

PhD intensive course

ELECTRICAL MEASUREMENT TECHNIQUES OF NON-ELECTRICAL QUANTITIES

Assoc. Prof. Dr. E. Jasiūnienė, Department of Electronics engineering

19 – 23 November 2018

About the course:

Non-electric quantities and their measurement problems; The principles of measurements of non-electric quantities distributed in space; Measurement methods of distances and level; Measurement methods of pressure; Principles of temperature measurement; Measurement of flow rate and heat energy of flow; Measurement of properties of materials

Aim of the course:

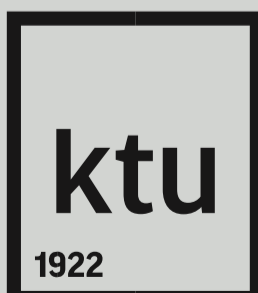
To provide students with the knowledge about measurement methods of non-electric quantities and fields, operation principles of measurement instruments and sources of measurement errors.

Course format, ECTS credits:

Structure – Lectures - 48, independent learning - 192, total hours -240, 9 ECTS credits
Teaching / Learning Methods - Formal lecture, One-to-one tutorials; Assessment Methods - Paper, Examination. Take-home assignment has to be done in (2-3 weeks.). The paper about the non-electrical quantities to be measured in the PhD work and their measurement methods has to be prepared.

Ten grade and gathered evaluation system is applied. The semester's individual work tasks are evaluated by grades; the final grade is given during the examination session while multiplying particular grades by the lever coefficient and summing the products.

Study load: 9 ECTS credits.



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Electrical Measurement Techniques of Non-Electrical Quantities

19 – 23 November 2018

Target group: PhD students.

Main topics of the course:

- Theory of measurement methods of non-electric quantities.
- Non-electric quantities and measurement units.
- Static and dynamic characteristics.
- Measurement of non-electric quantities distributed in space.
- Tomographic measurement methods of fields.
- Measurement methods of distances and level.
- Measurement methods of force and pressure.
- Temperature measurement methods.
- Measurement of flow rate and heat energy of flows.
- Measurement of material properties.

References:

1. Measurement, instrumentation and sensors handbook (ed. J. G. Webster, H.Eren) Second Ed. CRC Press, 2014.
2. J. P. Bentley. Principles of measurement systems. Pearson Education Ltd., 2005.
3. Measurement and Instrumentation. Trends and Applications (Ed. M.K. Ghosh, S. Sen, S. Mukhopadhyay), CRC Press, 2008, 666p.
4. Handbook of Measurement in Science and Engineering, Ed. M. Kutz, John Wiley & Sons, 2013.

Course schedule:

Start date: 19 November 2018 at 9 a.m.

End date: 23 November 2018 at 3 p.m.

Course fee:

5-day 9-ECTS course fee is 810 EUR . Travel and insurance expenses, and accommodation *are not* included in course fee.

Course is free of charge for students who come to study under the Erasmus+ program.

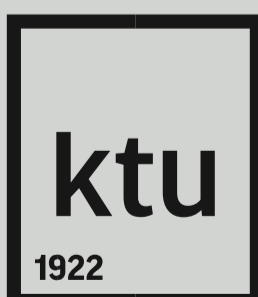
Registration to the course:

Send inquiry to phd@ktu.lt

Registration deadline: 30 October 2018

Contacts: Doctoral School, Kaunas University of Technology

Phone: +370 626 22701, e-mail: phd@ktu.lt



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