# Plan of the lectures of human anatomy for the 1st year students

# of pharmacy faculty in 1st semester \_2012/2013 studying year

1. Introduction to anatomy. Basic tissues. Organs, systems of organs. Early stages of development. 2
2. General anatomy of skeleton. Bone as an organ. Development of bones. Classification of articulations. Structure and function of skeletal muscles. Muscle as an organ. Development. Action of muscles. 2
3. Introduction to splanchnology. Digestive system. 2
4. Respiratory system. Urinary system. 2
5. General anatomy of the male and female genital system. 2
6. Functional anatomy of endocrine glands and immune system. 2
7. General anatomy of the central nervous system. 2
8. Organs of special senses. 2
9. Peripheral part of nervous system. Sympathetic part and parasympathetic part of autonomic nervous system. 2
10. General anatomy of the cardiovascular system. 2

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**20 hours**

***Plan of the practices of human anatomy for the students of pharmacy faculty in 1st semester of 2012|2013 studying years***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Topic** | **Date** | | |
| **7** | **8** | **9** |
| 1. | Skeleton of the trunk and extremities. Skull. | 06.09 | 06.09 | 06.09 |
| 2. | Articulation system. | 13.09 | 13.09 | 13.09 |
| 3. | Muscular system. | 20.09 | 20.09 | 20.09 |
| 4. | **Summary lesson** “Locomotors system”. | 27.09 | 27.09 | 27.09 |
| 5. | Digestive system. Oral cavity, pharynx, esophagus, stomach. Small and large intestine. Pancreas and liver. Peritoneum. | 04.10 | 04.10 | 04.10 |
| 6. | Respiratory system. Nasal cavity, larynx, trachea, bronchi. Lungs and pleura. | 11.10 | 11.10 | 11.10 |
| 7. | Urinary system. Kidneys and ureters. Urinary bladder, urethra. | 18.10 | 18.10 | 18.10 |
| 8. | Male and female genital organs. Mammary gland. Perineum. | 25.10 | 25.10 | 25.10 |
| 9. | Endocrine and immune system. **Summary lesson**“Splanchnology” | 01.11 | 01.11 | 01.11 |
| 10. | Central nervous system. Spinal cord. | 08.11 | 08.11 | 08.11 |
| 11. | Rhombencephalon and mesencephalon. | 15.11 | 15.11 | 15.11 |
| 12. | Prosencephalon. **Summary lesson** “Central nervous system” | 22.11 | 22.11 | 22.11 |
| 13. | Organs of special senses. Organs of vision, of hearing and balancing, of taste, and of smell. Skin. **Summary lesson** “Organs of special senses”. | 29.11 | 29.11 | 29.11 |
| 14. | Peripheral nervous system. Nervous plexuses and nerves. | 06.12 | 06.12 | 06.12 |
| 15. | Autonomic nervous system. Its sympathetic and parasympathetic parts. Autonomic ganglia, nerves and plexuses. **Summary lesson** “Peripheral nervous system”. | 13.12 | 13.12 | 13.12 |
| 16. | Heart. Lesser and systemic circulations. | 20.12 | 20.12 | 20.12 |
| 17. | Blood vascular system. Arteries. Microcirculation. | 27.12 | 27.12 | 27.12 |
| 18. | Venous system. Lymphatic system. **Summary lesson** “Cardiovascular system”. | According to depart, schedule | | |
| 19. | **Summary lesson** “Practical skills”. | 10.01 | 10.01 | 10.01 |
| 20. | **Total check of module 1.** | 17.01 | 17.01 | 17.01 |
| **40** | | | | |

**MODULE 1. Biological features of human vital activity.**

**Bases of medical genetics**

**Content module 1.** **Molecular-cellular level of life organization**

**Lectures**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № | Topic | Hours | | Date |
| **MODULE 1. Biological features of human vital activity. Bases of medical genetics**  **Content module 1.** **Molecular-cellular level of life organization** | | | | |
| 1. | Introducing to Medical Biology course. Structurally-functional organization of the cell. | 2 | 3.09-14.09 | |
| 2. | Molecular bases of heredity. Flow of information. | 2 | 17.09-28.09 | |
|  | Total | 4 |  | |
| **Content module 2. Basic principles of heredity and variability** | | | | |
| 3. | Organism level of the genetic information organization. Gene's interaction. Chromosomal theory of heredity. Sex genetics. | 2 | 1.10-12.10 | |
| **Content module 3. Methods of the human inheritance investigation. Hereditary diseases.** | | | | |
| 4. | Basis of human genetics. Methods of inheritance investigation. | 2 | 15.10-26.10 | |
| 5. | Hereditary diseases of man. | 2 | 29.10-9.11 | |
|  | Total for module 1 | **10** |  | |
| **MODULE 2. Population and species, biogeocenotic and biosphere levels of living things organization**  **Content module 5. Medical and biological basis of parasitism.**  **Medical** **Protozoology** | | | | |
| 6. | Introducing to Medical Parasitology. Medical and biological basis of parasitism. Protozoa as the parasites of human. | 2 | 12.11-23.11 | |
| **Content module 6. Medical Helminthology** | | | | |
| 7. | Medical Helmintology. Flat worms – parasites of human. | 2 | 26.11-7.12 | |
| 8. | Phylon Nemathelmintes. Classis Nematoda – causative agents of human diseases. | 2 | 10.12-21.12 | |
| **Content module 7.** **Medical Arachnoentomology. Biosphere and human.** | | | | |
| 9. | Medical Arachnoentomology. Arthropods as source and carriers of human infections and invasions. | 2 | 24.12-28.12 | |
| 10. | Biosphere as a system of human existence. Basis of human ecology. | 2 | 10.01-14.01 | |
|  | Total for module 2 | **10** |  | |

