## CanSat: Hands-On Satellite Design
### Summer University 2017 Block 3

### Week 1 July 24th-28th

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#### Schedule:
- **9:00 - 10:30**
  - 2. Introduction to astronautics
  - 5. Introduction to electronics design
  - 7. Introduction to electronics design
  - No class

- **11:00 - 12:30**
  - Welcome Session
  - 3. Introduction to astronautics and short tour
  - 6. Introduction to electronics design
  - 8. Introduction to soldering and using workshop tools

- **14:00 - 16:00**
  - 1. Introduction to the course
  - 4. Project work: Planning the CanSat mission
  - 9. Introduction to soldering and using workshop tools

- **16:30 - 20:00**
  - Cultural Session

### Week 2 July 31st-August 4th

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#### Schedule:
- **9:00 - 10:30**
  - 10. Introduction to CAD design
  - 13. Introduction to programming
  - 16. Introduction to water rocket design
  - 18. Introduction to programming
  - No class

- **11:00 - 12:30**
  - 11. Introduction to CAD design
  - 14. Introduction to programming
  - 17. Introduction to water rocket design
  - 19. Introduction to programming

- **14:00 - 16:00**
  - 12. Project work: CanSat mission design
  - 15. Project work: CanSat mission design
  - 20. Project work: CanSat mission design

- **16:30 - 20:00**
  - Cultural Session

**Kommentiert [SU1]: Instructions for lecturers.**
- Please fill out the syllabus by renaming every session with a session name e.g. "session 1" becomes "1. Introduction to methods and practices".
- Please fill out the assessment methods in the text box at the bottom. Label relevant assessments in the syllabus as such, with a relevant title. Please give them a different colour.
- Please fill out the reading list in the text box at the bottom. Give links to publications where possible. You can assign readings to specific sessions, or simply to the relevant week.
- Please make sure the teaching hours average 18 hours per week (the session structure below does this).
- The cultural program will be posted on our website.
### Week 3 August 7th-11th

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<tr>
<td>9:00 - 10:30</td>
<td>21. Introduction to BEESAT</td>
<td>24. Introduction to programming</td>
<td>27. Project work: CanSat mission design</td>
<td>29. Project work: CanSat mission design</td>
<td>No class</td>
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<td>11:00 - 12:30</td>
<td>22. Introduction to BEESAT</td>
<td>25. Introduction to programming</td>
<td>28. Project work: CanSat mission design</td>
<td>30. Project work: CanSat mission design</td>
<td>No class</td>
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<td>14:00 - 16:00</td>
<td>23. Project work: CanSat mission design</td>
<td>26. Project work: CanSat mission design</td>
<td>Cultural Session</td>
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<td>16:30 - 20:00</td>
<td>Cultural Session</td>
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### Week 4 August 14th-18th

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<tr>
<td>9:00 - 10:30</td>
<td>32. Satellite subsystems</td>
<td>35. Project work: CanSat mission design</td>
<td>38. Assessment: Presentation</td>
<td>40. Launch campaign</td>
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<td>11:00 - 12:30</td>
<td>33. Satellite subsystems</td>
<td>36. Project work: CanSat mission design</td>
<td>39. Assessment: Presentation</td>
<td>41. Launch campaign</td>
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<td>14:00 - 16:00</td>
<td>34. Project work: CanSat mission design</td>
<td>37. Project work: CanSat mission design</td>
<td>Cultural Session</td>
<td>42. Launch campaign</td>
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<td>16:30 - 18:00</td>
<td>Cultural Session</td>
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<td>Farewell Party</td>
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Assessment information for students

Further information on assessments
The assessment is based on the project which is conducted throughout the whole duration of the course. The students work in small teams whereat team marks as well as individual marks will be given. The final grade of each individual student is composed of the following components:

- Examination of the team’s project work by a peer of space engineers (Team grade, 40%)
- Presentation of the project work and answering to critical questions in front of a review board (Individual grade, 40%)
- Performance of the team’s system during the launch campaign (Team grade, 20%)

Further Information on excursions
There will be a short tour through the laboratories of an institute or company which is developing space technologies.

Key readings for students

Week 1
Handbook of Space Technology, W. Ley
Make: Electronics, C. Platt

Week 2
Arduino Cookbook, M. Margolis

Week 3
Handbook of Space Technology, W. Ley
Arduino Cookbook, M. Margolis

Week 4
Handbook of Space Technology, W. Ley