

## LECTURE PLAN FOR FYS 3610 AUTUMN 2008

- 4 hours of lecture + 2 hours of seminar per week
- 3 hours mid-term examination written (counts 20%)
- Project work (counts 20%)
- Oral examination (counts 60%)

Week	Topic	Curriculum	Lecturer
34 6h	Introduction The Earth's Atmosphere The Earth's magnetic field	Compendium Ch 2 - pdf Compendium Ch 3 – pdf	JM
35	Earth atmosphere – Ozone - UV	Compendium	TS
36 4h	The Lorentz Force and single particle motion continued: - Gyromotion - Zeroth order drifts (ExB, Grad B, Curvature) - Magnetic momentum, pitch angle and loss cone Maxwellian distribution and plasma temperature MHD description Ionosphere.	Ch 2.1-2.5 K&R       Compendium Ch 4 – pdf	JM JM
37 6h	Ionosphere cont Ionospheric currents	Compendium Ch 4 – pdf Compendium Ch5 – pdf	JM
38	6h Exercises		
39 4h	Ionospheric currents and magnetic deflections	Compendium Ch6 – pdf	JM
40 4h	The Sun and Solar Activity, Frozen-in, Reynolds number, Solar wind parameters and time lag	Ch 3.1-3.3, 3.5-3.6, 3.8-3.9 K&R Ch 4.1-4.3, 4.4-4.5 (descriptive) K&R	JM
41	Midterm examination		
42	Earth's atmosphere – ozone - UV	Compendium	TS

43 21Oct 22Oct 23Oct	Ionospheric convection UV radiation impact on humans Exercises	Ruohoniemi&Greenwald Ch 7–Moan.pdf	Selfstudy JohanM
44  <b>28-31 Oct</b>	Aurora  <b>Field trip to Andøya Rocket Range (Tuesday – Friday) Experimental Techniques (4h)</b>  <b>+ Field observations</b>	Ch 14 K&R  Powerpoint-pdf's  Infrastructure.pdf, Optics.pdf, Radars.pdf, ICI.pdf	JM
45	Finish topics on aurora, ionosphere and solar wind		JM
46	Polar cap patches Project work –get started	Article	JM
47	Project Work		
48	Repetition 2h		JM
	ORAL EXAMINATION	10 & 12 December	

**Version 16 October**