**Practices**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| № | Topic | Hours | | | Date |
| **MODULE 1. Biological features of vital functions of man. Bases of medical genetics**  **Content module 1.** **Molecular-cellular level of life organization** | | | | | |
| 1. | Levels of living things organization. Plant and animal cell structures. Structural components of the cytoplasm. | 2 | 3.09-7.09 | | |
| 2. | Hereditary apparatus of the cell. Morpho-functional characteristic of chromosomes. Human karyotype and ideogram. | 2 | 10.09-14.09 | | |
| 3. | Characteristic of nucleic acids. The organization of the information flow in cell. | 2 | 17.09-21.09 | | |
| 4. | Life cycle of a cell. Reproduction and its forms. | 2 | 17.09-21.09 | | |
| **Content module 2. Basic principles of heredity and variety** | | | | | |
| 5. | Human Genetics peculiarity. Mendel's laws of heredity. Mono-, di- and polyhybrid inheritance. Multiple alleles. Inheritance of blood groups. | 2 | 24.09-28.09 | | |
| 6. | Allelic and non-allelic gene’s interaction. Pleiotropy. | 2 | 1.10-5.10 | | |
| 7. | Linkage inheritance. Sex genetics. Sex-linked inheritance. | 2 | 8.10-12.10 | | |
| **Content module 3. Methods of the human inheritance investigation. Hereditary diseases.** | | | | | |
| 8. | Methods of the human inheritance investigation: cytogenetic and biochemical analysis. Chromosomal and gene's diseases diagnostics. | 2 | 15.10-19.10 | | |
| 9. | Study of twins. Genealogy of human as the method of human inheritance investigation. | 2 | 22.10-26.10 | | |
| 10. | Dermatoglyphics as the method of human inheritance investigation. Genetic characters of human populations (Hardy-Weinberg law). | 2 | 29.10-2.11 | | |
| **Content module 4. Biology of individual development** | | | | | |
| 11. | **Control of the module 1 “Biological features of vital functions of man. Bases of medical genetics”** | 2 | 5.11-9.11 | | |
|  | **Total** | **22** |  | | |
| **MODULE 2. Population and species, biogeocenotic and biosphere levels of living things organization**  **Content module 5. Medical and biological basis of parasitism.**  **Medical** **Protozoology** | | | | | |
| 12. | Medical and biological basis of parasitism. Protozoa as the parasites of human. Phylon Sarcomastigophora, Classis Lobozea. Phylon Ciliophora. Representatives of the Classis Rimostomatea – parasites of human. | 2 | 12.11-16.11 | | |
| 13. | Representatives of the Classis Zoomastigophora – parasites of human. | 2 | 19.11-23.11 | | |
| 14. | Phylon Apicomplexa. Representatives of the Classis Sporozoa – parasites of human. | 2 | 26.11-30.11 | | |
| **Content module 6. Medical Helminthology** | | | | | |
| 15. | Phylon Plathelmintes. Classis Trematoda: liver, cat’s, lancet-like and lung flukes. | 2 | | 3.12-7.12 | |
| 16. | Classis Cestoidea: beef, pork, dwarf tapeworms, Echinococcus – causative agents of human diseases. | 2 | | 10.12-14.12 | |
| 17. | Phylon Nemathelmintes. Classis Nematoda: large intestinal roundworm, pinworm (seatworm), whipworm, *Trichinella spiralis* – causative agents of human diseases. | 2 | | 17.12-21.12 | |
| **Content module 7.** **Medical Arachnoentomology. Biosphere and human.** | | | | | |
| 18. | Phylon Arthropoda. Classis Arachnoidea. Ticks (Acarina) – causative agents of diseases and carriers of human infections. | 2 | | 24.12-28.12 | |
| 19. | Classis Insecta: lice (Anoplura), flees (Aphaniptera), Diptera – causative agents of diseases and carriers of human infections. | 2 | | 10.01-16.01 | |
| 20. | **Control of the module 2**  **“Population and species, biogeocenotic and biosphere levels of living things organization”** | 2 | | 17.01-23.01 | |
|  | **Total** | **18** | |  | |

**Independent work**

|  |  |  |
| --- | --- | --- |
| № | Topic | Hours |
| **MODULE 1. Biological features of vital functions of man. Bases of medical genetics**  **Content module 1.** **Molecular-cellular level of life organization** | | |
| Preparing of themes, which don’t in plan of auditory classes. | | |
| 1. | The organization of the way of biological things and energy in cell. | 2 |
| 2. | Cells membranes. Transport across the cell surface membrane (plasmalemma). | 2 |
| 3. | Genes structure in pro- and eukaryotes. Structural, regulatory, tRNA and rRNA genes. | 2 |
|  | Total | 6 |
| **Content module 2. Basic principles of heredity and variety** | | |
| Preparing of themes, which don’t in plan of auditory classes. | | |
| 4. | Genetic maps. Methods of the human chromosomes mapping. | 2 |
| 5. | Variability of the organisms, its forms. Phenotypic and genotypic variation. | 2 |
|  | Total | 4 |
| **Content module 3. Methods of the human inheritance investigation. Hereditary diseases.** | | |
| 6. | Practical skills of content modules 2 and 3. | 2 |
|  | Total | 2 |
| **Content module 4. Biology of individual development** | | |
| Preparing of themes, which don’t in plan of auditory classes. | | |
| 7. | Gametogenesis. Meiosis. | 1 |
| 8. | Peculiarities of prenatal period of human development. Pre-conditions of congenital developmental anomalies. | 2 |
| 9. | Postnatal period of human development and its periods. | 1 |
| 10. | Aging as the finishing stage of human ontogeny. Theories of ageing. | 2 |
| 11. | Preparing of the control of the learning module 3 | 2 |
|  | Total | 8 |
|  | Total for MODULE 1. | 20 |
| **MODULE 2. Population and species, biogeocenotic and biosphere levels of living things organization**  **Content module 5. Medical and biological basis of parasitism.**  **Medical** **Protozoology** | | |
| **Preparing of themes, which don’t in plan of auditory classes.** | | |
| 12. | Methods of laboratory diagnosis of diseases caused by protozoa parasites. | 4 |
| 13. | Teaching of Pavlovskiy about **transmissible** diseases. | 2 |
| 14. | Peculiarities of malaria clinical course in Ukraine. | 2 |
| 15. | Preparing for practical classes – theoretical preparing and practical experience. | 2 |
|  | Total | **10** |
| **Content module 6. Medical Helminthology** | | |
| Preparing of themes, which don’t in plan of auditory classes. | | |
| 16. | Blood flukes – causative agents of parasitogenic illnesses of man. Agents of metagonimosis and nanophoetosis. | 2 |
| 17. | Guinea worm (*Dracunculus medinensis*) and Filaria – agents of human diseases. | 2 |
| 18. | Laboratory diagnostics of helminthosis. | 4 |
| 19. | Preparing for practical classes – theoretical preparing and practical experience. | 2 |
|  | Total | **10** |
| **Content module 7.** **Medical Arachnoentomology. Biosphere and human.** | | |
| Preparing of themes, which don’t in plan of auditory classes. | | |
| 20. | Blood sucking insects: characters, importance as the intermediate hosts of helminthes and carriers of human infections. | 2 |
| 21. | Origin of man. Human races: like reflects of adaptive regulars of human's development. | 2 |
| 22. | Preparing of the control of the MODULE 2 | 2 |
|  | Total | **6** |
|  | Total for MODULE 2. | **26** |

