NTNU

Mandatory project assignment

TIØ4317

Morten Risstad
10. January 2025

The Assignment – What?

- Empirical «mini-project»
  - Define research question
  - Retrieve data
  - Estimate models
  - Analyse and present results
- Group work
- Related to the time-series part of TIØ4317
- Deliverables
  - Replication package on GitHub
  - Peer-review report evaluating other group(s)
  - Physical presentation

The time-series part of TIØ4317

TIØ4317 - Empirical and Quantitative Methods in Finance

Progress plan spring 2025

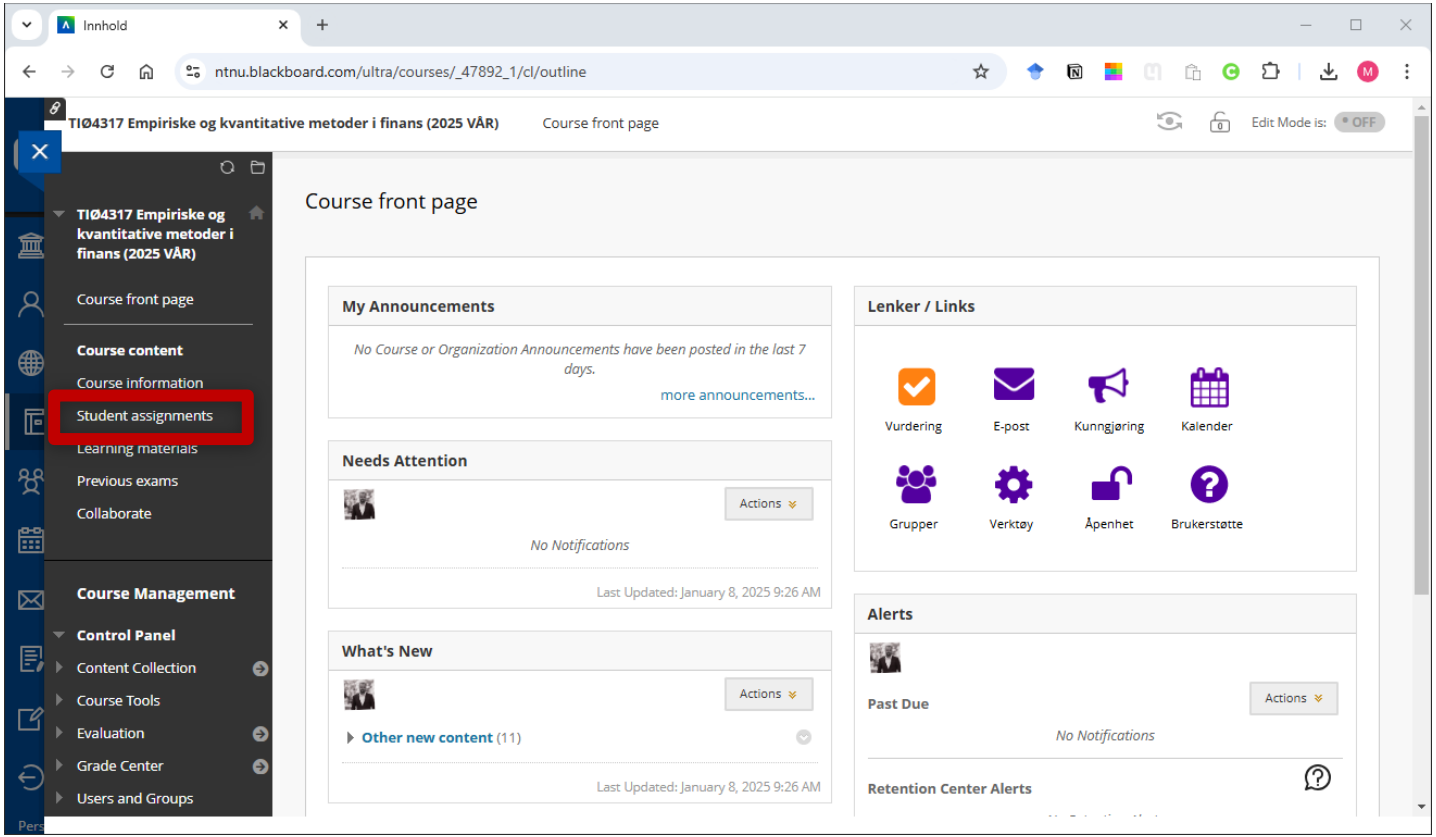
Updated: **03.01.2025**

Week	Date	Weekday	Time	Room	Teacher	Topic	Brooks	Tsay	Hult
Part I: Empirical finance									
2	10.01.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Introduction | Descriptive statistics	1; 15	1	
3	17.01.2025	Friday	13:15-16:00	GL-RFB R9	Maria	Statistical inference | Cross-sectional data	2; 3		
4	24.01.2025	Friday	13:15-16:00	GL-RFB R9	Maria	Linear regression	3; 4		
5	31.01.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Post estimation diagnostic tests	5		
6	07.02.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Univariate time series models	6	2	
7	14.02.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Forecasting | Guest lecture: Hafslund	6		
8	21.02.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Volatility models	9	3; 10	
9	28.02.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Multivariate time series models	7; 8	8; 9	
10	07.03.2025	Friday	13:15-16:00	GL-RFB R9	#N/A	Winter holiday			
11	14.03.2025	Friday	13:15-16:00	GL-RFB R9	Maria	Panel data | Q&A Part 1	11		
Part II: Financial optimization and risk management									
12	21.03.2025	Friday	13:15-16:00	GL-RFB R9	Stein-Erik	Risk Measures I			6
