



People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Sétif 1 University – Ferhat Abbas
Faculty of Economics, Commerce and Management sciences
Finance and Accounting Department

PhD Program in Financial Technology

Presentation of the PhD Program

The PhD program in Financial Technology at the University of Setif 1 is a research-oriented program designed in response to the major transformations occurring globally in financial systems. These changes have brought about new needs and ambitions for countries to train researchers and authors capable of understanding and analyzing financial technology (FinTech), which is rapidly growing in today's world.

This program focuses on both theoretical and practical aspects of financial systems, keeping pace with technological developments, digital technologies, and evolving regulatory frameworks at local and international levels.

It aims to produce graduates with strong academic backgrounds in finance and economics, able to specialize in areas like big data analysis, blockchain technologies, artificial intelligence, and machine learning applications in finance.

The program encourages critical thinking, creativity, and interdisciplinary collaboration. It promotes research and training aligned with real-world challenges, while also considering diverse international and national policy contexts in financial strategies.

The PhD program will offer students from around the world an academic and practical framework to explore these challenges, contribute to innovation, and develop effective and impactful solutions for financial systems.

The program is built around a deep understanding of financial technologies, and aims to contribute meaningfully to their evolution. It includes interdisciplinary areas and aims to train elite researchers with high-level scientific and technical skills, guided by internationally experienced supervisors.

Graduates will be able to propose, design, and implement strategies and tools to assess and guide financial transformations, especially those driven by digital and financial technologies.

Objectives of the Program

1. To provide advanced knowledge and applied and theoretical skills in the core disciplines of financial technology, including finance, digital technologies, and regulatory frameworks.
2. To develop advanced research methodologies and tools to explore and analyze complex financial systems and their scientific implications.
3. To equip students with analytical and critical thinking abilities to examine emerging challenges in financial technology from ethical, legal, and social perspectives.
4. To train students on advanced data analysis tools and technologies used in financial technology such as blockchain and artificial intelligence.
5. To prepare students to lead in academic and professional settings and shape the future of financial systems at a global level.
6. To enable students to earn a PhD by conducting high-quality, original, and applicable research in financial technology.

Admission Requirements

- **Master's Degree:** Applicants must hold a master's degree (or equivalent) in finance, economics, management, accounting, computer science, engineering, or any related field recognized by national or international institutions.
- **Language Requirement:** Applicants must demonstrate proficiency in Arabic or English. Courses and program activities will be conducted in either Arabic or English depending on the candidate's preference.

Career Opportunities

Graduates of the PhD in Financial Technology will be well-qualified to pursue diverse careers, including:

- **Academia and Research:** Professors, researchers, or research center specialists in universities or higher education institutions.
- **Financial and Technology Industry:** Experts in financial and FinTech firms, including both traditional and innovative sectors. Possible positions include strategy consultants, big data specialists, research and development heads, etc.
- **Consulting:** Strategic consultants in financial technology applications and data analysis.
- **Regulatory and Oversight Bodies:** Experts in regulatory and financial supervisory institutions like central banks or international monetary organizations.
- **Entrepreneurship:** Founders of startups or companies operating in FinTech.
- **Think Tanks and Research Institutions:** Researchers in policy and strategic studies focused on finance and technology.

Potential Fields for Dissertation Research

The PhD program offers the opportunity to conduct research in various areas of financial technology, including:

- Digital transformation and financial system evolution in organizations.
- FinTech innovations in insurance (InsurTech), wealth management (WealthTech), lending, and regulation (RegTech).
- Technological applications in financial markets and digital financial solutions.
- Public and private sector adoption of financial technologies.
- Research and academic institutions specializing in finance and digital technologies.

Official Framework and Program Design

The PhD in Financial Technology focuses on advanced and applied research. Students will conduct research under the supervision of qualified faculty, developing dissertations that contribute to both theoretical and practical knowledge.

The program includes coursework and research activities structured as follows:

Coursework Overview

The program consists of **two semesters** of coursework (first year), followed by a **two-year research phase**, totaling **three years**.

