MASTER
MTECH

TECHNOPRENEURSHIP: MASTERING SMART ICT, STANDARDISATION AND DIGITAL TRUST FOR ENABLING NEXT GENERATION OF ICT SOLUTIONS

LUXEMBOURG LIFELONG LEARNING CENTRE
LA FORMATION CONTINUE DE LA CHAMBRE DES SALARIÉS

In partnership with:

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UNIVERSITÉ DU LUXEMBOURG

ILNAS

MASTER MTECH

TECHNOPRENEURSHIP: MASTERING SMART ICT, STANDARDISATION AND DIGITAL TRUST FOR ENABLING NEXT GENERATION OF ICT SOLUTIONS

The Master MTECH is the result of a fruitful collaboration between the academic, research and technical standardisation communities since 2013. ILNAS and the University of Luxembourg have built this innovative programme based on the results of their joint developments and achievements, in particular the university certificate "Smart ICT for Business Innovation", the research programme "Technical Standardization for Trusted Use in the Field of Smart ICT " (2017-2020), and the research programme "Technical Standardisation for Trustworthy ICT, Aerospace, and Construction" (2021-2024). The academic content of the Master and the selection of speakers are under the responsibility of the University of Luxembourg and ILNAS, and the Luxembourg Lifelong Learning Centre (LLLC), the further education centre of the Chamber of Employees (Chambre des salariés) is in charge of the marketing and the required administrative and logistical support. The Master degree is also supported by the European standardisation organisations, namely the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC), as well as the European Telecommunications Standards Institute (ETSI).

The Master MTECH is extremely innovative. On one hand, it provides students with a base of knowledge on topics reflecting current issues and those at the cutting edge of Smart ICT, and on the other hand, it serves as a catalyst for growth in the ICT Industry by offering practical examples and case studies illustrating the use of technical standardisation as a tool to give common technical language, build trust, and foster effectiveness in Smart ICT.

OBJECTIVES

This Master degree aims for the students to transfer smart secure ICT knowledge directly into technical innovation, through the prism of the competitive and innovative tool of technical standardisation, during their internship in collaboration with their company.

The Master covers various Smart ICT technologies, such as Cloud Computing, Internet of Things, Big Data, Artificial Intelligence, Blockchains and Distributed Ledger Technologies, while addressing Digital Trust aspects related to these technologies (smart secure ICT).

It allows the students to:

- master the smart secure ICT and Technopreneurship concepts and their implementation in the market ;
- cater for the current and future issues and standardisation needs in ICT areas such as digital intelligence and digital trust ;
- develop a prospective view on future and emerging technologies to assimilate, disseminate and effectively use the knowledge ;
- take advantage of the benefits of ICT governance in companies and governments to control and effectively use the competences and resources of the organisation ;
- measure the challenges of digital trust and information security for the development of smart ICT ;
- identify the key principles and technologies to achieve smart secure ICT projects ;
- understand how the voluntary technical standards process works, particularly in the ICT sector ;
- identify and use published and draft standards relevant to business ;
- discover the role of standardisation delegate working on draft standards ;
- analyse the opportunities offered by smart secure ICT and create value for business through an internal standardisation strategy.

TARGET AUDIENCE

The Master is mainly designed for professionals in the Smart ICT driven economy sectors, technopreneurs and anyone fulfilling the conditions for admission.

ADMISSION REQUIREMENTS

- Bachelor's degree with at least 3 years of experience in a related field or Master's degree in a related field, and
- IELTS (International English Language Testing System) with at least 5.5 or TOEFL (Test of English as a Foreign Language); 213 for the computer based test, 79 for the Internet based test and 550 for the paper based test.

Details of the requirements available on www.uni.lu.

CAREER OPPORTUNITIES

Technology Officer, Consultant emerging technologies, Digital strategy consultant, Smart ICT consultant, Innovation manager, Standards manager, Project manager, Head of innovation, Head of digital strategy and Technopreneur.

DIPLOMA

The Master's diploma in Technopreneurship is delivered by the University of Luxembourg.

