

**MedTech** Mediterranean Institute of Technology

Enroll in a life changing journey

www.medtech.tn 🥒

<b>Welcome</b>	
Engineering Programs	P. 12
International Opportunities	P. 16
Licence in Computer Science	P. 18
Master Programs	P. 22
Services	P. 26



## **President's** Message

The strategic location of Tunisia in the heart of the Mediterranean combined with the diversity of its cultural heritage constitutes major assets for the development of a regional hub of educational excellence.

It is in this framework that we have developed the South Mediterranean University (SMU). On behalf of all members of our management team, we want to make your education at SMU a life changing experience and wish you success in your drive for professional excellence.

Mahmoud TRIKI, Founder & President, SMU



## Shape your **future** at MedTech

### 🔊 Our vision

MedTech aspires to be a regional hub of excellence in engineering education by fostering innovative learning and societal impact.

### lour mission

MedTech is committed to train highly qualified engineers capable of contributing and leading innovative ventures in today's globalized world.

### 😽 Our values

- Diversity
- Excellence

- Integrity
- Creativity

Care

## A LIFE CHANGING JOURNEY

LCI -MSB - MEDTECH

## MedTech for a global career

0

SMU library

## Our learning strategy

MedTech implements an adaptive learning strategy that offers students a life changing experience.

### 🗗 Digital

MedTech is facilitated with technology, information and instructions that are enhanced using various applications, tools and resources to improve the learning experience.

### Active

Our active pedagogy allows our students to be continuously involved in the learning process through individual and group activities, bootcamps, simulation games enabling them to develop a variety of skill sets that differentiate our graduates on the job market.

### 🚊 Interdisciplinary

By combining our curricular objectives to different disciplines, we help our students acquire the knowledge and skills necessary for their personal and professional development.



2<sup>nd</sup> floor, LAB MedTech

### Why choose MedTech?

The Mediterranean Institute of Technology is a community driven by a shared purpose that is to develop the minds of young engineers. All nationalities and all disciplines are welcome to explore the fields of Software Engineering, Computer Systems, Renewable Energy, Artificial Intelligence and Blockchain applications.



MedTech Mediterranean Institute of Technology

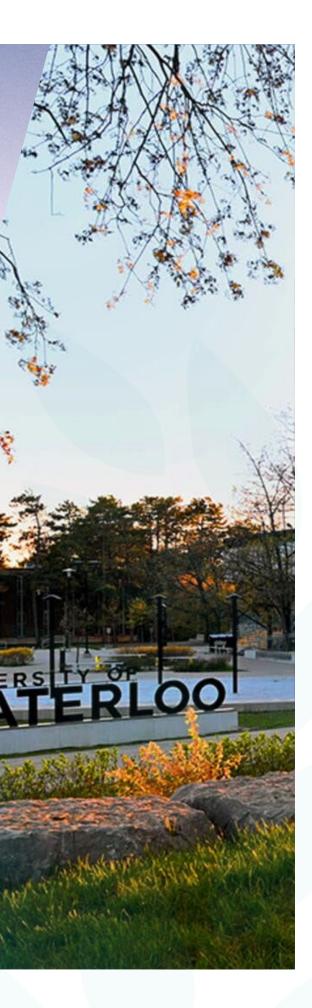
Modern Teaching Methods	To improve the student experience, MedTech provides state-of-the-art information technology, tools and resources suited for both blended and hybrid learning.
Highly Qualified Professors	Experienced faculty, all holding PhDs from prestigious universities.
State of the Art Facilities & Laboratories	<ul> <li>Laboratories in major scientific fields (Renewable Energy, Computer Science, Electronics, Physics, Chemistry).</li> <li>A well-equipped makerspace dedicated to students to elaborate their projects.</li> </ul>
Well-Rounded Training in Business Management, Governance & Ethics	ronment and the interplay between ethics and modern
Possibilities of	Opportunities to benefit from visiting professors, joint research projects and dual diploma partnership with the

Double Degrees

Opportunities to benefit from visiting professors, joint research projects and dual diploma partnership with the University of Michigan-Dearborn, USA and HEC Montreal, Canada.

