

## Course

# GE3 - Electrical Engineering 3

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### ^ General information

<b>Long name</b>	Electrical Engineering 3
<b>Approving CModule</b>	<a href="#">GE3_BaET</a>
<b>Responsible</b>	Prof. Dr. Rainer Kronberger Professor Fakultät IME
<b>Level</b>	Bachelor
<b>Semester in the year</b>	winter semester
<b>Duration</b>	Semester
<b>Hours in self-study</b>	96
<b>ECTS</b>	5
<b>Professors</b>	Prof. Dr. Rainer Kronberger Professor Fakultät IME
<b>Requirements</b>	FO7_GE1, FO7_GE2
<b>Language</b>	German
<b>Separate final exam</b>	Yes

## Final exam

### Details

written exam 120 minutes

### Minimum standard

4.0

### Exam Type

written exam 120 minutes

## ^ Lecture / Exercises

### Learning goals

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#### Knowledge

Static electric fields  
Electric field strength  
Electric flux  
Electric energy  
dielectric materials  
capacitance  
Static magnetic fields  
magnetic field strength  
magnetic flux  
inductance  
magnetic energy  
magnetic materials  
Transformer  
electromagnetic fields  
Field energy  
Maxwell equations

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#### Skills

To teach the mathematical and physical origin and effects of static and magnetic electric fields. To understand the derivation of inductance and capacitance. Students learn the influences of fields on matter. Furthermore, the students should learn to grasp and understand the complex electrotechnical interrelationships.

### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	1
Exercises (shared course)	0
Tutorial (voluntary)	0

### Separate exam

