

Faculty of Physics and Mathematics



The faculty is founded in 1996.

The faculty carries out training of bachelors, specialists and masters in Physics and Mathematics specialties. Also at the faculty there is training for Doctor of Philosophy Degree and Doctor of Science Degree.

The dean of the faculty is Doctor of technical sciences, professor Vanin V.V. (tel. (044) 406-82-51).

The faculty is based on 7 chairs.

The General and solid-state physics chair (headed by Doctor of technical sciences, professor Gorshkov V. N. (tel. (044) 406-81-24) ) carries out training of bachelors in “Physics” specialty, specialists and masters in “Physics” specialty.

The chair holds scientific research projects in following courses:

Theoretical and experimental investigations of optical, electrophysical properties and surface phenomena of semiconductor materials, modelling of self arrangement processes of nanoparticles;

Development of theoretical bases and creation of the series of optoelectronic devices based on semiconductor materials and nanotechnology;

Advanced teaching technologies, distance education.

The General and theoretical physics chair (headed by academician of the National academy of sciences of Ukraine, Doctor of physical and mathematical sciences, professor. Loktev V.M. (tel. (044) 406-82-49) ) carries out training of bachelors in “Physics” specialty, specialists and masters in “Physics” specialty.

The chair holds scientific research projects in following courses:

The theory of magnetic quantum phase transitions in Van Vleck and dimerized magnetic solids;

Theory of magnetic and transport properties of magnetic nanoparticles ensembles;

## Investigation of acoustic emission caused by mechanical strains in composite materials

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The General and experimental physics chair (headed by corresponding member the National academy of sciences of Ukraine, Doctor of physical and mathematical sciences, professor Gorobets Yu.I. (tel. (044) 406-82-48)) carries out training of bachelors in "Physics" specialty, specialists and masters in "Physics" specialty.

The chair holds scientific research projects in following courses:

Magnetic properties of ferromagnetic and antiferromagnetic materials;

Electrochemical and hydrodynamic processes in magnetic field;

Investigation of magnetic domain structures behaviour in the external magnetic field;

Thermomagnetic phenomena in ferromagnetic solids;

Investigation of surface characteristics of solids by scanning electronic microscopy, tunnelling microscopy and atomic force microscopy methods.

The Mathematical analysis and probability theory chair (headed by Doctor of physical and mathematical sciences, professor Klesov O. I. (tel. (044) 406-82-44)) carries out training of bachelors in "Mathematics" specialty, specialists and masters in "Mathematics" specialty.

The chair holds scientific research projects in following courses:

Investigation of linear and nonlinear problems of stochastic systems and equations of mathematical physics;

Investigation of actual problems of probability theory and mathematical statistics, theory of stochastic processes and stochastic analysis, theory of functions and functional analysis, differential equations and mathematical physics;

Novel technologies of teaching, distance education.

The Differential equations chair (headed by Doctor of physical and mathematical sciences, professor Dudkin M.Ye. (tel. (044) 406-82-45)) carries out training of bachelors in "Mathematics" specialty, specialists and masters in "Mathematics" specialty.

The chair holds scientific research projects in following courses:

Asymptotic and qualitative methods of evolutionary systems investigation;

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Investigation of optimal management problems for stochastic systems;

Solutions of linear differential-fundamental equations systems with linearly transformed argument.

The Mathematical physics chair (headed by Doctor of physical and mathematical sciences, professor Ivasishen S.D. (tel. (044) 406-82-46)) carries out training of bachelors in "Mathematics" specialty, specialists and masters in "Mathematics" specialty.

The chair holds scientific research projects in following courses:

Creation, investigation and application of Green's matrixes of boundary value problems and fundamental solutions of Cauchy problems;

Development of methods and algorithms of asymptotically solving operators;

Deterministic chaos in not ideal dynamic systems and systems with limited excitation;

Nonlinear dynamics of heterogeneous distributions of magnetization in multisublattice magnetically ordered crystals in external variable fields, structural phase transformations, methods of perturbation theory.

The Descriptive geometry, engineering and computer drawing chair (headed by Doctor of technical sciences, professor Vanin V.V. (tel. (044) 406-82-51)).

The chair holds scientific research projects in following courses:

Geometrical modelling and projecting of products' surface, technological processes and rigging in aircraft and mechanical engineering;

Geometrical modeling of multicriteria problems of science and technology;

Modeling of processes of agricultural production for the optimization of agricultural tools and equipment designing;

Novel technologies of teaching, distance education.