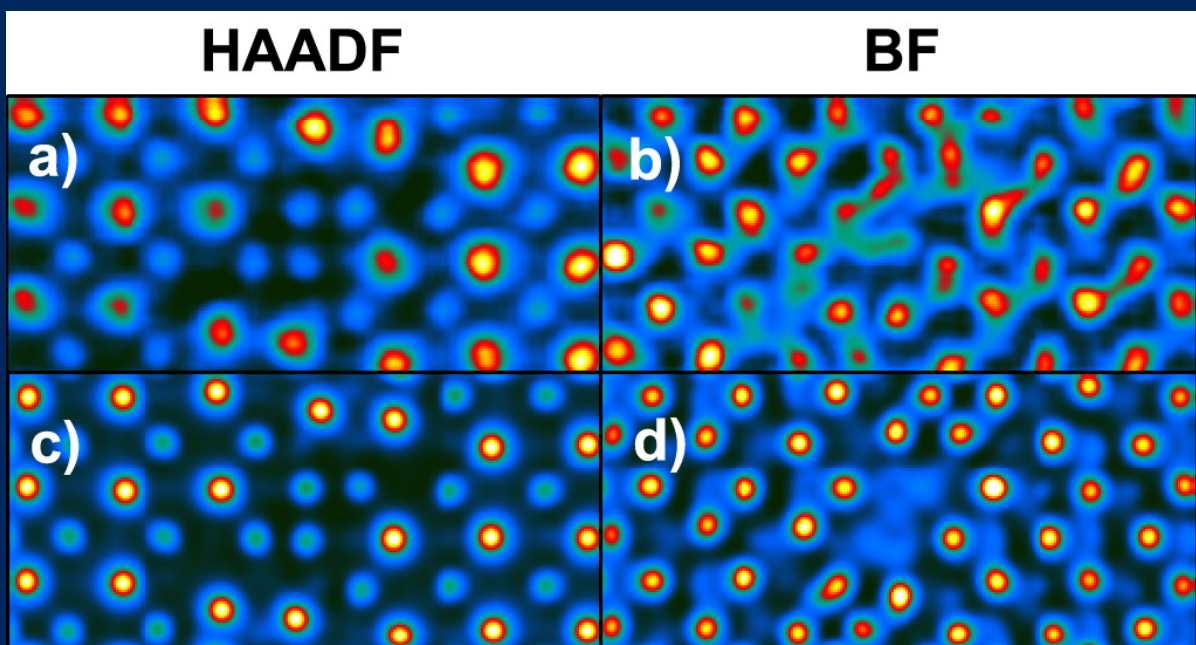




University
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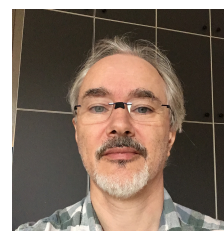
PHYS5042 Nano & Atomic Scale Imaging (NASI) 1

Course Information Guide 2023/2024

Course Details

PHYS5042 Nano & Atomic Scale Imaging 2 (NASI2) is a level 5 Physics Honours course. It is an optional course for students on the MSc: Advanced Functional Materials degree and those from the Centre for Doctoral Training: Photonic Integration for Advanced Data Storage (PIADS) and other MSc Physics degrees and the MSc Nanoscience & Nanotechnology (from School of Engineering). Following the course will require up to 100 hours of learning effort, participating in lectures, on-line learning activities and self-study of notes and textbook material. The course is delivered in Semester 2. Students should have already completed PHYS5041 (NASI1) or have familiarity with the basics of microscopy from other courses at another university (in the latter case, you will only be allowed to register at the discretion of the Course Coordinator, after talking to them).

Course Coordinator: Dr Ian MacLaren
Room 315b, Kelvin Building
ian.maclaren@glasgow.ac.uk



Lecturers: Prof Stephen McVitie
Dr Donald MacLaren
Dr David Boldrin
Dr Trevor Almeida
Dr Kayla Fallon
Dr Joshua Einsle
Others TBC

Course Delivery

Lectures take place, Mondays and Tuesdays 14:00 - 15:00 in Semester 2. These will present more in-depth coverage of advanced topics in electron microscopy and related techniques, including electron optics and other aspects of TEM instrumentation, aberration correction, Lorentz imaging of ferro-magnetic/electric materials, diffraction, and nanoanalysis. Coverage of topics related to the application of such techniques in other areas outside of physics, such as Earth and Planetary Sciences may also be included.

All content is accessed via the Moodle page of the course.

Assessment

The course is assessed via two oral presentations (25% each) and a submitted final report task (50%). All will be based on the student summarising and discussing aspects of the recent developments in Nano and Atomic Scale Imaging and their application in science and technology.