

Space Instrumentation

ELEC-E4220 (5 cr)

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Guests



Today 31.10.2017

- Part II practicalities
- Overview of astronomical space missions so far: why, how, what have we learned (Docent Merja Tornikoski)

ESA

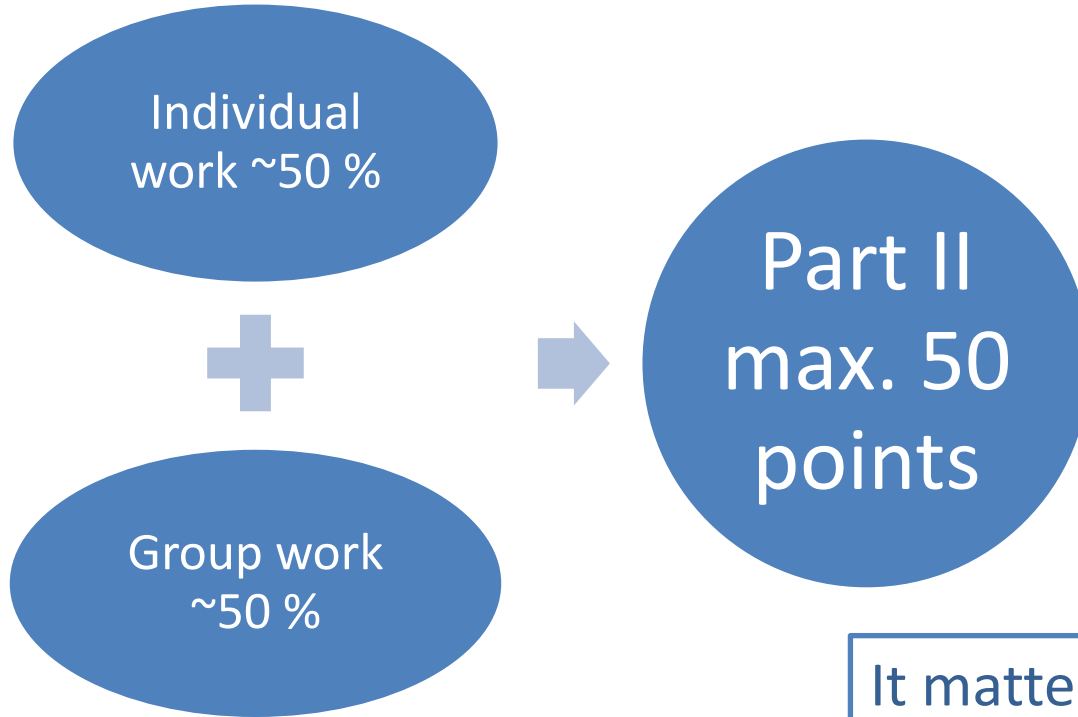


Part II schedule

Part II

- Tue 31.10. Astronomical space missions: an overview.
- Thu 2.11. **No teaching.**
- Tue 7.11. A look into the future. Space missions in the next few decades.
- Thu 9.11. Project work kick-off.
- Tue 14.11. High-energy space missions I. X-rays, XMM-Newton satellite, Chandra etc.
- Thu 16.11. Project work.
- Tue 21.11. High-energy space missions II. Gamma-rays, Fermi satellite.
- Thu 23.11. Project work.
- Tue 28.11. Lifecycle of a space mission. Case study: the Planck satellite.
- Thu 30.11. Project work.
- Tue 5.12. Project presentations.
- Thu 7.12. Project presentations, course wrap-up.

Evaluation and grading: Part II



It matters what you
do during the course!

To pass the course you need to do ...

- Part I:
 - Assignments
 - Final assignment
- Part II:
 - Assignments
 - Project work in groups (report, presentation)
 - Self- and peer-assessment

Project work in groups

- "Design your own astronomical space mission"
 - Scientific case
 - Payload; instruments
 - Orbit
 - Schedule
 - ...
- Kick-off and further instructions on Thursday 9.11. , final presentations on 5.12. and 7.12.

Assignments

- Essays of 2 to 3 pages (A4, normal font size and line spacing) that elaborate on teaching session topics.
- Returned to MyCourses within one week: DL next Tuesday at 14.15.

Self- and peer assessment

- At the end of the course the students evaluate:
 - their own performance.
 - their group members' performance.
- Detailed instructions given later.
- Checked by the teacher.

Definition of an essay on this course = a formal short piece of writing on a particular subject; an article; a short scientific paper.

Group meetings

- "Formal" meetings on Thursdays 12-14 in Simlab.
 - Only 4 formal meetings before presentations
- Meetings outside the formal times as needed.
 - Be sensible about this.
- Make an agenda and notes of each meeting.
 - Get organized!

Project report and presentation in groups

- Report includes a brief introduction and background section, the main findings and conclusions, and particularly the arguments why certain solutions were chosen.
- 5 to 10 pages (A4, normal font size and line spacing).
- Project presentations 5.12. and 7.12.

Part II requirements

| Student contribution | Points | Comments |
|---------------------------------|-------------------------|--|
| Assignments | 5 x 5 = 25 in total | 5 assignments, maximum of 5 points each. |
| Project report and presentation | 2 x 10 = 20 in total | Each group member receives the same amount of points, depending on the quality of the group effort. Points are given for the quality of the assessment. If a particularly low (<2) or high (>4) peer evaluation is given to a student, this has the potential of lowering or increasing the final course grade (i.e. do not be lazy in your group). |
| Self- and peer-assessment | 5 | |

- The maximum number of points is 50. Approx. 50% are required for passing the course.

The final course grade is based on the total number of points in Parts I and II: 100 points.

Next steps

- First assignment posted in MyCourses today. Deadline Tuesday 7.11. at 14.15.
- No lecture next Thursday 2.11.
- Next lecture on Tuesday 7.11. :
Dr. Joni Tammi: A look into the future. Space missions in the next few decades.
- Project work starts on Thursday 9.11., be there!