

SCIENTIFIC AREAS OF THE CHAIR ACTIVITY

Development and testing of the modern methods of geometric computer modeling, design and analysis geometry of modern cars and road-building machines' parts and units.

Application and improvement of methods of geometric modeling of technosphere's objects.

Further development and introduction of innovative higher education technologies in order to improve the quality of students' training in graphic disciplines.

RECENT ACHIEVEMENTS

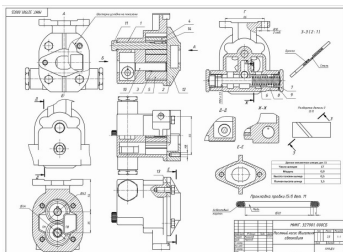
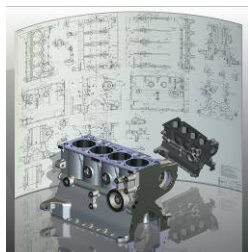
In order to improve the quality of learning and to introduce research into the teaching process the Autodesk Point of Attendance was organized at the department in the form of Education Center, which bring to the University the status of a strategic partner of Autodesk in education area.

Every year students of the department participate in All-Ukrainian and international competitions in applied geometry and computer modeling:

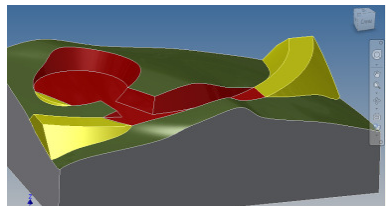
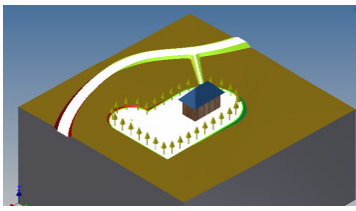
- drawing - 2D modeling;
- development 3D modeling.

Recently, students have been awarded for: 1 place - 21 times; 2nd place - 24 times; 3rd place - 33 times.

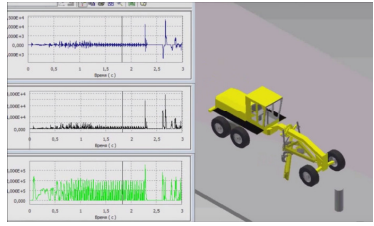
EXAMPLES OF WORKS PERFORMED AT THE DEPARTMENT



Model and drawing of the cylinder block of the MEMZ-317 engine and the oil pump in Autodesk Inventor



Modeling of vertical relief planning in Civil 3D



Engineering analysis (CAE) in Autodesk Inventor



Parametric modeling in Autodesk Fusion 360



Engineering design in Autodesk Fusion 360



Bridge in Autodesk Revit

THE MAIN AREAS OF WORK

- Development of digital models of parts and assemblies.
- Construction of panorama of vehicle visibility (in bus design and production, Lviv).
- Evolution gear design and calculation.
- Calculation of natural frequencies and oscillations of multi-bar structures.
- Simulation of single-track vehicles stability by computer experiment (Kharkov bicycle factory).
- Design and research of internal combustion engines fuel systems (for Malyshev plant, Ukrzaliznytsya).

Professional orientation: all technical specialties of the educational institution.

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