

MSE-664

## CCMX Winter School - Surface Science: Fundamentals, Properties and Selected Applications

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Cursus	Sem.	Type
Materials Science and Engineering		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral presentation
Workload	60h
<b>Hours</b>	<b>28</b>
Courses	20
Exercises	8
<b>Number of positions</b>	<b>24</b>

### Frequency

Every 3 years

### Summary

This course is designed to cover a series of important scientific aspects of surface science and to provide an in-depth review of their corresponding fundamentals. It is organised as a retreat over one week, with 9 modules consisting of presentations given by lecturers and the participants.

### Content

Please find information on the link below.

### Keywords

surface thermodynamics and kinetics, geometric and electronic structure determination, adsorbate-covered metal and oxide surfaces.

morphology, grain growth, texture, constrained film structures, amorphous films, simulation

Plasma, thin films, coatings, nanostructured films, CVD, PACVD, PVD, sputtering.

scanning probe microscopy, STM, SFM (AFM), MFM

### Learning Prerequisites

#### Recommended courses

Participants should be educated in materials science, physics, chemistry or microtechnology to benefit the most from this course.

### Resources

#### Websites

- <https://ccmx.epfl.ch/courses-and-events/2019-winter-school/>