Course Plan: PHY-765 - Gravitational Lensing (GL)

Version: April 01, 2019

Lecture plan subject to change. See https://kasperschmidt.github.io/teaching/SS19_GravLens_UP765 for details.

Week Date Time	Lecture	Exercise/Seminar	Location
1 April 10 8:00-10:00	**Slides 01** **Intro & Early days of GL**	**Worksheet 01** **(Literature searches and first lenses)**	**2.28.2.011**
2 April 17 8:00-10:00	**Slides 02** **Light deflection and basic GL geometry**	**Worksheet 02** **(Select poster topic for presentation)**	**2.28.2.011**
3 April 24 8:00-10:00	**Slides 03** **The lens equation**	**Worksheet 03**	**2.28.2.011**
4 May 1 8:00-10:00	**Holiday - no lecture. Compensated by 5-10 minutes longer days weeks 3-15**		**N/A**
5 May 8 8:00-10:00	**Slides 04** **Multiple images**	**Worksheet 04** **(Poster presentations)**	**2.28.2.011**
6 May 15 8:00-10:00	**Slides 05** **Time delays**	**Worksheet 05** **("Journal club" allocation 1)**	**2.28.2.011**
7 May 22 8:00-10:00	**Slides 06** **Magnifying sources**	**Worksheet 06** **(Present "journal club" papers 1)** **(Essay allocation)**	**2.28.2.011**
8 May 29 8:00-10:00	**Slides 07** **Finding (strong) gravitational lenses**	**Worksheet 07**	**2.28.2.011**
9 June 5 8:00-10:00	**Slides 08** **Microlensing**	**Worksheet 08** **("Journal club" allocation 2)**	**2.28.2.011**
10 June 12 8:00-10:00	**Slides 09** **Searching for extrasolar planets with GL**	**Worksheet 09** **(Present "journal club" papers 2)**	**2.28.2.011**
11 June 19 8:00-10:00	**Slides 10** **Modeling Gravitational Lenses**	**Worksheet 10** **(Essay review allocation)**	**2.28.2.011**
12 June 26 8:00-10:00	**Slides 12** **Weak GL**	**Worksheet 12** **(Essay review feedback)** **(Select topic for 'talk')**	**2.28.2.011**
13 July 3 8:00-10:00	**Slides 13** **Cosmic Shear and the CMB**	**Worksheet 13** **(Science presentations w. slides)** **(Select and start preparing outreach)**	**2.28.2.011**
14 July 10 8:00-10:00	**Slides 14** **The future of GL**	**Worksheet 14** **(Finish outreach)**	**2.28.2.011**
15 July 17 8:00-10:00	**Slides 15** **Summary, loose ends and Q&A**	**Worksheet 15** **(Outreach presentations)**	**2.28.2.011**

Potential Examination:

45 min. oral examination

20 min presentation w. topics known in advance + Q&A.