

## For Cyber Security and NIA Student

To support you when planning and updating your personal study plan





#### **Content**

- The purpose of these slides is to help you plan both this academic year and your future studies. The slideshow is divided into two sections:
  - Core competence studies and
  - Complementary competence studies.
- The slide series highlights changes and recommendations related to study offerings both at Laurea and outside Laurea.
- Changes in the study units will only affect you if you have not yet completed the study unit.
- If you have started your studies in 2021 or earlier please check also slideshow for Digital Service Development students for curriculum changes related to these topics. Some slides are target to NIA group students.



#### **Shortcuts**

Explore the curriculum for complementary competence in your own field of study for the next academic year by clicking here.

Explore Laurea MOOC's by clicking here.



In the Study Search choose "self-paced studies (MOOCs)".



# General information about the degree in cyber security

- The Degree Programme in Business Administration (210 ECTS credits) consists of the following studies:
  - Core competence studies 150 ECTS credits (compulsory studies)
  - Complementary competence studies 60 ECTS credits (elective studies;
     45 credits must be related to cyber security)
- The core competence studies must be completed in English.
- The curriculum for complementary competence studies is updated annually and the following year's offering is published on 1<sup>st</sup> September.
- Changes in the study unit selection and study offering are possible.



#### **Degree structure**

## 210 ECTS

## Core competence studies

(150 ECTS, compulsory)

- Business Operations (30 ECTS)
- Competence in ICT (30 ECTS)
- Sustainability and business analysis (30 ECTS)
- Expert in a Work Community (internship): Placement 1 and 2 (15+15 ECTS)
- Expert in Development and Workplace (15 ECTS) + Thesis: development project in real working environment (15 ECTS)

## Complementary competence studies

(60 ECTS, elective)

- Cybersecurity (45-60 ECTS)
- Other studies

<sup>\*</sup> If you do not complete your studies at the pace of your group, discuss with your tutor teacher the need to change the study unit implementation.





## Instructions on PSP change needs

- PSP changes are only necessary for students who have not completed their studies in their own group or at the latest at the pace of the last study unit implementation.
- An exception to this is the Research and Development Methods study unit, whose study code will change from the autumn semester 2024 as the objectives have been specified slightly. All students who have not yet completed the study unit by the time of the change will complete it with the new code. In the future, we will make mass editing of PSPs. In mass editing, the new study is submitted to the PSP if you have not yet enrolled for the study unit before. If you have earlier enrolment or the study unit is graded as fail, please note the change yourself.



## **Changes in compulsory studies**

Old study unit	New study unit	Last implementation of the old study unit
A9273 / R0013 Swedish for Bachelors of Business Administration	HL00BY88 Svenska för tradenomer	With group NDV223SN at Tikkurila campus on spring semester 2024.
R0238 Project Management and Communication	YY00BW73 Project Management and Communication	-
YY00BT40 Research and Development Methods	YY00CA30 Research and Development Methods	Study unit implemented with code YYT0BT40 last time in spring semester 2024.





# Cybersecurity studies (choose min. 45 ECTS)

# 45 -60 ECTS

#### Information Infrastructure and Security

(15 ECTS)

- A9185 Network Applications (10)
- TO00BR88 Networking Infrastructure and Security (5)

#### Information Security Management

(10 ECTS)

- TO00BR89 Introduction to Information Security (5)
- TO00BR90 Information Security Management (5)

#### **Cybersecurity Technologies**

(20 ECTS)

- TO00BR91 Enterprise Security and Practitioners (5)
- TO00BR92 Cybersecurity Analyst (5)
- TO00BR93 Network and Applications Security (5)
- TO00BR94 System Security (5)

#### Cybersecurity Work-Life Practices

(10 ECTS)

- TO00BR95 Cybersecurity Hackathon Project (3)
- TO00BR96 Cybersecurity Working Life Practices (2)
- TO00BS11 Cybersecurity project (5)



### Cybersecurity scheduling

## Beginner Intermediate

Advanced

#### Spring

TO00BR89 Introduction to Information Security (5)

TO00BR90 Information Security Management (5)

A9185 Network Applications (5)

TO00BR88 Internet Infrastructure and Security (10)

TO00BR91 Enterprise Security and Practitioners (5)

