennoy nauki / Otv. red. V.ZH. Kelle. – M,, 1995.
10. Filosofiya yestestvennykh nauk / pod red. S.A. Lebedeva. – M., 2006.
11. Filosofiya nauki: nauka kak deyatel'nost' / Pod red. S.A. Lebedeva. – M., 2007.
12. Filosofiya sovremennogo yestestvoznaniya: Uchebnoye posobiye dlya vuzov. – M., 2004.
13. Frolov I.T., Yudin B.G. Etika nauki. Problemy i diskussii. – M., 1986.

5. Philosophical problems of biology

Basic

1.Azimov A. Kratkaya istoriya biologii. – M., 2002.
2. Aristotel'. O chastyakh zhivotnykh. – M., 1937.
3. Baltika N.M., Kuramshina N.G., Gilyazetdinov SH.YA. Elementarnaya yedinitsa zhivogo i filosofskiye aspekty biologii: Uchebnoye posobiye po biologii. Bashkirskiy institut povysheniya kvalifikatsii rabotnikov obrazovaniya. – Ufa, 1994.
4. Berg P.JI. Iz vospominaniy genetika // Voprosy filosofii. – 1993. – №7. – S.93-124.
5. Berg L. S. Nomogenez, ili evolyutsiya na osnove zakonomernostey. – L., 1977.
6. Biologiya v sisteme nauk o cheloveke. – M., 1986.
7. Borzenkov V.R. Filosofskiye osnovaniya evolyutsii. – M., 1987.
8. Bryzgalina Ye.V. Istoriya biologii kak smena paradigmal'nogo znaniya. – MGU, 1998.
9. Vandishev V.M. Fílosofíya: yekskurs v ístoríyu vchen' í ponyat'. – Kiĭv, 2006.
10. Volkova E. V., Filyukov A.M. Filosofskiye voprosy teorii vida. – Minsk, 1966.

Additional

1. Golubovskiy M.D. Genom cheloveka i soblazny determinizma // Znamya. – 2001. – №1. – S. 199-204.
2. Iordanskiy N.N. Evolyutsiya zhizni. – M., 2001.
3. Istoriya biologii s drevneyshikh vremen do nachala XX veka / Pod. red. Mikulinskogo S.R., – M., 1972.
4. Istoriya biologii s drevneyshikh vremen do nashikh dney. – V 2-kh t. – M., 1972-1975.
5. Ichas M. O prirode zhivogo: mekhanizmy i smysl. – M., 1994.
6. Markov A. Rozhdeniye slozhnosti. Evolyutsionnaya biologiya segodnya: neozhidannyye otkrytiya i novyye voprosy. – M., 2010.
7. Meller G.D. Obshchiye raboty po genetike / Per. s angl. Pod obshchey red. akad. Vavilova N.I. – M.-JI., 1937.
8. Metodologiya biologii: novyye idei (sinergetika, semiotika, koevolyutsiya) / Otv. red. O.Ye. Baksanskiy. – M., 2001.
9. Morgan T.G. Izbrannyye raboty po genetike / Per. s angl. Pod obshchey redaktsiyey i s vvodnoy stat'yey akad. Vavilova N.I. – M.-JI., 1937.
10. Nazarov V.I. Evolyutsiya ne po Darvinu: smena evolyutsionnoy modeli. – M., 2005.
11. Ratner V.A. Genetika, molekulyarnaya kibernetika: Lichnosti i problemy. – Novosibirsk, 2002.
12. Rutten M. G. Proiskhozhdeniye zhizni (yestestvennym putem) / Per. s angl. – M., 1973.
13. R'yuz M. Filosofiya biologii. – M., 1977.
14. Sen-Mark F. Sotsializatsiya prirody. – M., 1977.
15. Simionesku K., Denesh F. Proiskhozhdeniye zhizni. Khimicheskiye teorii. – M., 1986.
16. Sloms'kiy V.S. Bíoyetika / Vídp. red. prof. V.M. Vandishev. – Sumi, 2009.
17. Sovremennyye filosofskiye problemy yestestvennykh, tekhnicheskikh i sotsial'no-gumanitarnykh nauk / Pod red. V.V. Mironova. – M., 2006.
18. Soyfer V.N. Vlast' i nauka. Istoriya razgroma genetiki v SSSR. – M., 1993.
19. Soyfer V.N. Mezhdunarodnyy proyekt «Genom cheloveka» // Ekologiya i zhizn'. – 1999. – №4. – S.44-52.
20. Stvolinskaya N.S. Istoki i perspektivy mezhdunarodnoy programmy «Genom cheloveka» // Biologiya v shkole. – 2002. – №2. – S.12-17.
21. Stegniy V.N. Arkhitektonika genoma, sistemnyye mutatsii i evolyutsiya. – Novosibirsk, 1993.
22. Stil E., Lindli R., Blanden R. Chto, yesli Lamark prav? Immunogenetika i evolyutsiya. – M., 2002.
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14. Information resources

1. http://www.pidruchniki.com/filosofiya/
2. http://www.grandars.ru ›
3. http://www.dic.academic.ru/dic.nsf/enc_philosophy/
4. http://www. tureligious.com.ua/

6.2. Guidelines

1. Educational and methodical materials based on the MOODLE platform. URL: https://cdn.snau.edu.ua/moodle/course/view.php?id=3492

6.3. Computer Applications and soft

Modul syllabus review _____

Developed by the teacher of the chair of philosophy and socio-humanities Perelomov A.Y.

Parameter by which the work program (syllabus) of the educational component is evaluated by the guarantor or a member of the project team	**So**	**No**	**Comment**
Learning outcomes by educational component (MLOs) correspond to the EK			
Learning outcomes by educational component (MLOs) correspond to the provided PLOs (for compulsory)			
Learning outcomes in the educational component provide an opportunity to measure and assess the level of their achievement			

Member of the project group EP _____ _____ _____

(signature) (name) (Full name)

The parameter by which the working program (syllabus) of the educational component is evaluated by the teacher of the relevant department	**So**	**No**	**Comment**
General information about the educational component is sufficient			
Learning outcomes by educational component (MLOs) correspond to the PLO_s			
Learning outcomes by educational component (MLOs) provide an opportunity to measure and assess the level of their achievement			
Learning outcomes (MLOs) relate to the competencies of students, not the content of the discipline (contain knowledge, skills, abilities, not topics of the curriculum of the discipline)			
The content of the EK is formed in accordance with the structural and logical scheme			
Learning activity (teaching and learning methods) allows students to achieve expected learning outcomes (MLOs)			
The educational component involves learning through research that is appropriate and sufficient for the appropriate level of higher education			
The assessment strategy within the educational component is in line with the policy of the University / faculty			
The provided assessment methods allow to assess the degree of achievement of learning outcomes in the educational component			
The workload of students is adequate to the volume of the educational component			
Recommended learning resources are sufficient to achieve learning outcomes (MLOs)			
The literature is relevant			
The list of training resources contains the necessary software products to achieve MLOs			

Reviewer (lecturer of the department) _____ _____ _____

(name) (position, name) (signature)