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Paper

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## **National Technical University as a Center of Educational and Scientific Activities in Industrial Region**

Zaporizhzhya region belong to famous industrial regions that existed in ex-USSR and now stays in CIS countries. The necessity of engineering specialists training through all our history influenced gratefully the structure of high technical school in this region changing from agricultural machinery institute in early 30-s to machineconstruction institute in 60-s till full-ranged technical university in early 90-s. Modern situation requires permanent cooperation with leading industrial enterprises, both state and private and National Technical University (ZNTU) serves as coordinator of technical higher education and scientific activity.

Changes in Ukrainian economy due to market transformations influence greatly faculty structure of our technical University, with licensing of new specialties and specializations in engineering education. Since 2001 when our University received National status new institutes were created within university structure, also making emphasis on humanitarian component of modern engineering education thus creating economic-humanitarian institute in university structure.

If previously there existed the trend to very narrow specialization, now we support the idea of wide qualification, characterizing modern engineer as possessing:

- good special professional knowledge (know-how, basic technologies, materials and equipment etc.);
- wide scientifically underground (mathematics, physics, materials science etc.);
- sufficient management level (managerial projects, complex systems, economical analysis ect.);
- cultural and communication abilities (mother language and English language as leading one, programming, science history, ethic of engineering etc.)

In such determination of modern technical higher education we feel the necessity of new conditions to ensure both managerial part of it, and modern level economical education in general at technical university with very strict indication of required volume of computer knowledge.

As practical example of derived cooperation we can speak of University chairs activity with leading Ukrainian aviation enterprise "Motor-Sich", having results in organization of special aviation motors laboratory fully equipped by "Motor-Sich", direct participation of leading staff members in education, practical and methodical training, diploma projects fulfillment at the plant etc.