



Applied Measurement Science 2014

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<http://www.ut.ee/ams>



Measurements?

- To be understood in the broadest sense:
 - Toxic metals in drinking water
 - Cholesterol level in blood
 - Strength of construction materials
 - Protein content in wheat
 - Octane number of gasoline
 - ...



Importance of Measurements?

- Importance of measurements is enormous:
 - Critical decisions (economical, social, medical) are based on results of measurements
 - **40% of the EU directives** involve measurements
 - It has been estimated that direct spendings on measurements alone make up ca **80 billions of EUR or 1% of the GDP** in Europe
 - Adding in indirect costs raises this figure significantly

The Assessment of the Economic Role of Measurements and Testing in Modern Society. Survey directed by Geoffrey Williams, Pembroke College, Oxford, **2002**



Outline

- **Interdisciplinary** 3+2 master's degree programme
- **Cross-sectorial**
 - Physical measurements
 - Chemical measurements (chemical analyses)
 - Metrology
 - Quality systems
 - Economic and legal aspects of measurements
- Tuition in english

The education that you will get is of very broad applicability



Autumn 2014 Timetable

Faculty of Science and Technology (I.O)

Week 1 starts on Sept 1, 2014

2014/2015. academic year autumn semester

Time	Course code	Course title	Location	Week(s)		Lecturer(s)
Monday						
12.15 - 14.00	LOKT.06.016	Liquid Chromatography and Mass Spectrometry (lecture)	Ravila 14A - 1100	2-11,15-16	E	Ivo Leito, Koit Herodes, Karin Kipper, Anneli Kruve
13.15 - 19.00	LOKT.06.047	Atomic Spectroscopy (lecture)	Ravila 14A - 1100	12-13	E	Teemu Matias Näykki, Ivo Leito
Tuesday						
10.15 - 16.00	LOKT.06.047	Atomic Spectroscopy (lecture)	Ravila 14A - 1051	12-13	E	Teemu Matias Näykki, Ivo Leito
14.15 - 16.00	LOKT.06.016	Liquid Chromatography and Mass Spectrometry (lecture)	Ravila 14A - 1051	1-11,14-16	E	Ivo Leito, Koit Herodes, Karin Kipper, Anneli Kruve
Wednesday						
8.15 - 10.00	LOFY.01.036	Measuring and Instrumentation (lecture)	Ravila 14c - A102	1-16	O	Koit Mauring
10.15 - 12.00	LOKT.06.018	English Terminology in Chemistry (lecture)	Ravila 14A - 1021	1-16	E	Ivo Leito, Koit Herodes
12.15 - 14.00	LOKT.06.032	Practical Chemical Analysis (lecture)	Ravila 14A - 1100	1-16	O	Koit Herodes, Ivo Leito
14.15 - 16.00	LOFY.01.082	Quality Management (lecture)	Ravila 14c - A102	2-16	O	Mart Noorma
16.15 - 18.00	LOKT.06.036	Master Seminar in Measurement Science (seminar)	Ravila 14A - 1100	1-16	O	Ivo Leito

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Autumn 2014 Timetable

Week 1 starts on Sept 1, 2014

Thursday						
8.15 - 10.00	LOFY.01.039	Measurement Data Processing (lecture)	Ravila 14c - A102	1-16	O	Erko Jakobson
10.15 - 12.00	LOFY.01.037	Modern Metrology (lecture)	Ravila 14c - A111	2-16	O	Mart Noorma, Martin Vilbaste, Riho Vendt
12.15 - 14.00	LOKT.09.028	Quality Systems (lecture)	Ravila 14A - 1019	3-16	E	Jukka Veli Hiltunen
Friday						
12.15 - 14.00	LOKT.06.032	Practical Chemical Analysis (lecture)	Ravila 14A - 1100	1-16	O	Koit Herodes, Ivo Leito
14.15 - 16.00	LOKT.02.035	Electrochemical Methods for Quantitative Analysis (lecture)	Ravila 14A - 1100	1-16	E	Jaanus Kruusma

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Other study activities

- **Practical placement** in industry or field laboratory (9 ECTS)
- **Optional subjects** (6 ECTS)
- **Master's thesis** (30 ECTS)
 - Research work in a research group
 - Must be at least "potentially publishable", preferably published or submitted by defence
- **MSC Euromaster Summer school** (12 ECTS)

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Program Coordination

- **Ivo Leito**, prof, programme director
 - ivo.leito@ut.ee, +372 5 184 176,
Skype: leitoivo,
Chemicum Ravila 14a - 4034
- Study-program-related questions
 - Choosing courses
 - Finding research group
 - Etc...



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International student office

- **Kaija Murasov**, International student coordinator

- kaija.murasov@ut.ee, +372 7 375 152, Ülikooli 18, the „Main building“



– Problems not directly related to the study program

- Visa, Residence permit, Health insurance, Dormitory, ...



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Stipends/Scholarships

<http://www.ut.ee/ams/tuition-fees-scholarships/>

- Tuition fee waiver Scholarships
 - **Most of you have got it**
 - **You will not pay tuition fee**
- ESF Stipends (up to 300 EUR/month)
 - **Decided by your reaserch group leader**
- “DoRa 9” Stipends

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Can I work in Tartu to earn money?

- It is legally allowed
- The best way: when you will be linked to a research group, talk to your supervisor
 - there may be a job of research assistant, etc
- Please carefully consider your time!

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Will I find a job after graduation?

- This is a field where
 - There is shortage of educated people
 - jobs are created constantly
- See <http://www.ut.ee/ams/career-outlook/>

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I hope to meet all of you in
September!