PROGRAMME

STANDARDISATION	ECTS
Smart Secure ICT and Innovation	1
Technical Standardisation	3
TOTAL	4

SMART ICT	ECTS
Smart ICT Technologies I	5
Smart ICT Technologies II	5
TOTAL	10

DIGITAL TRUST FOR SMART ICT	ECTS
Security for Smart ICT I	2
Security for Smart ICT II	3
Trust Architectures for Smart ICT	4
TOTAL	9

TECHNOPRENEURSHIP	ECTS
Management of Business and Technical Innovation	3
Digital Intelligence	2
Legal Aspects	2
TOTAL	7

MASTER THESIS	ECTS
Master Thesis	30
TOTAL	30

AT A GLANCE

Duration:	**4 semesters**
Credits:	**60 ECTS**
Language:	**English**
Organisation:	**Courses organised on Fridays and Saturdays**
Place:	**Alternately at the LLLC (Friday) and at the University of Luxembourg (Saturday)**
Registration fee:	**6,400 € for the 4 semesters**
Application period:	**Send your application to mtech@uni.lu**
Start:	**September 2024**

Request for application form:

PARTNERS

UNIVERSITÉ DU
LUXEMBOURG

The University of Luxembourg is a European research university with a distinctly international, multilingual and interdisciplinary character. It is a modern institution with a personal atmosphere, close to European institutions, innovative companies and the financial place. With over 6,000 students and around 1,500 academic staff, including 300 professors, from all over the world, the university offers a unique blend of international excellence and national relevance, delivering knowledge for society and business.

The University's ambition is to provide research and teaching of the highest quality in the key areas of digital transformation, medicine and health, as well as sustainable and societal development, and to generate a positive scientific, educational, social, cultural and societal impact in Luxembourg and the Greater Region.

The University is composed of three faculties and three interdisciplinary research centres. The research priority areas are Materials Science, Computer Science and ICT Security, European and International Law, Finance and Financial Innovation, Education, Digital and Contemporary History, Health and Systems Biomedicine, and Data Modelling and Simulation. Times Higher Education ranks the University of Luxembourg among the top 200 - 250 universities worldwide.

YOU'LL NEVER WORK ALONE.

CHAMBRE DES SALARIÉS
LUXEMBOURG

A NECESSARY INSTITUTION TO DEFEND EMPLOYEES' INTERESTS

The *Chamber of employees* (Chambre des salariés, CSL), which was constituted as a result of the introduction of the unique status has more than 630,000 adherents. It plays a major role in the consultation process regarding national legislative procedures. Its opinion is required on all bills in relation with its adherents before the final vote in the Parliament.

The CSL publishes documentation on legal issues regarding labour law, social security law as well as viewpoints and opinions on economic and social topics. It also organises public conferences with relation to the work environment.

The CSL appoints the employee and retiree representatives which sit within the Caisse nationale de santé (National Health System), the Assurance pension (retirement insurance), the labour court and the social security jurisdictions.

Further education for adults is one of the main activities of the CSL. The Luxembourg Lifelong Learning Centre (LLLC), the further education centre of the CSL, proposes a large panel of evening courses, seminars, university degrees, specialised training courses and professional certifications.

The LLLC facilities are located in the heart of Bonnevoie, ideally connected to the public transport network and in close proximity to the central station. It is not only a training space, but also a lively place of exchange which can host working meetings, conferences as well as cultural gatherings in the best conditions.

ILNAS

ILNAS is a public administration under the authority of the Minister of the Economy.

ILNAS currently represents a network of competencies relating to quality and safety of products and services, whose missions support national competitiveness.

ILNAS, as Luxembourg's national standards body, is a member of European and international standards organizations (CEN, CENELEC, ETSI, ISO, IEC and ITU-T). In this context and through the "Luxembourg Standardization Strategy 2020-2030", ILNAS allows and encourages the participation of the national market in the technical standardization process.

Among other activities, ILNAS is supporting and strengthening education about standardization and related research developments. In this frame, a strong collaboration between ILNAS and the University of Luxembourg was initiated in 2016, notably with the launch of the professional University certificate "Smart ICT for business innovation", which was a first step before the creation of the Master MTECH.

Along with technical standardization, digital trust is another key topic of the Master MTECH. ILNAS, through its Digital Trust Department, supervises notably various national organizations to guarantee a high level of confidence in the digital services provided in Luxembourg. It is in charge of the supervision of trust service providers and the trust services that they provide with respect to the requirements of the eIDAS Regulation. It is also Luxembourg's supervisory body for providers of digitization or electronic archiving services (PSDC). Finally, in the context of the European Regulation on Cybersecurity certification, also known as the Cybersecurity Act, ILNAS was designated as a National Cybersecurity Certification Authority (NCCA) in charge of supervisory tasks.

LUXEMBOURG LIFELONG
LEARNING CENTRE
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With more than 12,000 enrolments per year, the LLLC is positioned as one of the largest providers of continuing education for adults in Luxembourg.

It offers employees a wide range of competitively priced training courses leading to recognized diplomas and certifications.

THE OFFER

- Evening courses
- Seminars
- Diploma of Access to University Studies Literary option (DAEU-A)
- University and higher education courses
- Specialized training
- Training courses for seniors
- Certifications

With the support of:

THE GOVERNMENT
OF THE GRAND DUCHY OF LUXEMBOURG
Ministry of the Economy

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