

MSE-636(a)

**Scanning electron microscopy techniques (a)**

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<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Advanced Manufacturing		Opt.
Materials Science and Engineering		Opt.

Language of teaching	English
Credits	1
Session	
Exam	Written
Workload	30h
<b>Hours</b>	<b>14</b>
Lecture	11
Exercises	1
Practical work	2
<b>Number of positions</b>	<b>31</b>

**Frequency**

Every year

**Summary**

This intensive course is intended for researchers who envisage to use scanning electron microscopy techniques for their research or who want to understand how to interpret SEM images and analytical results presented in scientific publications.

**Content**

This intensive course is intended for researchers who are potential new users of scanning electron microscopes. It will provide them with a basic understanding of the instruments, optics of SEM, the imaging modes, the associated analytical techniques EDS and EBSD, related theories of image formation.

Demonstrations will be given on the microscopes.

2x Year Spring (b) and autumn (a).

**Keywords**

SEM, FIB, ESEM

**Assessment methods**

Written

**Resources****Websites**

- <https://www.epfl.ch/research/facilities/cime/teaching/doctoralschools/mse-636/>

**Moodle Link**

- [https://go.epfl.ch/MSE-636\\_a](https://go.epfl.ch/MSE-636_a)