Post Master’s degrees opportunities at EURECOM

Caroline HANRAS
International Relations Manager
2015
KEY FACTS ABOUT EURECOM

- 250 Master students
- 70 PhD students
- 23 Professors
- 3 Main fields of research and teaching: Mobile Communications, Network and Security, Multimedia Communications
- Status of consortium made of top universities and companies
- 100% Teaching in English
- First school outside the USA which was granted the "IEEE Major Educational Innovation Award"
WHY A POST MASTER at EURECOM?

International

2/3 foreign professors and students
Study in a truly multilingual and multicultural environment

Location

Combine high quality study and leisure on the French Riviera!

Availability

EURECOM’s size ensures greater proximity with staff and professors.

Quality / Recognition

Classes are full of EURECOM’s cutting-edge research and tight links with industry

Relevance

A very hands-on and flexible curriculum for maximum relevance to market needs

Only school in France where the curriculum is 100% taught in English
EURECOM IN PICTURES
AN UNCOMPARABLE SETTING

- French Riviera – Cote d’Azur
  - Enjoy **300 days** of sunshine per year 🌞
  - 30 min from Nice airport (2nd international airport in France)
  - Ideal for sport lovers: 30 min from the beaches

1 hour from the sky slopes

Ski and beach at the same time! January 2014
EUROPE LARGEST SCIENCE PARK

- EURECOM is located in the heart of SOPHIA ANTIPOLIS
  “The French Silicon Valley”

- 1,452 companies,
- 31,000 jobs
- 4,500 researchers
- More than 5,000 students
- 70 nationalities

Some of Sophia Antipolis’ leading companies

More information about Sophia Antipolis

A HUGE POOL OF INTERNSHIP AND EMPLOYMENT OPPORTUNITIES FOR EURECOM’ STUDENTS
EURECOM’s classes benefit from the latest advances in research from an international faculty who gained a world-wide recognition.

- **268** Scientific publications
- **121** with foreign institutions
- **22** Average H Index
- **276** Quotations in national and international media (183 in 2013)
- **161** Conferences
LINKS WITH INDUSTRY

EURECOM collaborate tightly with companies. These industrial partnerships allow for a very hands-on approach to teaching to the benefit of students.

1. EURECOM industrial members

![List of industrial members]

2. INTERNSHIPS

EURECOM keeps an updated database of internship opportunities offered by companies allowing students to directly apply through it. Each semester, the database proposes an average of 200 offers from more than 70 companies for less than 100 targeted students.

3. RESEARCH CONTRACTS WITH COMPANIES

EURECOM is actively involved in research projects with top companies to bring its expertise in key fields.
EURECOM’s CURRICULA

Years of higher education

8
7
6
5
4
3
2
1

Entry degree

Studies at EURECOM

Curriculum fully integrated in the degree of EURECOM’s academic partners

Engineering curriculum
6 to 24 months study periods

3 year Bachelor’s degree

Master’s degree

4 year Bachelor’s degree

5 year Master’s degree

Post Master’s degree

5 year Master’s degree

PhD
POST MASTER’s DEGREES

ACCREDITATION:

EURECOM’s Post Master’s degrees ("diplôme d’ingénieur spécialisé") are State-recognized and accredited by the CTI (official French accreditation body of engineering studies). This accreditation guarantees a high academic quality and relevance to market needs.

DURATION:

Three semesters (two academic semesters and one paid 6 month professional internship), starting in September.

OBJECTIVES: Training experts in two fast-growing fields with huge employment prospects

- **Security in Communications and Computer Systems**
- **Communications for Intelligent Transport Systems**

With the fast development of computer and communication systems in our private and professional life, has come fraud in various forms. The demand for information security professionals is quickly exceeding the number of skilled experts.

With the increase of traffic congestion and concern over road safety; Intelligent Transportation Systems (ITS) promise to be one of the most dynamic and innovation specialization fields. Recent studies pointed that this field will be worth $33.75 billion (USD) by 2020.
Objectives: provide the necessary competences to become a security expert able to protect existing systems and/or a security architect able to design secure communications systems

a. Understand hacking attacks to better counter the
   - Network and systems security Sécurité des systèmes et réseaux
   - Cyber-criminality and computer forensics

b. Design and implement defense systems, cryptography
   - Secure communications
   - Security of security hardwares

c. Adapt security in various applications
   - Security applications in networking and distributed systems
   - Watermarking and biometrics, imaging for security applications

d. Gain new skills in relevant fields
   - Internet applications
   - Internetworking architectures and protocols
   - Cloud computing
   - Mobile communication systems
COMMUNICATIONS FOR ITS – COURSE SAMPLES

**Objectives:** to provide the necessary knowledge required by engineers and managers to design ITS applications and the related mechanisms to understand the innovations and unique opportunities of ITS.

a. Basic Tools and Knowledge
   - Mathematical Tools
   - Performance Evaluation
   - Simulation and Emulation Methodology

b. Mobility related tools
   - Mobility Modeling
   - Transport Planning
   - Infrastructure Planning

c. Communication related tools
   - Mobile Wireless Access Technologies
   - Mobile Networking
   - Standardization Activities
   - Mobile application and services
   - Mobile communication systems
The curriculum offers a perfect balance between theoretical courses and practical application to enable students to be quickly operational. Business oriented courses (“non technical courses”) harmoniously complete technical classes.

