

Curriculum

Shapiro & Teukolsky (1983) "*Black Holes, White Dwarfs and Neutron Stars*"

- Chapter 2 p.17, 22–29, (29–32), 39–44, Fig.2.2, 2.3, Box 2.1, Table 2.2
- Chapter 3 p.(55–57), 59, 61–72
- Chapter 4 p.82–87, (91–92), 100–105
- Chapter 6 Figs. (6.2+6.3)
- Chapter 8 p.(188–197), (220–240)
- Chapter 9 p.241–253, 253–258
- Chapter 10 p.267–290
- (Chapter 6, 12, 13, 14, 15, 16, 18; small parts of these chapters covered in Lecture notes)

Tauris & van den Heuvel (2023) "*Physics of Binary Star Evolution*"

- Chap. 4.1, 4.3, 4.5, 4.8, 4.9, 7.1, 7.3, 7.6, 14, 15
- (Chapter 6, 9, 10, 11, 13; small parts of these chapters covered in Lecture notes)

- Tauris & van den Heuvel (2006) "*Formation and Evolution of Compact Stellar X-ray Sources*"
 - McClintock, Narayan & Steiner (2013) "*Black Hole Spin via ...*"
 - Riles (2013) "*Gravitational Waves*"
- ... see course webpage for further resources.

For the **oral exam** (see questions below):

- Lecture notes (available from course webpage)
- Shapiro & Teukolsky (1983), Ch.2–4, 8–10
- Tauris & van den Heuvel (2023), Ch. 4.3, 4.5.2+4.5.4, 4.8.2+4.8.3, 4.9, Ch. 7.3.1, 7.3.4, Ch. 14.1, 14.6.2+14.6.3, 14.9.1

Exam questions (oral)

1. Degenerate Fermi Gases and Applications to Simple E.O.S.
2. Cooling of White Dwarfs
3. Structure of Neutron Stars
4. Radio Pulsars
5. Accreting Neutron Stars
6. Binary Evolution

The oral exam will be on Thursday December 14, 2023 @ 09:00–12:00
(alphabetic order by last name).

Location: AAU Fysik, Skjernvej 4A, room 2.120