June-July 2026

TSI

UNIVERSITY OF APPLIED SCIENCES

SUMMER SCHOOL PROGRAMME 2026

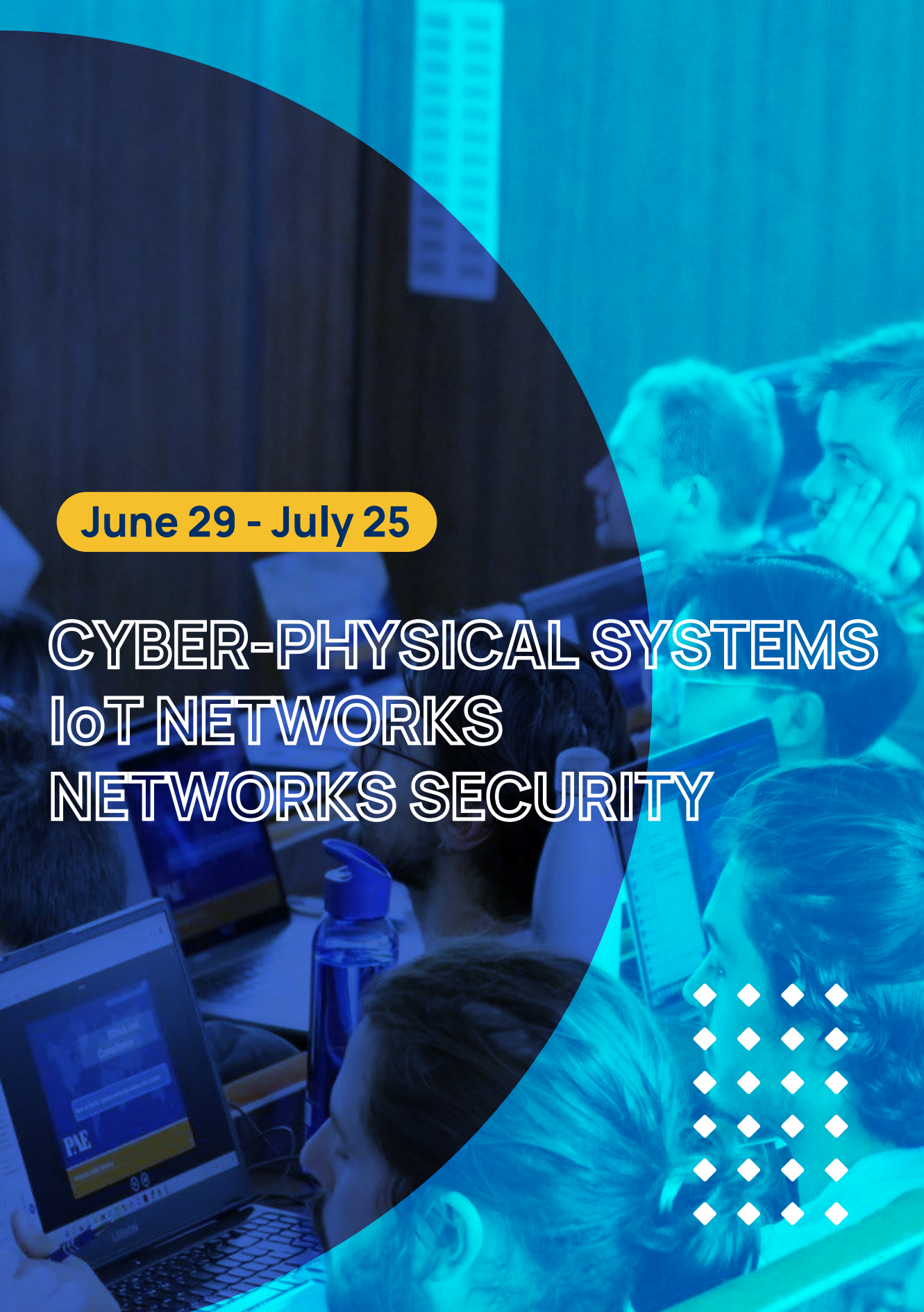
CYBER-PHYSICAL SYSTEMS

IoT NETWORKS

NETWORKS SECURITY

CISCO NETWORKING

DIGITAL INNOVATION AND ENTREPRENEURSHIP


June 29 - July 25
CYBER-PHYSICAL SYSTEMS
IoT NETWORKS
NETWORKS SECURITY

Summer School Programme I

Get hands-on experience in the realm of IoT and unleash your potential to drive innovation in the age of Artificial Intelligence!

