



UNIVERSITÀ DEGLI STUDI DI TORINO

ID

VP66_DIP_BIOTEC

Visiting Professor Program Academic year 2022/2023

TEACHING COMMITMENT: 24 hours

COURSE TITLE

MASS SPECTROMETRY

TEACHING PERIOD

1st term

SCIENTIFIC AREA

Analytical Chemistry

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

Applications of mass spectrometry to the analysis of biomolecules. approach to targeted and untargeted metabolomics. mass spectrometry imaging. application of ms to clinical studies and multi-omics.

LEARNING OBJECTIVES

Acquisition of competences in the field of mass spectrometry analyses.

The objective of the course is to provide students with the principles for the development and application of methods based on mass spectrometry in the biochemical and biopharmaceutical fields.

TUTORSHIP ACTIVITIES

Graduate students tutorship with possibility of international exchange

LAB ACTIVITIES

Practical laboratory activities on orbitrap and triple quadrupole MS analyzers.

OTHER ACTIVITIES BESIDES THE COURSE

Metabolomics and MS project development seminars

ADDITIONAL COURSE

COURSE TITLE

Advanced Mass Spectrometry

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

analytical chemistry

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

Advanced MS applications in the field of metabolomics. Online/Offline Database Searching, Structural Identification by MS/MS Analysis. High-Definition Mass Spectrometry. MALDI-MSI, DESI-MSI, PESI-MS. Technique of Cryosectioning, Laser Microdissection. Stability of Metabolites in Biological Samples..

LEARNING OBJECTIVES

Acquisition of competences in the field of mass spectrometry analyses.

The objective of the course is to provide students with the principles for the development and application of metabolomics and MSI methods based on mass spectrometry in the biochemical and biopharmaceutical fields.

TUTORSHIP ACTIVITIES

Possible tutorship on international exchange students

LAB ACTIVITIES

Practical analysis and database searching activities

OTHER ACTIVITIES BESIDES THE COURSE

Metabolomics and MSImaging seminars

VISITING PROFESSOR PROFILE

The visiting professor should have a solid background and experience on biochemical mass spectrometry and a broad background in the field of -omics applications. He/she should have a solid experience in English teaching and be a well-known recognized scientist at international level.

The Visiting Professorship will be a great opportunity for the students as they will be able to explore possibilities possibility of training abroad and discuss scientific projects that they are currently working on.

CONTACT PERSON AT THE DEPARTMENT

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