MedTech Your bridge to **North America** 

10



# Partners in Canada



Double Degree program



Capstone program



## Partners in **USA**



Transfer program



Capstone program

# MedTech Engineering Programs



### SOFTWARE ENGINEERING



RENEWABLE ENERGY ENGINEERING



COMPUTER SYSTEMS ENGINEERING



## Programs **Objectives**

MedTech engineering programs are designed to train future engineers to apply scientific knowledge to problem solving.

### Our Talent

### Our students paths upon graduation

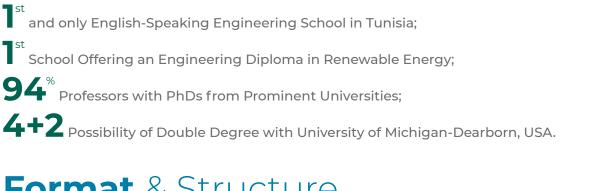




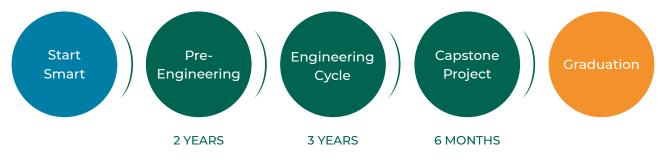


### Worldwide graduate opportunities in

UNIVERSITY OF ROSTOCK (GERMANY) • UNIVERSITY OF PORTO, TECNICO LISBOA (PORTUGAL) • UNIVERSITY OF MICHIGAN-DEARBORN (USA) • MEDTECH-HEC MONTREAL



### Format & Structure



Programs Breakdown - Engineering

## **Pre-Engineering**

### 🛗 🛛 Freshman Year

- 🏉 Calculus I
- 🏉 Digital Systems
- Academic English
- Introduction to
   Microeconomics
- Calculus IIDiscrete Mathematics
- English Composition
- Chemistry I

### 🛗 Sophomore Year

- Linear Algebra
- Electromagnetism
- Technical Writing

#### Computer System Engineering

- Waves, Optics
- (& Quantum Physics)
- Electrical Circuits
- Computer Organization
  - & Design

- Sophomore Project
- Probability and Statistics
- Introduction to Macroeconomics

#### Software Engineering

- Advanced Object-Oriented Programming
- System Development
- Computer Organization & Design

- Classical Mechanics
- Introduction to Programming
- Object Oriented-Programming
- Freshman Project
- Introduction to Psychology
- Data Structures & Algorithms
- Differential Equations

#### **Renewable Energy Engineering**

- Waves, Optics & Quantum Physics
- Electrical Circuits
- Chemistry II

## **Engineering Cycle**

### Computer Systems Engineering

### **Junior Year**

- Electronic Devices & Circuits Operating Systems Startup Engineering Signals & Systems Introduction to Software Engineering Introduction to Management Engineering Seminar Graph Theory & Applications Database Management Systems Communication Systems Feedback Control Systems Multivariable Calculus & Numerical Methods Governance & Citizenship Embedded Systems
- Junior Project

### **Senior Year**

Digital Signal Processing Computer Networks Programming Language Design & Implementation Advanced Digital Systems Effective Technical Communication Introduction to Finance Engineering Seminar Distributed Systems Artificial Intelligence Hardware/Software Co-design Communication Systems Engineering Ethics & Professional Practice Senior Project

### **Final Year**

Cyber Security Assessment & Management Data Analytics Machine Learning Robotics Engineerin Artificial Intelligence Pervasive Computing & Cloud Research Methods Engineering Seminar Capstone Project

### Programs Breakdown - Engineering

### Software Engineering

#### **Junior Year**

### **Senior Year**

- **Operating Systems** Global Software Development Startup Engineering Introduction to Software Engineering Introduction to Management **Engineering Seminar Graph Theory & Applications** Database Management Systems Web Software Development Mobile Software Develiopment **Requirements & User Experience** Governance & Citizenship Junior Project
- **Computer Networks** Programming Language Design & Implementation Software Analysis & Design **Effective Technical Communication** Introduction to Finance Engineering Seminar **Distributed Systems** Senior Project Software Quality & Testing Artificial Intelligene Software Architecture Software Development Methodologies **Engineering Ethics & Professional** Practice **Engineering Internship**