</> Introduction to the Cyber-Physical Systems 40h/2 ECTS

- Development tools on micro-controller systems
- Programming on micro-controllers - programming in the right language and understanding how to program parallel systems (management of interrupts, clocks, power)
- Programming I2C; SPI; UART interfaces

Learning outcomes:
› Flash the memory, debug, analyse the system
› Select the right microcontroller according to the use case
› Build a physical prototype

</> Introduction TO IoT Networks 25h/1.5 ECTS

- Low level protocols
- Short range network: Bluetooth; Zigbee
- Mid-range networks: Wi-Fi; Ethernet
- Long range networks: loRAWan; SigFox; NB-IOT
- High level protocols
- COAP; MQTT
- Cyber-physical systems permanently connected to the Internet

Learning outcomes:
> Select the right wireless mediums according to the needs & constraints
> Dimension the network according to the scale of a cyber-physical system deployment

Prerequisite: microcontroller programming course

</> Networks Security 15h/0.5 ECTS

- Securing short, mid & long range wireless protocols
- Securing exchanges between the cloud and the embedded system (TLS, MTLS, certificate management, secret management)

Learning outcomes:
Upon completion of this course, course participants will be able to architect a secure system.

Summer School Programme:
Cyber-Physical Systems
IoT Networks
Networks Security

Programme | Preliminary Schedule

WEEK 1

Time	Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2	Friday July 3
10.00-13.10	Welcome day	Introduction to the Cyber-Physical Systems			Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	TSI Programme	Introduction to the Cyber-Physical Systems			
15.30-17.00	Group work / Self-study				

WEEK 2

Time	Monday July 6	Tuesday July 7	Wednesday July 8	Thursday July 0	Friday July 10
10.00-13.10	Introduction to the Cyber-Physical Systems				Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	Introduction to the Cyber-Physical Systems			Introduction to IoT Networks	
15.30-17.00	Group work / Self-study				

