



ÉCOLE POLYTECHNIQUE  
FÉDÉRALE DE LAUSANNE

This is a gentle reminder about the upcoming Massive Open Online Course (MOOC) from the EPFL (Ecole Polytechnique Federale de Lausanne), covering introductory aspects of synchrotron and XFEL radiation. A link to the course can be found at <https://www.edx.org/course/synchrotrons-and-x-ray-free-electron-lasers>. This now includes a short 'teaser' video, also viewable at <https://www.youtube.com/watch?v=iOk5fgVvqMg>, which gives an insight about the course contents.

The course is aimed at a broad scientific audience from historical-artefact restorators and paleontologists, through biologists, biochemists and chemical engineers, to materials scientists and physicists. It includes the following themes:

- 1) Interaction of x-rays with matter;
- 2) The production and physics of synchrotron and XFEL radiation;
- 3) X-ray optics, beamlines, and instrumentation;
- 4) X-ray diffraction and scattering;
- 5) UV and x-ray spectroscopies;
- 6) X-ray imaging (mainly tomography and lensless imaging/ptychography);
- 7) Extra week on phasing techniques in macromolecular crystallography.

The course begins on 5th March 2018 and lasts for nine weeks - each week, two to three new videos are released (YouTube videos embedded in the edX player, which can be downloaded and viewed at leisure), each approximately 20 minutes long, plus optional problems (and optional final exam at the end of the course). Enrollment on the course (see above link) is free; a Verified Certificate can be purchased at the end for those who so wish and have achieved the pass grade.

This is an excellent opportunity, especially for younger staff and students, to learn more about the fascinating and interdisciplinary world of synchrotron science and all its myriad possibilities in an engaging and exciting manner!

Warm regards,

Phil Willmott

---

Paul Scherrer Institut  
Prof. Phil Willmott  
Beamline manager, Materials Science beamline  
CH-5232 Villigen PSI

Tel: +41 56 310 51 26

E-Mail: [philip.willmott@psi.ch](mailto:philip.willmott@psi.ch)