* Students with a B2 level in English automatically validate the language credit.
# CONTENT OF THE CURRICULUM

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical courses</td>
<td>• Innovative courses, designed in partnership with EURECOM's academic and industrial members.</td>
</tr>
<tr>
<td></td>
<td>• Regularly assessed and updated.</td>
</tr>
<tr>
<td>Non technical courses</td>
<td>• 1/3 of the curriculum. « <strong>Soft skills</strong> » MBA type classes taught by experts from companies or professors from renowned business schools in Law, Management, Business simulation…</td>
</tr>
<tr>
<td>Semester project</td>
<td>• Blend of theoretical and practical work, often involves the building of a prototype. Projects are sometimes proposed by industrial partners. (Around 200h per semester)</td>
</tr>
<tr>
<td>Foreign languages</td>
<td>• Any foreign language can be taught provided there are 5 students min.</td>
</tr>
<tr>
<td>internship</td>
<td>• Thesis on an industrial or research subject carried out in a company or a lab during 6 months.</td>
</tr>
<tr>
<td></td>
<td>• Students are paid and integrated as part of the company’ staff.</td>
</tr>
</tbody>
</table>
During your studies at EURECOM, students have to pick up a project which is highly related to industrial partnership. The aim is to put into practice the concepts learnt in class and gain a valuable practical and/or research experience.

Duration: **200 h/student**

### Recent semester’s projects

#### SECURITY IN COMPUTER SYSTEMS AND COMMUNICATIONS
- ADSL Security Analysis
- Automated Analysis of Malicious Web Artifacts
- Automated Identification of Android Malware Using Classification Techniques
- Breaking data-at-rest encryption
- Building a multi-cloud backend for a Dropbox clone
- D3js and computer security visualization
- Decentralized location sharing for Smartphones
- Digging for maliciousness
- Geographic data visualization of Internet attacks with WebGL Globe
- Holes detection thanks to armies of spies
- Implementing clustering algorithms with Cunetsim
- Privacy of a car2X Pseudonym Change Algorithm
- Privacy Preserving Delegated Word Search in the Cloud
- Security Visualization
- Study of generic PostScript attacks on printers from the web-side
- Upgrades-as-a-Service in Cloud Computing Environments
- Large-Scale Security and Privacy Simulations for Intelligent Transport Systems

#### COMMUNICATIONS FOR INTELLIGENT TRANSPORT SYSTEMS
- Characterization of Content Traffic Patterns for Opportunistic
- Cross Layer Distributed Congestion Control for Wireless Vehicular Communications
- Enhancing Configuration and Visualization Interfaces for Vehicular Mobility Simulations
- Evaluation of Multi-Channel Vehicular Communication for Traffic Safety Applications
- Experimental Measurement of Urban Vehicular Communication at 800Mhz
- Extension of the OpenAir Interface Mobility Generator for Future LTE-A Applications
- Modelization and Evaluation of the Impact of Motorcycles Mobility on Vehicular Traffic
- Modelization of Urban Pedestrian Mobility
- Performance measurements on a data traffic offloading platform.
- Scheduling in LTE/LTE-A with a learning engine
- Field Test Measurement and Comparison of Urban Vehicular Communication Conditions at 5GHz and 800Mhz
PROFESSIONAL INTERNSHIPS

- EURECOM’ study programs include a **paid 6-month internship** in a hi-tech company.
- Students are integrated as part of the staff.
- EURECOM has a huge database of internship opportunities available both in France and abroad to make sure students will find one suitable.

A few examples of recent internships made by EURECOM students
CAREER PREPARATION

THEMATIC WORKSHOPS:

EURECOM organises workshops animated by industrial partners and specialised agencies to help students in their future job search:

- How to write a CV
- How to write a motivation letter
- Rules of a professional interview
- How to use social networks in an efficient way

INTERNSHIPS FAIRS:

EURECOM organises internship fairs with local companies which enable students to directly meet with company HR managers. Students may also be invited to take part in job fairs held in other cities such as Paris.
STUDENT ASSOCIATION HIGHLIGHTS

From your arrival until your graduation, the student association will make sure you make the most of your time!

- Weekend of Integration
- Many sport activities
- International study trip
- Beach volley challenges
- Ski weekend
- End of the year weekend
- Graduation Ceremony
ADMISSIONS

Post Master’s applications are opened from October to early June. Admission committees meet monthly to assess applications.

Entry requirements:
- a 5-year Master’s degree (or equivalent) in a relevant field
- A min B2 level in English (upper intermediate)

Students fill an online application and send by post the following documents:
- CV
- Motivation letter
- Certified copy of transcripts (indicate ranking if available)
- Certified copy of degree certificate
- 2 recommendation letters (at least one from a professor)
- English test (French test if applicable) – can be sent later
- Any useful document deemed relevant by the students (certifications, bachelor/master’s thesis)

Selection criteria:
- Academic performance, reputation of the home university, ranking
- Quality of the motivations, relevance of the future professionnal project
USEFUL INFORMATION

- General information about admission
  Caroline HANRAS
caroline.hanras@eurecom.fr

- Coordinator Post Master
  Communications for
  Intelligent transport Systems
  Jérôme HAERRI
  Jerome.haerri@eurecom.fr

- Coordinator Post Master
  Security in Communications and
  Computer Systems
  Aurélien FRANCILLON
  aurelien.francillon@eurecom.fr

- Online application form
  https://www.eurecom.fr/en/postulant/new

- Activity Report 2014
  LINK

- Faculty Profile
  LINK