

GENERAL INFORMATION

VENUE

TU Berlin
 Innovationszentrum Technologien für Gesundheit und Ernährung IGE
 Müller-Breslau-Straße 15 (VWS 4)
 Room VWS 128
 10623 Berlin, Germany



SCHEDULE

Beginning: Monday, 15 July 2013, 1 pm

End: Friday, 19 July 2013, 3 pm

LANGUAGE

The course will be held in English.

REGISTRATION

Please complete and return the enclosed form or contact:

DECHEMA Research Institute
 Training dept.
 P.O. Box 17 03 52
 D-60077 Frankfurt am Main

Phone: +49 69 7564 253
 Fax: +49 69 7564 414
 Internet: www.qbio-summer-school.de
 E-mail: gruss@dechema.de

REGISTRATION FEE

PhD and other students: € 630,-

University: € 750,-

Industry: € 980,-

(incl. course materials, lunch, snacks, coffee breaks and VAT)

DEADLINE

10 June 2013

ACCOMMODATION

The following hotels are within walking distance to the venue:

Novotel am Tiergarten
 Straße des 17. Juni 106-108
 10623 Berlin
 Phone: +49 30 600350
 E-mail: h3649@accor.com
 Internet: www.novotel.com
 Single room: ~ 84 € per night

Hotel Gates Berlin City West
 Knesebeckstr. 8-9
 10623 Berlin
 Phone: +49 30 311060
 E-mail: info@hotel-gates.com
 Internet: www.hotel-gates.com
 Single room: ~ 64 € per night

Hotel Indigo (Berlin-Ku'damm)
 Hardenbergstr. 15
 10623 Berlin
 Phone: +49 30 8609090
 E-mail: reservation-west@hotelindigoberlin.com
 Internet: hotelindigoberlin.com
 Single room: ~ 80 € per night

Hotel Motel One Berlin Kurfürstendamm
 Kantstr. 7-11a
 10623 Berlin
 Phone: +49 30 31517360
 E-mail: berlin-kudamm@motel-one.com
 Internet: www.motel-one.com
 Single room: ~ 69 € per night

Hotel Heidelberg Berlin
 Knesebeckstr. 15
 10623 Berlin
 Phone: +49 30 3130103
 E-mail: info@hotel-heidelberg-berlin.de
 Internet: www.hotel-heidelberg-berlin.de
 Single room: ~ 38 € per night

The prices may differ slightly.

Please contact the hotels directly to book a room.

SUMMER SCHOOL

15 - 19 July 2013
 Berlin / Germany

Quantitative Biology: Current concepts and tools for microbial strain and process development

www.qbio-summer-school.de



LECTURERS

QUANTITATIVE BIOLOGY: CURRENT CONCEPTS AND TOOLS FOR MICROBIAL STRAIN AND PROCESS DEVELOPMENT

Modern biology and biotechnology follow the chemical, physical and engineering sciences by using quantitative mathematical models for the description of complex cellular behaviors. Concepts from molecular and systems biology, synthetic biology, process engineering, and economy will have to be combined for the development of efficient biotechnological processes. To enable biologists, biotechnologists, and biochemical engineers to pursue this interdisciplinary challenge, it is mandatory to strengthen both the mathematical skills of biologists and the engineers' knowledge of basic biological concepts and nomenclatures.

Thus, the Society for Chemical Engineering and Biotechnology DECHEMA (Frankfurt) and the Innovation Centre Technologies for Health and Food (Berlin) devised a summer school schedule that would allow participants to familiarize themselves with relevant biological concepts from systems and synthetic biology, with mathematical modeling strategies and appropriate technologies and software tools. The summer school addresses both biologists and engineers: Biologists will learn how engineering approaches can help them in planning, performing and evaluating experiments, whereas engineers get insight into state-of-the-art measurement techniques that feed their biological models.

The course consists of formal lectures, workshops and tutorials for hands-on experience with state-of-the-art tools.

The participants are encouraged to bring their laptop computers. They will be informed on the system requirements and provided with respective software to be installed on the laptop PC.

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|---------------------------|---|
| Prof. Dr.-Ing. Lars Blank | RWTH Aachen (LB) |
| Prof. Dr.-Ing. Anja Drews | HTW Berlin (AD) |
| Dr. Lothar Eggeling | FZ Jülich (LE) |
| Dr.-Ing. Petra Först | TU München (PF) |
| Prof. Dr. Björn Junker | Martin-Luther-Universität Halle-Wittenberg (BJ) |
| Dr.-Ing. Stefan Junne | TU Berlin (SJ) |
| Dr. Lei Mao | HTW Berlin (LM) |
| Prof. Dr.-Ing. Vera Meyer | TU Berlin (VM) |
| Prof. Dr. Elke Nevoigt | Jacobs U Bremen (EN) |
| Prof. Dr. Marco Oldiges | FZ Jülich (MO) |
| Dr.-Ing. Jochen Schmid | TU München (JS) |
| Prof. Dr. Dirk Schwarzer | University Tübingen (DS) |
| Prof. Dr. Björn Usadel | RWTH Aachen (BU) |
| Prof. Dr. Wilfried Weber | University Freiburg (WW) |



PROGRAMME

MONDAY, 15 JULY

- » Opening of the summer school (VM)
- » Fundamentals of process engineering (AD)
- » Fermentation strategies and dynamic models (PF or AD)

TUESDAY, 16 JULY

- » Rheology, fluid dynamics and bioreactors (AD)
- » Model based process design (SJ)
- » Transcriptomics (VM, BU)
- » Three parallel exercise courses

WEDNESDAY, 17 JULY

- » Proteomics (DS, BU)
- » Synthetic biology (WW)
- » Three parallel exercise courses

THURSDAY, 18 JULY

- » Metabolomics (MO)
- » Stoichiometric models (LB)
- » Metabolic flux analysis (BJ)
- » Evaluation of non-linear models: reaction kinetics (AD)
- » Mathematical modeling for systems biology (LM)
- » Four parallel exercise courses

FRIDAY, 19 JULY

- » Renewable resources and biorefinery concepts (JS)
- » Renewable resources and microbial strain optimization (EN)
- » Amino acids: trends in market and research (LE)
- » Feedback round and closing of the summer school (VM)

SOCIAL PROGRAMME / EVENINGS

Monday night, a get-together event is planned to facilitate the networking of the participants. There will be ample opportunity to familiarize oneself with the software of interest in the evenings.

(subject to modifications)

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Reply form
(Fax-No.: +49 69 7564-414)

DECHEMA Research Institute
Training dept.
P.O. Box 17 03 52
D-60077 Frankfurt am Main

Registration to the DECHEMA summer school 7158
"Quantitative Biology" Berlin, 15-19 July 2013
Deadline for registration: 10 June 2013

QBio

Participant

Mrs Mr Title _____
Name _____
Surname _____
Company _____
Department _____
Street/POB _____
Code/Place _____
Phone/Fax _____ E-mail _____

Invoice address

Company _____
Department _____
Street/POB _____
Code/Place _____

Industry University PhD Student *

* Please attach proof.

Education: PhD Master Bachelor Other _____
Field: Chemist Biologist Engineer Other _____

I am interested in the following research fields: _____

The course fee amounts to € 980.- (industry), € 750.- (university), € 630.- (PhD students). Please do not transfer the fee before having received the final confirmation of participation by DECHEMA. If we receive a notice of withdrawal at least two weeks prior to the beginning of the course, the participation fee less 10% for administration expenses will be reimbursed. Thereafter, a reimbursement will not be possible.

Place, date

signature + company stamp