

Critical Embedded Systems

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Fault Tolerant Systems Research Group

- Department of Measurement and Information Systems
 - Approx. 70 employees, 35 PhD students
 - Embedded Systems
 - Intelligent Systems
 - **Fault Tolerant Systems (FTSRG)- 24 person**
- Software engineer, electrical engineer, medical engineer
- Basic courses (software engineering)
 - Digital systems
 - Operating systems
 - Artificial intelligence
 - Embedded systems
 - Formal methods
 - Measurement laboratory
- Specialization (software engineering)
 - Integrated intelligent systems (BSc)
 - Systems design (BSc)

Fault Tolerant Systems Research Group

■ Lectures

- Ákos Horváth
- István Majzik
- Tamás Bartha
- + invited speaker



■ Labs:

- Rebeka Farkas



Course structure

- Basics of Safety
 - Definitions
 - Requirements
- Techniques for verification and validation of safety
 - Formal methods
 - Hazard analysis
- Nuclear safety and its requirements
 - Techniques, requirements and architectures
- Case studies
 - Avionics
 - Railway
 - Nuclear

Requirements

- „Self-processing of a relevant topic”
 - Processing of an scientific paper on safety
 - Presentation in 12+3 minutes
 - Guidelines
 - Relevant to the course
 - You can provide your own selected publications or select from our list
 - **(handout 3. week, submission: 11. week)**
- Oral exam
 - HW has a significant impact on the final grade (50%)
 - Extra assignments can be done during the semester for extra points
 - Materials: mainly the slides

Contact

- Homepage

- Course material
- <https://www.inf.mit.bme.hu/en/edu/courses/critembed>

- Class:

- Wednesday, I.L. 405, 10:15-12:00
- On even weeks, Friday, I.E. 320 10:15-12:00
- **Please arrive on time!**