# Plan of lectures

**of the** **course of «Higher Mathematics»**

**for first**-**year pharmaceutical students**

# in the first semester of 2012/2013 academic year

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | **Topics** | **Hours** | **Dates** |
| **MODULE 1** | | | |
| 1. | **Differential calculus.** Derivative of function. Differential of function. Applications of differential. Many variables function. Partial derivative. Partial and total differentials. Applications of total differentials. | 2 | 07.09 |
| 2. | **Integral calculus. Differential equations.** Indefinite integral. Properties of the indefinite integral. Definite integral. Newton-Leibniz formula. Properties of the definite integral. Improper integrals. Differential equations: basic theory. Physics, chemistry, biology, and medicine processes modeling in using differential equations. | 2 | 21.09 |
| 3. | **Probability of random quantities.** Random event. The statistical and the classical definition of probability of the random event. Theoretically plural examination of random quantities. Conditional probability. Multiplication theorems on probability. The addition theorems of probability. | 2 | 05.10 |
| 4. | **Analyses of random quantities.** Random value. Methods of distribution laws for discrete random quantities assignment. Distribution functions. Density of distribution function. Characteristics of distribution: mathematical expectation, variance, standard deviation. | 2 | 19.10 |
| **MODULE 2** | | | |
| 5. | **Laws of random quantities distribution.** Binomial law of distribution. Approximation formulas of Mauvre-Laplace, Poisonne. Normal law of distribution. | 2 | 02.11 |
| 6. | **Boundary laws of probability theory.** Series of independent random variables. Inequalities of Chebyshev. Law of great numbers: Chebyshev theorem, Bernoulli theorem. Applications of Chebyshev theorem in measurements theory. Central boundary theorem and its applying significance. | 2 | 16.11 |
| 7. | **Analysis of variation series.** General and selective series. Discrete variation series. Interval variation series. Empirical function of distribution density. Empirical function of distribution. Point and interval estimations of normally distributed quantities parameters. | 2 | 30.11 |
| 8. | **Verification of statistical hypotheses.** Hypotheses formulation. Criteria for verification of the hypotheses. Errors of first and second kinds. Formulation of statistical conclusion. General examination of hypotheses verification about equality of parameters of independent normal series. | 2 | 14.12 |
| 9. | **Analysis of variance.** Basic concepts of analysis of variance: model of analysis; formulation of hypotheses; plan of experiment; criteria of hypotheses verification; formulation of conclusion. One factor variance analysis for a parametric model. | 2 | 28.12 |
| 10. | **Correlation and regressive analysis.** Correlation dependence. Regression equation. Empirical line of regression. Evaluation of correlation coefficient from data of mathematical selection and analysis of its significance. | 2 | 11.01 |
| **In total** | | **20** |  |

# Plan of practical classes

**of the** **course of «Higher Mathematics»**

**for first**-**year pharmaceutical students**

# in the first semester of 2012/2013 academic year

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | **Topics** | **Hours** | **Dates** |
| **1** | **2** | **3** | **4** |
| **MODULE 1** | | |  |
| 1. | **Derivation of functions. Application of derivative.** Derivative of sum, product and ration of functions. Derivative of complex function. Higher order derivatives. Geometrical and mechanical interpretations of derivative. Application of derivative for determining of monotonic intervals, minimums and maximums, extremes, intersection points. Optimization problems in pharmacy and medicine. | 3 | 03.09 |
| 2. | **Application of differential.** Calculations of differentials of first and higher orders Calculation of function change and comparison of it with differential of function. Application of the differential in linear approximation of function and approximate calculations. Application of differential to the estimation of indirect measurement errors. | 3 | 10.09 |
| 3. | **Differentiation of the many variables functions**. Calculation of partial derivatives of the first and higher orders. Calculation of partial and total differentials and their comparison with the function change. Application of the total differentials to the functions linear approximation and errors of indirect measurements. | 3 | 17.09 |
| 4. | **Integration methods. Definite integral and its application**. Direct integration. Integration by changing the variable. Integration by parts. Calculations of definite integrals. Improper integrals analysis. Geometrical application of definite integrals. Application of definite integral to the solution of physical, biological and medical problems. | 3 | 24.09 |
| 5. | **Solution of differential equations.** First order differential equation with dividing variables. First order linear differential equations. Second order linear differential equations with the constant coefficients. Partial and general solutions of differential equations. | 3 | 01.10 |
| 6. | **Processes modeling using differential equations.** Physical processes: free vibrations, cooling of the substance, diffusion, absorption of light and ionizing radiation, radioactive disintegration. Kinetics of the chemical reactions. Processes in pharmacy, biology and medicine. | 3 | 08.10 |
| 7. | **Analysis of random quantities.** Distribution series, distribution polygon, probability function of discrete random quantities. Calculation distribution characteristics – mathematical expectation, variance, standard deviation. | 3 | 15.10 |
| 8. | **Random quantity distribution function**. Calculation of the probability of random quantities using distribution function. Calculation of fractiles using given distribution density function. | 3 | 22.10 |
| **1** | **2** | **3** | **4** |
| 9 | **Random quantity density distribution function.** Calculation of the probability of random quantities using density distribution function. Calculation of the mathematical expectation, variance of independent variable using given density distribution function. | 3 | 29.10 |
| 10. | **Final module No 1** (items 1 – 9). | 3 | 05.11 |
| **In total** | | **30** |  |
| 11. | **Main laws of discrete random quantities distribution.** Solution the problems using binomial law of distribution. Application of Muavre-Laplace and Poissone approximation formulas. | 3 | 12.11 |
| 12. | **Main laws of analog random quantities distribution.** Solution the problems using the uniform law, the exponential law, the normal law of distribution formulas. Application of the standard normal distribution tables. | 3 | 19.11 |
| 13. | Distributing laws of statistics of selection distribution. Student's t-distribution. Fisher-Snedecor distribution. Statistics of selections which are subordinated to these distributions. Apply of distributing Pearson, Student's and Fisher-Snedecor tables. | 3 | 26.11 |
| 14. | **Analysis of variation series.** Constructing of the discrete variation series. Constructing of the interval variation series, empirical density of distribution function, empirical distribution function. Graphical representation of variation series. | 3 | 03.12 |
| 15. | **Estimation parameters of quantity distribution.** Calculation of point estimation of mathematical expectation, variance, standard deviation and mean square standard deviation. Calculation of the probable interval for the mathematical expectation of normally distributed value. Calculation of the probable interval for the variance and standard deviation of the normally distributed value. | 3 | 10.12 |
| 16. | **Algorithm of statistical verification of hypothesis.** Verification of methods of analysis on presence of systematical errors. Comparison of new method of analysis with standard one by means of reproduction. Study of factor influence on the displacement of the center of studied value. | 3 | 11.12 |
| 17. | **One-factor variance analysis**. Parametric model of one-factor variance analysis. Experiment planning, formulation of hypothesis and its statistical verification. | 3 | 17.12 |
| 18. | **Correlation analysis**. Construction of the correlation field. Construction of empiric line of regression. The correlation coefficient calculations and analysis of importance of linear correlation relation. | 3 | 24.12 |
| 19. | **Modeling of regression equations.** Modeling of linear interaction between ftures and factors. Linear regression models. Analysis of importance of linear dependence on the basis of variance analysis|. | 3 | 14.01 |
| 20. | **Final module No 2** (items 11 – 19). | 3 | 21.01 |
| **Total** | | **30** |  |
| **Total – 60 hours** | | | |

