SMU

MedTech
Mediterranean
Institute of Technology

ABET Engineering Accreditation Commission

ENGINEERING SCHOOL

• SINCE 2014 •

Welcome

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.

OUR MISSION

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

OUR VALUES

Diversity | Integrity | Care | Excellence | Creativity

A LIFE CHANGING JOURNEY

MEDTECH FOR A GLOBAL CAREER

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.

OPENING **NEW PROFESSIONAL HORIZONS**

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.

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

Laboratories in major scientific fields (Renewable Energy, Computer Science, Electronics, Physics, Chemistry).
A well-equipped makerspace dedicated to students to elaborate their projects.

WELL-ROUNDED TRAINING IN BUSINESS, MANAGEMENT, GOVERNANCE & ETHICS

Successful engineers require a diverse set of competencies that extend to communication skills, business, management, and an appreciation of the regulatory environment and the interplay between ethics and modern technologies.

POSSIBILITIES OF 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

PARTNERS IN CANADA

HEC MONTRÉAL

Double Degree program

PARTNERS IN EUROPE

Università di Catania

Research Pathway(Phd)

PARTNERS IN USA

DEARBORN

SJSU SAN JOSÉ STATE UNIVERSITY

Transfer program

UA LITTLE ROCK

Capstone program

MEDTECH ENGINEERING PROGRAMS

SOFTWARE ENGINEERING

RENEWABLE ENERGY ENGINEERING

COMPUTER SYSTEMS ENGINEERING

Duration **5 years**

Credits **300 ECTS**

Language **English**

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

+33% are enrolled in PhD abroad

+8% are entrepreneurs

+59% joined the business world

WORLDWIDE GRADUATE OPPORTUNITIES IN

University of Rostock (Germany) • University of Porto, Tecnico Lisboa (Portugal)
University of Michigan-Dearborn (USA) • Medtech-HEC Montreal

1st and only English-Speaking Engineering School in Tunisia;

1st School Offering an Engineering Diploma in Renewable Energy;

94% Professors with PhDs from Prominent Universities;

4+2 Possibility of Double Degree with University of Michigan-Dearborn, USA.

FORMAT & STRUCTURE

Start Smart → 2,5 years **Pre-Engineering** → 2,5 years **Engineering Cycle** → 6 months **Capstone Project** → **Graduation**

PRE-ENGINEERING

FRESHMAN YEAR

Computer Organization and Design
English Composition
Calculus II
Mechanics & Thermodynamics
Freshman Project
Startup Engineering
Introduction to Programming
Digital Systems
Academic English
Calculus I
Introduction to Macroeconomics

SOPHOMORE YEAR

COMMON COURSES

Electrical Circuits
Technical Writing
Object-Oriented Programming
Linear Algebra
Differential Equations
Electromagnetism
Sophomore Project
Discrete Mathematics
Probability & Statistics
Waves, Optics & Quantum physics
Introduction to Macroeconomics
Introduction to Psychology

ELECTIVE COURSES

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

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

Renewable Energy Engineering
Waves, Optics & Quantum Physics
Electrical Circuits
Chemistry II

ENGINEERING CYCLE

Computer Systems Engineering

JUNIOR YEAR

S1
Operating Systems
Electronic Devices & Circuits
Embedded Systems
Signal & Systems
Goverance & Citizenship
Startup Engineering

S2
Database Management Systems
Feedback Control Systems
Graph Theory & Applications
Multivariable Calculus & Numerical Methods
Junior Project
Introduction to Management

SENIOR YEAR

S1
Programming Language & Design
Computer Networks
Digital Signal Processing
Advanced Digital Systems
Introduction to Finance
Effective Technical Communication

S2
Hardware/Software Co-Design
Communication Systems
Distributed Systems
Artificial Intelligence
Engineering Ethics & Professional Practice
Senior Project

FINAL YEAR

S1
Cyber Security Assessment & Management
Robotics Engineering
Pervasive Computing and Cloud
Machine Learning
Data Analytics
Research Methods

S2
Capstone Project

Software Engineering

JUNIOR YEAR

S1
Web Software Development
Operating Systems
Database Management Systems
Introduction to Software Engineering
Startup Engineering
Introduction to Management
Engineering Seminar

