

**National Technical University
“Kharkiv Polytechnic Institute”
Faculty of engineering
Department: “Engineering technology
and metal-cutting machine-tools”**



Area of expertise:

- Industry knowledge: Automation and instrumentation
- Specialty: Automation and computer integrated technologies
- Specialization: Automation of management of technological systems in mechanical engineering
- Educational qualification levels: bachelor and master electrician engineer-researcher



Area of studying:

Industry knowledge: Automation and instrumentation

- Development and optimization of control systems with the use of computer-integrated technologies
- A guide to installation and operation of means and systems of automation of production
- Development and design of automated machinery and systems engineering
- Maintenance and adjustment of automatic devices and systems
- Organization of engineering production and automated systems



The main special disciplines for bachelors:

Industry knowledge: Automation and instrumentation

- Principles of design of automation systems
- Automated electric drive
- Technology-aided engineering production
- Maintenance and repair of automation systems
- Automated control systems of technological processes
- Programming of machining on CNC machines
- Computer aided design of technological processes



Basic special courses for masters:

Industry knowledge: Automation and instrumentation

- Optimization of technological systems
- System of the automated training
- The quality management system of production
- Automated control systems
- Technology and computer integration
- Automated control systems



Areas of expertise:

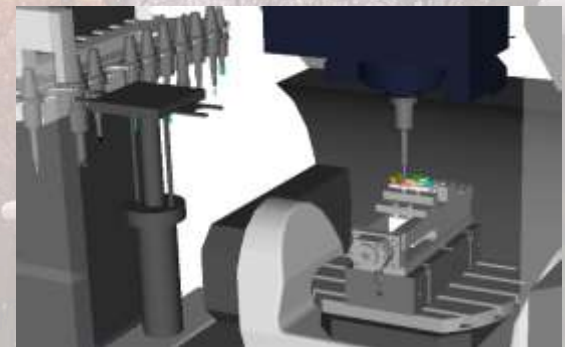
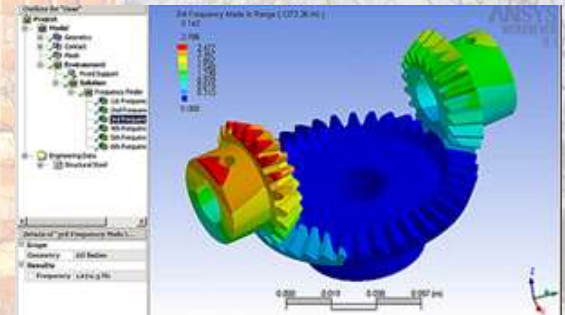
- Industry knowledge: Mechanical engineering
- Specialty: Applied mechanics
- Specialization: Technology automated production
- Specialization: Metal cutting machines and systems
- Educational qualification levels: bachelor and master



Areas of studying:

Industry knowledge: Mechanical engineering

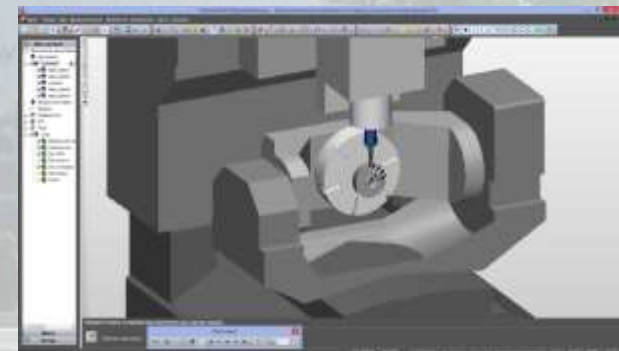
- Designing of new technological processes of machining and Assembly machines
- Organization of automated machine-building production
- Designing of technological processes of processing and Assembly of products
- Design of technological equipment and automation
- Quality control of engineering products
- Modern methods of designing of metal-cutting machines and systems
- Mathematical and computer modeling of technical systems
- Technological preparation of production
- The creation of controlling systems and other technologically oriented systems; service and maintenance of process equipment; carrying out of marketing researches in machine tools construction



The main special disciplines for bachelors:

Industry knowledge: Mechanical engineering

- Fundamentals of the theory of cutting of materials and cutting tools
- Fabrication and design of blanks engineering
- Industrial and manufacturing engineering
- High technologies in mechanical engineering
- Technology automated production
- Automated system of technological preparation of production
- System HIMSELF/SAE
- Of technology of repair and processing of sample parts
- Technological processes of Assembly of engineering products
- Mechanization and automation of technological processes
- Fundamentals of computer-aided design of technological equipment
- Design and analysis of machine tools
- Aggregate machines and automatic lines
- Programming of CNC machines
- Technology of machine tools, repair and modernization of machine tools
- Operation and maintenance of metal cutting equipment, repair and modernization of machine tools, assembly stations



Basic special courses for masters:

Industry knowledge: Mechanical engineering

- Integrated production system
- Fundamentals of CAD/CAM/CIM
- High technologies in mechanical engineering
- Physic-chemical processing methods
- Re-engineering in a modern technological systems
- Modern problems and methods of mathematical and computer modeling
- Mechatronics and composition process equipment
- Marketing research technological equipment and strategies for its promotion
- Research, test and operation of machine complexes
- Computer aided design and design of technological equipment
- Computer diagnostics, certification and operation of technological equipment
- Dynamics modeling and computer simulation of metal-cutting equipment



Equipment and laboratory facilities

- The training phase of cutting equipment
- Computer class



Job prospects

- Machine-building enterprises of any form of ownership and design departments on design automation
- Technology departments for automatization of technological processes of machining and Assembly of products
- Research departments and institutions on issues of automation of production processes
- Planning organizations on the preparation of programs for CNC machines and machining centers
- Positions that can be occupied by graduates:
 - ✓ Process Engineer
 - ✓ Research Engineer
 - ✓ Operation Engineer and Repairing Engineer of technological equipment
 - ✓ Product Manager
 - ✓ Head of production, enterprise or organization



Department



Head of Department:
A. A. Permyakov,
Doctor of Technical Sciences,
Professor

- Gasanov M.I., vice-rector, Professor
- Dobrotvorskiy S. S., Doctor of Technical Sciences, Professor
- Klochko A. A., Doctor of Technical Sciences, Professor
- Sizy Y. A., Doctor of Technical Sciences, Professor
- Stalinsky D.V., Doctor of Technical Sciences, Professor
- Fadeev V.A., Doctor of Technical Sciences, Professor
- Khavin G. L., Doctor of Technical Sciences, Professor
- Khitsan V. D., Doctor of Technical Sciences, Professor
- Shelkovoy A. N., Doctor of Technical Sciences, Professor
- Naboka E. V., Ph. D., associate Professor
- Fesenko A. V., Ph. D., associate Professor
- Basova E. V., Ph. D., associate Professor
- Dobrovolskaya L. G, Ph. D., associate Professor
- Ivanova M. S., Ph. D., associate Professor
- Kotlyar A. B., Ph. D., associate Professor
- Prikhodko O. Yu, Ph. D., associate Professor
- Ushakov A. N., Ph. D., associate Professor
- Yakovenko I. E., Ph. D., associate Professor
- Ruzmetov, A. R. , Ph. D., associate Professor
- Slipchenko S.E., senior lecturer
- Evsyukova F. M., senior lecturer
- Zabara A.S., assistant