

Ғылыми Кеңестің шешімімен (№11 хаттама 10.05.2017 ж.) 2017 жылы оқуға түскен төмендегідей мамандықтардың студенттері көптілдік бағдарламасын оқиды:

1. 5B011200 - Химия
2. 5B011300 - Биология
3. 5B010900 - Математика
4. 5B011000 - Физика
5. 5B011000 - Информатика

Ағылшын тілінде оқылатын пәндер

5B011200 - Химия

p/c	пәннің атауы	кредиттер саны
1	The methodology of chemical tasks solution	3
2	Calculation methods of analysis	3
3	Increased complexity tasks in chemistry	3
4	Physical chemistry	3
5	The methods of physical	3
6	Colloid chemistry	3
7	Electrochemistry	3
8	Structure and properties of coordination compounds	3
9	Chemistry of disperse system	3
10	Chemical kinetics and catalysis	3
11	Formation of chemical bond, its effect to substance properties	3
12	Superficial phenomenon of chemistry	3
13	The usage of computer programs on chemistry lessons	3
14	Program learning	3
15	Making of visual aids for chemistry	3
16	Oxidation – reduction reactions	3
17	Electrochemistry processes	3
18	Methodology of decision of tasks of enhanceable complication	3
19	Chemistry olympiad tasks	3
20	Solution of industry content	3

5B011300 Биология

p/c	пәннің атауы	кредиттер саны
1	Human and animal physiology	3
2	Physiology of living organisms	3
3	The doctrine of the vessels	3
4	Plant physiology	3
5	Physiological basis of plant growth and development	3
6	Growth and development of plant cells	3
7	Genetics	3
8	Population Genetics	3
9	Genetic basis of breeding	3
10	Biochemistry	3

11	Biochemistry of plants	3
12	Molecular Biochemistry	3
13	Biology of individual development	3
14	Biology of development and reproduction	3
15	Evolutionary biology	3
16	Molecular biology	3
17	Biometrics	3
18	Solving problems in molecular biology	3

5B010900 - Математика

р/с	пәннің атауы	кредиттер саны
1	Practicum on solving problems of algebra	3
2	Practicum on solving problems of geometry	3
3	Methods of teaching of start of the analysis	3
4	Classical inequalities and their application	2
5	The methods of coordinates in the plane and in space	2
6	Practicum on solving equations and inequalities	3
7	Practicum on solving problems of finding areas and volumes	3
8	Methods of teaching integrals and derivatives in the school	3
9	Diophantine equations of higher orders	3
10	Geometric and projection construction	2
11	Practicum on solving problems of transcendental equation and inequalities	3
12	Geometric problems on the construction on the plane	3
13	Application of integral calculus in the school course	3
14	The numbers of Fibonacci and Catalana	3
15	Methods of cross sections in the space	2
16	Practicum on solving problems of linear algebra	3
17	Practicum solutions of problems of analytic geometry	3
18	Methods for solving systems of linear equations	3
19	Problems oh curves and surfaces of second order	3
20	The theory of determining the matrices	3
21	Straight lines and plane in space	3
22	Selected problems of elementary mathematics of applied character	2
23	Selected problems of elementary mathematics of a research character	2
24	Applied problems of geometry	2

5B011000 - Физика

р/с	пәннің атауы	кредиттер саны
1	Mechanics	3
2	The practice of physical problems solving by mechanics	3
3	Molecular physics	3
4	The practice of physical problems solving by molecular physics	2

5	Electricity and magnetism	2
6	The practice of physical problems solving by electricity and magnetism	2
7	Optics	2
8	Atomic physics	3
9	Nuclear physics	2
10	Physics of the atomic nucleus and elementary particles	2
11	Nuclear structure of an atom	2
12	Physical methods of research	3
13	Fundamentals of crystal physics and methods of growing ionic crystals	3
14	Thermoactivation spectroscopy of alkali-halide crystals	3

#### 5B011000 - Информатика

р/с	пәннің атауы	кредиттер саны
1	Computer and peripheral devices	2
2	Delphi programming language	2
3	Visual Basic Programming Language	3
4	Python Programming Language	3
5	C ++ Programming Language	3
6	Java Programming Language	3
7	Theory of Database	3
8	C # Programming Language	2
9	Designing in AutoCAD	2
10	Macromedia Flash	2
11	Technique of Decisions the Tasks of Programming	2
12	Web Technologies	3
13	System Programming	3
14	Parallel computing	3
15	Methods of teaching informatics	3

Решением Ученого Совета (протокол №11 от 10.05.2017г.) по программе полязгычия будут заниматься студенты 2017 года поступления следующих специальностей:

1. 5B011200 - Химия
2. 5B011300 - Биология
3. 5B010900 - Математика
4. 5B011000 - Физика
5. 5B011000 - Информатика

Дисциплины, преподаваемые на английском языке

#### 5B011200 - Химия

№п/п	дисциплина	количество кредитов
1	The methodology of chemical tasks solution	3
2	Calculation methods of analysis	3
3	Increased complexity tasks in chemistry	3

4	Physical chemistry	3
5	The methods of physical	3
6	Colloid chemistry	3
7	Electrochemistry	3
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16	Oxidation – reduction reactions	3
17	Electrochemistry processes	3
18	Methodology of decision of tasks of enhanceable complication	3
19	Chemistry olympiad tasks	3
20	Solution of industry content	3

5B011300 Биология

№п/п	дисциплина	количество кредитов
1	Human and animal physiology	3
2	Physiology of living organisms	3
3	The doctrine of the vessels	3
4	Plant physiology	3
5	Physiological basis of plant growth and development	3
6	Growth and development of plant cells	3
7	Genetics	3
8	Population Genetics	3
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14	Biology of development and reproduction	3
15	Evolutionary biology	3
16	Molecular biology	3
17	Biometrics	3
18	Solving problems in molecular biology	3

5B010900 - Математика

№п/п	дисциплина	количество кредитов
1	Practicum on solving problems of algebra	3
2	Practicum on solving problems of geometry	3
3	Methods of teaching of start of the analysis	3
4	Classical inequalities and their application	2

5	The methods of coordinates in the plane and in space	2
6	Practicum on solving equations and inequalities	3
7	Practicum on solving problems of finding areas and volumes	3
8	Methods of teaching integrals and derivatives in the school	3
9	Diophantine equations of higher orders	3
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17	Practicum solutions of problems of analytic geometry	3
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19	Problems oh curves and surfaces of second order	3
20	The theory of determining the matrices	3
21	Straight lines and plane in space	3
22	Selected problems of elementary mathematics of applied character	2
23	Selected problems of elementary mathematics of a research character	2
24	Applied problems of geometry	2

5B011000 - Физика

№п/п	ДИСЦИПЛИНА	КОЛИЧЕСТВО КРЕДИТОВ
1	Mechanics	3
2	The practice of physical problems solving by mechanics	3
3	Molecular physics	3
4	The practice of physical problems solving by molecular physics	2
5	Electricity and magnetism	2
6	The practice of physical problems solving by electricity and magnetism	2
7	Optics	2
8	Atomic physics	3
9	Nuclear physics	2
10	Physics of the atomic nucleus and elementary particles	2
11	Nuclear structure of an atom	2
12	Physical methods of research	3
13	Fundamentals of crystal physics and methods of growing ionic crystals	3
14	Thermoactivation spectroscopy of alkali-halide crystals	3

5B011000 - Информатика

№п/п	ДИСЦИПЛИНА	КОЛИЧЕСТВО КРЕДИТОВ
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1	Computer and peripheral devices	2
2	Delphi programming language	2
3	Visual Basic Programming Language	3
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