

Automation in Complex Systems EIEN35

2022-04-07

Time table: March - June 2022 (study term 4)

The lectures are held in room M:IEA; NOTE! No fixed week-schedule! Follow TimeEdit!

| W | Day | Time | Lecture | Lecturer | Literature | Project & Exercises |
|-----------------------|--------------|----------------|--|--------------------------------|--|--|
| 12 | Mon March 21 | 8-10 | Introduction + administration | GL | | |
| | Tue | | | | | |
| | Wed | 13-15 | Introduction project exercise / Dynamic systems / Simulators | RS, UJ | Project Description/ Chapter 8, Shampine-Gear | Start Lab Project |
| | Thu | | | | | |
| | Fri | 8-10 | Dynamic systems / Simulators | UJ | | |
| 13 | Mon March 28 | 10-12 | Queuing theory | UJ | Chapter 6.6, 7 | |
| | Tue | | | | | |
| | Wed | 15-17 | Queuing theory | UJ | | |
| | Thu | | | | | |
| | Fri | 8-10 | <i>Exercise seminar</i> | UJ | | |
| 14 | Mon April 4 | 10-12 | Process monitoring / Operator support (PR) | C. Rosen | Chapters 9, 11 – 12, Wise-Gallagher, Kramer-Fjellheim | |
| | Tue | | | | | |
| | Wed | | | | | |
| | Thu | 10-12 | Plant-wide control | C. Rosen | Skogestad | |
| | Fri | | | | | Deadline simulation exercise 1 |
| <i>Easter holiday</i> | | | | | | |
| 17 | Mon April 25 | 10-12 | <i>Exercise seminar</i> | UJ/GL | | |
| | Tue | | | | | |
| | Wed | 13-15 | Data bases | GL | Chapter 17 | |
| | Thu | | | | | |
| | Fri | | | <i>Valborg</i> | | |
| 18 | Mon May 2 | 10-12 | ISA88, ISA95 and Industry 4.0 | Charlotta Johnsson | | |
| | Tue | | | | | |
| | Wed | 13-15 | Next wave of digitalization, its tools and challenges. | Tobias Antius Ulf Yngvesson | Novotek | Deadline simulation exercise 2 |
| | Thu | | | | | |
| | Fri | 8-10 | HMI | GL | Chapter 9 | |
| 19 | Mon May 9 | 8-10 | Visit at Tetra Pak | GL | | |
| | Tue | | | | | |
| | Wed | 8-10, 13-15 | Complexity | G. Olsson | | Two lectures: 8-10, 13-15 |
| | Thu | | | | | |
| | Fri | 8-10, 13-15 | -Communication -Structural complexity in industrial automation | T. Gillblad | | Two lectures: 8-10, 13-15 |
| 20 | Mon May 16 | 8-10 | Simulation exercise discussions | UJ | | |
| | Tue | | | | | |
| | Wed | 13-17 | Lab project | RS/GL/UJ | | Presentation of the Lab project |
| | Thu | | | | | |
| | Fri | | | <i>Lundakarnevalen</i> | | |
| 21 | Mon May 23 | 10-12 | Course repetition | UJ/GL | | |
| 22 | Wed June 1 | 14-19 | Exam | | | Sparta: C |

Teaching staff: Dr Gunnar Lindstedt (GL), Dr Ulf Jeppsson (UJ) and Dr Ramesh Saagi (RS)

Guest lecturers: Prof.emer. Gustaf Olsson, Dr Christian Rosén, Tech.Lic. Thomas Gillblad,
Prof Charlotta Johnsson, MSc Tobias Antius.