Module name

Mathematics III (Electrical Engineering)

Module nr.	Credit points	Workload	Self-study	Module duration	Module cycle
04-00-0111	9 CP	270 h	180 h	1 Term	Winter term

Language	Module owner
German	Apl. Prof. Dr. rer. nat. Steffen Roch

1 Teaching content

integral calculus: surface integrals, integral theorems; ordinary differential equations: linear and non-linear differential equations, existence and uniqueness of solutions, elementary techniques, linear systems with constant coefficients, Laplace transform; Complex Analysis: complex functions, complex differentiation, Cauchy's integral formula, power series and Laurent series, residues, residue theorem

2 Learning objectives

3 Recommended prerequisites for participation

Recommended: Mathematik I und Mathematik II (für ET)

4 Form of examination

DefaultModule exam:

- DefaultModule exam (Technical examination, Oral/written examination, Default RS)

Usually the exam is taken in form of a written test (90 min), except when there are only a small number of potential participants. In this case, the exam can be taken in the form of an oral exam (30 min). The decision about the form of the exam is taken and communicated during the first two weeks of the lecture, based on the prospective number of students taking the exam.

5 Prerequisite for the award of credit points

Passing the final module examination

6 Grading

DefaultModule exam:

- DefaultModule exam (Technical examination, Oral/written examination, Weighting: 100 %)

7 Usability of the module

B.Sc.ETiT, B.Ed.ETiT, B.Sc.WIETiT, B. C. MedTech, B.Sc.MEC, B.Sc.CE, B.Sc.IST

8 Grade bonus compliant to §25 (2)

9 References

Courses

DefaultCourse nr.	Course name		
04-00-0127-vu	Mathematics III (Electrical Engineering)		
Instructor		**Type**	**SWS**
Apl. Prof. Dr. rer. nat. Steffen Roch		Lecture and practice	6