WEEK 3

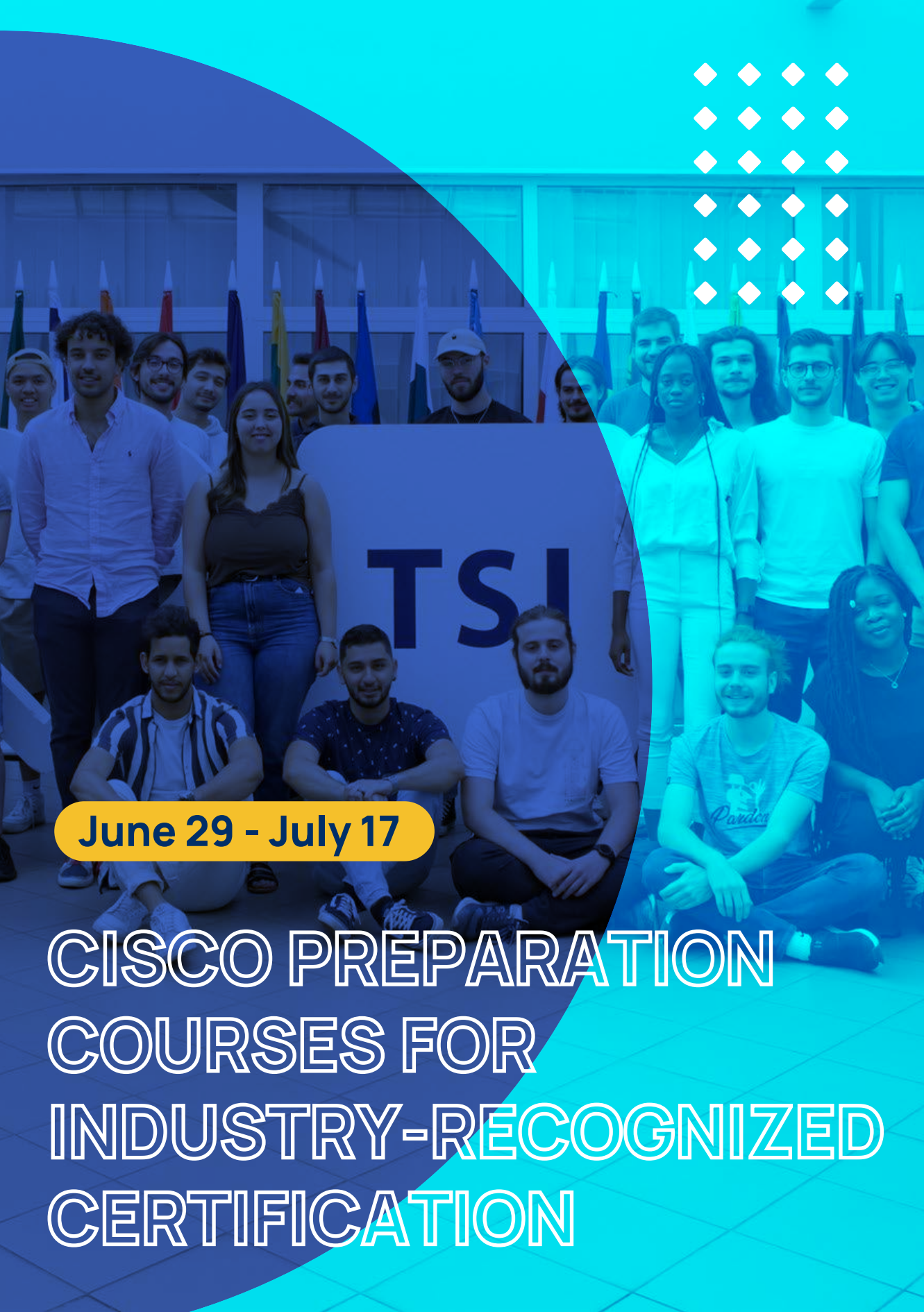
Time	Monday July 13	Tuesday July 14	Wednesday July 15	Thursday July 16	Friday July 17
10.00-13.10	Introduction to IoT Networks				Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	Introduction to IoT Networks				
15.30-17.00	Group work / Self-study				

WEEK 4

Time	Monday July 20	Tuesday July 21	Wednesday July 22	Thursday July 23	Friday July 24
10.00-13.10	Networks Security			Final presentation Feedback	Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	Group work / Self-study			Farewell event	

The practical side of Cybersecurity is usually coding, so there is no option to "touch" your work or its elements in the literal sense. At TSI university it was so interesting to actually do manual work, with the wires and everything, while also to code as well of course!

Sara Bouamama, EPITA (France)
Summer School participant



June 29 - July 17

CISCO PREPARATION COURSES FOR INDUSTRY-RECOGNIZED CERTIFICATION

Summer School Programme II

This intensive 3-week course is focused on preparing students and professionals for industry-recognized Cisco certifications, equipping them with the knowledge and skills needed to succeed in the field.

Introduction

Cyber threats affect us all, and cybersecurity jobs continue to grow. In fact, cybersecurity failure is among the top 5 global risks according to the World Economic Forum Global Risks Report (2021). The world needs diverse, tech-savvy cyber professionals to defend against shrewd digital adversaries.
This Cybersecurity Essentials course prepares you for the entry-level Cisco Certified Support Technician (CCST) Cybersecurity certification and entry-level cybersecurity positions such as Cybersecurity Technician, Junior Cybersecurity Analyst, or Tier 1 Help Desk Support roles. You will learn vital skills like threat intelligence, network security, and risk management to protect yourself and organizations from cyber attacks. If you enjoy solving puzzles, are passionate about technology, and like working in teams, the field of cybersecurity may be a great fit for you!

Course Description and Features

90h/3.5 ECTS

This is a practice-focused course that leads you though the main aspects of Cybersecurity, prepares and allows you to pass the CCST: Cybersecurity certification exam.
After the course you will have a valid Cisco Certified Support Technician (CCST) Cybersecurity certification that will kick-start your career in Cybersecurity.

