Data analysis helps develop methods, algorithms and software able to extract value out of huge masses of heterogenous data with several dimensions.

The curriculum offers a cohesive blend of technical classes in Machine and Deep learning, data mining, distributed systems coupled with fundamentals in Business, Innovation and Project Management to develop profiles which are highly valued by corporate recruiters.

**COMPETENCES ACQUIRED**

- Provide the theoretical background and the applied knowhow to manage and improve large-scale distributed systems
- Acquire tools and methods to develop algorithms of data analysis and conceive data storage and processing systems
- Develop an in-depth understanding of the fundamentals in other relevant fields such as: image and speech processing, Semantic Web and knowledge graph technologies; communications and computer security...
- Acquire managerial knowledge to provide and lead innovation in Business Intelligence and Data Analytics (Project Management, Organization, innovation management...)
- Get an Introduction to advanced research topics

**PROGRAM**

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

### Scientific and technical modules

- Database Management System Implementation
- Machine Learning and Intelligent System
- System and Network Security
- Distributed systems and cloud computing
- Introduction to statistical learning
- Operating systems
- Fundamentals of Optimization
- Mathematical methods for engineers
- Algorithmic machine learning and data mining
- Advanced Statistical Inference
- Modern computer architectures
- Secure Communications
- Semantic Web and Information Extraction Technologies
- Speech and Audio processing
- Cyber crime and Computer forensic
- Distributed software and middleware
- Software development methodologies
- Information theory
- Mobile application and services
- Interaction Design and Development of Modern Web
- Applications

### Soft skills/management modules

- Introduction to Management
- Personal Development and new product development
- Entrepreneurship and Capital Venture
- Innovation and product development
- Intellectual property Law
- Sustainable ICTs
- Business Simulation
- Sociological approaches of Telecom
- Technologies
- General Introduction to Law: contracts, setting up business
- Project Management
DATA SCIENCE AND ENGINEERING
MASTER OF SCIENCE

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

ADMISSION REQUIREMENTS
- A Bachelor’s degree (3 years 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

TYPICAL JOBS
The Master in Data Science and Engineering opens to a wide array of industries and business domains (client relation management, logistics, production, finance, marketing...). The need for trained specialists in Big Data is constantly growing as shown by recent studies and results in very good employment prospects for future graduates.

Some of the targeted fields:
- Retail
- Finances and banking
- Manufacturers (car, aviation)
- Services providers (Telecommunication, energy...)
- Science and research

PROFESSIONS
- Data Scientist
- Big Data architect
- Research and development engineer
- Product Manager for Big Data solutions
- Business Intelligence Analyst
- Business Analytics solutions provider
- Knowledge scientist
- Data product manager

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 organized with the administration staff or Eurecom in public and private student halls 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.
https://housing.eurecom.fr/en/

APPLYING
All applications should be made on line:
https://www.eurecom.fr/en/postulant/new
The web site provides full information on admission procedures:
https://www.eurecom.fr/en/teaching/master-science