



## COURSE DATASHEET

<b>Semester:</b>	2012/13/1
<b>Course:</b>	Laboratory Practices of Physics
<b>Code:</b>	VEMKFI1332A
<b>Responsible department:</b>	Institute of Physics and Mechatronics
<b>Department code:</b>	MKFI
<b>Responsible instructor:</b>	dr. István Szalai

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### Course objectives:

The main objectives of this course are: strengthen the understanding of basic physical concepts, laws and methods discussed in the lecture course with application of theoretical knowledge in practice. Study measurements methods of physical quantities important for practice of science and engineering.

### Course content:

1. Introduction to laboratory practice, instruments. 2. Theory and statistic of measurements. 3. Measurements with slope. 4. Investigation of elastic properties of solids. 5. Measurements with spring. 6. Measurement of resistance with different methods. 7. Measurements of sound waves velocity in gases. 8. Measurement of potential by compensational method. 9. Investigation of resonance in series RLC circuits. 10. Measurement of magnetic induction, Hall-effect. 11. Measurement of diffraction by He-Ne laser. 12. Determination of index of refraction by refractometer. Measurement of optical polarization. 13. Determination of index of refraction by interferometer. Investigating of properties of optical grates. 14. Measurements by pendulum. 15. Essay written, 90 minutes.

### Requirements, evaluation and grading:

Fulfill the main tasks in the measurements and provide a written results and analysis.

### Required and recommended readings:

Fizika laboratóriumi gyakorlatok. Veszprémi Egyetemi Kiadó