#### **Final Year**

Algorithms & Complexity Machine LEarning Cyber Security Assessment & Management Data Analytics Pervasive Computing & Cloud **Research Methods Engineering Seminar Capstone Project** 

### **Renewable Energy Engineering**

#### **Junior Year**

Thermodynamics **Electrical Power Systems** Chemistry II Signals & Systems Startup Engineering Introduction to Management **Engineering Seminar** Materials for Renewable Energy Electromechanical Conversion Systems Solar Energy Systems Graph Theory & Applications Multivariable Calculus & Numerical Methods Governance & Citizenship Junior Project

#### **Senior Year**

Intermediate Heat Transfer **Biomass & Bioenergy Systems** Power Electronics Fluid Mechanics **Effective Technical Communication** Introduction to Finance **Engineering Seminar** Energy Management & Analysis Wind Energy Feedback Control Systems **Engineering Ethics & Professional** Practice Engineering Internship Senior Project

#### **Final Year**

Energy, Environment & Sustainability Power Systems & Smart Grid **Energy Conversion & Storage** Artificial Intelligence **Data Analytics** Research Methods **Engineering Seminar** Capstone Project



## **International** Opportunities

• EXCHANGE PROGRAM : MedTech students are given the opportunity to go on exchange in one of our partner universities like France or Portugal. During the exchange, they spend a semester abroad where they experience new ways of learning as well as a rich cultural exchange.

 INTERNATIONAL COLLABORATIVE PARTNERSHIPS: MedTech students can benefit from one of our International Collaborative Partnerships (ICP) and earn an MSc in either Business, Business and Technology or Engineering. Formats are either 3+2, 4+2 or 5+1.
 \*Please see our website for more details.





**9** France





The LUISS Italy



MedTech Mediterranean Institute of Technology

• CAPSTONE PROGRAM : After finishing their 5 years of Engineering, and before graduating, MedTech students can spend 6 months in one of our Capstone partners, to work on their capstone projects for the end of their studies, with the assistance of both MedTech professors and a professor from the partner university.

• DOUBLE DEGREE PROGRAM : MedTech students can benefit from a Double Degree opportunity with HEC Montreal and receive a BBA from HEC Montreal, plus a 5-year National Engineering Degree from MedTech within 5 years. \*Please see page 10 for more details.

17

Mediterranean Institute of Technology - MedTech

# **MedTech** Licence in Computer Science



### Program **Objectives**

The main objective of the Licence program in Computer Science is to train future graduates to be successfully employed in the field of computing, or to enroll in advanced degrees in computer Science or any other related discipline.

MedTech's Computer Science Licence program provides students with a combination of advanced technical and theoretical knowledge, best engineering practices, and emerging technologies to develop software that meets high quality standards.

The educational program has a thorough basis in the principles and practices of computing as well as real-world learning experiences through team-centered and hands-on projects to prepare students properly to engage in further learning.

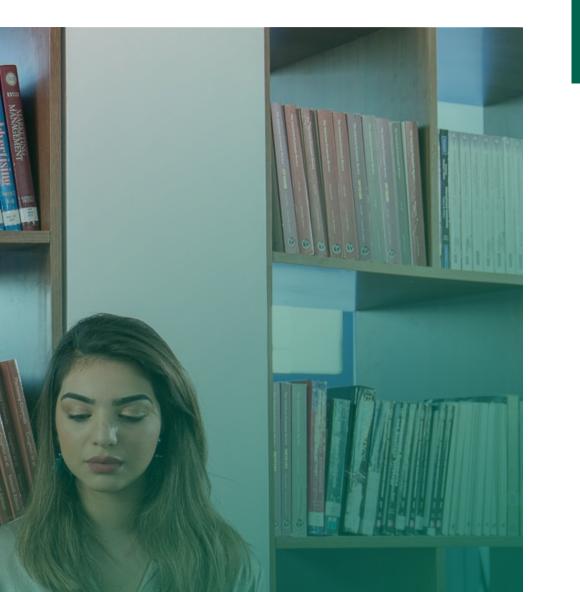
Besides technical skills, upon successful completion of the program, graduates will acquire social and entrepreneurial skills.

