ADVANCES IN BIOIMAGING FOR NEXT GENERATION DRUG DELIVERY

TRACKS COURSE | 7.5 CREDITS | STUDY PERIOD 4

ABOUT THE COURSE
The course aims to provide an in-depth knowledge of bioimaging settings used in drug design and delivery. The students will have the possibility to work jointly across discipline borders to solve practical challenges based on contemporary research. The course is part of the theme Emerging technologies - from science to innovation in TRACKS educational initiative on Chalmers. It is not included in any educational program and/or department but is suitable as an elective course.

BACKGROUND
Past decade has witnessed tremendous progress in nanomedicine that utilizes nanoparticles as vehicles for drug delivery. It was perhaps best exemplified by the recent success of lipid nanoparticle mRNA vaccines against the COVID-19. Our ability to face health challenges in the future is critically dependent on young scientists being trained across disciplines, and in working and learning how to address the current challenges together.

LEARNING OUTCOMES
After completing the course, the student should be able to
- describe different types of imaging instrumentation and their applications
- account for different types of image analysis techniques and their applications
- account for and evaluate current theories, methods and techniques within the research field
- compile, critically analyze and evaluate research results and present these both orally and in writing.

HIGHLIGHTS
Lectures presented by experts from academia and industry, practical exercises in contemporary research laboratories and on-site visit to AstraZeneca

PREREQUISITES
All students of master and doctoral programs, as well as Chalmers alumni can apply. We encourage students with backgrounds from Physics, Chemistry, Biotechnology, Material Science, Biology, Nanotechnology etc.

INTERESTED?
Write a short motivation letter and your course transcripts to Hana Jungova hana.jungova@chalmers.se and Fredrik Höök Fredrik.hook@chalmers.se. We aim for a maximum of 20 students (minimum 5) with a mix of competences. If the interest is high, we will select students based on their backgrounds and motivation letters.