

## The GRICU PhD National School

In 2007, GRICU (Chemical Engineering University Group) decided to set up a nationwide educational program in Chemical Engineering at doctorate level. To accomplish that mission, each year a one-week National School is organized in a different location in Italy. The aim of the School is to enable PhD students to enrich their knowledge in topics of general interest in the area of chemical engineering, as well as in more specific, technologically-oriented application fields. The School also represents the ideal meeting place where PhD students in Chemical Engineering and related areas from different Universities can discuss their experience, ideas, research interests and points of view.

The GRICU National School is open to all PhD students in Chemical Engineering and related fields (such as Materials, Food, Environmental and Safety Engineering). Students from other areas, such as Physical, Natural and Life Sciences, are welcome as well.

This year, the *core* module is centered around a specific field: biological and bioprocess engineering. The course covers the main topics of biological and bioprocess engineering. The first part of the course is dedicated to fundamental aspects such as bio-thermodynamics, transport phenomena in biological systems and biomechanics. Core topics in biological engineering (such as integrative biology, industrial biotechnology, bioinformatics and data processing) will be presented. Furthermore, a large attention will be paid to the main fields of applications for biomedical (biomaterials - regenerative medicine - biomedical products design), bioprocess (bioprocess design and separation) and biological engineering (systems biology and synthetic biology).

In addition to school classes, students will have the opportunity to visit Fidia farmaceutici S.p.A..

Previous GRICU PhD National school programs have been successfully hosted in Le Castella (Calabria, 2008), Muravera (Sardegna, 2009), Rimini (Emilia Romagna, 2010), Santa Margherita di Pula (Sardinia, 2011), Montesilvano (Marche, 2012), Salice Terme (2013) and Ferrara (Emilia Romagna, 2014) with an average of 80 attendees.

## The 2015 PhD National School

The topics of the 2015 School are: **Biological and bioprocess engineering**. Teachers from Italian and foreign academic institutions as well as from industry will be lecturing during the 5 days class program.

One day of the School will be dedicated to the visit of the Fidia farmaceutici S.p.A. in Abano Terme (PD). The 2015 School will run from Monday, September 7<sup>th</sup> to Friday, September 11<sup>th</sup>. Attendees are expected to arrive at the School location on Sunday, September 6<sup>th</sup>, and leave on Friday, September 11<sup>th</sup>.

Upon agreement with all Italian PhD Committees, the active participation to the School will grant Credits (CFU) to the attendees.

## Venue

Padova is one of the most visited tourist destinations in Italy; the city is extraordinarily rich of art, starting from the Basilica of Saint Anthony, the Basilica of Saint Justine and the Cathedral, the Palazzo della Ragione and the Scrovegni Chapel that was completely painted with frescoes by Giotto between 1303 and 1305.



Padova is moreover seat of the second older Italian university, founded in 1222 and it is possible to visit its old historical facilities, the Palazzo Bo and the Botanic Garden (<http://www.unipd.it>).

More in general, it is very nice to walk around Padova, enjoying of monuments, squares, porticoes and its elegant atmosphere.

## Registration

**The registration fee is € 475,00.**

The fee includes lectures, lecture material, coffee breaks, half board, single-room Residence accommodation for five nights (check-in Sunday, September 6<sup>th</sup> pm, check-out Friday, September 11<sup>th</sup> am).

**Registration must be completed by July 15<sup>st</sup>, 2015** by sending an email to the School Secretariat ([gricu@aidic.it](mailto:gricu@aidic.it)). The email must include the student's name, postal address, electronic mail address, office and mobile telephone number, name and location of the University attended by the PhD student, year of attendance (first, second, third year). If an attendee wishes to share a room with a particular person, this information must be included in the email.

**Payment of the registration fee must be completed by Friday, July 31<sup>th</sup> 2015**

The registration fee must be paid by direct bank transfer to the following account:

IBAN: IT82E0200802452000100953390  
c/o UniCredit Banca, Agenzia Bologna San Mamolo  
Piazza di Porta San Mamolo 6, 40136 Bologna  
intestato a: GRICU

**N. B.** The bank transfer must include the following information: "Registration fee 2015 GRICU PhD School, Name of the attendee"

A copy of the bank transfer must be sent by email to the School Secretary.

**Registrations received after the deadline of July 15<sup>st</sup> will not be accepted.**

**Payment of the registration fee after July 31<sup>th</sup> 2015 will not be accepted and the registration will be cancelled.**

## Scientific Program

Prof. Giuseppe Maschio (University of Padova)  
Prof. Nicola Elvassore (University of Padova)  
Prof. Valentina Busini (Polytecnic of Milano)  
Prof. Almerinda Di Benedetto (University of Napoli)  
Prof. Onofrio Scialdone (University of Palermo)

## Invited Lecturers

Anna Angela Barba (University of Salerno)  
Silvio Bicciato (University of Modena)  
Nicola Elvassore (University of Padova)  
Mario Grassi (University of Trieste)  
Linda Griffith (MIT)  
Stefano Guido (University of Napoli)  
Vincenzo La Carruba (University of Palermo)  
Gaetano Lamberti (University of Salerno)  
Paolo Magni (University of Modena and Reggio Emilia)  
Antonio Marzocchella (University of Napoli)  
Massimo Morbidelli (ETH Zurich)  
Sabrina Pricl (University of Trieste)  
Alessandra Rampazzo (University of Padova)  
Giulio Cesare Sarti (University of Bologna)



## Accommodation

Participants will be housed in **ESU Residence Copernico** Via Giovanni Battista Tiepolo, 54, 35131 Padova for single room. The fee includes unlimited LAN connection and use of the gym. Free WiFi is available in common area.

ESU Residence provides a comfortable location near the city center of Padova, the train station and the Faculty of Engineering of the University of Padova.

For more information, visit the website at: <http://www.esupd.gov.it/it>.

## Final program

### Fundamentals of Biological engineering

Stefano Guido  
Linda Griffith  
Alessandra Rampazzo

### Biomaterial and regenerative medicine

Vincenzo La Carruba  
Mario Grassi  
Gaetano Lamberti  
Anna Angela Barba

### Molecular modeling, Bioinformatics, System and Synthetic Biology

Sabrina Pricl  
Silvio Bicciato  
Paolo Magni

### Separation technology and lab-on-chip applications

Giulio Cesare Sarti  
Nicola Elvassore

### Bioprocess design and continuous manufacturing

Antonio Marzocchella  
Massimo Morbidelli



## GRICU PhD NATIONAL SCHOOL 2015

### *Biological and bioprocess engineering*



Padova

September 7<sup>th</sup> – 11<sup>th</sup> 2015

Complesso Fiore di Botta

Via del Pescarotto, 8, 35131 Padova