COURSE

RESEARCH BASED CONTINUING EDUCATION

Hands-on Microtechnology

How can modern microtechnology help to cover the ever increasing demands and result in better and competitive products?

This course takes advantage of one of the most modern and unique high technology facilities located at campus Sønderborg of SDU to provide a thorough hands-on introduction to novel and emerging micro technologies covering areas such as:

- ➜ Sensor development
- ➜ Microstructured surfaces
- ➜ Power MEMS

The aim is to give an overview and a hands-on understanding on upcoming micro- technologies that are used in production and development facilities worldwide. The course was developed by researchers of the Mads Clausen Institute in collaboration with external partners such as the Fraunhofer Institute ISIT in Germany.

Benefits
On the course you will receive:

- ➜ A broad overview on modern microtechnological methods and techniques
- ➜ Knowledge on microminiaturized sensors
- ➜ Knowledge on power microelectromechanical systems
- ➜ Knowledge and experience on structure formation of smart surfaces
- ➜ Access to a pool of broad scientific and engineering expertise
- ➜ Opportunity to exchange experiences and network with colleagues

Audience
The course content is addressed to skilled professionals working in different industrial sectors such as sensor development, advanced electronics, microscaled mechatronics or similar.

Basic knowledge of engineering and/or physics corresponding to a bachelor, civil engineer, professions bachelor or similar is expected.

Time and place
22.-23. January 2015
The course is held at University of Southern Denmark, Sønderborg campus

Price
6.000 kr. excl. VAT
The price includes tuition, materials and meals during the course days. The price does not include accommodation.

Registration
Deadline 12. December 2014
On our website: www.sdu.dk/sdue

SYDDANSKUNIVERSITET.DK

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Program

Day 1 Morning:
Microfabrication and -characterization

- ➜ Introduction to microtechnology
- ➜ Thin-film deposition
- ➜ Etching
- ➜ Scanning electron microscopy and scanning probe microscopy

Day 1 Afternoon:
Hands-on Microstructures

Practical cleanroom exercises

- ➜ Lithography
- ➜ Thin-film deposition
- ➜ Microscopy

Day 2 Morning:
Micro-Electro-Mechanical Systems and power MEMS

- ➜ Introduction to MEMS sensors and actuators
- ➜ Types of actuation and sensing
- ➜ Materials and fabrication
- ➜ Power MEMS
- ➜ MEMS switches and power electronics
- ➜ Bio-applications

Day 2 Afternoon:
Hands-on MEMS

- ➜ Background services and broadcast receivers
- ➜ Practical session: Build an app with service/activity interaction

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Learn more on www.sdu.dk/sdue

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