

4.1. Title: **Mathematical demography** (system analysis)

4.2. Annotation of the academic subject: the discipline includes models of population birth-rate, growth, motion and mortality. It also includes learning of main formulas and application methods. Special attention has been paid to stochastic and determined mathematical models of population birth-rate, growth, motion and mortality. Main formulas and definitions are formulated and interpreted as well. The growth of the earth population, social-economic aspects of demography and life insurance are considered too.

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

4.4. Duration: 6<sup>th</sup> semester

4.5. Number of credits: 2

4.6. Lector's full name: associate professor Myhaylo M. Sharapov.

4.7. The goal of the academic subject: the deep learning of methods of mathematical demography, ability to treat with main demography models in practice.

4.8. The prior requirements: discrete mathematics, probability theory and mathematical statistics basic concept.

4.9. Professing methods: lections.

5.0. Rating methods: module-rating system. Each semester results are estimated over 100-poits scale. The education ends by test.

5.1. Language: Ukrainian.