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Innovative technologies in the education process by using virtual instruments

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Laboratory course in engineering education system is an important and effective component of specialists training in the field of engineering and technology. The laboratory course has developed to gain skills of working with measuring devices.

To study the most common information processing methods in measurement systems (statistics, correlation and spectral analyzes), as well as to study work features of calibration equipments, it was decided to extend the list of physical quantities measurement with relevant laboratory stands.

The aim of laboratory course includes measuring the most common physical quantities such as temperature, loads, vibrations, deformations. Studying of TEDS sensors was implemented in these lab works too.

PCI-6221 card of National Instruments production was used as analog and digital input-output tool. Software development system NI LabVIEW was used as a specialized software for the producing laboratory course.

Laboratory course was approved officially at the department of Information and Measurement Technology of NTUU "KPI". Laboratory course allows to give students an idea about realistic presentation of studying material in applied problems.