S2
Global Software Development
Mobile Software Development
Requirements & User Experience
Graph Theory & Applications
Governance & Citizenship
Junior Project

SENIOR YEAR

S1
Computer Networks
Programming Language Design & Implementation
Software Analysis & Design
Software Development Methodologies
Technical Communication
Introduction to Finance
Engineering Seminar

S2
Software Quality & Testing
Distributed Systems
Software Architecture
Artificial Intelligence
Engineering Ethics & Professional Practice
Senior Project
Engineering Internship

FINAL YEAR

S1
Pervasive Computing and Cloud
Cyber Security Assessment and Management
Data Analytics
Machine Learning
Algorithms & Complexity
Research Methods
Engineering Seminar

S2
Capstone Project

Renewable Energy Engineering

JUNIOR YEAR

S1
Thermodynamics
Electrical Power Systems
Chemistry II
Signal & Systems
Startup Engineering Governance & Citizenship Engineering Seminar

S2
Electromechanical Conversation Systems
Intermediate Heat Transfer
Graph Theory & Applications
Multivariable Calculus Introduction to Management Junior Project

SENIOR YEAR

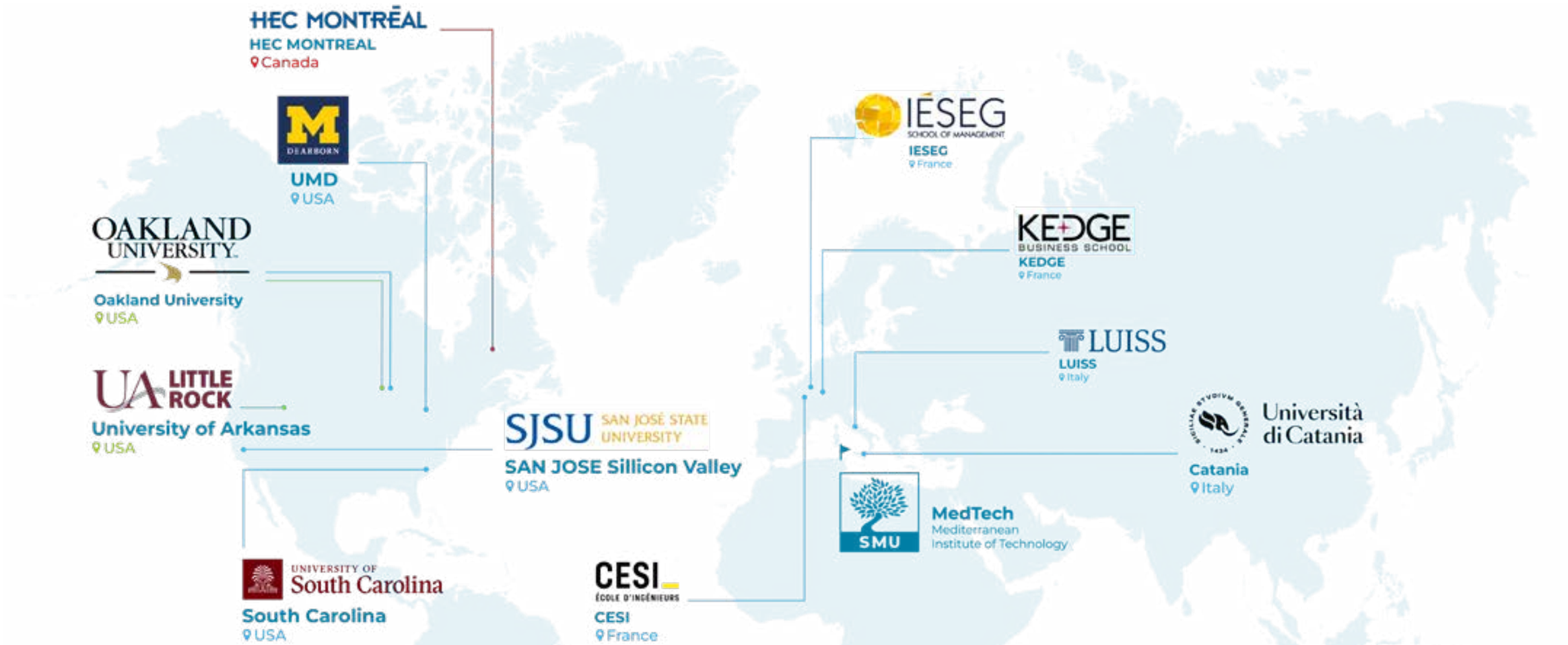
S1
Solar Energy Systems
Feedback Control Systems
Biomass & Bioenergy Sytems
Fluid Mechanics
Effective Technical Communication
Introduction to Finance
Engineering Seminar