**Self-study plan**

**of the**  **course of «Higher Mathematics»**

**for first**-**year pharmaceutical students**

# in the first semester of 2012/2013 academic year

|  |  |
| --- | --- |
| **№** | Topics |
| 1. | **Elements of calculus mathematics.** Approximate data. Absolute and relative errors of approximate quantitiesDefinite, doubtful and meaningful numbers of approximate quantities. |
| 2. | **Calculation of the function limit.** Limits of numerical consequences. The limit of function. Infinitesimal and infinitely large functions. Theorems about limits. Technique of the limit calculation. |
| 3. | **Analysis of continuity of functions.** Continuity of function. Main properties of continuous functions. Asymptotics of functions: vertical, horizontal, sloping. |
| 5. | **Application of differential calculus of function of one variable.** Continuity and derivative of the function. Main theorems of differential calculus: Farm theorem, Roll theorem, La Grange theorem. Complete research of functions. Finding of uncertainlies by Lopital rules. |
| 6. | **Application of differential calculus of function of many variables.** Research of function of many variables on extremes. Application of least-squares method for the mathematical modeling of experimental conformities. |
| 7. | **Integral calculus.** Application of definite integrals. Calculating the area of plane figure. Way at irregular motion. Work of variable force. Number of populations. Product of chemical reaction. Application of the theorem about the mean value. Dose of radiation. Integral spectral characteristics of radiation sources |
| 8. | **Modeling of processes in pharmacy and medicine by differential equations.** Solving of differential equations of kinetics of chemical reactions, pharmacokinetics, sedimentation, growth of the cells reproduction dynamics of epidemics. |
| 10. | **Probabilities of random events.** Calculation of probabilities of random events on the basis of formula of complete probability and Bayes’ formula. |
| 11. | **Laws of distribution of random events.** Application of local and integral approximation Muavre-Laplase formulas. Poisson law of distribution for rare events. Tasks on the even and exponential laws of distribution. |
| 12. | **Boundary laws of probability theory as basis of mathematical statistics.** Totality of independent random quantaties. Mean random quantity and its characteristics. Law of large numbers in the form of Chebyshev. Application of Chebyshev theorem in the theory of measurings. Bernoulli law of great numbers. Central boundary theorem and its applying significance. |

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| --- | --- |
| **THEMATIC PLAN OF PRACTICAL LESSONS**  **for foreign students of pharmaceutical department**  **of the 1-st year study** | **Quantity of hours** |
| 1. The Noun. Genitive Case of Possession. Nouns and Personal Pronouns in Genitive Case. | 4 |
| 2. Genitive Case after Negation. | 8 |
| 3. Noun’s endings of Masculine Gender in Genitive Case Singular. | 4 |
| 4. Prepositions after which Genitive is Used. | 2 |
| 5. Verbs of Motion. Nouns in the Genitive Case after Verbs of Motion. Usage of the Prepositions **до** і **звідки.** | 6 |
| 6. Adjectives and Possessive Pronouns in the Genitive Case. | 4 |
| 7. The Noun. Dative Case of Address. | 4 |
| 8. Personal and Possessive Pronouns in the Dative Case. | 2 |
| 9. Adjectives in the Dative Case. | 2 |
| 11. Dative Case of Age. | 2 |
| 12. Possessive Pronoun **свій.** | 2 |
| 13. Usage of Verb подобатися - сподобатися. | 2 |
| 14. Nouns, Adjectives and Possessive Pronouns in the Dative Case Plural. | 4 |
| 15. Nouns and Personal Pronouns in the Instrumental Case Singular for Expressing Means of Movement and Tool of Action. | 4 |
| 16. Preposition з (із), зі with Nouns in the Instrumental Case. | 2 |
| 17. Nouns in the Instrumental Case Plural. | 2 |
| 18. Adjectives and Possessive Pronouns in the Instrumental Case. | 4 |
| 19. Usage of Verbs зустрічати (ся), знайомити (ся). | 2 |
| 20. Cases and how they are Used in the Ukrainian Language. | 6 |
| 21. Declension of Main Groups of Adjectives. | 6 |
| 22. Ukrainian Pronouns and their Declension. | 4 |
| 23. The Verb. Tense and Aspects. Verbs of Motion. | 4 |
| *Final test control of module 2* | 2 |
| ***Total hours*** | 82 |

**TOPICS LECTURE**

**the Ukrainian language for students of the first course   
 pharmaceutical department                      English Department   
 2012-2013 st.y.**

|  |  |  |
| --- | --- | --- |
|  | **SUBJECT** | **Quantity of hours** |
| 1. | Ukrainian language - the national language of the Ukrainian people. | 2 |
| 2. | The word as a unit of language. Nominative function of word (ручка - предмет, гарний - ознака, писати - дія, чотири - кількість). | 2 |
| 3. | Synonyms. Absolute synonyms (батько = тато, мама = мати, буква = літера).Antonyms (там ≠ тут, день ≠ ніч, швидко ≠повільно, старий ≠новий, працювати ≠від­почивати). | 2 |
| 4. | Practical phonetics. Organs of speech and their work. Features playback and sound functioning of Ukrainian language. Loud sounds of modern literary Ukrainian. Artykulation-acoustic classification of consonants. Orthoepy. Pronunciation of vowels and consonants. | 2 |
| 5. | Graphics and spelling. Ukrainian alphabet. The relationship between letters and sounds of the Ukrainian alphabet in the Ukrainian language. | 2 |
| 6. | Parts of speech. The general value of the noun. Proper and common names. Category creatures and inanimate things. Grammatical categories of noun. Category of gender. Category of number. Category of case. The main meanings of a case. Conjugation of nouns. | 4 |
| 7. | Adjective. The meaning of adjectives. Qualitative adjectives. Relative Adjectives. Hard and soft groups of adjectives. Conjugation of adjectives. Agreement of the adjective with noun. | 4 |
| 8. | Pronoun. The meaning of pronouns. Correlation of pronouns to other parts of speech. Personal pronouns *я (ми), ти (ви).* Personal-pointing pronouns *він,вона, воно, вони.*  Reflexive pronoun *себе.* Possessive pronouns *мій (наш), / (ваш), свій (свої).* Demonstrative pronouns цей*, той, такий.* Attributive pronouns *(самий), весь (увесь), кожний (кожен).* Interrogative-relative pronouns *хто, що, який,* *чий, скільки, котрий.* Conjugation of personal pronouns. | 4 |
| 9. | The verb. The meaning of the verb. Infinity. Two conjugations of verbs. Category of aspect. Imperfective and perfective verbs. Category of person. Category of tense. Present, future, past tense. Category of manner of action. Paradigm of imperative mood. | 6 |
| 10. | Adverbs. The meaning of adverb, its grammatical features. Quality-attributive adverbs *(добре, швидко, повільно).*  Adverbs of manner *(разом, по-українському / по-українськи).* Quantitatively-attributive adverbs *(дуже, багато).*  Adverbial moderfire of time *(тепер, зараз, завжди).* Impersonal-predicate adverbs expressing the state of nature *(тихо, тепло, холодно).* | 2 |
| 11. | The numeral. The meaning of the numerals.Quantitative and ordinal numerals. | 2 |
| 12. | Preposition. Use of prepositions *у (в), на, з (із, зі), про, до* with nouns in different cases. Conjunction. Coordinating conjunctions і *(й),* *та* (in the sense і). Disjunctive conjunctions *або, чи.* Adversative conjunctions *а, але* | 4 |
|  | ***Total*** | **36** |

