Digital Signal Processing



Organization

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Organization

General Information



Prerequisites:

Basic knowledge of signal and system theory

Format and assessment:

- Lectures and Tutorials (V3 + Ü1), 6 Credits
- Written exam (100 %), 180 min, open book

Manuscript:

- Can be purchased in A5 booklet format from the Kittler Student Center (KSC)
- Can be also used during the exam!

Platform for announcements and materials:

Moodle (https://moodle.tu-darmstadt.de)

Lecture & Tutorials & Consultation



Lectures (Prof. Dr.-Ing. A.M. Zoubir)

Day	Time	Room
Wed	13:30-15:10	S306 051
Thu	14:25-15:10	S306 051

Tutorials (C. Eckrich)

Group	Day	Time	Room
1	Fri	09:50-11:30	S101 A5
2	Tue	16:15-17:55	S306 051

➤ Tutorials are held bi-weekly in two alternating groups, no registration required! First tutorials are on Fri, 01.11.23 (Group 1) and Tue, 05.11.23 (Group 2).

Lecture & Tutorials & Consultation



Open Question Session (C. Eckrich)

Day	Time	Room
22. Oct.	16:15-17:55	S306 051
14. Jan.	16:15-17:55	S306 051

- Extra open consultation hour before the exam
- Moodle Question Forum
- Meeting requests via email

Organization

Announcements and Materials



Besides announcements, all materials and information can be found on Moodle:

- Organization slides
- Lecture
 - Slides
- Tutorials
 - Sample tasks and solutions
 - Slides
- Manuscript
- Timetable
- Forum for questions
- Recommended literature
- Previous exams



Lecture

Chapters



- Discrete-Time Signals and Systems
- 2. Digital Signal Processing of Continuous-Time Signals
- Filter Design
- 4. Finite Impulse Response Filter Design
- 5. Design of Infinite Impulse Response Filters
- 6. An Introduction to Random Variables and Stochastic Processes
- 7. The Finite Fourier Transform
- 8. Estimation of the Spectrum
- 9. Non-Parametric Spectrum Estimation
- 10. Parametric Spectrum Estimation
- 11. Advances in Digital Signal Processing



Exchange



GO OUT! IHR STUDIUM IM AUSLAND

etit

- Ein oder zwei Semester im Ausland studieren
- Möglich ab dem 5. Semester
- Bewerbung ab sofort bis zum 30. November Start im WiSe 2025/26
- 80 Partnerunis in Europa, Nord-u. Südamerika, Asien, Ozeanien
- Anerkennung der erworbenen Leistungen
- Double Degree
- Finanzielle Unterstützung

NÄCHSTE INFOVERANSTALTUNG:

29.10.24 | 13:30 Uhr S3|06, 052

Do you have further Questions?



- 1. Consult the moodle forum
- 2. Visit the SPG webpage
- 3. Contact supervisor: Christian Eckrich
- 4. Contact tutors who held the respective tutorial

eckrich@spg.tu-darmstadt.de

