

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

version: July 16, 2018

Lecture plan subject to change. See https://kasperschmidt.github.io/teaching/SS18_GravLens_UP765 for details.

Week Date	Lecture (Wed.'s 08:15-09:05)	Exercise/Seminar (Wed.'s 09:10-09:55)	Location
1 April 11	<u>Slides 01</u> Intro & Early days of GL	<u>Worksheet 01</u> (Literature searches and first lenses)	2.28.2.011
2 April 18	<u>Slides 02</u> Light deflection and basic GL geometry	<u>Worksheet 02</u> (Select poster topic for presentation)	2.28.2.011
3 April 25	<u>Slides 03</u> The lens equation	<u>Worksheet 03</u>	2.28.2.011
4 May 2	<u>Slides 04</u> Multiple images	<u>Worksheet 04</u> (Poster presentations)	2.28.2.011
5 May 9	<u>Slides 05</u> Time delays	<u>Worksheet 05</u> ("Journal club" allocation 1)	2.28.2.011
6 May 16	<u>Slides 06</u> Magnifying sources	<u>Worksheet 06</u> (Present "journal club" papers 1) (Essay allocation)	2.28.2.011
7 May 23	<u>Slides 07</u> Finding (strong) gravitational lenses	<u>Worksheet 07</u>	2.28.2.011
8 May 30	<u>Slides 08</u> Microlensing	<u>Worksheet 08</u> ("Journal club" allocation 2)	2.28.2.011
9 June 6	<u>Slides 09</u> Searching for extrasolar planets with GL	<u>Worksheet 09</u> (Present "journal club" papers 2)	2.28.2.011
10 June 13	<u>Slides 10</u> Modeling Gravitational Lenses	<u>Worksheet 10</u> (Essay review allocation)	2.28.2.011
11 June 20	No lecture and seminar. Compensated by 5-10 minutes longer days weeks 3-15		N/A
12 June 27	<u>Slides 12</u> Weak GL	<u>Worksheet 12</u> (Essay review feedback) (Select topic for 'talk')	2.28.2.011
13 July 4	<u>Slides 13</u> Cosmic Shear and the CMB	<u>Worksheet 13</u> (Science presentations w. slides) (Select and start preparing outreach)	2.28.2.011
14 July 11	<u>Slides 14</u> The future of GL	<u>Worksheet 14</u> (Finish outreach)	2.28.2.011
15 July 18	<u>Slides 15</u> Summary, loose ends and Q&A	<u>Worksheet 15</u> (Outreach presentations)	2.28.2.011

Potential Examination:
45 min. oral examination
20 min presentation w. topics known in advance + Q&A.