The master in Digital Security aims at providing a solid background in the design and management of security in major areas of communications and computer science. The professional training in security will be offered as a complement to an advanced program in computer networking, mobile services and imaging. Graduates will thus be able to tackle security problems encountered in networking, distributed software applications and image processing. Various technical areas ranging from secure software to cryptographic mechanisms and practical countermeasures against network attacks through watermarking of images and biometric identification techniques will be addressed in several courses and laboratories.

**COURSE AIMS**

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**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 modules**

- Computer architecture
- Image & Video Compression
- Digital Image Processing Information theory
- Network Modeling
- Introduction to computer networking and internet
- Operating systems
- Software development methodologies
- Secure communications
- System and Network Security
- Emulation and simulation methodologies
- Information theory
- Mobility Modeling
- Mobile application and services
- Mobile communication systems
- Network Modeling

**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

**REQUIREMENTS**

Entry requirements include a Bachelor’s degree in the engineering fields covered by the Master program (Electrical engineering/computer sciences/communication engineering...).
DIGITAL SECURITY
MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

- English
  - Mother tongue or English proficiency test such as:
    - TOEFL: 564 (PBT), 213 (CBT), 80 (IBT)
    - IELTS: 5.5
    - TOEIC: 750
    - Cambridge: CAE

No prerequisite in French.

COMPETENCES ACQUIRED

- Solid background in design & management of security in computer and communication systems
- Design of secure communications systems
- Protection of existing systems
- Expertise in theoretical foundations of security
- Hands-on experience with software and networked systems
- Knowledge of security applications in communications and information systems
- Security skills as a complement to networking (mobile & fixed), image processing and software engineering

TYPICAL JOBS

- Security architect
- Security officer
- Network manager
- Security consultant
- Software Engineer with strong security expertise
- System Engineer with strong security expertise
- Telecommunications Engineer with strong security expertise

PROFESSIONS

By providing security skills as well as a solid competence in widely demanded fields like mobile networking, web engineering and image processing this Master broadens the employment sector from security specialists to a range of companies in the IT field that need and highly value additional security expertise. Potential employers thus include companies specialized in security fields such as:

- Network and Software Security Manufacturers (Firewall, IDS, Antivirus...)
- Network and Software Security Service Providers (Security consulting, ethical hacking services)
- But also companies in the broader field of ICT as follows
- Hardware and software manufacturers
- Professional Services (consulting, project management)
- Communication equipment manufacturers
- Network operators
- Application providers

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. Some of the companies offering internship opportunities to our students: SAP, BMW, Symantec, IABG, Orange, Amadeus, Renault, Siemens, ARM, Fortinet, PSA, KMPG, Nokia, Accenture, HP, Magnetti Marelli, DLR...

LODGING

Accommodation is organised with the Administration Staff of Eurecom in student halls of residence, rooms or shared flats. Eurecom has an online platform of accommodation offers, from public student residents to flat-sharing in villas and individual studio options. Eurecom students live in several cities nearby: Antibes (a charming city by the seashore), Nice (5th biggest French city); Valbonne or Biot.

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

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