S2
Energy Management & Analysis
HVAC in Buildings
Wind Energy
Power Electronics
Engineering Ethics & Professional Practice
Senior Project
Engineering Internship

FINAL YEAR

S1
Energy, Environment & Sustainability
Power Systems & Smart Grid
Energy Conversion & Storage
Artificial Intelligence
Data Analytics
Research Methods Engineering Seminar

S2
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.*

CAPSTONE PROGRAM

In the middle of their 5th year 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 oppor- tunity with HEC Montreal and receive a BBA from HEC Montreal, plus a 5-year National Engi- neering Degree from MedTech within 5 years.

**Please see page 10 for more details.*

MEDTECH LICENCE IN COMPUTER SCIENCE

Duration **3 years**

Credits **180 ECTS**

Language **English**

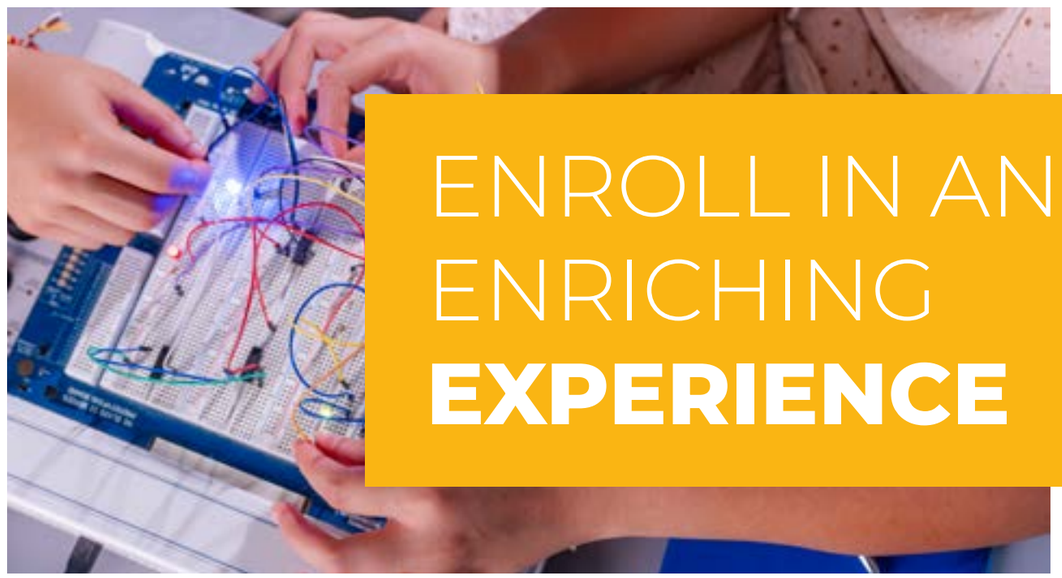
MESRS

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**

LICENCE IN COMPUTER SCIENCE

YEAR 1

Term 1
Calculus I
Introduction to Programming Digital Systems
Academic English
Discrete Mathematics Introduction to Psychology
Multimedia Technology

Term 2
Calculus II
Computer Networks
Database Management Systems Freshman Project
(Pyhton) Computer Organization & Design English
Composition

