

SENSORS AND BIOSENSORS FOR ANALYSIS AND CONTROL

TRAINING COURSE / MASTER DEGREE A3M

OPENING :
APRIL 2019



**A3M : Analysis, Molecules,
Materials, Medicine**

International option : 3B - Biomeasurement, Biomonitoring, Biosensors

AIMS

To train for the conception of biomonitoring systems

Multidisciplinary approach

- Applied to Environment, Food and Health markets
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WHO ?

15 places, open to different origins (chemistry, physics, biology) in an international partnership for students in master degree and trainees (industry, staff University, post doc, PhD...)

LEVEL

Master degree (MS), PhD, or equivalent.

WHEN ?

April 29th to June 7th 2019

WHERE ?

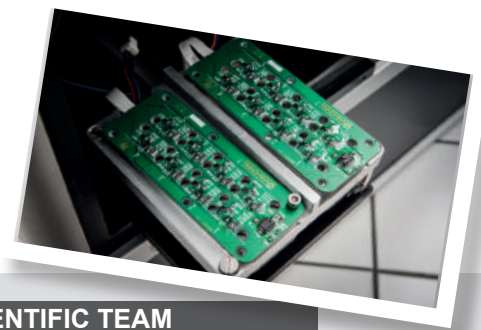
Institute of technology, University of Nantes, La Roche sur Yon, France



UNIVERSITÉ DE NANTES

SENSORS AND BIOSENSORS FOR ANALYSIS AND CONTROL

The international option Biomeasurement, Biomonitoring, Biosensors (3B) is at the interface of several disciplines (*biology, chemistry, physics, materials, engineering, statistics, electronics*) and is intended for students with very different initial backgrounds. This formation of 6 weeks will train you specifically to design instruments dedicated to bio-measurement applied to the environment, agri-food and health: you will have for vocation to create and develop devices for the characterization of organic, biological matrix, food or measurement via living organisms (*biosensors*). A partnership with South East Asia is in place and stakeholders are recognized international specialists in their field. The lessons are entirely taught in English. The courses will take place at the Technological Institute of La Roche-sur-Yon (*France*), in liaison with the research team of the CNRS GEPEA laboratory.



SCIENTIFIC TEAM

- One of the leading research group on microbial biosensor.
- Teachers from France, Europe, USA and Asia.
- A complete and up to date scientific equipments from 3D printing to CARS spectrometer.

MAPS



Institute of Technology
18 Bd G Defferre
85035 La Roche sur Yon
France

International network



6 weeks, 124h with teachers + 25h without teachers

Main operations at the interface of biosensors 24h

EC1 Market, integration and industrial transfert,
EC2 Analysis of complex data
EC3 Practical courses on electronic applied to biosensors

Enzyme bioassays and biosensors 29h

EC1 The enzyme, functions, the active site and immobilization
EC2 Application to several technology readiness levels
EC3 Practical courses at the interface applied to enzyme biosensors

Whole cells bioassays and biosensors 43h

EC1 The cells, constraints and conservation
EC2 Application to several technology readiness levels
EC3 Practical courses at the interface applied to cell biosensors

Affinity bioassays and biosensors 28h

EC1 Affinity systems and signal transductions
EC2 Application to several technology readiness levels
EC3 Practical courses at the interface applied to affinity biosensors

Conferences, group working 25h

RATE

Cost for a master degree: 500€ / Year
(need to follow all the master)

Cost for training only: 2500 €
(not included accommodation and travel cost)

CONTACT



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