## Enroll in an enriching **experience**

## Program Breakdown - Licence

## **Licence in Computer Science**

Heat Yea	r 1
<ul> <li>Term 1</li> <li>Calculus I</li> <li>Introduction to Programming</li> <li>Digital Systems</li> <li>Academic English</li> <li>Discrete Mathematics</li> <li>Introduction to Psychology</li> <li>Multimedia Technology</li> </ul>	<ul> <li>Term 2</li> <li>Calculus II</li> <li>Computer Networks</li> <li>Database Management Systems</li> <li>Freshman Project (Pyhton)</li> <li>Computer Organization &amp; Design</li> <li>English Composition</li> </ul>
Yea	r 2
<ul> <li>Term 3</li> <li>Object Oriented Programming</li> <li>Linear Algebra</li> <li>Software Analysis &amp; Design</li> <li>Operating Systems</li> <li>Introduction to Management</li> <li>Programming "Language Design &amp; Implementation</li> <li>Physics</li> <li>Technical Writng &amp; Ethics</li> </ul>	Term 4 Web & Mobile Programming Probability & Statistics Graph Theory Data structures and Algorithms Distributed Systems Electrical circuits Sophomore Project (Agile and IOT)
Hea Yea	r 3
<ul> <li>Term 5</li> <li>Pervasive Computing &amp; Cloud</li> <li>Machine Learning &amp; AI</li> <li>Cyber Security &amp; Big Data Effective</li> <li>Technical Communication</li> <li>Software Engineering</li> <li>Startup Engineering</li> </ul>	Term 6 Capstone Project Certification



## There's a place for **everything**, it's called **College**

**SMU** library

# **MedTech** Master Programs



**BLOCKCHAIN & AI** 



### SOFTWARE ENGINEERING



ENERGY MANAGMENENT & SUSTAINABILITY



**CYBER SECURITY** 







## Programs **Objectives**

The Master programs at MedTech provide advanced knowledge and methodological competences over a broad range of fields and techniques in the four different areas of specialization. The master programs focus on competences for effectively managing people, projects and processes as well as developing technical skills necessary for each specialization.

### Programs Breakdown - Master

## **Blockchain & Al**



### Year 1

Year 2

- Artificial Intelligence
- Advanced Statistics & Data Analytics
- Database Management Systems
- Digital Marketing
- Effective Technical Communication
- Digital Transfromation & Industry 4.0

- Algorithms & Graphs
- Distributed Systems
- Pervasive Computing & Cloud
- Business Process Modeling
- Engineering Ethics & Professional Practice
- Digital Banking & Fintech

- Machine Learning
- Distributed Ledger Technology, Blockchain & Smart Contracts
- Financial Markets Systems & Technology
- Cyber Security Assessment & Management
- Managing Innovation & Entrepreneurship
- Business Environment
- Master Thesis



23

## Program Breakdown - Master

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Energy Management
  & Sustainability
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## Software Engineering



- Software Analysis & Design
- Database Management Systems
- Software Quality & Testing
- Advanced Programming
- Startup Engineering
- Artificial Intelligence

Year 2

- Requirements & User Experience
- Software Architecture
- Software Development Methodologies
- Web & Mobile Software Development
- Engineering Ethics & Professional Practice



## **Cyber Security**

Year 2

### Year 1

- Cryptography
- Cyber Security Assessment & Management

- Design & Development of Secure Software
- Informatics Security & Law
- Effective Technical Communication
- Data Analytics

- Designing & Building Secure
   Infrastructures
- Information Technologies Security
- Security Auditing
- Security & Privacy
- Engineering Ethics & Professional
   Practice

- Communication Systems Fundamentals
- High Performance Services & Infrastructures
- Robotics
- Machine Learning
- Information Systems Management
- Semantic Web
- Master Thesis

SMU library





## SMU Career & Alumni Center A way to build your network

In a more demanding employment market now, more than ever, the need for mentorship and guidance for you to choose your career wisely is crucial. As a career center, our aim is to bridge the gap between professional life needs and our educational system to provide our students with the right skills and knowledge so that they succeed in their professional lives.

Alumni Center, 4<sup>th</sup> floor, **MSB** 

## SMU Incubator



In a world where innovation is at the heart of rising economies, new business ideas have become an essential need. By founding the SMU Incubator, the university seeks to encourage young ambitious students and Alumni by helping them take the first step in creating their own companies.

