CALL FOR POSITIONS IN THE ADVANCED TRAINING COURSE
in
POLYMERISATION PROCESSES & POLYMERIC MATERIALS
“International MOPLEN School”

CHAIR: Prof. Maria Cristina Annesini

Infostud enrolment number: 27705

1 - Aims
This Advanced Training Course is designed to provide specific professional training in the fields of polymerisation processes and polymeric materials. The course programme is designed to feature a high level of scientific rigor and technical/industrial training, partially via a work placement in an industrial research context.

2 - Requisites for Admission
This Advanced Training Course is open to postgraduate students with a “Laurea Specialistica” or a “Laurea Magistrale” (5 years’ duration, i.e. Masters’ level) in one of the following subjects:

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<th>MASTERS’ DEGREE COURSE QUALIFICATION</th>
<th>DEGREE CLASS NUMBER</th>
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</thead>
<tbody>
<tr>
<td>Chemical Engineering</td>
<td>27/S; LM22</td>
</tr>
<tr>
<td>Science &amp; Technology in Industrial Chemistry</td>
<td>81/S; LM71</td>
</tr>
<tr>
<td>Materials Science &amp; Engineering</td>
<td>61/S; LM53</td>
</tr>
<tr>
<td>Chemical Science</td>
<td>62/S; LM54</td>
</tr>
</tbody>
</table>

Candidates with a Masters’ Degree equivalent awarded by a legally recognised institution are entitled to apply.
This Advanced Training Course is also open to applicants with an equivalent qualification awarded by a foreign university, provided that it has been previously recognised as such by the Advanced Training Course Teaching Committee; the purpose of such recognition will merely be to decide admission to the course and/or remain within the scope of inter-university cooperation and exchange agreements. The qualification awarded abroad must be of a level equal to that required for course admission. Candidates without such qualifications will not be accepted onto this Advanced Training Course; the equivalence of qualifications awarded to candidates from foreign institutions must be declared for the sole purpose of enrolment on the Advanced Training Course. Pre-requisites for admission must be held by the call deadline and the “Dichiarazione di Valore” (declaration of validity) of the academic degree awarded abroad must be attached to the application for admission. The Teaching Committee will rank candidates on the basis of their final marks in qualifications required for and compatible with the Advanced Training Course content; the duration of their studies; the coherence between previous qualifications and the Advanced Training Course content; and any other relevant qualifications the candidate may hold. Non-EU citizens from countries in which LyondellBasell Industries Holdings B.V. operates are preferred.
Enrolment on the Advanced Training Course does not preclude enrolment on other courses.
3 – Number of places

There is a limited number of position available on the course. In order to promote internationalisation, positions on the Advanced Training Course will be allocated as follows:

- A) 3 positions available for Italian or EU citizens
- B) 3 positions available for no-EU citizens

The manner in which these places are granted may be modified on the basis of the number of applications received, and vacant places may be granted to students from other places of origin.

The course will be activated on enrolment of a minimum of 6 trainees. A maximum of 6 trainees will be enrolled on the course.

3.1 – Funding & Scholarships

The company Basell Poliolefine Italia s.r.l (LyondellBasell Industries Holding B.V.) will fund a total of 6 scholarships, each totalling a gross sum of € 6,000 to the benefit of the students ranked highest according to the admission criteria proposed by the Selection Committee and approved by the Teaching Committee. Scholarships are awarded on the understanding that recipients will attend the course full-time for the entire duration of the course.

Scholarships will be paid directly by the company Basell Poliolefine Italia s.r.l, which will also reimburse the beneficiary for the first instalment of the enrolment fee, and pay the second instalment of the enrolment fee directly to the Sapienza University on behalf of scholarship recipients.

Any sums paid by Basell Poliolelene Italia s.r.l. for the scholarships and to reimburse the first instalment of the enrolment fee are subject to “tassazione ordinaria” (ordinary taxation) pursuant to and by effect of Article 50, paragraph 1, point c of the Italian unified law on income tax (T.U.I.R).

4 – Duration & Organisation of Training

The Advanced Training Course has a duration of 6 months and will be held at:

Centro Ricerche “G.Natta”
Basell Poliolefine Italia s.r.l
Piazzale Donegani, 12
IT-44122 Ferrara

Lectures will begin in November 2017.

Training will comprise a total of 350 hours, of which at least 60 will be devoted to lectures.