Course Features:

- Intensive program with both: instructor-led and self-paced activities
- Practice-focused with practical classes held with simulation environments and virtual test set-ups
- CCST Cybersecurity certification exam attempt after the course is included.
- Cultural program in Riga and Latvia is included

Summer School Programme: Career Launch in Networking - Cisco Preparation Courses for Industry-Recognized Certification

Programme II Preliminary Schedule

WEEK 1						WEEK 2					
Time	Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2	Friday July 3	Time	Monday July 6	Tuesday July 7	Wednesday July 8	Thursday July 0	Friday July 10
10.00-13.10	Welcome day	Cybersecurity Threats, Vulnerabilities, and Attacks. Securing Networks	Attacking the Foundation. Attacking What We Do	Network Security Infrastructure	Cultural programme	10.00-13.10	Linux Overview System and Endpoint Protection. Cybersecurity Principles, Practices, and Processes	System and Network Defense. Access Control	Firewall Technologies Zone-Based Policy Firewalls	Cryptography	Cultural programme
13.10-14.00	LUNCH BREAK					13.10 14.00	LUNCH BREAK				
14.00-15.30	Welcome day	Attacking the Foundation	Wireless Network Communication	The Windows Operating System		14.00-15.30	Understanding Defense Access Control	Access Control Lists	Cloud Security	Technologies and Protocols	
15.30-17.00		Labs and Practice	Labs and Practice	Labs and Practice		15.30-17.00	Labs and Practice	Labs and Practice	Labs and Practice	Labs and Practice	

WEEK 3					
Time	Monday July 13	Tuesday July 14	Wednesday July 15	Thursday July 16	Friday July 17
10.00-13.10	Network Security Data. Evaluating Alerts	Threat Intelligence. Endpoint Vulnerability Assessment	Final Exam	Cisco Certified Support Technician Cybersecurity (100-160) exam	Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	Governance and Compliance Security Assessments	Digital Forensics and Incident Analysis and Response	Results Analysis	Free time	
15.30-17.00	Labs and Practice	Labs and Practice	Self-paced Junior Cybersecurity Analyst Career Path Exam		

Pre-requisites

To start this course, learners are expected to have knowledge of TCP/IP networking, including network protocols, services, processes, and basic configuration of networking devices such as routers and switches.

June 29 - July 10

DIGITAL AND INNOVATION ENTREPRENEURSHIP

Summer School Programme III

Turn your ideas into real business concepts. Learn by doing- develop, solve problems, and pitch your ideas in an inspiring international environment.

Introduction

In today's economy, business growth is increasingly driven by the ability to create innovative business ideas grounded in digital transformation, sustainability, and an interdisciplinary mindset. These competencies are essential across a wide range of industries. As a result, there is a growing demand for educational formats that combine strong theoretical foundations with hands-on experience in business idea development.

Course Description and Features

78h/3 ECTS

This intensive 2-week Summer School brings together **international participants** to turn innovative ideas into **real-world business concepts**. Designed for ambitious students and future entrepreneurs, the program blends **practical learning with essential business theory** in a truly international environment.

Participants will work in diverse teams to **develop, test, and present business ideas**, gaining hands-on experience in business modeling, creative problem-solving, and pitching. By the end of the program, each participant will have created an **initial business plan or concept**, along with the skills and motivation to continue developing their idea beyond the Summer School.

Key highlights:

- Hands-on business idea development;
- Team-based, international collaboration;
- Creative, analytical, and presentation skill building;
- Final project presentations and feedback;
- Insight into Latvia's innovation and entrepreneurial ecosystem.

