

CH-703

**Basic and advanced NMR - Level 2 (EPFL)**

Abriata Luciano Andres, Bornet Aurélien, Emsley Lyndon, Patiny Luc, Piveteau Laura

Cursus	Sem.	Type
Chemistry and Chemical Engineering		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral
Workload	60h
<b>Hours</b>	<b>29</b>
Courses	16
TP	13
<b>Number of positions</b>	<b>12</b>

**Frequency**

Every year

**Remark**

Next time Winter 25 (block)

**Summary**

The goal is to give a sound theoretical and practical foundation in NMR for various applications in research. PhD students and post-docs who have followed the course successfully should be able to perform modern multi-dimensional NMR experiments independently.

**Content**

Basic and advanced NMR-Part 2 comprises theoretical and practical aspects of modern bio-molecular NMR. The theoretical teaching given in the morning will comprise (among others) an introduction to density operator products and concepts of coherence transfer. Exercises (in the afternoon) will allow students to practice on multi-dimensional NMR experiments.

A bi-annual alternation with other subjects like solid state NMR is possible.

The intention is to teach PhD students and post-docs so that they can benefit from the modern high field NMR spectrometers available at EPFL. The goal is to give them a sound theoretical and practical foundation in NMR for various applications in research. PhD students and post-docs who have followed the course successfully should be able to perform modern multi-dimensional NMR experiments independently. They should also be able to help colleagues in various research groups who wish to use NMR.

Participation on the part 2 of the block course is only possible after having followed part 1 before (Basic and advanced NMR - Part 1), or under special circumstances (e.g., post-docs with prior knowledge) after discussion with the organizers.

**Keywords**

NMR

**Learning Prerequisites****Required courses**

Basic and advanced NMR - PART 1

**Assessment methods**

2021: oral exam via Zoom