YEAR 2

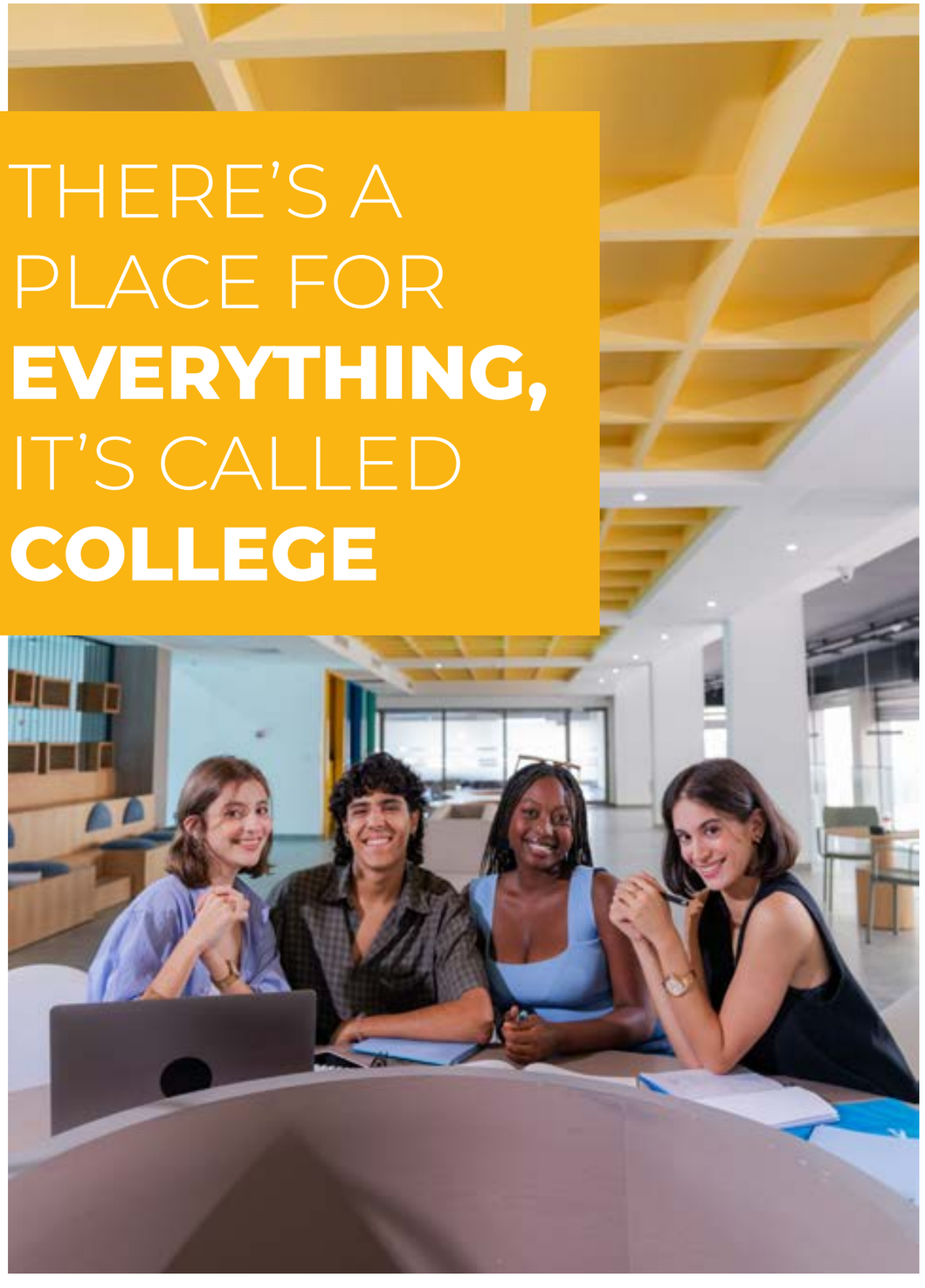
Term 3
Object Oriented Programming
Linear Algebra
Software Analysis & Design
Operating Systems
Introduction to Management
Programming Language Design & Implementation
Physics
Technical Writng & Ethics

Term 4
Web & Mobile Programming
Probability & Statistics
Graph Theory
Data structures and Algorithms
Distributed Systems
Electrical circuits
Sophomore Project (Agile and IOT)

YEAR 3

Term 5
Pervasive Computing & Cloud
Machine Learning & Artificial Intelligence
Cyber Security & Big Data Effective
Technical Communication
Software Engineering
Startup Engineering

Term 6
Capstone Project



MEDTECH MASTER PROGRAMS

BLOCKCHAIN AND ARTIFICIAL INTELLIGENCE IN BUSINESS COMPUTING

SOFTWARE
ENGINEERING

CYBER SECURITY
FULL-TIME (2 YEARS)
PART-TIME (2.5 YEARS)

Duration
2 years

Credits
120 ECTS

Language
English

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.