Summer School Programme:
Digital Innovation and Entrepreneurship

Programme III Preliminary Schedule

WEEK 1					
Time	Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2	Friday July 3
10.00-13.10	Welcome day	Entrepren-eurship Basics	Company Visits	Workshops	Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-15.30	Team Building and Business Incubator	Market Analysis and Business Planning	Company Visits	Workshops	
15.30-17.00	Riga City Tour	Idea Generation			

WEEK 2					
Time	Monday July 6	Tuesday July 7	Wednesday July 8	Thursday July 9	Friday July 10
10.00-13.10	Project Workshops	Business Model Development	Advanced Project Work	Business Plan Presentations	Cultural programme
13.10 14.00	LUNCH BREAK				
14.00-16.00	Mentored Team Work	Business Model Development	Advanced Project Work	Networking	

Note: Evenings are reserved for group work, self-study, and informal networking.

Pre-requisites

- Bachelor's and Master's level students with basic to intermediate knowledge in entrepreneurship, management, logistics, or industrial engineering
- Motivation to develop and advance business ideas
- Bachelor's students should have completed at least their first year of studies

Join us in Riga, Latvia in June and July, and become a part of exciting experience in one of the most innovative universities in Europe!

Programmes Details

Venue of the Summer School

TSI University of Applied Sciences
2 Lauvas Street, Riga, Latvia
15 min from the city centre

Programme Fees

- Programme I
  Cyber-physical Systems, IoT Networks, Networks Security - 1050 EUR per participant
- Programme II
  Cisco Preparation Courses with Certification - 1350 EUR per participant
- Programme III
  Digital Innovation and Entrepreneurship - 700 EUR per participant

The fees include:

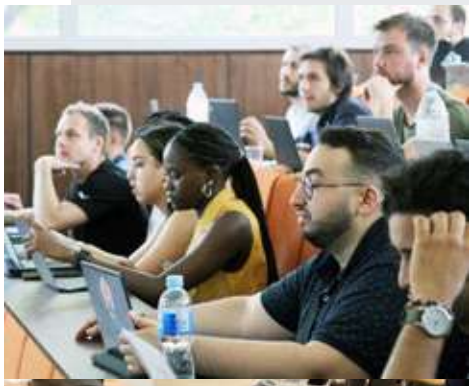
- Lectures & workshops
- All study materials, access to the biggest STEM e-library in Latvia will be available online at e.tsi.lv
- Coffe/Tea at TSI
- Cultural activities every Friday

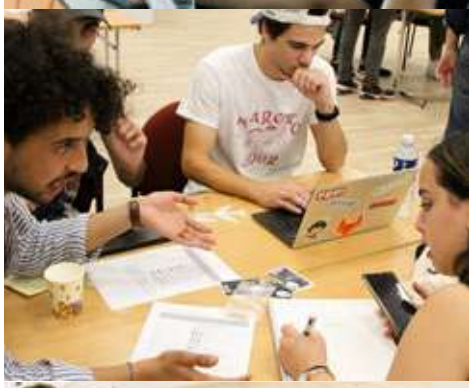
Not included:

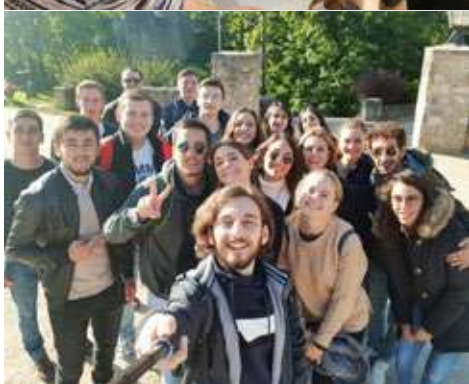
- Accommodation
- Breakfasts, lunch, dinners
- Transportation card
  (30 EUR per month: all public transports, excl. trains)
  Included only in Programme III package
- Approx. budget per month - from 400 EUR

