GIS-E5050: ADVANCED GEODESY

02.03.2021-13.04.2021
GNSS module

https://www.maanmittauslaitos.fi/tutkimus/tutkimustoiminta/metsahovin-geodeettinen-tutkimusasema

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Welcome to the course Advanced Geodesy!

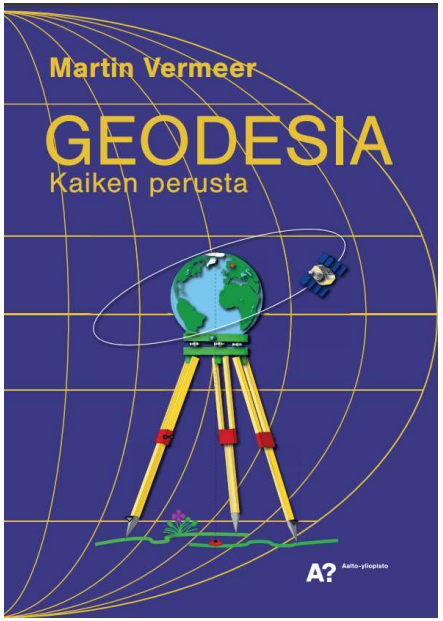
On this course you are going to have a deeper look into different gravity measurements, very long baseline interferometry (VLBI) and modern satellite positioning systems.

Schedule for live lectures

When	What	Who	DL's, exercises, etc	Week
Tues 2.3. 10-12	Introduction	MN		9
Weds 3.3. 12-14	VLBI: Principles	NZ	exercise: VLBI	9
Tues 9.3. 10-12	Corrections needed in the measurements	MN		10
Weds 10.3. 12-14	VLBI: Experiment	NZ	exercise: VLBI	10
Tues 16.3. 10-12	GNSS: From meter to sub-centimeter	OA		11
Weds 17.3. 12-14	GNSS: Network-based and real-time positioning	OA	exercise/demo: GNSS	1
Tues 23.3. 10-12	GNSS: GNSS precise positioning in the real-world	OA		12
Weds 24.3. 12-14	Gravity: Theoretical background and maths	MBK	exercise: GNSS	12
Tues 30.3. 10-12	Gravity: Measurements	MN		13
Weds 31.3. 12-14	Gravity: Geopotential and geoid	MBK	exercise: gravity	13
Tues 6.4. 10-12	Presentations	MN		14
Weds 7.4. 12-14	Presentations	MN	exercise: gravity	14
	Exam week (no exam, assignment DLs)			15

Live lectures Tuesdays and Wednesdays
Exercise sessions Wednesdays 14-16

To pass the course: three assignments, three quizzes, and a short written report and a presentation of it.



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These slides **do not** follow the book!

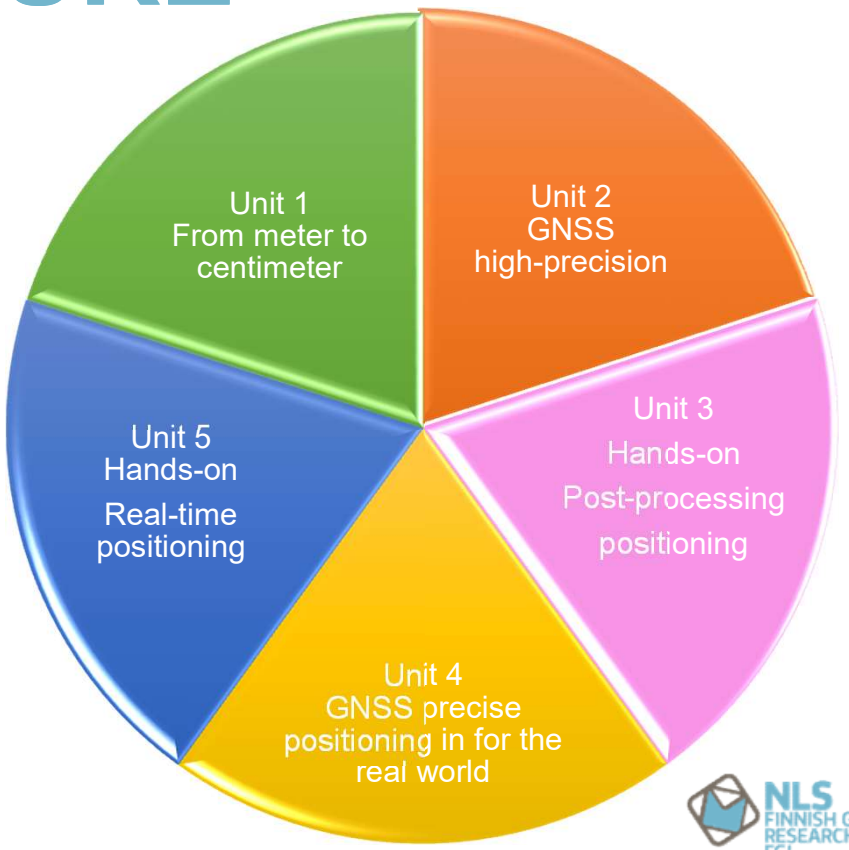
DISCLAIMER

- The lectures aim **to increase your awareness** on how different levels of positioning performance may be achieved using GNSS technology.
- Lots of things & terms! **Do not get** intimidated or overwhelmed.
- **Hands-on experiences** are meant to become more familiar with all these.
- Feel free to ask questions for further clarifications **at any time**.

MODULE STRUCTURE

- Three lectures (~ 90 min / unit)
- Two hands-on sessions
- Reflection leading questions / unit
- Real-time demonstration
- Active student participation
- Questions on the chat
- Raise your hand

- Reflection essay + module quiz



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