

MATH 523

RIEMANN SURFACES

FALL 2011-2012

INSTRUCTOR: Prof. Dr. Vyacheslav Zakharyuta, Sabancı University, FENS

TIMETABLE: Thursday, 13.40-16.30

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ASSESSMENT: To be announced

PRE-REQUISITES: Consent of the instructor

PRINCIPAL TEXTBOOK: O. Forster, *Lectures on Riemann Surfaces*, Springer-Verlag, 1977

PROGRAMME

WEEKS	SUBJECTS TO BE COVERED
1 & 2	Riemann surfaces: definition and examples. Properties of holomorphic mappings.
3 & 4	Homotopy of curves. The fundamental group. Coverings.
5 & 6	The universal coverings and covering transformations.
7 & 8	Sheaves. Analytic continuation.
Will be announced	Mid-term Exam
9 & 10	Algebraic functions.
11 & 12	Differential forms and their integration.
13 & 14	Compact Riemann surfaces.
Will be announced	Final Examination

SUGGESTED READING:

- L. V. Ahlfors, *Complex Analysis*, McGraw-Hill, NY, 1966