First Semester Courses:

Teaching Units	Course Titles	Hourly Volume
Specialization Modules	Foundations of Financial Technology and Digital Ecosystems	30 hours
	Blockchain Technology, Cryptocurrencies, and Decentralized Finance (DeFi)	30 hours
	Research Design, Ethics, and Qualitative Methods in FinTech	30 hours
	Advanced Financial Econometrics I: Time Series and Panel Data Analysis	30 hours
Cross-Disciplinary Modules	Philosophy Lessons	20 hours
	Introductory Lessons in Education and Pedagogy	20 hours
	Information and Communication Technology Lessons	20 hours
	Capacity-Building Lessons in Foreign Languages	20 hours
	Lessons in Programming Fundamentals and Techniques	20 hours
	Artificial Intelligence Tools and Techniques	20 hours
Seminars	Trends and Challenges in Global FinTech Regulation	-
	Total Hours	240 hours

Second Semester Courses:

Teaching Units	Course Titles	Hourly Volume
Specialization Modules	Artificial Intelligence and Machine Learning in Financial Services	30 hours
	FinTech Regulation, Policy, and RegTech Innovation	30 hours
	Cybersecurity, Financial Risk Management, and Digital Resilience	30 hours
	Advanced Financial Econometrics II: Machine Learning, Big Data, and Microeconometrics for FinTech	30 hours
	Workshop	30 hours
Seminars	AI and Machine Learning Applications in Financial Decision-Making	-
	Total Hours	120 hours

Research Phase (Years 2 and 3)

The final phase includes:

- Development and refinement of the research proposal.
- Conducting original research.
- Writing the dissertation.
- Dissertation defense.
- Participation in national and international conferences and publishing research findings.

Financial Technology/ اسم التخصص بالانجليزية	
Curriculum highlights	<ul style="list-style-type: none">• Rigorous two-semester sequence in Advanced Financial Econometrics tailored for FinTech• In-depth exploration of core technologies: Blockchain/DeFi and AI/Machine Learning in Finance.• Strong emphasis on research design, ethics, and diverse methodologies.• Comprehensive coverage of FinTech regulation, policy, cybersecurity, and risk management.• Designed to prepare graduates for leading roles in academia, industry, and regulatory bodies globally.• International student focus with relevant global and regional content.
Admission information	<ul style="list-style-type: none">• Master's Degree: A Master's degree (or equivalent) in all domains of Economics, Commerce, and Management Sciences, Computer Science, Engineering, Business Administration, or a closely related field from a recognized institution.• Language Proficiency: The program will be delivered in English or Arabic. Good proficiency in either English or Arabic is required.
Core courses	<p>Total Hours per Course: 20 hours per semester</p> <p>Semester 1 (Total 80 Course Hours):</p> <ol style="list-style-type: none">1. Foundations of Financial Technology and Digital Ecosystems (20 hours)2. Blockchain Technology, Cryptocurrencies, and Decentralized Finance (DeFi) (20 hours)3. Research Design, Ethics, and Qualitative Methods in FinTech (20 hours)4. Advanced Financial Econometrics I: Time Series and Panel Data Analysis (20 hours) <p>Semester 2 (Total 80 Course Hours):</p> <ol style="list-style-type: none">5. Artificial Intelligence and Machine Learning in Financial Services (20 hours)6. FinTech Regulation, Policy, and RegTech Innovation (20 hours)7. Cybersecurity, Financial Risk Management, and Digital Resilience (20 hours)8. Advanced Financial Econometrics II: Machine Learning, Big Data, and Microeconometrics for FinTech (20 hours)
Advanced	Beyond core courses, students will engage with advanced topics through

topics	<p>dissertation research, specialized seminars, and independent study. Potential areas include:</p> <ul style="list-style-type: none"> • Decentralized Autonomous Organizations (DAOs) • Central Bank Digital Currencies (CBDCs) & Monetary Policy • Algorithmic Bias and Fairness in AI for Finance • Quantum Computing applications in FinTech (emerging) • Sustainable FinTech and Green Finance Technologies • Advanced RegTech/SupTech solutions • Behavioral Economics of FinTech Adoption • The Economics of Digital Platforms and FinTech Ecosystems
Full Curriculum	<p>The full curriculum comprises 8 core doctoral courses totaling 160 hours (80 course hours per semester) over two semesters, followed by examinations and the development and defense of a doctoral dissertation. The program includes mandatory participation in supplementary activities (as detailed in Table 2) to enhance research skills and professional development. Estimated total hours for specified supplementary activities are 80 hours in Semester 1 and 90 hours in Semester 2.</p>