# Fast Trak<sup>™</sup> training and education

COL<sub>2</sub>



# Small-scale column packing

Duration: 3 days

# **Course description**

This hands-on course focuses on optimizing small-scale column packing, handling methods as well as testing and maintenance of chromatography resins. We will address factors influencing separation performance and the relationship to reproducibility and stability.

You will pack and test small-scale columns, with different design features and dimensions, using several types of chromatography resins.

- Hands-on practice for preparing and maintaining lab or pilot scale chromatography columns
- Column packing-lectures and exercises
- · Column testing and troubleshooting
- Guidelines for writing standard operating procedures (SOPs)
- · Column qualification and resin lifetime

### Who should attend?

- · Production personnel responsible for column packing or column performance issues
- Process development scientists, engineers, and operators working with chromatographic columns at pilot scale
- System engineers interested in the design and handling aspects of column-based production operations

#### After the course, you will be able to:

- Understand the critical issues in lab- and pilot-scale column packing based on your own practical experience
- Pack and test lab- and pilot-scale columns more rapidly and efficiently
- · Identify major issues, trouble shoot current concerns and avoid problems in the future

# 2019 pricing

Fast Trak Center	List Price	Product Code
Germany, Munich	1787 (EUR)	29237709
India, Bangalore	44000 (INR)	29099329
Singapore	2730 (SGD)	29226611

# **Topics covered**

- Protein purification strategies
- Column packing requirements and techniques
- Column/resin considerations
- Column evaluation
- Column and resin cleaning and maintenance
- Troubleshooting
- Sanitization of resin and equipment



# General course information

Fast Trak Education is one means by which GE Healthcare provides application training in the various aspects of bioprocessing.

The courses are designed to provide a learning experience for process development and manufacturing staff.

There are hands-on training courses on column packing, basic chromatography, optimization and scale-up for both pilot and production scales. Courses on validation issues and chromatography theory are also given. The courses are run at our regional Fast Trak centers or customized at your premises.

### **Cancellation policy**

In case you need to cancel your registration, the following charges will apply:

30 to 21 days prior to course:
20 to 8 days prior to course:
7 days or less prior to course:
100% of course fee
100% of course fee

If you are unable to attend after registered, you may send a colleague in your place or attend another course.

GE Healthcare reserves the right to modify course location, course material, substitute speakers, or to cancel the course. If the course is cancelled, registrants will be notified as soon as possible and will receive a full refund of paid fees. GE Healthcare will not be responsible for airfare penalties or other costs incurred due to a course cancellation.

#### Course certificate

Upon completion of the course, each participant receives a course certificate in which course name and course date is stated.

#### Course evaluation

At the end of each course, you will be asked to fill in a course evaluation form. We value your opinion of the course, the speakers, the material, and presentations and use this feedback to continuously improve the courses and their contents.

#### **Travel and hotel costs**

Travel and hotel costs are not included in the course price.

#### Language

Standard courses are held in English at Fast Trak Centers in USA, Sweden, Turkey, India, Singapore and Korea, unless otherwise specified. In China, most courses are in Chinese with occasional courses in English. The courses in Germany are held in German and courses in Japan are held in Japanese. Customized courses can be presented in other languages. Please contact the Fast Trak center for more information.

#### Lunches

All lunches during course days are included in the course prices.

#### Material in binders

Each course participant will receive the lectures and other relevant material in a binder.

## Requirements for safety level S1 (L1) laboratories

Every course participant who enters our laboratories for the practical sessions must comply with certain safety requirements. Please notice that open-toe shoes are not allowed in the lab. Obligatory protective clothing and safety devices will be provided.

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