



Aalto University
School of Science

Introduction to Plasma Physics for Fusion and Space Applications, PHYS-E0461 Practices

- Lectures 2h/week (Monday, 14:15 – 16:00, zooming in, zoom address on course page)
- Exercises 2h/week (Tuesday 10:15 – 12, M140) **EXCEPTION THIS WEEK!!! Y307**

About the exercises:

- Problem set delivered at the Monday lectures, 8 days before the corresponding exercise session:
 - About 3 "regular" problems to solve
 - The 4th assignment requires thinking and explaining. E.g., some phenomenon related to plasma physics
 - The outcome of the 4th assignment has to be turned in before the following Monday's lecture. Upload your story at the MyCourses Assignments page

During Tuesday exercise session:

- Student marks the problems he/she is willing to go through on blackboard
- The correct solutions are worked out on the blackboard
- Course assistant will give hints and answer questions about the next problem set delivered the day before

How to determine your grade with course work:

- 50% from homework
- 50% from the two exams. Both exams have to be passed with 40% of the points

Recommended reading

By far, the most appropriate written material for this course is:

F. Chen: *Introduction to Plasma Physics and Controlled Fusion, Vol. 1 "Plasma Physics"*

(Vol. 2, "*Controlled Fusion*" was not, unfortunately, ever published.)

OTHER, VERY USEFUL MATERIAL:

Wesson: *Tokamaks*. This is the "Bible" for fusion plasma physics: it contains 'everything'. However, it is NOT a textbook but, rather, a reference document.

Fitzpatrick: *Lecture-notes-manuscript*

Well written text on basic plasma physics but generally with more advanced math. However, strongly recommended supplementary reading with discretion. PDF attached with author's permission.

Karttunen: *Plasmafysiikan perusteet*

Exams

First exam: Friday 23.10.2020 at 9-13

Second exam: Wednesday 9.12.2020 at XX-YY