ТШП

# CERTIFIED CYBER SECURITY SPECIALIST



### Content

The certificate program explores in depth practically relevant concepts of IT security and their formal foundation. Starting from the innocent looking question how "security" of IT systems can be defined, and afterwards measured, we discuss security modeling, threat and risk assessment as well as specifying security objectives that counteract those threats and risks. We will look into cryptographic methods, security protocol design and authentication mechanisms, which provide the basic toolbox needed to achieve security objectives. Tailoring the program to the participants needs, we will discuss topics like system hardening, random number generation, or access control mechanisms.

### **Target Group**

Professionals who studied IT but need a deeper dive into IT security, engineers/managers who are responsible for IT security within their company, e.g data privacy officers.

### **Academic Director**

Prof. Dr. Claudia Eckert Chair of IT Security, TUM

## Why this program?

With more and more complex IT systems, fast-pacing developments and increasing cyber risks, IT security becomes a topic crucial to competition and personal safety.

While learning in a lab environment, participants will be able to bring in individual cases to the program, interact with experts from different industries and will benefit of the extensive practical and research experience of two excellent academic partners Fraunhofer AISEC and the Technical University of Munich.

The theoretical sessions will be complimented by hands-on sessions (hardware provided). Participants can bring security problems from practice and develop a possible solution, revised by the examiner. An excursion to Fraunhofer AISEC offers a unique insight into current IT security topics.

### **Requirements for entry**

Mathematical or algorithmic background on undergraduate level (as e.g. taught in German Bachelor's engineering study programs).

### Partner



### Contact and further information



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#### About the TUM Institute for LifeLong Learning

The TUM Institute for LifeLong Learning supports international experts and leaders from science, business and society to meet the challenges of the 21st century.

Therefore, the Institute offers innovative continuing education courses and thus facilitates scientifically-based and technologysupported professional and leadership development.