PROGRAM BREAKDOWN

Master

BLOCKCHAIN AND ARTIFICIAL INTELLIGENCE IN BUSINESS COMPUTING

YEAR 1

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

YEAR 2

Machine Learning
Distributed Ledger Technology, Blockchain & Smart Contracts
Financial Markets Systems & Technology
Cyber Security assessment & Management
Managing innovation & entrepreneurship
Business Environment
Master Thesis

SOFTWARE ENGINEERING

YEAR 1

Software Analysis & Design
Database Management Systems
Software Quality & Testing
Advanced Programming
Startup Engineering
Artificial Intelligence
Requirements & User Experience
Software Architecture
Software Development Methodologies
Web & Mobile Software Development
Engineering Ethics & Professional practice

YEAR 2

Machine Learning
Data Analytics
Pervasive Computing and Cloud
Cyber Security and Assessment
Research Methods
Robotics

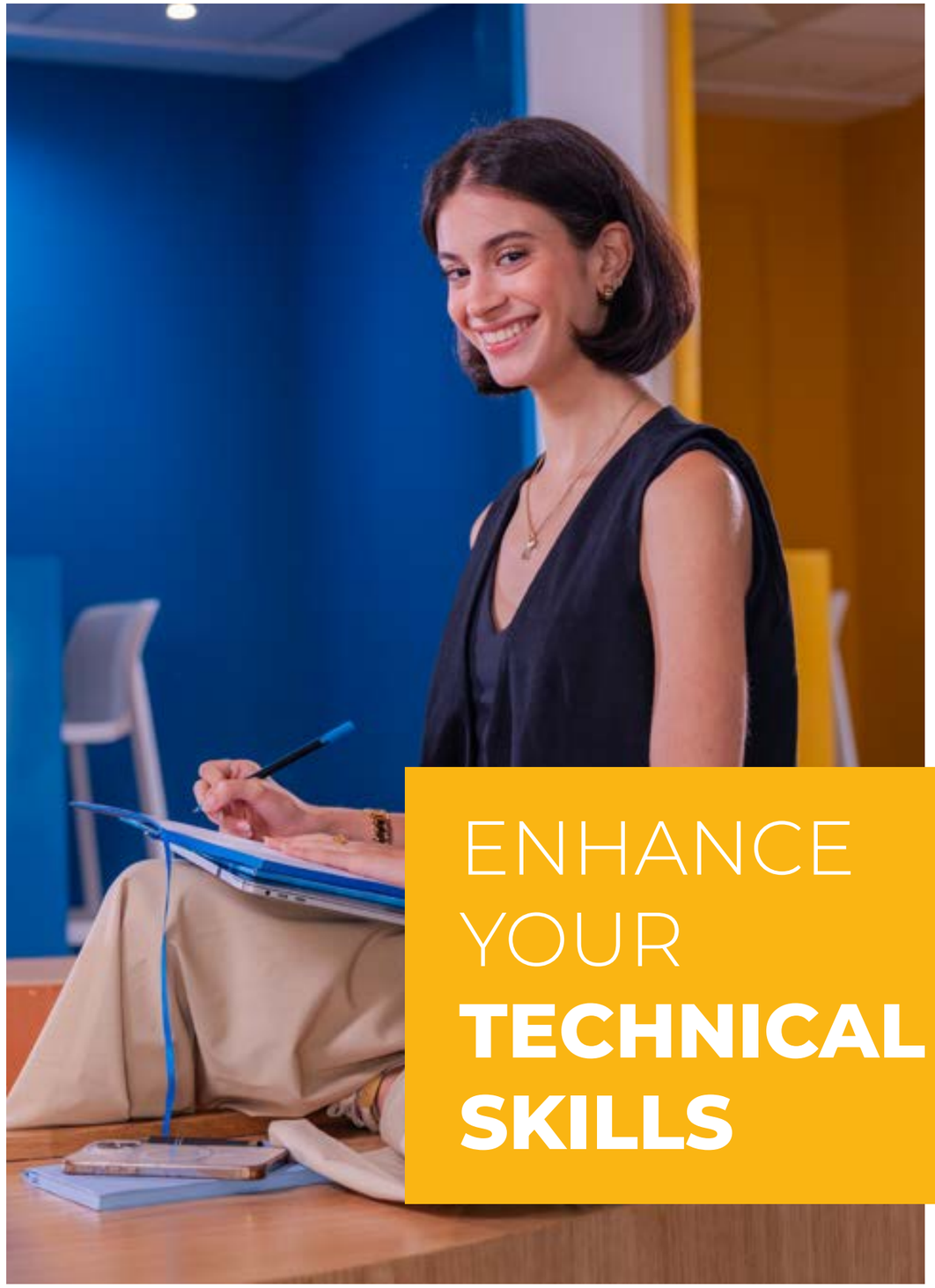
CYBER SECURITY

YEAR 1

Cryptography
Cyber Security Assessment And Management
Ai For Cybersecurity
Computer Network Security
Engineering Ethics & Professional Practice
Incident Response And Recovery
Machine Learning
IOT Security
Effective Technical Communication
Pervasive Computing & Cloud
Design And Development Of Secure Software
Ec-c Certification: CEH Or NDE

YEAR 2

Blockchain Technology
Informatics Security And Law
Security And Privacy
Information Technologies Security
Research Methods
Digital Forensics
Master Thesis



ENHANCE YOUR **TECHNICAL SKILLS**

EXECUTIVE PROGRAMS

EXECUTIVE MASTER IN
BIM & ERP MANAGEMENT

EXECUTIVE MASTER IN
DIGITAL HEALTH AND ARTIFICIAL INTELLIGENCE

EXECUTIVE MASTER IN BIM & ERP MANAGEMENT

The Executive Master in BIM & ERP Management is a part-time program, designed to tailor the work and life commitments of participants. Classes meet four days a month (Thursday through Sunday from 9:00 AM to 6:00 PM) over a 17-month period, followed by three additional months dedicated to the final project.

The Building Information Modeling (BIM) and Enterprise Resource Planning (ERP) methodologies have revolutionized the Architecture, Engineering, Construction, and Operation (AECO) industry. Yet there is a shortage of highly qualified practitioners to manage BIM projects.

The Executive Master in BIM & ERP Management allows participants to acquire a high level of know-how in the management of processes, equipment, and workflows involved in the construction sector, throughout the entire lifecycle of a building project, from the planning and design phase, to procurement, construction and maintenance stage..

The program consists of modules and workshops aiming at:

Providing the knowledge and skills of how BIM and ERP methodologies can be applied across a construction/infrastructure project from conception to demolition.

Developing critical thinking, leadership, and decisionmaking skills, and the ability to apprehend strategic decisions dealing with both the technical administration and the execution of a project.

