4.1. Name: **Decompositions methods of discrete optimization** (systems analysis)

4.2. Annotation of educational discipline: educational discipline includes the basis theoretical positions of discrete optimization, includes modern mathematical methods of solution of complex discrete optimization problems, based on ideas of decomposition, and application of these methods. The purpose of discipline consists in the acquaintance of students with the theory of discrete optimization, of mathematical models and methods of decision of problems, research of their efficiency. Students must capture the decomposition methods of solution of complex problems which arise up in practice and have a large size. Students must be able independently to decide problems by exact and approximate algorithms.

4.3. Type: discipline of the free choice of the student (in blocks)

4.4. Term of study: 8th semester

4.5. Amount of credits: 2 credits

4.6. Name of lecturer: Doctor of Sciences (Physics & Mathematics), Leading Scientific Researcher Semenova Natalia Volodimirovna.

4.7. Purpose of educational discipline: acquaintance with the theory of discrete optimization, mathematical models and methods of solution of discrete problems, research of their efficiency. Students must capture the decomposition methods of solution of complex problems which arise up in practice and have a large size. Students able independently to decide problems by exact and approximate algorithms.

4.8. Previous requirements: to know material of normative courses of mathematical analysis, linear algebra, mathematical logic, operations research, discrete mathematics, theory of probability.

4.9. Teaching methods: employments are conducted in the form of lectures.

5.0. Methods of evaluation: estimated on the module-rating system. The results of educational activity of students are estimated on a scale of 100-balls. The course ends by test.

5.1. Language of teaching: Ukrainian.