



## COURSE DATASHEET

<b>Semester:</b>	2012/13/1
<b>Course:</b>	Machines of Fluid Mechanics and Thermodynamics (Lab.Pract.)
<b>Code:</b>	VEMKGEB131A
<b>Responsible department:</b>	Department of Mechanical Engineering
<b>Department code:</b>	MKGE
<b>Responsible instructor:</b>	Dr. András Bálint

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### Course objectives:

To make the students acquainted with the machines of fluid technic. Measuring of characteristics some thermal apparatuses

### Course content:

General knowledge about the measuring, the working conditions. Making the laboratory record. Rules of the work in the laboratory, electrical apparatuses, high pressure mediums (steam, compressed air) quickly rotating parts. Measuring of distribution of velocity of a gas running in cylindrical tube. Characteristic curve (P-V) of a fan. Examination of type of the flow. Coefficient of pipe friction. Characteristic curves of a centrifugal pump. Measuring of centrifugal pumps in series and in parallel. Characteristic curve of a metering orifice. Calibration of a metering elbow pipe. Indicating of a cylinder of a Whortington-pump. Calculation of hydraulic resistance of a heat changer with measuring on a model. Examination of a tube in tube type heat exchanger. Measuring the heat transfer coefficient with respect boiling. Data Acquisition and Signal Conditioning. Measuring of the velocity of a transient fluid running in cylindrical tube. Test paper. Supplying of measurement

### Requirements, evaluation and grading:

The Student must take part on more than 80 % of the Lessons. During the semester will be 1 test on the 14-th week.

### Required and recommended readings:

Baróti-Bálint.-Bordás-Pálma-Szalay-Veres-Zsiros: Gépek üzemtana laboratóriumi gyakorlatok, VE 1995.