# SCHEDULE OF PRACTICAL CLASSES FOR PHARMACY MEDIUM

**1st SEMESTER 2012/2013 year**

### LATIN LANGUAGE

|  |  |  |
| --- | --- | --- |
| **№** | Theme | **h.** |
|  | Short history of the Latin language. The alphabet. Vowels and consonants. Pronunciation. Diphthongs. | **2** |
|  | The accent. Length and brevity of the syllable. | **2** |
|  | The Verb. General information. The Imperative mood. |  |
|  | The Verb. The Present indicative active. The Verb “sum, esse”. | **2** |
|  | The Noun. The categories of Nouns. The dictionary form of Nouns. The non-agreed modifier. The 1st declension of Nouns. The Greek equivalents of the 1st declension. | **2** |
|  | The 1st declension of Nouns. The Greek Nouns. Prepositions (Acc., Abl.) | **2** |
|  | The 2nd declination of Nouns. The masculine gender. The Greek equivalents. | **2** |
|  | The 2nd declination of Nouns. The neutral gender. The Greek equivalents. | **2** |
|  | The prescription. General information. | **2** |
|  | The Adjective. The categories of adjectives. The dictionary form of Adjectives. The Agreed modifier. The 1st and 2nd declination Adjectives. The Greek equivalents. | **2** |
|  | The Present participle passive. | **2** |
|  | The 3rd declination of Nouns. General information. Three types of Nouns. | **2** |
|  | The 3rd declination of Nouns. The masculine gender. The Greek equivalents. The Noun “liquor”. | **2** |
|  | The 3rd declination of Nouns. The feminine gender. The Greek equivalents. | **2** |
|  | The 3rd declination of Nouns. The neutral gender. The Greek equivalents. | **2** |
|  | The peculiarities of declining some 3rd declination Nouns. Declining of the 3rd declension Nouns of Greek origin. | **2** |
|  | The Adjectives of the 3rd declension. Three groups. The Greek equivalents. | **2** |
|  | The Present participle active. | **2** |
|  | The degrees of comparison of Adjectives. | **2** |
|  | Final test. | **Extra class** |
|  | ***Total*** | **40** |

**SCHEDULE OF INDUVIDUAL WORK FOR PHARMACY MEDIUM**

1st SEMESTER 2012/2013.

**LATIN LANGUAGE**

**Мodule 1**

|  |  |  |
| --- | --- | --- |
| **№** | **Theme** | **h.** |
|  | The most used Verbs in pharmaceutical terminology. | **4** |
|  | The Noun. The categories of Nouns. The dictionary form of Nouns. The non-agreed modifier. The prescription. General information. | **4** |
|  | The Adjective. The categories of Adjectives. The dictionary form. The agreed modifier. The 1st and 2nd declination Adjectives. The Adjectives indicating pharmacological effects in medications. Word – forming elements. | **4** |
|  | The nomenclature of medications. The names of primary processing products. The names of medicine-extractions from the plant raw material. The pharmaceutical and botanical herb names. | **4** |
|  | The trivial names of medications. The prescriptions with trivial names. The names of alkoids and glycosides. | **4** |
|  | The names of serums and vaccines. | **4** |
|  | The most used masculine and feminine Nouns of the 3rd declension. Exeptions. The Greek doublets. Word-forming elements. | **4** |
|  | The most used neutral Nouns of the 3rd declension. Exeptions. The Greek doublets. Word-forming elements. The peculiarities of declining of the 3rd declension Nouns. | **4** |
|  | The 3rd declension Adjectives in medical terminology. | **4** |
|  | The degrees of comparison of Adjectives. | **4** |
|  | **Total** | **40** |

**CALENDAR AND THEMATIC SCHEDULE OF LECTURES**

**on inorganic chemistry for the 1st year students of pharmaceutical faculty**

**during the autumn term of 2012– 2013 academic year**

**Group 9** T o p i c s a n d c o n t e n t s o f l e c t u r e s Number

Date of hours Mo d u l e 1 “Ge n e r a l c h emi s t r y ”

04.09.2012

Atomic-molecule concept. Basic laws of chemistry. Chemical equivalents of

substances 2

18.09.2012 Structure of atoms. The Periodic law and Periodic table by D. Mendeleev 2

02.10.2012 The nature of chemical bonds and structure of chemical compounds 2

16.10.2012 Solutions. Ways of expressing concentrations of solutions. Colligative

properties of solutions

2

30.10.2012 Chemical thermodynamics. Thermochemistry. The direction of chemical

processes passage

2

13.11.2012 Chemical kinetics and equilibrium 2

27.11.2012 The concept of strong and weak electrolytes. The equilibrium in feebly

soluble electrolytes solutions

2

11.12.2012 Acids and bases theories. Dissociation of water. pH. Protolytic processes 2

25.12.2012 Reactions with electrons transferring 2

22.01.2013 Coordination compounds. Reactions of coordination compounds formation 2

**Totally: 20**

Confirmed by the Department session

Protocol No. 1 dated «31» August 2012

\_\_\_\_\_\_\_\_\_\_\_ Associate professor V. Ogurtsov

**CALENDAR AND THEMATIC SCHEDULE**

**of practice and laboratory studies in inorganic chemistry for the 1st year students of**

**pharmaceutical faculty during the autumn term of 2012 – 2013 academic year**

**Group 9**

The topic Number

of hours

Date

***Thematic module 1. Atomic-molecule concept. The basic laws of chemistry***

04.09.2012

Atomic-molecule concept. Nomenclature and classification of inorganic

compounds.

