

MSE-807

**Excitonic effects in 2D heterostructures**

Kis Andras

<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Materials Science and Engineering		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Written
Workload	60h
<b>Hours</b>	<b>30</b>
Courses	24
Exercises	3
TP	3
<b>Number of positions</b>	<b>30</b>

**Frequency**

Only this year

**Remark**28.08.2023-01.09.2023 Registration via <https://2dexcitons-school23.epfl.ch/>**Summary**

Optically excited 2D materials, host electron-hole pairs called excitons with high binding energies and long lifetimes. Deterministically stacked 2D materials form vdW heterostructures with versatile stacking configurations, making them highly versatile and potentially useful for applications.

**Content****Keywords**

2D Materials, Excitons, van der Waals heterostructures, Emergent phenomena, light-matter interaction.

**Assessment methods**

Written exam

**Resources****Websites**

- <https://2dexcitons-school23.epfl.ch/>