

# MOBILE COMPUTING SYSTEMS

## MASTER OF SCIENCE

### ACCREDITATION

National Accreditation by the French Ministry of Education, Higher Education and Research.

The degree can lead to enrollment in a Phd program.

### KEY WORDS

Wireless Communications, Mobile Communications, Mobile Networking, Mobile Applications and Services, Telecommunications, Signal Processing Technology.

### STRONG POINTS OF THE PROGRAM

- > The teaching program benefits from a unique location and from the expertise of renowned industrial partners.
- > EURECOM is located in Sophia Antipolis, Europe's largest technology park, a hotbed of internships and jobs opportunities for students.
- > EURECOM is a consortium of leading international universities and top ICT companies and has established a synergy with the local industrial environment on advanced research topics.
- > During their Master, students will have access to cutting-edge technological platforms within EURECOM's Wireless Communications Laboratory.
- > Students are supervised by internationally renowned researchers.
- > A 6-month paid internship which provides a cutting-edge experience. EURECOM has its own database of internship offers in several countries.
- > A fully dedicated team providing administrative support to international students
- > A strong international exposure providing essential intercultural tools (only school in France with 2/3 of international students and professors)

### SCHOOL OFFERING THE MASTER

EURECOM, a «Grande Ecole» with a 100% curriculum in English. It is located on the French Riviera, between Nice and Cannes. The degree is co accredited by IMT (Institut Mines-Télécom).

### INDUSTRIAL PARTNERS

BMW Group, IABG, Orange, Monaco Telecom, SAP, Symantec.

### LANGUAGE OF TEACHING

100% teaching in English. French is taught as a foreign language throughout the program. A 3-week program of intensive French courses is organised in September.

### ENVIRONMENT

This Master provides a comprehensive set of competences in Communication Systems: from physical layer (wireless communications theory and implementation aspects), mobile networking (based on IPV6), to applications (for smartphone, tablets...). Sophia-Antipolis is considered a major European region for telecommunications research and development in southern France. EURECOM has established over the years a synergy with the local industrial environment on advanced research topics.

### COURSE AIMS

- > Provide the theoretical background and the applied know-how for engineers in Mobile Communications Systems.
- > Learn to tackle problems from a system viewpoint, taking vertical cut and following a cross-layer approach.
- > Acquire and master tools and methods to follow the rapid evolution of technology and provide solutions leading to future generations of systems.
- > Acquire managerial knowledge to provide innovation in Mobile Communications Systems (Project Management, Organization, innovation management...).

### PROGRAM

The Master's program is made of 4 full-time semesters: 3 semesters of courses followed by a 6-month Msc thesis in industry or in a research lab.

#### Scientific and Technical courses

- > Information theory
- > Essential Mathematical Methods for Engineers
- > Mobility Modeling
- > Fundamentals of Optimisation
- > Distributed Systems and Cloud Computing
- > Operating systems
- > Secure communications
- > Software development methodologies
- > Mobile Communication Systems
- > Mobile Communication Techniques
- > Advanced topics in Wireless communication
- > Digital Communication
- > Statistical Signal Processing
- > Mobile application and services
- > Network modeling
- > Radio Engineering
- > Wireless Access technologies
- > Mobile Networking
- > Mobile Advanced Networks
- > Signal Processing Technologies
- > Channel Coding theory
- > Signal Processing for Communications

#### Soft skills / Management modules

- > Introduction to Management
- > Personal development and Team
- > Leadership
- > Entrepreneurship and Capital Venture
- > Innovation and new product development
- > Business Simulation
- > Sociological approaches of telecom technologies (course given in French)
- > Project Management
- > Sustainable ICT's (Green IT)
- > Intellectual Property Law
- > General Introduction to Law

#### Also part of the program:

- > Company visits and seminars
- > Scientific and Technical Projects
- > French language
- > Professional coaching (workshops on CV/professional interviews)
- > 6-month thesis in Industry or Research lab

# MOBILE COMPUTING SYSTEMS

## MASTER OF SCIENCE

### ADMISSION REQUIREMENTS

- > a Bachelor's degree (3years min) in the engineering fields covered by the Master's program (Electrical engineering / computer sciences / communication engineering...).
- > B2 level in English

### LANGUAGE REQUIREMENTS

#### English (at least one of the following)

- > Mother tongue;
- > English Language Qualification
  - TOEFL 564 (PBT), 213 (CBT), 80 (IBT)
  - IELTS: 5.5
  - TOEIC: 750
  - Cambridge CAE

### APPLYING

All applications should be made online:

<https://www.eurecom.fr/en/postulant/new>

The website provides full information on application procedures:

<https://www.eurecom.fr/en/teaching/master-science/master-degree-mobile-computing>

### COMPETENCES ACQUIRED

- > A global view of the major challenges of future Mobile Communications Systems
- > A strong theoretical background in communications and networking to address the fixed /wireless convergence
- > Knowledge of the most recent industrial developments and standards
- > Introduction to advanced research topics

### TYPICAL JOBS

The Master in Mobile Computing Systems gives access to the Telecom Equipment industry, to the Telecom Operators industry and to the academic/theoretical research world.

All national and international institutions in the field of communications systems provide career opportunities to graduated students:

- > Operators
- > Telecommunications industry
- > Consulting companies in Information Technologies
- > Regulators
- > Software editors
- > Semi conductor industry
- > Other industries (car manufacturers...)

### PROFESSIONS

- > Research and development in Communication Systems
- > Network Consulting
- > Network Architect
- > Communications Software Development
- > Communications Hardware Development
- > Project Management
- > Telecom Policy Making

### COST

Tuition fees for the full program (2 years):

€12,000

€6,000 (European Union and Erasmus zone) Possible partial fee waivers and scholarships.

### DURATION

2 years (starting in september):

3 semesters of courses followed by a 6- month paid internship in a lab or company.

### LODGING

Accommodation is organised with the Administration Staff of EURECOM in student halls of residence, rooms or shared flats.

### SCHOOL CONTACTS

EURECOM  
Campus SophiaTech  
450 Routes des Chappes CS 50193  
06410 Sophia Antipolis  
FRANCE

[www.eurecom.fr](http://www.eurecom.fr)

Tel: +33 (0)4 93 00 81 00

Fax: +33 (0)4 93 00 82 00

Admissions

[admission@eurecom.fr](mailto:admission@eurecom.fr)



Institut Mines-Télécom

IMT  
International Relations  
37-39 rue Dareau  
75014 Paris - France  
[international@imt.fr](mailto:international@imt.fr)  
[www.imt.fr](http://www.imt.fr)