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Department of International Relations

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Dear Faculty Partner

In Zlín, March 12, 2025

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**Information regarding to Blended Intensive Program**

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Dear Faculty Partner,

As we informed you in the previous email, this summer, we are going to organize a BIP (Blended Intensive Program) focused on cybersecurity as part of Erasmus+ program. We are looking for partner universities whose students would participate. The upcoming Blended Intensive Program is designed exclusively for the partners of the Faculty of Applied Informatics of the Tomas Bata University in Zlín. It will therefore not be offered to other interested parties.

As part of our grant, we can pay for all issues related to teaching and the social program (excursions, etc.). Your students will have to receive standard Erasmus support from your university, as part of which they will pay for their accommodation (for two weeks it will be about 120 EUR) and transportation.

Please, let us know if you would like to get involved by having your students participate directly at [hromada@utb.cz](mailto:hromada@utb.cz)

We are looking forward to meet your students.

Yours sincerely,

Prof. Martin Hromada, Ph.D.  
Vice Dean for International Relations

**Topic: „Cybernetics and Informatics – Key 21th Century Sciences“**

**Physical part: 4 August – 15 August 2025**

**Annotation:**

The course "Cybernetics and Informatics – Key 21st Century Sciences" provides a comprehensive exploration into the disciplines at the forefront of technological advancement and security. Participants will delve into the principles of cybernetics, an interdisciplinary field that studies regulatory systems, their structures, functions, and behaviours. Emphasis is placed on the application of cybernetics within informatics, examining the interactions between information systems and their users.

The course also focuses on the fundamentals of data and computer security, equipping students with the knowledge to identify and defend against threats and vulnerabilities that endanger digital information and infrastructure.

A particularly hands-on aspect of the course is penetration testing, which involves the methodical simulation of cyber-attacks to identify and remediate potential weaknesses in computer systems, networks, and applications. Students will gain practical skills in emulating cyber-attacks to uncover and rectify potential security lapses.

The aim of this course is to furnish students with both the theoretical knowledge and practical skills necessary to understand and navigate the complex world of contemporary cybernetics and informatics.

**The lectures, practices, and related teamwork will focus on:**

- Cybernetics Informatics
- Data Management
- Data Security
- Computer Security
- Penetration testing

**Required knowledge:**

- Working with PC: Windows/Linux/Mac OSX
- Linux shell/bash
- Networks basics: ports, protocols, SSL/TLS, client-server
- Cryptographic basics
- Cybersecurity awareness
- HTML
- VMware player/workstation or VirtualBox

**Recommended knowledge:**

- Linux shell/bash
- Networks: WAN/LAN/WiFi
- Python 3.x
- Web development basics
- Kali Linux
- Metasploit framework
- Wireshark
- Nmap, recon, sqlmap, gobuster, BeEF
- Browser developer tools
- Digital forensic and OSINT basics

**Lecturers:**

Ing. David Malaník, Ph.D. (dmalanik@utb.cz)

Ing. Petr Žáček, Ph.D. (zacek@utb.cz)