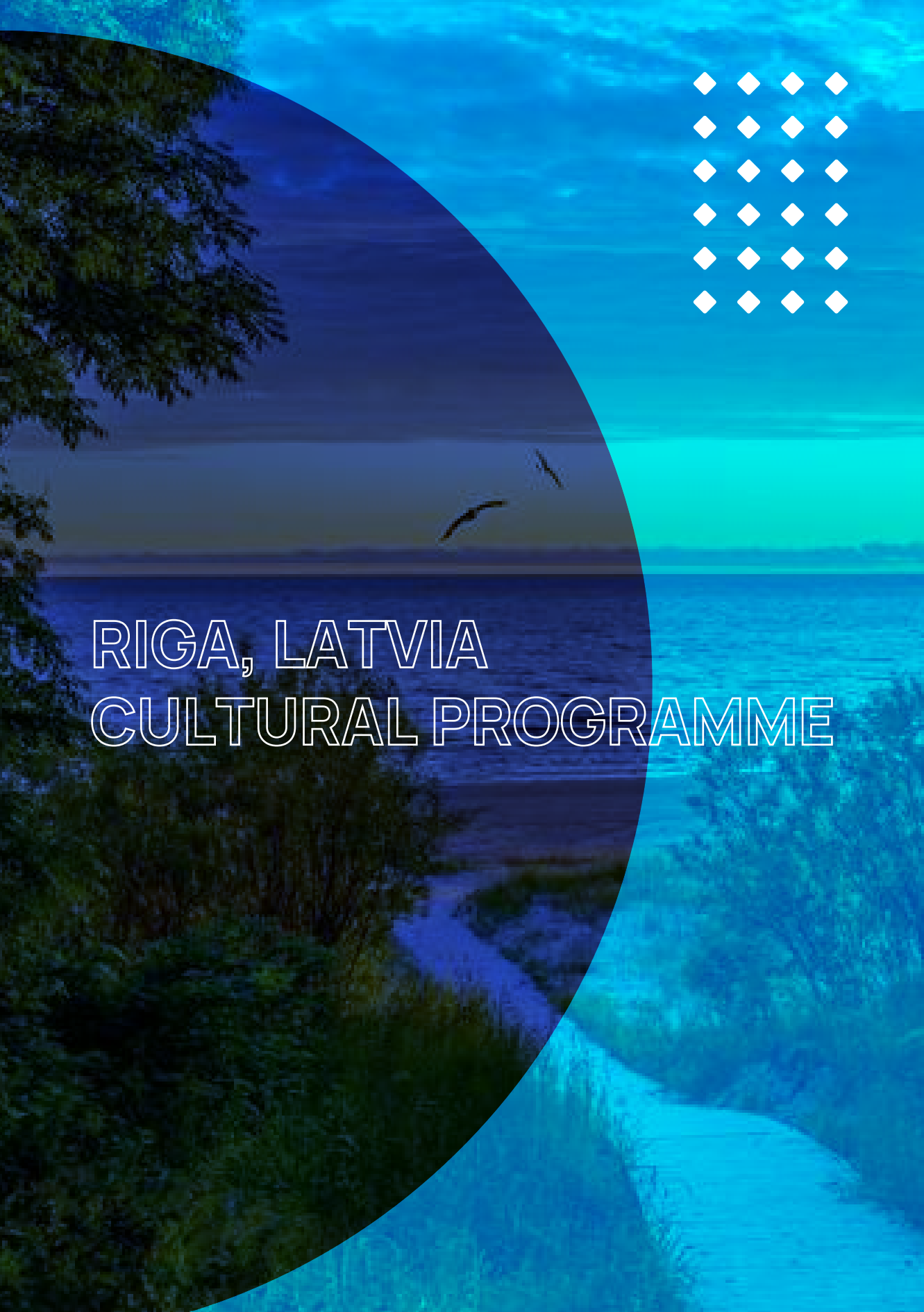
Recommended Accomodation

Students hotel “Duck Republik” is located just across the street from the TSI university. The hotel is around 15 minutes’ walk from the city centre, close to the bus, tram and railway station. Hotel has gym, yoga room, chill and study common area, laundry, pool table and board games and international community.









RIGA, LATVIA
CULTURAL PROGRAMME

Cultural Programme

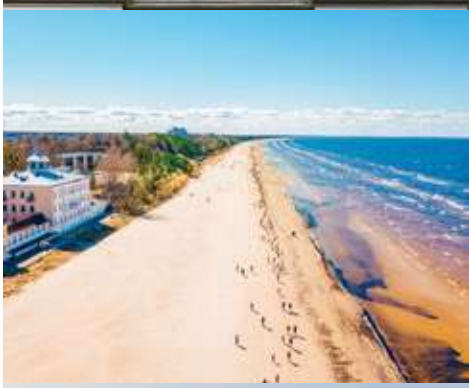
Latvia represents versatile environment: European metropolis Riga, coastal and historical towns, with unique architecture, countrysides, forests & Baltic Sea.