Developing communication and collaboration skills.

EXECUTIVE MASTER IN DIGITAL HEALTH AND ARTIFICIAL INTELLIGENCE

The Executive master's in digital health and AI is Designed to teach the interdisciplinary knowledge and skills required to drive innovation in the expanding area of digital health.

Digital Health and AI program recognizes the interaction between technologies and people in healthcare and draws on the expertise of faculty from across SMU university and internationals to create an interdisciplinary learning experience, healthcare systems, medical Law, change management, engineering, artificial intelligence, and data science.

Aimed at early- or mid-career professionals, participants to the Applied Digital Health and AI MSc will come from a wide range of backgrounds, including health professionals, public health, statistics, computer science and engineering.

Classes meet four days a month (Thursday through Sunday from 9:00 AM to 6:00 PM)

The program consists of modules and projects aiming at:

Providing the essential tools and practical skills to pursue a career in leading digital transformation for health.

Developing leadership and critical thinking for Digital Transformation in Health with assurances of their ethical, safe, and effective deployments.

Developing Communication and Change management skills.

Operating and leading in a multidisciplinary environment

SMU Incubator
MSB - MedTech - LCI

SMU **INCUBATOR**

Launched in September 2019, the SMU Incubator was established to nurture the leadership community of South Mediterranean University (MSB & MedTech). Embracing innovation within a vibrant entrepreneurial environment, +10% of our students and alumni are trailblazers, shaping the future and creating value.
With a wealth of faculty expertise, SMU is dedicated to fostering its driven talents and project leaders by aiding the growth and execution of their business concepts. The Incubator provides a comprehensive 6-month training for entrepreneurs and spinoffs in the early stage, offering workshops, mentorship, coaching, and access to MSB & MedTech resources and network. This culminates in Pitching Sessions before expert panels, potential clients and interested investors
The SMU Incubator is not just a training ground; it's a gateway for entrepreneurs and companies to expand their horizons to new markets and secure funding through our extensive Alumni and Partner network and have impact on our communities.
Our Co-working Space is designed as a collaborative hub for each cohort to leverage collective skills, resources, and business-engineering synergies.
In its third year, the latest cohort showcased their innovative FinTech, HRTech, and FoodTech startups to investors on DEMO DAY after months of guidance from top mentors and industry experts.

