



Course Specification Document

Title	Complex Analysis
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Credits	4 ECTS
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Aims	This course aims to study of basic concepts of complex analysis
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Intended learning outcomes

On successful completion of this course, the student will be able to:

- Study power series, their properties and uses.
- Prove the properties of analytic functions and solve the related exercises and problems.
- Use Cauchy theorem about holomorphic functions and its consequences.
- Expand complex functions in Laurent series, calculate residues and use residue theorem to calculate several types of integrals.

Syllabus

- Power Series, properties of their sums, and applications.
- Analytic functions.
- Cauchy theory for holomorphic functions.
- Laurent series expansion, residues and applications of the calculus of residues.