4

11.09.2012 Basic laws of chemistry. 4

18.09.2012 Equivavlents of substances in chemical reactions. 4

***Thematic module 2. Structure of substances and The Periodic by D. Mendeleev***

25.09.2012 Structure of atoms. The Periodic law and Periodic table by D. Mendeleev 4

02.10.2012 The nature of chemical bonds and structure of chemical compounds 4

***Thematic module 3. Solutions. Properties of solutions***

09.10.2012 Solutions. Ways of expressing concentration of solutions 4

16.10.2012 Preparation of a solution of known concentration 4

23.10.2012 Colligative properties of solutions 4

***Thematic module 4. The basics of chemical thermodynamics and kinetics. Equilibrium in***

***electrolytes solutions***

30.10.2012

The basic terms of chemical thermodynamics. Thermochemistry. The

direction of chemical processes passage

4

06.11.2012 The rate and mechanism of chemical reactions 4

13.11.2012 Chemical equilibrium 4

20.11.2012 The concept of strong and weak electrolytes

27.11.2012 The equilibrium in feebly soluble electrolytes solutions 4

04.12.2012 Acids and bases theories. Self-ionization of water. pH 4

***Thematic module 5. The main types of chemical reactions***

11.12.2012 Protolytic processes 4

18.12.2012 Reactions with electrons transferring 4

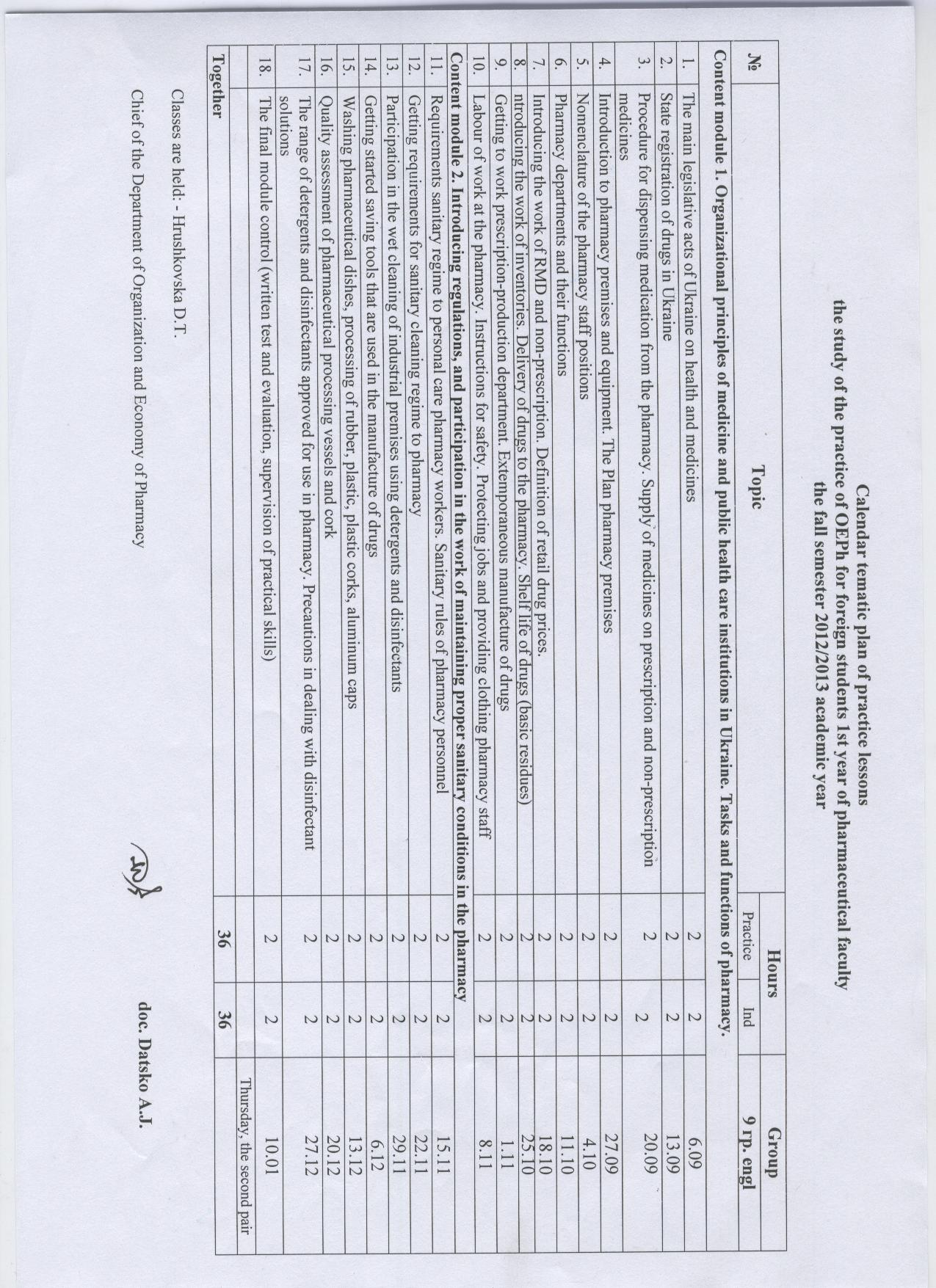
25.12.2012 Experimental studying of reduction-oxidation reactions 4