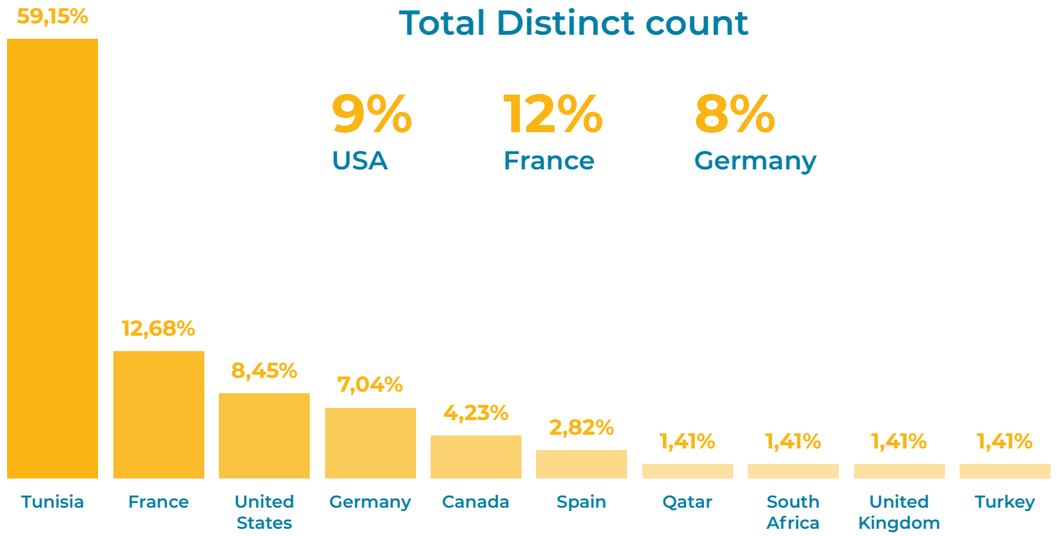
SMU **CAREER SERVICES**

In today's competitive job landscape, effective mentorship is more essential than ever to make informed career decisions. Our career center is dedicated to closing the gap between the demands of professional life and our academic offerings, equipping our students with the necessary skills and insights for professional triumph.
SMU Robust corporate partnerships provide students with essential career development resources and direct pathways to employment opportunities. These collaborations offer internships, job placements, and practical insights into industry trends, greatly enhancing the employability and real-world preparedness of graduates.

ALUMNI AND FAMILY RELATIONS

Serves as a hub for graduates to connect with their former school and each other. It offers networking events, and mentorship programs to support alumni's professional growth. The center also organizes reunions, manages alumni records, to enhance the university's resources and programs. Its goal is to maintain a vibrant alumni community, provide ongoing support to build a strong, engaged SMU community that contributes to the institution's legacy and supports current students.

WHERE ARE OUR MEDTECH ALUMNI **TODAY ?**



MEDTECH SENT TO

GLOBAL ENR
Vneuron Risk & Compliance
GIZ
Energy Consult
Berkeley Lab
University of Michigan
Worldine
Ford

FONDATION SMU

Fondation SMU
MSB - MedTech - LCI

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.

www.fondationsmu.org

AN EXCITING STUDENT LIFE

SMU Student Life
MSB - MedTech - LCI

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**

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

Created on April 1st 2023 at the cutting edge of technology, the Trading Room of the South Mediterranean University offers 18 specialized workstations allowing the University’s students to experience the environment and the activity of the highly performing financial analysis and trading platforms. Students and faculty members benefit from access to Refinitiv Eikon and Datastream platforms and to Cloud / Windows based Financial Trading and portfolio management simulation platforms.

IN THIS SPACE,
YOU MAKE
YOUR DREAMS COME TRUE

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**

Start Smart → **Form & Documents** → **Admission Tests** → **Decision**

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

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