

COURSE: MULTI-PHYSICS MULTI-SCALE SIMULATION WITH **EMBEDDED HIGH-TO-LOW FIDELITY INFORMATION**

Pre-registration: Since 5/8/23

Promoted by:

Dpto. de Ingeniería Química y Nuclear

Lead by:

Gumersindo Jesús Verdú Martín

	Certification Achievement
Course modality FACE-TO-FACE	Course 2022-2023
ECTS	Campus
2	Valencia
20 h	0 h
On-campus	Online

Course modality

Face-To-Face	Online	Live broadcast
20 hours	0 hours	0 hours

Venue:

Aula- Seminario Dpto. Ingeniería Química y Nuclear Edificio 5I Universitat Politècnica de València

Timetable:

Morning

Lunes 15 de mayo: 9:00 - 13:00. Martes 16 de mayo: 9:00 - 13:00. Miércoles 17 de mayo: 9:00 - 13:00.

Jueves 18 de mayo: 9:00 - 13:00. Viernes 19 de mayo: 9:00 - 13:00.

Fee	Target	Deadlines	Since	Up to
0.00 €	General public	-	-	-

Fees comments:

0,00 € - Público en general

Objectives

After completing the course, students will be able to apply Predictive Modeling and Simulation and High-to-Low (Hi2Lo) Model Fidelity Information in models of core reactor physics, core thermahydraulics and core fuel performance

Who this course is for

Nuclear Engineering students and profesionals.

Previous knowledge

Statistical concepts and nuclear engineering

L Trainers

Maria Avramova

Kostadin Ivanov

Expert

Expert

Didactic Methodology and assessment procedures

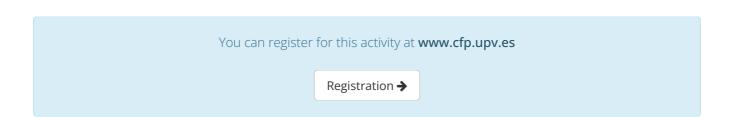
Practical and theoretical lessons

Content

- 1. Introduction to Predictive Modeling and Simulation (M & S)
- 2. Classification of M&S Approaches
- 3. High-to-Low (Hi2Lo) Model Fidelity Information Schemes
- 4. Verification, Validation and Uncertainty Quantification (VVUQ) of M&S and Hi2Lo
- 5. Core Reactor Physics (RP) M&S
- 6. Novel High-Fidelity and Traditional RP M&S
- 7. Core Thermal-Hydraulics (TH) M&S
- 8. Novel High-Fidelity and Traditional TH M&S
- 9. Hi2Lo Schemes in RP
- 10. Multi-Scale Uncertainty Propagation in RP
- 11. Hi2Lo Schemes in TH
- 12. Multi-Scale Uncertainty Propagation in TH

- 13. Core Fuel Performance (FP) M&S
- 14. Novel High-Fidelity and Traditional FP M&S
- 15. Core Multi-Physics (MP) M&S
- 16. Novel High-Fidelity and Traditional MP M&S
- 17. Hi2Lo Schemes in FP
- 18. Multi-Scale Uncertainty Propagation in FP
- 19. Hi2Lo Schemes in MP
- 20. Multi-Scale Uncertainty Propagation in MP

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Note: Consult the general and specific conditions of this activity in the file available at www.cfp.upv.es