





Information Engineering and Computer Science, M.Sc. in English

Kamp-Lintfort Campus Faculty of Communication and Environment

# Information Engineering and Computer Science, M.Sc.

## **Fact File**

**Campus** Kamp-Lintfort

**Begin** Winter or summer semester

**Duration** 3 semesters studying full time

**Degree** Master of Science, M.Sc.

**Language** English

**Thesis** Completed in the 3<sup>rd</sup> semester

#### Rhine-Waal University of Applied Sciences

Would you like to study in a friendly atmosphere at a vibrant, internationally-focused university, where you'll find small classes, modern labs and staff dedicated to developing your future employability?

If so, then Rhine-Waal University of Applied Sciences is the perfect place for you.

Our university has more than 30 undergraduate and postgraduate degree programmes with innovative and interdisciplinary curricula designed to train you for future careers in the natural sciences, engineering or the social sciences. We are based in Germany, but most of our degree programmes are taught in English, which draws students from around the world – over 100 different nations are represented at our university.

Rhine-Waal University of Applied Sciences has two campuses, in Kleve and Kamp-Lintfort, halfway between Amsterdam and Cologne in Germany's picturesque Lower Rhine region. Each campus features state-of-theart classrooms and laboratories, a university library, a language centre and a canteen. Our many cooperative agreements with leading international businesses and research institutions will greatly enhance your internship and employment opportunities as well.

So, why not start building your future career with us?

We look forward to welcoming you here at Rhine-Waal University of Applied Sciences.

## **Information Engineering and Computer Science**

Mainstream terms like "Information Society" or "Information Era" illustrate guite clearly that information is one of the most valuable goods in today's economy. In times of global networking and dynamically changing economic and working environments, success increasingly depends on effective information and knowledge management. Efficient information processing or good information logistics is essential when data have to be acquired and information has to be delivered in the right format, at the right place, at the right time and to the right people. At the same time, data acquisition, validation, presentation and security have to adhere to very high standards. A dynamic environment like this needs individuals with a broad range of skills and knowledge who are able to understand and realise the requirements of information management, from design and development up to the implementation of suitable IT solutions.

Our unique master's degree programme has been designed to meet those needs. It provides a deep insight into the acquisition, processing and handling of data as well as giving you the chance to exploit the power of distributed network and computing units. At the same time you will be able to acquire the knowledge needed to analyse and process large amounts of data. To cover all these different aspects and to give you the chance to specialise in a field that fits your interests and career plans, the programme offers four different tracks to choose from:

- Computer Science
- Environmental Analysis
- Logistics
- Cyber-Physical Systems Engineering

## **Course structure**

This course is a three-semester follow-on master's degree programme, building on the knowledge you have acquired in your undergraduate degree programme. The first two semesters provide you with the theoretical and practical grounding vital to your professional career while the third semester is devoted to your master's thesis and colloquium. All courses have been designed to not just offer you factual knowledge but also various chances to apply what you have learned. You will be given the opportunity to enhance your knowledge through lectures and deepen it in advanced seminars and exercises. Practical training is integrated to every module.

In your first two semesters you will develop substantial skills in areas such as "System Simulation", "Data Mining", "Data Analysis", "Statistics" and "Geoinformatics". At the same time you will gain important key competencies in the fields of "Scientific and Technical Communication", "Intercultural Management and Intercultural Competence" as well as "Innovation Management" and will have the chance to specialise by choosing lectures and modules out of the four tracks previously mentioned. Each semester also includes an applied research project, giving you the opportunity to put theory into practice on a larger scale.

In your third semester you will develop your master's thesis. Again a high academic standard as well as the real-world relevance of your topic are of major importance.

#### **Career paths**

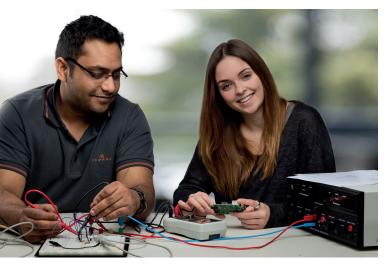
Our degree programme aims to equip you for a career that matches future labour market needs and trends by putting a special emphasis on innovative problem solving methods with respect to interdisciplinary and international approaches. Complementing the individual skills you have gained in your undergraduate degree, our master's degree will strengthen your employability and will make you an ideal candidate for all international companies and research institutes operating in the fields of:

- Information and data management
- Development and operation of large web-based and cloud-like storage and computing facilities
- Simulation of complex systems
- Development of decision support systems
- Hard and software development for automated systems in the field of logistics and embedded systems

## **Entry requirements**

Admission to our master's degree programme is subject to an application process.

The formal entry requirements for the Information Engineering and Computer Science, M.Sc. programme are:



- Proof of a completed undergraduate degree (B.Sc., B.A., diploma or equivalent) which included subjects in the fields of practical computer science and computer engineering as well as fundamentals in mathematics, natural sciences and engineering. In individual cases, missing subjects can be compensated by proof of other related academic training or qualifications. Please outline your additional knowledge and experience in an essay of no more than 1,000 words.
- An overall mark of at least 2.3 in your undergraduate degree.
- A sufficient level of English language proficiency (CEFR level B2 or better).

Please find more information on our website.

## **Tuition and costs**

Rhine-Waal does not charge tuition fees. Students are merely obliged to pay a nominal administration fee each semester that allows free travel on most public transport in the state of North Rhine-Westphalia, where we are located.

The cost of living in Germany is low compared with many places in Europe. Plan on around &800 per month for expenses, or approximately &5,000 per semester.

#### When and how to apply

Our master's programme starts in both winter and summer semesters. For application dates and dead-lines, please visit www.hochschule-rhein-waal.de.

International applicants must apply through 'uni-assist', a professional credential evaluation service in Germany, unless they have a German undergraduate degree. Please see our website for details.

# Need help or advice? Contact us!

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