Riga Old City Tour & Museums

The historical centre of the Latvian capital was inscribed on the UNESCO World Heritage List as 'the finest collection of Art Nouveau buildings in Europe'. Museums dedicated to various historical topics will guide you through the centuries.

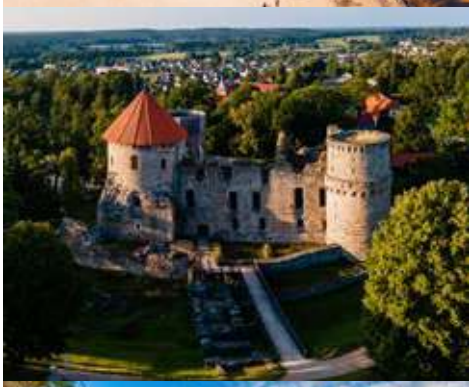
Jurmala City & Sea Coast

Jurmala is the biggest resort city on the shores of the Baltic Sea in a comfortable geographical location, just 20 km from the capital of Latvia, Riga.



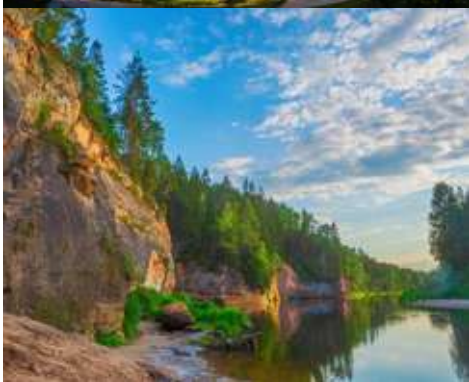
Cesis City & Medieval Castle

Cesis is one of the oldest towns that directly represents Latvian cultural heritage. Cesis Castle is one of the most iconic and best preserved medieval castles in Latvia.



Gauja National Park

The Gauja National Park is the largest and oldest of the national parks in Latvia, with the great biological diversity and unique natural, cultural and historical monuments.



Latvia is an Eastern European country situated in the Baltic Sea region, right between Lithuania and Estonia.

Latvia, Riga

Around 50% of Latvia's territory is covered by forests, making it one of the greenest countries of the EU. Latvia has the benefit of experiencing all four seasons and it's magical gifts. With 18 hours of sunlight at the peak of the season, summer time is prime at the country situated at seashore.

Latvia is one of the most technologically advanced nations with the fourth fastest Internet speed in the world. In both urban and rural areas speeds of at least 100 Mbps are within hand's reach, as well as 5G coverage for all large urban areas is in process to ensure even bigger progress. On March 2025, animated film "Flow" by Gints Zilbalodis won in the category "Best Animated Feature Film" and it is the first-ever "Oscar" for Latvia.

Latvian national sport is ice hockey, closely followed by basketball. The Latvian men's national ice hockey team achieved a historic milestone by securing their first-ever bronze medal at the 2023 IIHF Ice Hockey World Championship. In a parallel feat of excellence, the Latvian men's national basketball team attained an unprecedented 5th place at the 2023 FIBA Basketball World Cup.

Latvian cuisine is renowned for its natural ingredients, unique flavour combinations and exceptional service. Many people enjoy growing their own fruits and vegetables or harvesting wild berries and mushrooms from the forests.

TSI University of Applied Sciences

TSI is the only private technical university of applied sciences in the Baltics, which combines an exceptional approach with a versatile international community.

