Universität der Bundeswehr München

Electrical Engineering & Information Technology (B.Sc.)

Program of Study:	Electrical Engineering & Information Technology
Department:	Electrical Engineering & Information Technology
Degree Awarded:	Bachelor of Science (B.Sc.)
Form of Study:	full-time undergraduate study on campus
Language of Teaching:	German
Commencement of Study:	Fall trimester
Standard Period of Study:	3 years
Academic Counseling:	Department Chair of E.E. & I.T. E-mail: studiendekan.eit@unibw.de
Homepage:	http://www.unibw.de/eit

I) Program Description

Electrical Engineering and Information Technology are currently among the most interesting and most important fields in the business world. Numerous German companies and institutions research, manufacture, and distribute electronic and IT-based systems. Thanks to their many achievements, German engineers generally enjoy an excellent reputation worldwide. Electronic and IT-based systems have found application in almost every facet of day-to-day life. The bachelor's program in Electrical Engineering & Information Technology is designed to provide its students with a general understanding of electronic processes. In addition, the program should enable graduates to contribute to the development of new systems that allow us to continue our technological progress while at the same time protecting our natural resources.

II) Prerequisites

Since Electrical Engineering & Information Technology is a highly technical scientific field, candidates should be interested in subjects such as mathematics and physics. Higher-level high school credits in these subjects are helpful, but not mandatory. Preparatory courses in these subjects are offered at the University. We recommend that all students take part in an eight-week lab course prior to commencement of studies.

III) Preparing for Study

In preparation for the program, students are recommended to do the following:

- review their high school coursework in physics and mathematics,
- attend a mathematics seminar at their *Offizierschule*,
- contact an academic counsellor; practice exercises are available upon request.

IV) Abilities & Tendencies

If you always ask yourself "How does that work?" when confronted with technical systems, you are well-suited for this program. Intellectual curiosity in regard to scientific and technical issues is a basic prerequisite for the program "Electrical Engineering & Information Technology". In view of the growing interdependence between this field and classical fields of physics, chemistry, and biology, it is important that the student's curiosity not be limited to computers and mobile phones. Furthermore, students in this program must be able to keep the pace and work under pressure. The workload is particularly heavy in the initial stage of the program, when students delve into the theoretical foundations of the subject.

V) Structure of the Program

Students of the bachelor's program in Electrical Engineering & Information Technology choose from three areas of concentration:

- Communications Engineering (CE)
- Electric Power Systems (EP)
- Mathematical Engineering (ME)

In the framework of the classical areas of concentration "Communications Engineering" and "Electric Power Systems", students attend courses in their area of emphasis beginning in the fifth trimester, after having attended general courses in electrical engineering. The area of concentration "Communications Engineering" places particular emphasis on telecommunication engineering and microelectronics. In "Electric Power Systems" priority is given to the field of power engineering, e.g. electric machines and generating/ distributing electricity.

The area of concentration "Mathematical Engineering" distinguishes itself more markedly from the other areas in terms of content. Faculty members from the Electrical Engineering & Information Technology Department, the Civil Engineering & Surverying Department, the Computer Science Department, and the Aerospace Engineering Department hold courses in this area of concentration cooperatively. This area of concentration focuses on the mathematical treatment of the problems in engineering and includes a high proportion of elective courses; the majority of coursework is theoretical in nature.

The bachelor's program concludes with a bachelor's thesis, which is written over a period of three months.

VI) Careers

Graduates of Electrical Engineering & Information Technology find good opportunities for career development, both in Germany and abroad, in the following fields:

- research and development
- production
- project planning
- distribution

Apart from companies in the private sector, graduates are often hired in the following:

- public bureaus and organizations
- railway and post
- radio and television
- independent research institutes or technical institutes
- universities and *Fachhochschulen*

It is also possible for graduates to pursue careers as engineering consultants or, with some additional education, as patent engineers.

VII) Further Information

For more information on study at the Universität der Bundeswehr München and the application process, please visit www.unibw.de/studienberatung . As a student at the Universität der Bundeswehr München, you can also complete a portion of your studies abroad. You will find information on our exchange programs and partner universities at www.unibw.de/auslandsbuero .