## Qualification
Advanced Technician's Diploma
(Brevet de technicien supérieur en Cybersécurité)

## Duration
2 years – full-time – 120 ECTS

## Occupation profile
- CSIRT / CERT / SOC operator
  - security engineer
  - incident response analyst
  - log analyst
- SECOPS / security engineering
  - network security operator
  - security administrator
- Operational security officer
  - CISO assistant
  - Security operations desk
- Junior pentester

## Entry requirements
- Possess a secondary school-leaving certificate or equivalent
- Pass the admission test and classify among the first 14 candidates
- Acknowledge and sign the ethics and security disclaimer
- Have a good understanding of English.

## Work placement
12-week internship within a company
at the end of semester 4

## Courseload
- 21 teaching hours per week
- many autonomous working hours, partly in the presence of a teacher.

## Reduced class size
- 14 students per class
- Personal contact with teachers
- Mentoring

## Purpose
- professional life
- further higher education studies at undergraduate level ( BAC+3 )

## https://www.lgk.lu/bts/cs

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The Luxembourg Government has developed a cybersecurity strategy responding to the challenges of the digital transformation of today's society.

*"Cybersecurity and data protection are two themes of crucial importance for the economy of tomorrow - the data economy"* (FEDIL)

To meet the growing demand in IT and computing-related sectors, Luxembourg requires highly skilled and qualified professionals in the field of information security.

The Lycée Guillaume Kroll aims to provide these professionals by offering a contemporary, state-of-the-art training course in cybersecurity.



The project is in the process of accreditation and approval. Final approval is expected in early May 2021. Enrolments for the training will only start after this date.

### Advantages and USP

- preparation for numerous internationally recognized certifications
- numerous external instructors from real-life businesses
- networking with local professionals
- contact to members of the Luxembourg Cybersecurity Ecosystem
- small classes with up to 14 students
- close guidance and individual support
- access to a dedicated classroom space outside of teaching hours

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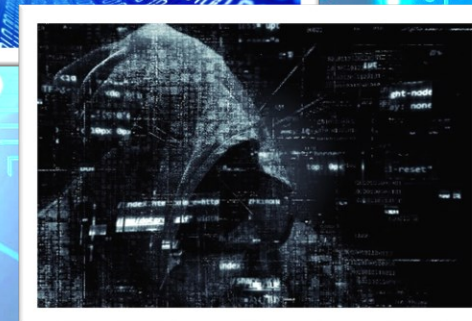


# bts >>
## *cybersecurity*



## Lycée Guillaume Kroll

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Luxembourg    www.lgk.lu/bts/cs

### BTS CYBERSECURITY
LYCEE GUILLAUME KROLL

## Course content

Cybersecurity is not solely about *technology*. It is also about *governance* and *communication*. Hence, the training program focuses on 5 fields:

**Security concepts**
- Fundamentals
- Technical aspects
- Penetration testing
- Digital forensics

**Governance & security mgmt**
- Data protection
- Risk management
- Incident response
- Frameworks, standards

**IT operations**
- Windows
- Linux
- Scripting
- Coding

**Network technologies**
- Fundamentals of networking
- Networking protocols

**Soft skills, project management, languages**

## Learning outcomes

Advanced technical and practice-based training, preparing students to implement and manage operational cybersecurity in a professional context according to the latest developments.

BTS cybersecurity graduates will be able to:
- easily blend into operational security teams,
- implement and manage security at the system and network level,
- assist the information security officer as a technical advisor,
- possess the necessary knowledge to manage and analyse incidents,
- adapt to new security challenges.

| | S1 | S2 | S3 | S4 | |
|---|---|---|---|---|---|
| **Security concepts, governance and security management** | | | | | |
| Fundamentals of cybersecurity | X | | | | Introduction: build basic knowledge |
| Applied cybersecurity | | X | | | Apply concepts |
| Penetration testing | | | X | | Attack |
| Incident response and digital forensics | | | X | | React |
| Governance, Risk and Defensive Security | | | X | | Defend |
| Security CTF's | | | | X | Analyse and combine |
| Cybersecurity project | | | | X | Apply knowledge; implement a project |
| Legal aspects and cybercrime | | | | X | do's and don'ts in the context of cybersecurity; ethics and deontology |
| **IT Operations** | | | | | |
| Operating systems Windows | X | | | | Learn how to manage a windows server |
| Operating systems Linux | | X | | | Learn how to manage a linux server |
| Scripting | X | X | | | Automate tasks |
| Cloud computing concepts | | X | | | Acquire basic knowledge |
| Python coding for cybersecurity | | X | X | | Use coding to support penetration testing |
| **Network technologies** | | | | | |
| Introduction to networks | X | | | | Acquire basic knowledge in IT networks |
| Switching, routing and wireless essentials | | X | | | deep dive into switching, routing, and wireless |
| Enterprise networking | | | X | | architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. |
| **Internship** | | | | | |
| Internship 12 weeks | | | | X | apply acquired competencies |
| **Soft skills and project management** | | | | | |
| Project management | X | X | X | | Learn how to handle small and large projects, alone and in groups |
| Technical business communication | X | X | | | Build soft skills, acquire basic communication techniques, document and present findings |
| Technical English | X | | | | Communicate (spoken and written) |
| Technical French | | X | | | Communicate (spoken and written) |
| Entrepreneurship | | | X | | Basics of enterprise ecosystems and entrepreneurship |