

IST — Information Science and Technology

Coordinator:
Tanguy Risset - ist@listes.insa-lyon.fr



INFORMATION SCIENCE & TECHNOLOGY

COMPUTER SCIENCE

TELECOMMUNICATIONS

**ELECTRICAL
ENGINEERING**

**Bachelor-Level
Courses in English**

SYLLABUS



PART 1 (6 WEEKS)

September – October

Computer Networks: LAN & IP networks

Object oriented programming

Assembly programming

Databases

Transmission lines and RF systems

Signal and Image Processing Part 1

PART 2 (6 WEEKS)

November – December

Computer Networks: Advanced notions

Middleware design and implementation

Operating Systems

Data-mining

Wireless Communication Basics

Signal and Image Processing Part 2

EVALUATIONS



EXAMS AT END-OCTOBER AND MID-DECEMBER

Students may stay until January to continue working on the project

EXAMPLE OF TRACK FOR 30 ECTS:

6 COURSES

To choose from September
to December

18 ECTS (3/course)

FRENCH COURSE / TANDEM AND INTERCOMPREHENSION IN FRENCH

2 hours per week

2 ECTS

PROJECT IN A RESEARCH LAB

2 days/week

10 ECTS

This track is not mandatory and is provided as an example. Students can create their own curriculum, and we do not impose a minimum number of ECTS.

COURSES



EXAMPLE OF TRACK FOR 14 ECTS:

3 COURSES (IST)

To choose from September
to December

9 ECTS (3/course)

1 COURSE (MINOR DPT)

To choose from September
to January/February

3 ECTS

FRENCH COURSE / TANDEM AND INTERCOMPREHENSION IN FRENCH

2 hours per week

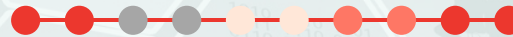
2 ECTS

This track is not mandatory and is provided as an example. Students can create their own curriculum, and we do not impose a minimum number of ECTS.

COURSES



PROJECT IN A LAB



Affiliated to INRIA
<http://citi-lab.fr/>



Affiliated to CNRS
<http://liris.cnrs.fr/>



Affiliated to CNRS, INSERM
<http://www.creatis.insa-lyon.fr/>



EXAMPLES OF PROJECTS:

- “Data analysis of low-cost air pollution measurements (keywords: wireless sensing, environmental data, data analysis)” – Ahmed Boubrima (ahmed.boubrima@inria.fr)
- “Multi-hop calibration of low-cost air pollution sensors (keywords: wireless sensing, environmental data, optimization algorithms)” – Ahmed Boubrima (ahmed.boubrima@inria.fr)
- “User association in cellular networks” – Razvan Stanica (razvan.stanica@insa-lyon.fr)
- “Blockchain, distributed systems and consensus” – Stephane Frenot (stephane.frenot@insa-lyon.fr)
- “Adaptive Federated Learning at the Edge: How to Balance Application Requirements, Data Scope and Resources Constraints?” – Frederic Le Mouël (frederic.le-mouel@insa-lyon.fr)
- “Application of ML techniques for analysis of solitary bees nests in the surroundings of the Sabana de Bogota – Colombia” – Oscar Carrillo (oscar.carrillo@cpe.fr) & F. Le Mouël (frederic.le-mouel@insa-lyon.fr)
- “Anomalie detection in core networks” – Pierre Francois (pierre.francois@insa-lyon.fr)
- “Data analysis from a LoRaWAN network” – Oana Iova (oana.iova@insa-lyon.fr)
- “Initiation to Arduino” – Oana Iova (oana.iova@insa-lyon.fr)

Let's keep in touch



ist@listes.insa-lyon.fr

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