- ADVANCED PROCESS CONTROL (APC) module 2024
- Need to register in TKP4555 (module) or KP8115 (PhD)
- Ask for office space in K4, 2nd floor

- An introduction to the module is given
- **Wednesday 21 August 2024 10:30-11:00 in room K4.205 (2nd floor in building K4)**
- The rest of the semester the lectures/exercises are planned to be (I hope this is OK for everyone)
- **Wednesdays 09:15-12:00 in room K4.205**
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- Course contents:
- • **Learning outcome:** the students will be able to design plantwide control systems.
- • **Content:**
  - – Control structure design for complete chemical plants.
  - – Optimal economic operation
  - – Selection of economic controlled variables
  - * Active constraints
  - * Self-optimizing control
  - * Gradients as self-optimizing variables.
  - – Advanced regulatory control ("advanced PID control" = decomposition of the control systrem)
  - – Consistent inventory control.
  - – Tuning of PID controllers.
  - – Multivariable control
  - * Decentralized control and RGA.
  - * MPC (when should it be used)
  - – Real-time optimization (RTO)
  - * Feedback implementions
- • **Teaching activities:** Lectures, exercises, computer simulation.
- • **Course material**: Copies from scientific papers and books including
- * New paper (2023) on "Advanced control using decompotion and simple elements": https://folk.ntnu.no/skoge/publications/2023/skogestad-advanced-regulatory-control_arc/
- * Chapter 10 in Skogestad and Postlethwaite, "Multivariable Feedback Control, Wiley, 2010: https://folk.ntnu.no/skoge/book/ps/
- See also here for more information: https://folk.ntnu.no/skoge/vgprosessregulering/