PHYS-736 **Plasma instabilities**

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Cursus	Sem.	Type
Physics		Opt.

Language of teaching	English
Credits	4
Session	
Exam	Multiple
Workload	120h
Hours	**56**
Courses	36
Exercises	20
Number of positions	

Frequency

Every 2 years

Remark

Next time: Fall 2021

Summary

To complete the theoretical knowledge acquired before the graduate studies.

Content

1. Introduction to Magnetohydrodynamics (MHD)
2. MHD Equilibrium and Instabilities in Tokamak Plasmas
3. Kinetic Theory of Microinstabilities
4. Introduction to Non-linear Phenomena
5. Kinetic Theory of Macroscopic Instabilities

Learning Prerequisites

Recommended courses

Basic theoretical knowledge of plasma physics (2nd cycle EPFL or equivalent)