## Advising and Counseling Center

Our University's top priority is the health and wellbeing of its students. Owing to that fact, SMU presents the Advising and Counseling Center (ACC) that provides academic advising and individual counseling to students in need.

The ACC has been created to help students keep a healthy state of mind and help them find proper on-and-off-campus resources.

Students are welcome to talk with their counselor about stress, academic performance, self-esteem and uncertainty. Services are provided by a licensed counselor.

# **Fondation** SMU



Promotes and supports the development of talents through academic excellence. Fondation SMU is a Tunisian non-profit association created in 2018 by South Mediterranean University to create and manage its Corporate Social Responsibility programs.

Its aim is to promote and support the development of Tunisian youth through the funding of student scholarships, research projects as well as employability and capacity building initiatives.

## **Foster talent** & open quality education to all

Offer scholarships and loans to students who have the talent and ability to succeed but concerns about funding.

## Drive research excellence

Provide an optimal framework for research around projects that have the potential to positively impact the social and economic sectors.

## Bridge education

Facilitate employability of young graduates by bringing them into a high-level training coupled with apprenticeship.

## Develop competencies & skills

Deploy capacity building programs that develop competencies and skills.



# An exciting student life



For broader horizons and for a learning experience that does not stop at the doorsteps of the classrooms, the campus features many clubs and associations that provide extracurricular and co-curricular opportunities for students, launching social projects, raising funds and donations for those in need or developing leadership skills and aiming for peace or wining competitions and bringing back trophies with SMU Sports Club. Our students are always learning, developing, and most importantly following their passions around and beyond campus.



Resting area, Mezzanine, MedTech



Cafeteria, ground floor, MedTech



# **SMU** Makerspace

Dedicated to creativity and innovation, SMU Makerspace is a space where students, faculty and alumni can gather to invent, create and learn with a "do-it yoursel" spirit.

SMU Makerspace enables SMU Community members to explore new interests and to develop creative projects from conception to implementation.









## In this space, you make your dreams come true

SMU makerspace

## 66

32

# Testimonials



RYM KRIAA MedTech ALUMNA MAJOR : RENEWABLE ENERGY Being the first and only English-Speaking Engineering School offering an Engineering Diploma in Renewable Energies in Tunisia, MedTech provides you with plenty of opportunities to sharpen your skills and mind.



AHMED AZIZ OUERTATANI MedTech ALUMNUS MAJOR : COMPUTER SYSTEMS ENGINEERING I belong to the first cohort of MedTech. I am extremely grateful for being provided with a unique opportunity to build a diversified and powerful network and gain technical engineering skills.



FATMA EZZAHRA BEN YEDDER MedTech ALUMNA MAJOR : SOFTWARE ENGINEERING

MedTech is one of my best life experiences. During my Software Engineering curriculum, I not only gathered a strong technical skills' background but also learned various soft skills including problem solving, public speaking, technical English communication and project management.

## Admission **Process**



To start the application process follow the link:

#### cms.smu.tn/admission

## Scholarships & Financial Aid

**Scholarships:** MedTech grants merit scholarships for outstanding students who cannot afford the tuition fees in order to promote academic excellence and provide better accessibility to quality education. MedTech also provides diversity scholarships to further enhance the cultural and international diversity on the SMU campus.

Financial aid: SMU assists students in the process of getting grants, scholarships or student loans.

**Student employment:** SMU students can find many employment opportunities on campus, such as part-time librarian or internships in different SMU departments.

## Admitted Students Next Steps

**Housing:** SMU is located in the new development Lac 2 where you will find higher-end accommodation. Cheaper options are Jardins de Carthage or El Aouina. La Marsa and Sidi Bou Said are popular options with expats as they are quite diverse and have many options for entertainment.

**Bank account:** Opening a bank account will probably be one of your priorities when moving to Tunisia. You will only need to provide: A copy of your certificate of registration at SMU, a copy of the first page of your passport, a copy of your Residency Card and a housing contract.

**Health services:** On campus, students will find a full-time nurse and a contracted doctor with whom you can have an appointment at the nursery (Mezzanine, MSB building). SMU can also help you get a health insurance.







South Mediterranean University

MSB . MedTech . LCI