TO00BR94 Systems Security (5)

TO00BR95 Cybersecurity Hackathon Project (3)

TO00BR96Cybersecurity Working Life Practices (2)

TO00BS11 Cybersecurity Project (5)

#### Autumn

TO00BR89 Introduction to Information Security (5)

TO00BR90 Information Security
Management (5)

A9185 Network Applications (5)

TO00BR88 Internet Infrastructure and Security (10)

TO00BR92 Cybersecurity Analyst (5)

TO00BR93 Network and Applications Security (5)

TO00BR95 Cybersecurity Hackathon Project (3)

TO00BR96 Cybersecurity Working Life Practices (2)

TO00BS11 Cybersecurity Project (5)



## **Optimal study path**

#### Optimal study path when studies has started on autumn

Beginner/ Intermediate	Third semester	•TO00BR88 Internet Infrastructure and Security (10) •TO00BR89 Introduction to Information Security (5) •TO00BR90 Information Security Management (5)
Advanced	Fourth Semester	<ul> <li>A9185 Network Applications (5)</li> <li>TO00BR91 Enterprise Security and Practitioners (5)</li> <li>TO00BR94 Systems Security (5)</li> <li>TO00BR95 Cybersecurity Hackathon Project (3)</li> </ul>
Advanced	Fifth Semester	<ul> <li>TO00BR92 Cybersecurity Analyst (5)</li> <li>TO00BR93 Network and Applications Security (5)</li> <li>TO00BR96 Cybersecurity Working Life Practices (2)</li> <li>TO00BS11 Cybersecurity Project (5)</li> </ul>



# Changes in complementary competence studies

This concerns students who have started their studies before autumn 2021.

Old study unit	New study unit
R0385 Internet Infrastructure and Security (5)	TO00BR88 Internet Infrastructure and Security (10)
R0318 Introduction to Information Security (5)	TO00BR89 Introduction to Information Security (5)
R0319 Information Security Management (5)	TO00BR90 Information Security Management (5)
R0323 Enterprise Application Security (5)	TO00BR93 Network and Applications Security (5)
R0321 Cybersecurity (5)	TO00BR92 Cybersecurity Analyst (5)
R0324 Network Security (5)	TO00BR91 Enterprise Security and Practitioners (5)
R0322 Systems Security (5)	TO00BR94 System Security (5)

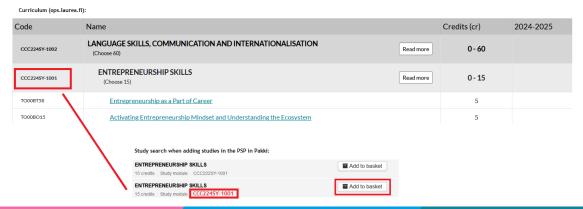


#### **Instructions**

Once you have made your choices, add your studies to your PSP and schedule your studies.

**Add individual studies** for your PSP with the code shown in the curriculum.

**To add an entire module** to your PSP search for a study in your PSP with the module name and select a module with the code mentioned in the curriculum. See one example in the picture below. If some of the study units in the module are already in your PSP, those will not be added. Thus, consider whether adding the whole module or just study units is more suitable to keep your PSP in order.





## Study units no longer available

#### Informed already earlier:

- R0386 Contemporary Issues In Networking and Network Security
- R0320 Information Security Development Project



### Did you notice these studies

- In particular, the module "Other complementary competence" in the curricula for complementary competence may receive new study units even at short notice before the start of enrolment.
- These studies are often offered on a one-off or fixed-term basis.
- Thus, it is recommended that you check the studies in this module just before enrolment starts to see if there is something that interests you.

Discover the studies offered in the "Other Complementary Competences" module by clicking here.



# Highlights from studies that arise for the needs of working life

- The studies may also be available in the form of project-based implementations, which always have a working life or a project partner. The scope of a project-based study implementation may differ from that of the studies implemented as a traditional study unit.
- Kindly note the competency prerequisites
- Module: Cybersecurity Work-life Practices:
  - TO00BR95 Cybersecurity Hackathon Project (3 ECTS)
  - TO00BR96 Cybersecurity Working Life Practices (2 ECTS)
  - TO00BS11 Cybersecurity Project (5 ECTS)



# Recommended common studies (1/2)

- The common generic studies curricula includes studies related to
  - Entrepreneurial skills
  - Language and communication skills
  - International competence
  - Wellbeing, study skills and impacting in student union
  - Other common skills
- The curricula can be viewed here.



