COMPUTATIONAL MATHEMATICS AND COMPUTER ALGEBRA

ANNOTATION TO THE SYLLABUS OF THE INSTITUTION OF HIGHER EDUCATION

Speciality 1-55 01 02 Auton	Form of higher education		
	Full-time	Correspondence	Correspondence
Course	2	2	2
Semester	3	4	3
Lectures, hours	34	8	8
Laboratory classes, hours	16	4	4
Test, semester	3	4	3
Class hours for the academic discipline	50	12	12
Independent work, hours	58	96	96
Total hours per academic discipline / credit units		108/3	

Specialty 1-53 01 02 Automated Systems of Information Processing

1. The purpose of teaching the discipline is to teach students the existing methods of numerical solution of mathematical problems and implementation of the methods in computer algebra systems.

2. As a result of mastering the discipline, the student must

know:

- areas of application of computational mathematics;

- Tendencies of modern computing systems construction;

-instruments for realization of numerical methods;

be able to:

-practically implement numerical methods for solving linear, nonlinear, integral equations, partial differential equations;

-process experimental data by numerical methods;

-Interpolate various functions;

differentiate and integrate functions given analytically;

implement methods in a computer algebra system;

own:

basic methods of approximate calculations and be able to apply them in professional activities;

programming skills of computational tasks with the use of modern software;

Skills of application of computer algebra system for solving computational tasks.

3. Formable competencies: BPC-18- Apply computational and analytical methods to solve applied problems.

1. Requirements and forms of current and intermediate attestation.

The following forms are used for diagnostics of competences: - oral, - written, - oral-written, - technical.