



## UMONS IS A PARTNER. ARE YOU?

### Mons, European Capital of Culture in 2015

Mons, European Capital of Culture, welcomes you during the summer of 2015. The motto for Mons 2015 is: "Where Technology meets Culture". The aim is not 'technology for technology's sake' but to break the barriers between people of different generations and social profiles.

In 2015, Mons becomes the capital of creativity, with a host of cultural and artistic events, new museums and big projects for you.

### The Faculty of Engineering...

The Faculty of Engineering of Mons has been training engineers since 1837 and awards engineering degrees (Bachelor, Master, PhD) in six different fields of engineering: Architecture, Chemistry & Materials, Computer Science & Management, Electricity, Mechanics, and Mining & Geology. Our students are eager to transfer the knowledge they have acquired to real engineering skills by solving real-life design problems.

The Faculty of Engineering plays a leading scientific and economical role in the region, namely through the local research centres 'Materia Nova' and 'Multitel'.

#### LOCATION

Faculté Polytechnique de Mons  
Rue de Houdain, 9 – 7000 Mons

#### ALL-INCLUSIVE

Accommodation is included for each participant, as is breakfast, lunch and dinner.

#### REGISTRATION

The deadline for applications is the 1<sup>st</sup> June 2015. The number of places is limited so early applications will be favoured. You will receive official confirmation by the 5<sup>th</sup> June so that you have time to make your travel arrangements. The registration procedure is available via the website.

#### PRICE

250€ – all inclusive (except travel expenses)

#### CONTACT

summer.polytech@umons.ac.be



A detailed and updated program  
of the activities is available on  
[www.umons.ac.be/polytech/summercourses](http://www.umons.ac.be/polytech/summercourses)



**POLYTECH  
MONS**



### Summer Courses of Engineering

A creative summer in the European Capital of Culture

**UMONS**  
Université de Mons

**6 – 10 JULY 2015**

## About our summer courses...

These summer courses are intended to give an educational opportunity to non specialised students to develop their knowledge in two specific fields: smart and protective coatings and neuro-creativity.

These are planned in one-week sessions offering high-quality, innovative academic courses with lectures, industrial visits, practical workshops and more. You will also take part in cultural events and social activities, in or near Mons, organised by students with whom you will interact daily.

A general welcome is scheduled for the evening of Sunday 5<sup>th</sup> July.

## Our student committee...

Our committee, "the Polytech International Mons'ters", is composed of students from second year Bachelor to second year Master's courses. With our involvement in these summer courses we aspire to help our Faculty expand its international standing.

Moreover, we will focus on the social aspect of this event by ensuring you will have a wonderful experience in Mons.

We will be happy to share our scientific knowledge, our cultural heritage and our local knowledge of Mons, with you to ensure you enjoy your stay. We will also organise some activities so you can discover our town and relax after a day at school. Let us make this week an amazing experience!



## Protective and Smart Coatings

When coatings extend the lifetime of structures and tune their functionalities!

### Fields of activity

Material science, Coating Technology, Surface analyses and engineering

### Learning objectives

Multifunctional coatings production (sol-gel, plasma deposition, ...) and applications (optical, photovoltaic, sensing, protective, self-healing...)

### Targeted audience

BA3 and MA1

**Mon 6 AM** ▶ Welcome. How to obtain functional surfaces.  
Methods for surface characterization

**Mon 6 PM** ▶ Industrial visit

**Tues 7 AM** ▶ Introduction to vacuum and plasma deposition.  
Practical examples

**Tues 7 PM** ▶ Visit of Materia Nova Research center Vacuum  
and plasma depositions – surface analyses

**Wed 8 AM** ▶ Introduction to sol-gel coatings. Practical examples:  
sensors, self-healing, protective, antibacterial properties

**Wed 8 PM** ▶ Exchanges with students of UMONS.  
Cultural activity – visit to a brewery

**Thur 9 AM** ▶ Introduction to anodized layers. Practical examples:  
aeronautical and photovoltaic applications.

**Thur 9 PM** ▶ Industrial Visit

**Fri 10 AM** ▶ Introduction to thermochemical treatments of metallic  
substrates. Coatings for biomedical applications

**Fri 10 PM** ▶ Practical Workshops – Evaluation

### Scientific Advisor:

Prof. Marjorie Olivier – marjorie.olivier@umons.ac.be

## Neuro-Creativity

Do you know what kind of creative thinker you are?

### Fields of activity

Management, Technological Innovation, Technological Creativity

### Learning objectives

To reveal students ability to create innovative technological  
projects and capacity to start a company

### Targeted audience

BA and MA

**Mon 6 AM** ▶ Welcome. The 3-I of the Innovation-mix

**Mon 6 PM** ▶ Co-creation and Open Source projects

**Tues 7 AM** ▶ Créactifs!

**Tues 7 PM** ▶ Star-Tech (WSL: Walloon incubator for engineering  
sciences)

**Wed 8 AM** ▶ Students success stories issued from Créactifs  
and Star-Tech Bachelor's Projects

**Wed 8 PM** ▶ Exchanges with students of UMONS.  
Cultural activity – visit to a brewery

**Thur 9 AM** ▶ How to create original and useful products or services?

**Thur 9 PM** ▶ Practical workshop in the streets of MONS 2015

**Fri 10 AM** ▶ Developing personal creative project  
initiated by the workshop

**Fri 10 PM** ▶ Evaluation

### Scientific Advisor:

Prof. Gaëtan Libert – gaetan.libert@umons.ac.be