15.01.2013 Coordination compounds. Reactions of coordination compounds formation 4

22.01.2013 Experimental studying of coordination compounds properties 4

25.01.2013 The final control of the acquirement the Module 1 “General chemistry” 4

**Totally: 80**



**Thematic plan workshops**

**the discipline "Valeology" for students 1-st cours of the pharmacy**

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | | **Thema** | **Hours** |
| **Content module 1. Health problems in modern society. Evaluation criteria, support and promote of health. "** | | | |
|  | Formation and development valeology. Defining object valeology. Place valeology among other sciences. Main tasks valeology as a practical science. Forming strategies health and substance of science valeology. Objects and methodological foundations valeologiy. Valeological monitoring and screening. The concept of individual health category. | | 2 |
|  | Reasons for separation valeology in educational science. Goals and Objectives valeological continuous education. Three types valeological knowledge. Creation of valeological education in Ukraine and foreign countries. The health status of the population of Ukraine. | | 2 |
|  | General characteristics of adaptation. Adaptation as a process of adaptation of the organism to changes occurring in the body and the environment. Adaptability as the level of congenital and acquired skills that support the device. Physiological and psychological characteristics that provide adaptation process. Age-related changes in adaptation. Types of adaptation. Adaptation based on social status and activity. Types of adaptation: professional, social, psychological, didactic, to exercise, to climatic and geographical conditions. Stage adaptation to exercise. The concept of "cross-adaptation". | | 2 |
|  | To make the idea of ​​"block" structure concept of health. Components of health comprehensively developed personality - physical, mental, social status, structure components of each. Block diagram of the structure of health. Methodology for rapid assessment of physical health. General principles of detection methods of care. | | 2 |
|  | Value movement for health. The definition of "physical activity". The concept of minimum, optimum and maximum physical activity. Hypokinesia and physical inactivity as factors of ill health. Hyperkinesia. Ways shaping health means physical activity. Adequate physical activity. Amount of physical activity that provides health. Differentiation of motor activity, depending on age and gender. The main ways of improving the impact of physical education: training and recreation. Basic rules of training. Characteristics of "aerobic physical exercise." Effect of restricted or excessive exercise on the functioning of body systems (musculoskeletal, cardiovascular, respiratory, nervous system). Criteria for evaluating the amount of recreational exercise. | | 2 |
|  | Characterization eastern health systems. Complexity triad: movement, breathing, consciousness - the main feature of the eastern health systems. Modern means of recovery. General characteristics of modern physical training used in recreational training: aerobic, anaerobic, strength direction. Exercise in health training. Характеристика східних оздоровчих систем. | | 2 |
|  | Prevention of posture. The value of good posture to ensure health. Formation of posture during ontogeny. Signs of correct posture. Guidelines correct posture when walking, sitting, during sleep. Means of physical education for prevention of posture. Prevention of cardiovascular disease. Risk factors for cardiovascular disease. Rational use of physical education to prevent systemic diseases. | | 2 |
| **Content module 2. Mastering the Principles of individual fitness programs.** | | | |
|  | The concept of life, its total harakterystyka.Faktory that define the way of life: eating habits, physical activity, regime of work and rest, bad habits, material and cultural needs of man. Lack of knowledge about healthy lifestyles and lack of skills to maintain it as a determinant of health. | | 2 |
|  | Determination of rational, balanced, adequate, nutritious food. Requirements diet. Basic principles of health food. Diet. Recommendations in nutrition foreign scientists, "pyramid valeological food". The concept of health food and diet. Metabolism and Health. | | 2 |
|  | Principles of recreation. The value of leisure in human life. Systematic rest - a principle that provides the rhythm of the body. A variety of holiday rights. Wellness nature recreation. Activities. The combination of active and passive rest (sleep). The difference between the concepts of content and influence on the body of leisure and recreational exercise. The combination of leisure with wellness training as a condition of increasing its effectiveness. External signs of physical fatigue. | | 2 |
| 11 | Health effects of breathing exercises on the human body. Chan knows ¬ ¬ ing breathing exercises and techniques to follow proper breathing during or after exercise. Influence of breathing exercises and proper breathing for major body systems. Rules of proper breathing. Advantages of nasal breathing. Persons ¬ ties for implementation of inspiration and expiration. General rules for use nan ¬ ¬ tion cycle full breath at rest. General requirenments ¬ gi in the process of breathing while performing physical and breathing exercises. | | 2 |
| 12 | Health effects of breathing exercises on the human body. Chan knows ¬ ¬ ing breathing exercises and proper breathing techniques compliance during and after exercise. Influence of breathing exercises and proper breathing for major body systems. Rules of proper breathing. Advantages of nasal breathing. Persons ¬ ties for implementation of inspiration and expiration. General rules for use nan ¬ ¬ tion cycle full breath at rest. General requirenments ¬ gi in the process of breathing while performing physical and breathing exercises. Methods of teaching proper breathing. Engineering major types of breathing and control its execution. The concept of a full breath: phase and the ratio between them. Methods of teaching breathing while performing cyclic and acyclic exercises. | | 2 |
| 13 | Breathing and Health. Fitness breathing. Exercise as a factor in increasing human efficiency. Method of breath AN Strelnikovoj, KP Buteyko. Breathing exercises for special purposes by K. Dineyky. Basic principles of organization and control over the physical pause mode the school day students. Breathing and Health. The theoretical basis of health and healing breathing exercises. Learning proper breathing while performing strength exercises. The technique of relaxing, refreshing and mobilizing breathing. Methods of load control while performing breathing exercises. Terms assembly complex health breathing exercises. | | 2 |
| 14 | General characteristics of stress. Stress is a "general adaptation syndrome". The source of stress, as one of its main components. The set of reactions to stress, as part of the concept of stress. Stress and human health. "Diseases of Civilization", as re ¬ Dhul ¬ tat chronic stress. Stress and disorders of body functions. Features of exercise as anti-stress agent. Features reaction trained organism to stressful factors. Exercise as a natural tranquilizer. Effect of physical activity on mental health of a person. Evaluation of personal anxiety (Dzh.Teylor). Methods of psychic self-regulation. | | 2 |
| 15 | . Principle variety of recreational exercise. A variety of exercise and their specific effects on the body. The principles and ways of its implementation in the health training. The principle of gradual increase in intensity and volume loads. Curative effect of physical activity of moderate intensity. Method of increasing loads. Featured normal loads increase in recreational training from lesson to lesson, weekly, within a single session. The principle of systematic, individual health and regularity of training. Planning of health training. Determining the maximum allowable and optimal physical activity depending on age and physical fitness. та фізичної підготовленості. | | 2 |
| 16 | Injuries and their prevention. Causes of injury during physical exercise. Painful sensations and their role. Types of injuries and their characteristics. Acute pathological conditions that may occur during physical exercise. Training knees and back - the most common injuries in recreational training. Injury Prevention in the organization of recreational exercise. | | 2 |
|  | **Total:** | | **60** |

**Thematic plan of individual work of students  
the discipline "Valeology" for students of the 1-st cours clinical pharmacy**