13	28.03.2025	Friday	13:15-16:00	GL-RFB R9	Stein-Erik	Risk Measures II		7	7
14	04.04.2025	Friday	13:15-16:00	GL-RFB R9	Stein-Erik	Portfolio optimization			4; 5
15	11.04.2025	Friday	13:15-16:00	GL-RFB R9	#N/A	Ind-øk trip break			
16	18.04.2025	Friday	13:15-16:00	GL-RFB R9	#N/A	Easter break			
Student project presentations									
17	25.04.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Presentations and peer-review			
18	02.05.2025	Friday	13:15-16:00	GL-RFB R9	Morten	Presentations and peer-review			

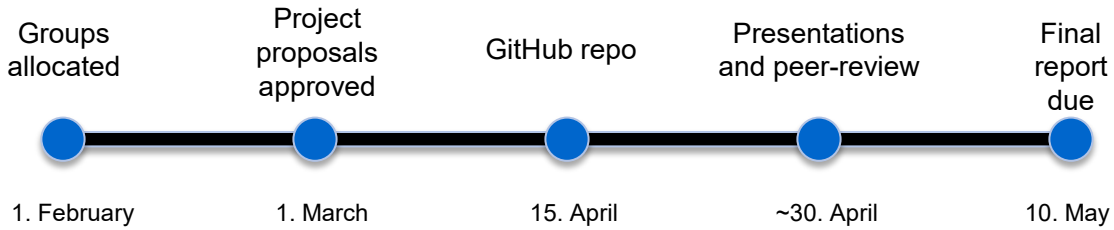
The Assignment – Why?

- Useful preparation for M.Sc. Thesis
- Problem solving in groups
- Applied project
- Gain experience with relevant applied tools
  - Data retrieval
  - Programming
  - Report writing
- Presentation training
- Contribute to fellow students trough peer-review

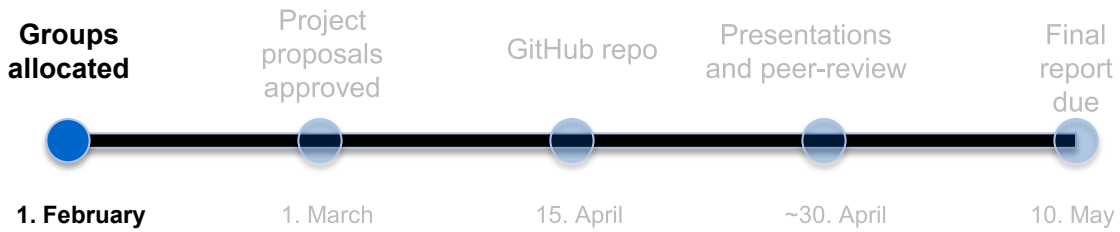
Blackboard


Innhold
ntnu.blackboard.com/ultra/courses/_47892_1/cl/outline
TIØ4317 Empiriske og kvantitative metoder i finans (2025 VÅR)
Course front page
Edit Mode is: OFF
TIØ4317 Empiriske og kvantitative metoder i finans (2025 VÅR)
Course front page
Course content
Course information
Student assignments
Learning materials
Previous exams
Collaborate
Course Management
Control Panel
Content Collection
Course Tools
Evaluation
Grade Center
Users and Groups
Course front page
My Announcements
No Course or Organization Announcements have been posted in the last 7 days.
more announcements...
Needs Attention
Actions
No Notifications
Last Updated: January 8, 2025 9:26 AM
What's New
Actions
Other new content (11)
Last Updated: January 8, 2025 9:26 AM
Lenker / Links
Vurdering
E-post
Kunngjøring
Kalender
Grupper
Verktøy
Åpenhet
Brukerstøtte
Alerts
Past Due
Actions
No Notifications
Retention Center Alerts

