ChE-610

Highlights energy research and chemical engineering 1

Queen Wendy Lee, Vacat .

Cursus	Sem.	Type
Chemistry and Chemical Engineering		Opt.

Language of teaching	English
Credits	1
Session	
Exam	Project report
Workload	30h
Hours	**28**
Courses	14
Project	14
Number of positions	

Frequency

Every 3 years

Remark

Next time Fall 28 to Spring 29

Summary

Synthesis and design of materials for sustainable energ.This seminar series will invite leading researchers from academia, industry, or government agencies to give insightful talks on state-of-the-art characterization techniques that are used to better understand the performance metrics of material.

Content

Each student must attend the seminar series.
There will be at least 14 hours of lecture from outside speakers and up to 14 hours of practical work to obtain 1 ECTs credit . At the end of the Academic year the students are required to deliver a report of the seminars summarizing the most important topics, with references, and give a critical assessment of what they learned. This must be turned in within two weeks of after the end to receive 1 ECTS. These are series of seminars that will take place at EPFL Valais Wallis in Sion and/or EPFL Lausanne weekly. The aim of these events is to have
presentations of the most important scientific achievements from all over the world in the mentioned areas. There will be at least 7 seminars per semester from outside researchers, and when possible, additional presentations showing the most recent progress of the Professors
and Scientists from EPFL will be included.
This will be highly beneficial for the PhD students ias the speakers will help the students broaden their professional horizons in various cutting-edge research topics. Furthermore, the students will have the opportunity to meet with the invited speakers; the aim is to encourage
students to discuss their own research and also to promote fruitful discussions between the two.
The invited scientists, will have expertise in areas including but not limited to:
- Infrared Spectroscopy,
- Raman Spectroscopy,
- UV/Vis Spectroscopy,
- Florescence Spectroscopy,
- Nuclear Magnetic Resonance,
- X-ray Scattering and Diffraction,
- Neutron Scattering and Diffraction,
- Electron Microscopy,
- Mass Spectrometry,
- Physical and Analytical Electrochemistry techniques,
- Scanning Probe Microscopy,
- Computational tools used to predict materials properties.

Note

Timetable here
https://www.epfl.ch/schools/sb/research/isic/news-events/chemical-engineering-and-energy-seminars/

Keywords

Chemical engineering,catalysis, nanotechnology, material synthesis, process engineering,
separations, energy, green chemistry, biotechnology, biocatalysis, systems biology and polymers systems.

Assessment methods

At the end of the academic year, students must submit a report summarizing the main topics covered in the seminars, with particular emphasis on one selected seminar, along with a critical assessment of what they learned.

Resources

Websites

- https://www.epfl.ch/schools/sb/research/isic/news-events/chemical-engineering-and-energy-seminars/