|  |  |  |
| --- | --- | --- |
| **№** | **Thema** | **hours** |
| **Content module 1. Health problems in modern society. Evaluation criteria, support and promote health.** | | |
| 1. | Main tasks valeology as science, practical valeology. The concept of categories of health, individual health criteria. Valeological monitoring and screening. Value health and disease. The term "third estate" of the body. The essence and the main indicators of population health. The concept of disease categories. | 4 |
| 2. | Views on Health Research scientists modernity and development of medicine. Direction of early preventive care. | 4 |
| 3. | The health status of the population of Ukraine. Three types valeological knowledge. Creation of valeological education in Ukraine and foreign countries. | 4 |
| 4. | General principles of detection methods of care. The main criteria for the formation, maintenance and promotion of health. The concept of physical, social, mental, spiritual health, their general characteristics. Criteria health, their comparative characteristics of illness criteria. | 4 |
| 5. | General characteristics of adaptation. Types of adaptation: professional, social, psychological, didactic, to exercise, to climatic and geographical conditions. Stage adaptation to exercise. The concept of "cross-adaptation". Levels of health. | 2 |
| 6. | Health as one of the greatest human values. The definition of "health" and diagnostics. Teaching of Amosov about "health number". Health is a dynamic attribute. The concept of a "safe" level of health. Biological organization as optimal relationship and harmony between functions and organs of the body. | 4 |
| 7. | Value movement for health, physiological reserves organism. Hypokinesia and physical inactivity as factors of unhealthy lifestyles. Adequate physical activity. Mechanisms of regulation of movements. Value process efficiency, fatigue, exhaustion. | 4 |
| 8. | Basic rules for recreational exercise: physical activity, active recreation. Characteristics of "aerobic physical exercise." Criteria for evaluating the amount of recreational physical activity a day, week, month. Morning and industrial gymnastics, physical training to ensure minimum and optimum health exercise. | 2 |
| **Content module 2. Mastering the Principles of individual health programs.** | | |
| 9 | Ways of healthy lifestyle means of physical activity. Criteria for a healthy lifestyle, their comparative characteristics with the criteria unhealthy lifestyle. | 2 |
| 10. | Basic principles of health food. Diet. Recommendations in nutrition foreign scientists, "pyramid valeological food". Metabolism and Health. | 2 |
| 11. | Fatigue as a physiological condition of the body. Meaning fatigue. Characteristics of fatigue in recreational training. General characteristics of the outward signs of fatigue. Exhaustion as a pathological condition of the body. Signs of fatigue. Fatigue as a subjective human experiences. | 2 |
| 12 | Rules of proper breathing. Advantages of nasal breathing. Particular feature for implementation of inspiration and expiration. General rules for use cycle full breath at rest. General requirenments in the process of breathing while performing physical and breathing exercises. Technology major types of breathing and control its execution. The concept of a full breath: phase and the control of them. Formation of breathing skills in the performance of acyclic exercises. | 2 |
| 13. | Features of influence of physical exercise as anti-stress agent. Features reaction trained organism to stressful factors. Exercises as a natural tranquilizer. The role of physical exercises in increasing the intensity of metabolism of catecholamines. Effect of physical activity on mental health of a person. | 2 |
| 14. | Significance of the principles and ways of its implementation in the health training. Curative effect of physical activity of moderate intensity. Featured normal increase of loads in recreational training from lesson to lesson, weekly, within a single session. Planning of health training. Relevance tupes of motor activity to individual of human. | 2 |
| 15 | Features of resuscitation in drowning. First aid for hypothermia and frostbite. First aid for overheating, heat and sunstroke. First aid for injuries (fractures, sprains, damaged). First aid for acute pathological conditions. First aid for injuries and pathological conditions during classes of physical training. | 2 |
|  | **Total:** | **42** |

**Thematic plan of independent work of students  
the discipline "Valeology" for students 1-st cours of the pharmacy**

|  |  |  |
| --- | --- | --- |
| **№** | **Thema** | **hours** |
| **Content module 1. Health problems in modern society. Evaluation criteria, support and promote health.** | | |
| 1. | Main tasks valeology as science, practical valeology. The concept of categories of health, individual health criteria. Valeological monitoring and screening. Value health and disease. The term "third estate" of the body. The essence and the main indicators of population health. The concept of disease categories. Views on Health Research of modernity scientists and development of medicine. The ways of early preventive care. | 2 |
| 2. | The health status of the population of Ukraine. Three types valeological knowledge. Creation of valeological education in Ukraine and foreign countries | 2 |
| 3. | General principles of detection methods of care. The main criteria for the formation, maintenance and promotion of health. The concept of physical, social, mental, spiritual health, their general characteristics. Criteria health, their comparative characteristics of illness criteria. General characteristics of adaptation. Types of adaptation: professional, social, psychological, didactic, to exercise, to climatic and geographical conditions. Stage adaptation to exercise. The concept of "cross-adaptation". Levels of Health. | 4 |
| 4. | Health as one of the greatest human values. The definition of "health" and diagnostics. Teaching M. Amosov about "health number". Health is a dynamic attribute. The concept of a "safe" level of health. Biological organization as optimal relationship and harmony between functions and organs of the body. | 4 |
| 5. | Value movement for health, physiological reserves organism. Hypokinesia and physical inactivity as factors of unhealthy lifestyles. Adequate physical activity. Mechanisms of regulation of movements. Value process efficiency, fatigue, exhaustion. Basic rules for recreational exercise: physical activity, active recreation. Characteristics of "aerobic physical exercise." Criteria for evaluating the amount of recreational physical activity a day, week, month. Morning and industrial gymnastics in ensureing of minimum and optimum health exercise. | 4 |
| 6. | Health system designed to develop flexibility. Stretching - a special system of stretching exercises. Battle hopak - a complex system of harmonious development of personality. Improving direction hopak. Gopak - unity of fortitude, strength of mind and body strength. Means of spirituality hopakers. Individual and copyright of recreational exercise. Exercise in Health Training. | 4 |
| 7. | Means of physical education for prevention of posture. Rules of saving a correct posture when walking, sitting, during sleep. Prevention of cardiovascular disease. Mechanisms health impact of physical activity on the cardiovascular system. Rational use of physical education to prevent disease. | 2 |
| **Content module 2. Mastering the Principles of individual fitness programs.** | | |
| 8. | Ways of promoting healthy lifestyles by means of motor activity. Criteria for a healthy lifestyle, their comparative characteristics of the criteria unhealthy lifestyle. | 2 |
| 9. | Basic principles of health food. Diet. Recommendations in nutrition foreign scientists, "pyramid valeological food". Metabolism and Health. | 2 |
| 10. | Fatigue as a physiological condition of the body. Meaning fatigue. Characteristics of fatigue in recreational training. General characteristics of the outward signs of fatigue. Exhaustion as a pathological condition of the body. Signs of fatigue. Fatigue as a subjective human experiences. | 2 |
| 11. | Rules of proper breathing. Advantages of nasal breathing. Particular feature of implementation of inspiration and expiration. General rules for useing of full cycle breath at rest. General requirenments in the process of breathing while performing physical and breathing exercises. Technology major types of breathing and control its execution. The concept of a full breath: phase and the ratio between them. Formation of airway skills in the performance of acyclic exercises. | 2 |
| 12. | Fitness breathing. Exercise as a factor in increasing mental and physical performance rights. Types of exercise. Breathing and Health. Method of breath AN Strelnikovoj, KP Buteyko. Breathing exercises for special purposes by K. Dineyky. Learning proper breathing while performing strength exercises. The technique of relaxing, refreshing and mobilizing breathing. Methods of load control while performing breathing exercises. Terms assembly complex health breathing exercises. | 2 |
| 13. | Features of exercise as anti-stress agent. Features reaction trained organism to stressful factors. Exercise as a natural tranquilizer. The role of physical exercise ¬ them in increasing the intensity of metabolism of catecholamines. Effect of physical activity on mental health of a person. | 4 |
| 14. | The principles and ways of its implementation in the health training. Curative effect of physical activity of moderate intensity. Featured normal loads increase in recreational training from lesson to lesson, weekly, within a single session. Planning of health training. Relevance of motor activity to individual paticular feature of human. | 4 |
| 15. | Features resuscitation in drowning. First aid for hypothermia and frostbite. First aid for overheating, heat and sunstroke. First aid for injuries (fractures, sprains, damaged). First aid for acute pathological conditions. First aid for injuries and pathological conditions during exercise. | 2 |
|  | **Total:** | **42** |