The numbers of credits assigned to each module are as follows:

<table>
<thead>
<tr>
<th>Sector (SSD)</th>
<th>TEACHING MODULES</th>
<th>Credits (CFU)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 1 – The Basics of Polymer Engineering</strong>&lt;br&gt;Topics covered are: the basic properties of polymers, the relationships between structure and mechanical and physical properties, and the types of polymerisation reaction and their kinetics; laboratory techniques for chemical and physical characterisation of polymers will be studied in depth through both theory lectures and practical laboratory activities.</td>
<td>3</td>
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### Module 2 – Polymerisation Processes
This module takes an in-depth look at the development of polymerisation processes, analysing methods of research and development, and the various technologies used.
Main topics covered are:
- Ziegler–Natta, chromium and metallocene catalysts
- Production chain: catalyst -> polymerisation process -> experimental polymerisation product manufacture & scale-up (pilot & industrial-scale plants)
- Evolution in polyolefin production technology (bulk, gas & slurry polymerisation)

### Module 3 – Safety, Sustainability & The Environment
This module aims to valorise safety policies and analyse issues relating to manufacturing processes from an environmental sustainability standpoint. It involves both theoretical and practical training, and will be tested.
Main topics covered are:
- Fire safety, handling toxic chemicals, toxicology and environmental genotoxicity testing, effluent treatment, life-cycle assessment, and issues relating to the disposal and recycling of plastics.

### Module 4 – Product Development
This module begins with analysis of the polymer product market and related innovations and technological developments, going on to analyse the state of the art in several specific sectors in detail.
Main topics covered are:
- Marketing & innovation, the application of polymers in the utilities (power & water), industrial & food packaging, car & transport, and biomedicine & healthcare/hygiene sectors.

### OTHER MODULES

| Work placement (“stage”) | 10 |

| TOTAL | 20 |

Tests to assess individual progress will be conducted after each module or group of modules. At the end of the course, trainees will be required to present a report on the research they performed during their work placement.
An attendance of 75% of scheduled Advanced Training Course activities entitles trainees to an attendance certificate and, where appropriate, 20 university training credits towards an applicable and relevant post-graduate course. Attendance certificates may be withheld, at the discretion of the Chair, should attendance or other behaviour be deemed inappropriate or insufficient. In this event, no enrolment fees will be reimbursed.

**For information on training, please contact:**
Maria Laura Santarelli
Dipartimento di Ingegneria Chimica Materiali Ambiente
5.1 How to apply
In order to apply, Advanced Training Course candidates must adhere to the following procedure:

1. Register with the University information system (Infostud) by following the instructions provided in the following link: (https://stud.infostud.uniroma1.it/Sest/registrazioneStudenti/initRegistrazione.do).
   Following successful registration, the system will issue a matriculation number and password for Infostud system access. Your matriculation number must be cited on the Advanced Training Course application. NB: Please remember to enter a correct e-mail address, as password reset instructions are sent by e-mail.
   Candidates who are already enrolled at Sapienza University need not register, as they already possess an Infostud matriculation number. If you forget your matriculation number and/or password, please reset here: https://stud.infostud.uniroma1.it/Sest/ModPwd2/reset.jsp.

2. Complete the Advanced Training Course application form on plain paper, using the attached form (Attachment 1).

   You must attach the following documents to your application form:
   - A copy of valid ID (ID card/driving license/passport)—must be signed and legible
   - Self-certification of qualifications held
   - A copy of the “Dichiarazione di Valore” (those with qualifications from abroad)
   - Declaration of consent for personal data handling (Attachment 2)
   - Curriculum Vitae

   Application forms, duly signed by the applicant and complete with the above attachments, must be received by 4 October 2017, and sent as follows:

   The application form may be delivered by hand on the following days and times:

   • Delivery of the application form by hand on the following days and times:
     Segreteria didattica del Corso di Alta formazione
     Dipartimento di Ingegneria Chimica Materiali Ambiente
     Via Eudossiana 18, 00184 Roma
     Opening days/times: Mon-Tue-Wed-Fri from 11 am to 1 pm; Thursday 3 pm to 4 pm

   • Scanned copies of all required documents by e-mail to: marialaura.santarelli@uniroma1.it; paper copies of original documents must be handed in at the beginning of the course.
Applications received after the indicated expiry date will not be considered.

5.2 Candidate selection
The Advanced Training Course secretary will verify admission requisites and publish a list/ranking of approved course participants by 9/10 October 2017. Successful candidates may register with Infostud and pay the enrolment fee as soon as the list of approved candidates has been published.

6 – Advanced Training Course enrolment fee
The enrolment fee for the Advanced Training Course is € 2,200.00 plus a € 16.00 virtual tax stamp, to be paid as detailed in 7.1 and 7.2. Payment must be made in 2 instalments, the first, of € 440.00 to be paid by the student before 25 October 2017, and the second, of € 1,760.00, which will be paid directly by LyondellBasell by 20 November 2017. Enrolment fees may only be reimbursed if the course is cancelled before it is begun. In this event, the student must apply to the Advanced Training Course Chair for reimbursement.

7.1 – How to pay the Advanced Training Course enrolment fee in person
Once you are accepted to the course, access Infostud (https://stud.infostud.uniroma1.it/Sest/Log/) and click the link “tasse” (taxes), and then "alta formazione/formazione" (postgraduate training); insert the course code indicated on the call for candidates and click “avanti” (next) then "stampa" (print).

