

MA30056: Complex Analysis

INFORMATION

Lecturer: Bernd Sing

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Organisation

Lecture: Mon 14:15 – 16:05, 4East 3.10

Exercise session: Thu 10:15 – 11:05, 2East 3.1 (1st week – 29.01: lecture)

Drop-in session: Tue 10:15 – 11:05, 2East 3.1

Weekly exercise sheets: Mon → Mon

Web: <http://www.maths.bath.ac.uk/~bs259/ma30056/>

Moodle: Access key (if necessary) is ma30056

I will probably be away in the first and the last week of March. Someone will cover teaching in the first week of March, while we will probably use the week before the Easter break as repetition week.

Content

- I. The complex number plane
- II. Functions of a complex variable
- III. Integration in the complex plane
- IV. Sequences and series
- V. Residue calculus

Literature

- J.W. Dettman: Applied Complex Variables; Dover, NY (1984); library: 513.317 DET
- I. Stewart & D. Tall: Complex Analysis (The Hitchhiker's Guide to the Plane); Cambridge UP, Cambridge (1985); library: 513.317 STE
- L.V. Ahlfors: Complex Analysis; McGraw-Hill, NY (1966); library: 513.317 AHL
- J.P. Gilman, I. Kra, R.E. Rodríguez: Complex Analysis (In the Spirit of Lipman Bers); Springer, NY (2008); library: e-book
- K. Knopp: Theory of Functions I & II; Dover, NY (1945); library: 513.31 KNO
- J.E. Marsden: Basic Complex Analysis; Freeman, San Francisco (1973); library: 513.317 MAR
- T. Needham: Visual Complex Analysis; Clarendon Press, Oxford (1997); library: 513.317 NEE
- H.A. Priestley: Introduction to Complex Analysis; Oxford UP, Oxford (2001); library: 513.317 PRI
- E.B. Saff & A.D. Snider: Fundamentals of Complex Analysis (with Applications to Engineering and Science); Pearson Education, New Jersey (3rd ed., 2003); library: 513.317 SAF
- R.A. Silverman: Introductory Complex Analysis; Dover, NY (1972); library: 513.317 SIL

Remarks

- If something is unclear, ask for clarifications!
(I don't want to read a comment in the evaluation like "I found the section XY confusing and would have preferred more time spent on that." when nobody asked a question on XY!)
- If you cannot read something on the blackboard or OHP or if I talk too quietly, tell me!
(Again, the end-of-semester evaluation is the wrong place for me to find things like that out.)
- I am not an English native speaker, so please excuse me if I use strange vocabulary or grammar and politely tell me the correct form!
(I don't want to do the same errors over and over again!)
- Please, attempt the exercises and hand them in even(!) if you are stuck!
(This gives me a chance to see how much is understood!)