Advancing Dutch Analytical Sciences

Miniaturization: Biosensing an Diagnostics

11 February 2017, 10:00 – 17:00
HAN, Laan van Scheut 2, Nijmegen

Content

Within the theme 'miniaturization' of the Analytical Sciences Talent Programme the course on Biosensing and Diagnostics will give an overview of the state-of-the-art and future developments in bioaffinity-based analysis techniques. Such tools are widely applied in clinical diagnostics and in food control; the examples shown in the course will mainly relate to food quality and safety. The course consists of lectures, demonstrations and hands-on practical work, and is intended for students and professionals who are not so familiar yet with rapid screening using binding assays, but are interested in the basics and in the latest developments.

Target audience

The course is taught in the framework of the Analytical Sciences Talent Program (ASTP) for top talents in vocational education (HLO/Universities of Applied Sciences), in the third year of their program (ASTP-2). Therefore, the course is well fit for employees at that level.

Topics

10.00-11.00	General introduction and basics | Michel Nielen (WUR)
11.00-12.00	Surface Plasmon Resonance biosensing | Swecha Joshi (WUR)
12.00-14.00	Hands-on practicals: strip test analysis | participants
13:00-14:00	*Lunch break*
14.00-14.30	Short student presentations & discussion about the practical results obtained
14.30-15.00	Multiplex biosensing using color-encoded microspheres | Michel Nielen (WUR)
15.00-16.00	Demonstration of mycotoxin screening in beer using a planar array of magnetic beads and imaging analysis | Jeroen Peters (WUR)
16.00-16.30	Towards biosensing and diagnostics using your cell phone | Nathalie Smits (WUR)
16.30-16.45	Final discussion and closing | Michel Nielen (WUR)

Lecturer

Prof. Dr. Michel W.F. Nielen and co-workers.
Principal scientist at RIKILT Wageningen UR, Professor of Analytical Chemistry at Wageningen University and Scientific Director of COAST.

Nielen obtained his PhD from the VU University (Amsterdam) in 1986. After a career at TNO and in industry at AkzoNobel, he became program manager Veterinary Drugs at RIKILT. In 2007 Nielen became professor at Wageningen University, focusing on research and development of bioactivity-related multi methods for the detection of chemical contaminants in the food chain.

Since 2012 he is Principal Scientist at RIKILT and holds a special chair on Analytical Chemistry at Wageningen University. Nielen has published more than 160 papers, covering a wide range of analytical technologies including biosensing and diagnostics.

Nielen is accompanied by his co-workers, who will inform you on the latest developments through their research topics at Wageningen University and Research Centre.

At the end of the course

You will have gained knowledge of the basics of Biosensing and Diagnostics, their applications and recent developments.

Course duration and time investment

Course duration:	1 day from 10:00 till 17:00
Company time:	0 hours (as this course is on a Saturday)
Participant's investment:	1 day + optional self-study

Extra Information

This course is part of the Saturday's program of ASTP and is taught every year.

Course fees:

- €800 (ex. BTW/VAT) per day
- COAST members pay a reduced fee of €400 per day (ex. BTW/VAT) or use a wildcard
- ASTP / MSc+ students: Free

Special fees can be offered to PhD students and companies registering for three or more persons.

For up-to-date information about the course program visit our website at www.ti-coast.com/L3.

Please contact us for more information.

Registration

To register fill out, sign and email the form attached to lifelonglearning@ti-coast.com .

Registration Form

Miniaturization: Biosensing and Diagnostics
11 February 2017, 10:00-17:00
HAN, Laan van Scheut 2, Nijmegen

Name	
Organization	
Address	
Billing address (if different from above)	
Educational background	
Email address	
Phone number	

Payment

☐ I will pay the full course fee of €800 per day (ex. BTW/VAT)
☐ I qualify for 50% discount, because my employer is a COAST participant, and will pay €400 per day (ex. BTW/VAT)
☐ I am a PhD student and will pay €400 per day (ex. BTW/VAT)
☐ I am a PhD student from a group participating in COAST and will pay €200 (ex. BTW/VAT) per day
☐ I have received a wildcard from: …….. Therefore, I will follow this course for free (note: this person must receive a copy of your registration mail, to indicate approval)

Date: Place:

Signature:

To register, please email the duly signed registration form to lifelonglearning@ti-coast.com