# Recommended common studies (2/2)

#### Some recommended language studies:

- TOooBY35 AWS Cloud Fundamentals
- E9955 Introduction to Linux Operating System
- Roo78 Effective Spoken Communication in English 5 ECTS
- Roo79 Effective Writing in English 5 ECTS
- Ro258 Introdution to Finnish Language and Culture 2
- Ro259 Intermediate Finnish
- V1533 Advanced Finnish 5 ECTS
- Roo89 Language and Culture Tandem 5 ECTS



# Study possibilities from other degree programmes

- There is room for 15 credits of freely selectable complementary studies in your curriculum
- Additional studies can replace core competence studies, if agreed with your tutor lecturer, or they can be added to other complementary competence studies
- You can also choose studies from Laurea's other complementary competence curricula, taking into account the prerequisites
- You can also choose studies in the core competence of another degree programme as other complementary competence, as long as they develop your competence and you fit into the group.
- The curricula can be viewed here.



### **3AMK** study possibilities

- 3AMK offers studies that complement Laurea's study offering. There is no need to separately agree on including them in your PSP if they produce new competence for your degree.
- 3AMK offerings include a wide range of diverse and crossdisciplinary studies, and the study offerings are categorized into ten themes. You can find studies suitable your degree in each theme, depending on your interests.
- For further information visit www.3amk.fi



## CampusOnline study recommendations

The following studies complement Laurea's study offering, so there is no need to separately agree on including them in your PSP.

Recommended study units (listed based on the study offering on autumn 2023):

- IoT, Architectures
- Elements of Cloud and Cybersecurity
- Microsoft Azure Fundamentals
- Cloud Services in Modern Information and Teamwork
- Windows PowerShell
- Advanced PowerShell



## Other study possibilities

- Other study possibilities outside Laurea are offered by:
  - MOOC.fi (Studies offered by University of Helsinki)
  - <u>FITECH</u> (Studies offered by the concortium of Finnish Universities)
- Before enrolling have a discussion with your tutor teacher.



#### Volunteer Challenges, Events and Podcasts

- Kindly note that the emplyees value everything that you have done on top of your studies
- <u>HackTheBox</u> (Capture The Flag self -training platform)
- <u>TryHackMe</u> (Vulnerability testing self-training platform)
- <u>Kali-Linux</u> (Professional penetration testing tool package)
- <u>Disobey</u> (Nordic Security Event)
- <u>Darknet Diaries</u> (Podcast that explains real life security incidents)

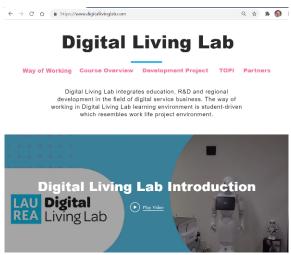


# Studying in digital projects?

 Digital Living Lab – space in Laurea Leppävaara, 009



## Online: Digitallivinglab.com



If you want to replace a study unit with Digital Living Lab-project, agree with your lecturer/tutor first, then contact us. If your complementary studies have room for extra project, contact the coaches (see digitallivinglab.com).



## Various digital skills (4IR) learned in development projects at Digital Living Lab

## **Content** production

- Photo production (=shoot, edit, publish)
- · Video production
- Live streaming
- 1st person videos (HMT-1 wearable)
- 360 video > VR production (Thinglink
- license for smaller scale)
- Websites (incl.soc.media, SEO, analytics)
- eCommerce (setup, product pics)
- Drone videos/-operations (later video analysis)
- AR demo (ehealth)
- Mobile/web app prototyping & development

#### **Robotics & drones**

- Service robots (Pepper)
- Logicstics robots (Omron)
- Software&RPA (robotic process automation)
- Drone pilots training, simulation, practice

#### **IOT & automation**

- Sensors (IOT, Arduino, Raspberry Pi, Ruuvitag)
- Controls (IOT, Controllino)
- Urban farming/indoor farming (sensors, controls)
- 3D design (SketchUp) & 3D printing
- (HMT-1 wearable for edge, IOT)