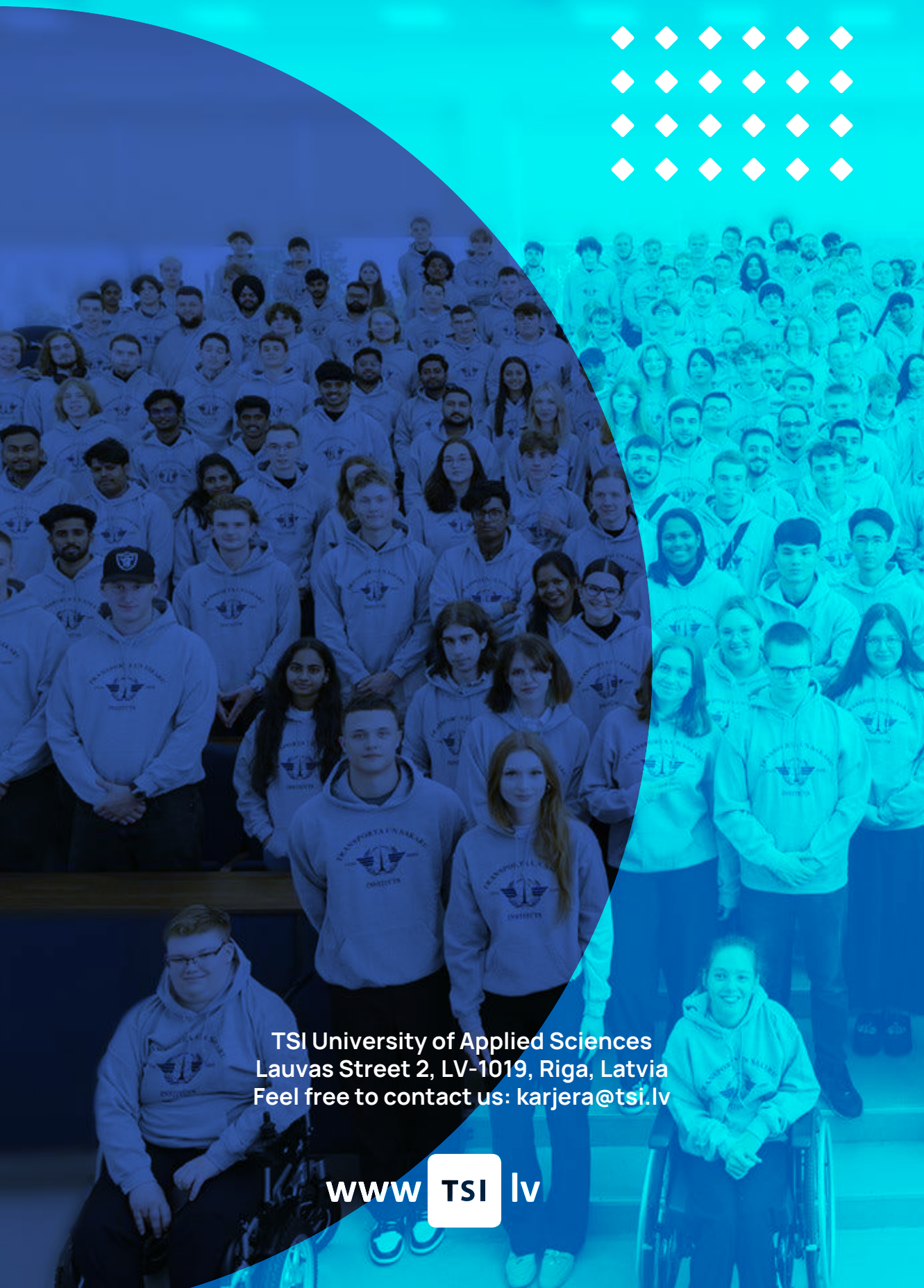
Creating a modern and dynamic environment, TSI is the university where a unique fusion of technology, innovation, and science works effectively towards preparing socially beneficial specialists for high-demand roles in IT, Robotics, Computer Engineering & Electronics, Aviation, Logistics and Business & Management.

In cooperation with the UWE Bristol university (UK), TSI designed double degree programmes that provide education in accordance with the world-class UK quality standards in the fields of artificial intelligence, IT project management, data analytics and aviation management.

TSI offers a wide range of scientific, professional and networking events and activities, and aims at merging traditional education with an innovational approach.

I recommend getting to know and joining TSI community as both within courses & friends you make – you feel welcomed. And that's one thing, that as I think, any foreign student would want to feel.

Robert Nantchouang,
EPITA (France)
Summer School participant



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