Enrolment fees must be paid before the expiry date indicated on the call for candidates (see point 6). To pay, use the form downloaded from Infostud to any local branch of the Gruppo UniCredit Bank; payment may be made:
- in cash
- online, by credit card—go to the Unicredit website and fill in the online payment form
- by cheque issued by any national bank and made out to “Gruppo UniCredit – Banca”, if the participant has a bank account at the same bank or any other national bank—the amount must match the sum to pay indicated on the form downloaded from Infostud, i.e. all banking fees must be paid at source
- by cheque issued by any national bank on behalf of the student—the amount must match the sum to pay indicated on the form downloaded from Infostud.

Enrolment fees will not be refunded under any circumstances. Students may request a refund if the course is cancelled before it is begun.

7.2 – How to sponsor a student on the Advanced Training Course
Firms or other organisations wishing to fund student’s or several students’ Advanced Training Course enrolment fees must ensure that the beneficiaries are registered on Infostud and have downloaded the necessary form, as described in point 7.1; the payment can then be made as follows:

- The sponsoring institution should transfer the amount matching the sum to pay indicated on the form downloaded from Infostud into the following account:
  IBAN: IT71I 02008 05227 000400014148
  Sort code: 9001778
  Tesoreria Universitaria Unicredit – Agenzia 30660
  Please indicate:
  "CAF (course code) matr. (student matriculation number)".

  NB: these codes are essential for us to match the payment to the student.
  If there several beneficiaries, the matriculation number of each must be indicated on the payment and the amount modified accordingly.
Once the payment has been made, please send an e-mail with your details (name of firm, VAT/tax code, contact details, and name(s), surname(s) and matriculation number(s) of all beneficiaries) advising as such to the following e-mail address: francesca.bernabei@uniroma1.it; once the payment has been received, the University Accounting Office (Ragioneria dell’Università) will issue a receipt to the e-mail address indicated on the enrolment form.
ADVANCED TRAINING COURSE APPLICATION FORM

To the Advanced training Course Chair:
Prof………………………………………
Università degli Studi di Roma “La Sapienza”
Address…………………………………
Piazzale/Via………………………………
Postcode: …………. R O M A

I, the undersigned 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To this end I attach the following documents:
- A copy of valid ID (ID card/driving license/ passport)—must be signed and legible
- Self-certification of qualifications held
- A copy of the “Dichiarazione di Valore” (those with qualifications from abroad)
- Declaration of consent for personal data handling (Attachment 2)
- Curriculum Vitae

I, the undersigned, hereby declare that I have read and approved in its entirety the Advanced Training Course call for candidates, to possess all the specified prerequisites, and to be aware that false or incomplete statements may result in criminal prosecution, pursuant to and by effect of Italian Legislative Decree. 445/2000.

Date                                                                                                                               Signature of applicant
Information pursuant to and by effect of Legislative Decree 196/2003 governing personal data

Purpose of data handling
Pursuant to and by effect of Article 13 of Legislative Decree n.196/2003, the information you provide will be handled only for the purposes of enrolment and attendance of the Advanced Training Course.

Means of handling and persons charged with such
Your information will be handled both manually and electronically. Your information may be passed to third-party private or public institutions or bodies if necessary to achieve the teaching aims of the course.

Provision of data and refusal to allow data handling
You must provide your personal information; if you refuse to do so, we will be unable to accept your application and enrolment, or to manage the teaching and associated activities.

Persons responsible for data handling
The Università degli Studi di Roma, in the person of its legal representative the Rector, whose domicile for said purposes is the University legal headquarters, is the custodian of your data. Its handling will be overseen by the Advanced Training Course Chair.

Your access to data and other rights as per Article 7 of Legislative Decree 196/2003
You have the right to request confirmation of the existence of information regarding your person, even if not yet recorded, and communication of such in an intelligible form. You have the right to request information regarding:

a) The origin of your personal information
b) How and why it will be handled
c) The details of any electronic processing it will be subject to
d) The details of the person or persons responsible for handling your data and their representatives as per Article 5, paragraph 2
e) The details of any persons or type of persons who may be given access to your data, including State representatives, managers or delegates.

You also have the right to obtain:

a) Details of any modification, amendment or integration of your personal information
b) Details of any cancellation, anonymisation or withholding of your data that breaks the law, including data not necessary to store for the purposes of which data were collected and handled
c) Written certification how the operations stated in points a) and b) were brought to light, including their content and any recipients, unless this is impossible or requires the use of means manifestly disproportionate to the rights being safeguarded.

You have the right to oppose, in whole or in part:

a) For legitimate reasons, the handling of your personal information, provided that said handling is not necessary for the purposes that it was collected for
b) The handling of your personal information for the purposes of advertising, direct marketing, market research or commercial communication.

I have read and understood the above terms and conditions.

(Sign to accept the above)