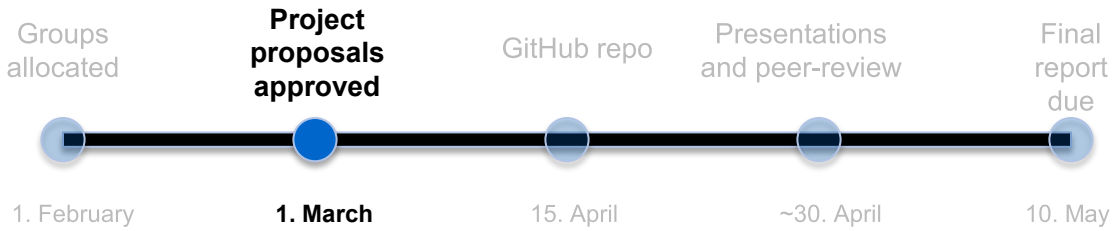
Project timeline[1]



1: Might be adjusted



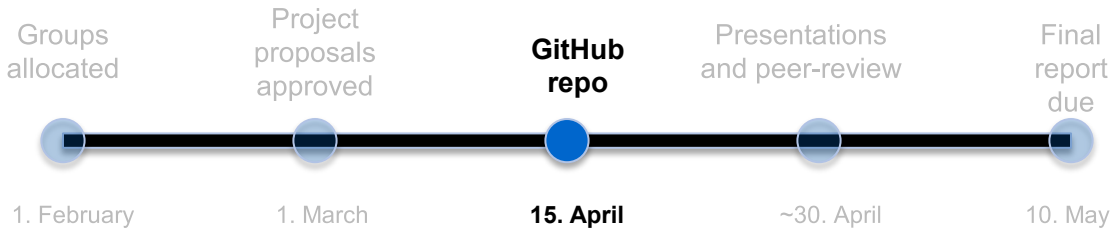
- Students will be randomly allocated to groups
- Group size ~3-6
- Workload should be uniformly distributed
- Group allocations will be posted 1. February



1 A4 page, outlining

- Research question
- Expected code usage
- What data and where to retrieve it
- Sketch of empirical design
- Distribution of work among group members

Details for submission TBD



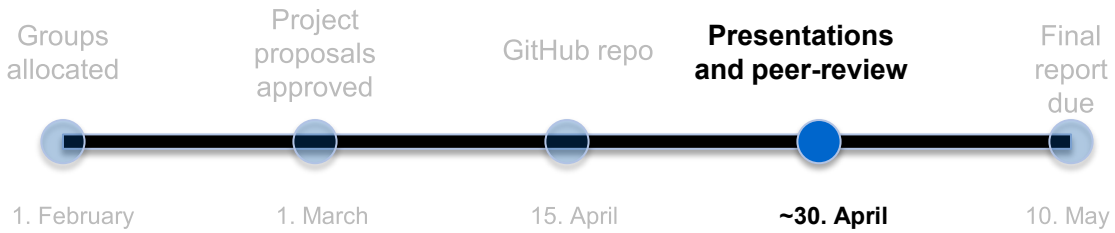
The GitHub repo will contain

- Written report
- Code
  - including source code and any supplementary files
  - programming language should be R
    - Python also acceptable
- Data
- Recorded presentation

Results must be replicable

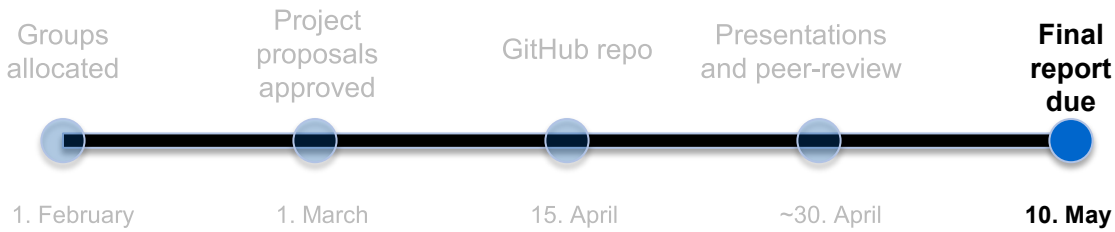
The written report

- Acceptable file formats:
  - Jupyter notebook: *. ipynb
  - Quarto document: *.qmd
- Max 10 A4 pages
- Section on use of LLMs
  - How have you used them?
  - What are your experiences?



30 min. session

- Present your work
  - PowerPoint presentation
- Receive peer-review from peer-group
  - PowerPoint presentation
- Discussion



Final report on GitHub

- Incorporating comments from peer-review

Details for submission TBD

Grading (pass/fail)

- Empirical project (50%)
  - Quality of written report
  - Efficency of code work
  - Presentation

- Peer-review (50%)
  - Quality of written peer-review report[1]
  - Usefulness of feedback

1: Details on how to write the peer-review report will follow