



Beyond Null Hypothesis Testing (S66)

19-21 August 2024

Course Director: Rebecca Kuiper

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| Day | Time | Type | Description | Location |
|--------|---------------|---|--|--|
| Monday | 09:00 – 12:00 | Mix of lecture and small hands-on exercises (Anne Scheel) | Introduction to the epistemology of hypothesis testing; principles of null-hypothesis significance testing (NHST); common problems with NHST in practice (publication bias, questionable research practices, misconceptions) | Minnaert building Room 0.11 |
| | 12:00 – 13:00 | Lunch | In Vening Meinesz building | |
| | 13:00 – 16:30 | Mix of lecture and computer lab (Anne Scheel) | Open-science practices; equivalence testing for improved inferences with NHST | |

| Day | Time | Type | Description | Location |
|---------|---------------|---|---|--|
| Tuesday | 09:00 – 12:00 | Lecture + hands-on parts (Rebecca Kuiper) | Introduction to informative hypotheses, Bayesian model selection (BMS), and model selection using information criteria (i.e., AIC and its generalization called the GORIC). This includes interpreting Bayes factors, posterior model probabilities, and GORIC weights. | Minnaert building Room 0.11 |
| | 12:00 – 13:00 | Lunch | In Vening Meinesz building | |
| | 13:00 – 16:30 | Lecture + Computer lab (Rebecca Kuiper) | Lecture on what is left of topics above. Work on exercises and ask questions. | |

| Day | Time | Type | Description | Location |
|-----------|---------------|---|--|--|
| Wednesday | 09:00 – 12:00 | Lecture + hands-on parts (Rebecca Kuiper) | Updating a hypothesis and combining evidence from multiple studies. Notably, the evaluation of informative hypotheses using model selection, discussed on Day 2 (Tuesday), plays an important role here. | Minnaert building Room 0.11 |
| | 12:00 – 13:00 | Lunch | In Vening Meinesz building | |
| | 13:00 – 16:30 | Lecture + Computer lab (Rebecca Kuiper) | Lecture on what is left of topics above. Work on exercises and ask questions. | |

Breaks

- ✓ 8.30am coffee & tea
- ✓ 10.30am coffee & tea
- ✓ 12.00-13.00 (or an hour around that time) lunch in [Vening Meinesz building](#)
- ✓ 14.30 soda drinks (Dutch: fris) and fruit

Questions

- If you have any course-related questions, please let us know (MS.SummerSchool@uu.nl).
- In case of other questions (e.g., related to housing), contact **Utrecht Summer School Organization** (info@utrechtsummerschool.nl or +31 (0) 30 253 4400).

For information about the Social Programme, please visit the [Utrecht Summer School website!](#)