

Summer Semester 2020

Introduction to Computational Physics (UKWR2)

Lecturers: Ralf Klessen, Rainer Spurzem

Location Wed 9:15-10:45, Fri 11:15-12:00, INF 227 KIP Hörsaal 2

The Lecture will be offered in **English Language**.

Lecture Time Plan

(subject to change depending on progress of lecture)

Wed 9.15	Fri 11.15	Week/Tut Number	Spurzem	Klessen	Chapter-Number: Topic
22.4	24.4.	1/1		x	Introduction, 1-3: Practical Exercises/Mathematica
29.4	—	2/2		x	4: Ord. Diff. Eqs. I: Two-Body Problem, Elementary Euler
6.5.	8.5.	3/3		x	6: Ord. Diff. Eqs. II: Runge-Kutta (2,4,higher) and more
13.5.	15.5.	4/4		x	5. Linear Algebra I / Matrices / Eigenvalues
20.5.	22.5.	5/5		x	5. Linear Algebra II / Householder / QR-QM, ...
27.5.	29.5.	6/6		x	5. Linear Algebra III quantum mechanics, Schrödinger-Eq.
3.6.	5.6.	7/7	x	x	Transition 5.-6.
10.6.	12.6.	8/8	x		6: Ord. Diff. Eqs. III: Population Dynamics / Stability I
17.6.	19.6.	9/9	x		6. Ord. Diff. Eqs. IV: Lorenz-Attractor, Nonl. Dynamics
24.6.	26.6.	10/10	x		6. Ord. Diff. Eqs. V: Lorenz-Attractor, Nonl. Dynamics
1.7..	3.7.	11/11	x		8: Random Numbers/Monte Carlo I
8.7.	10.7.	12/12	x		9: Monte Carlo II/Ising Model I
15.7.	17.7.	-/-	x		9: Ising Model II
22.7.	24.7.	-/-			Preparation Week (lecture?) Outlook
29.7.	31.7.	-/-			Exam Week (no lecture)

Relevant Public Holidays: May 1 (Fri), May 21 (Thu), June 1 (Mon), June 11 (Thu)