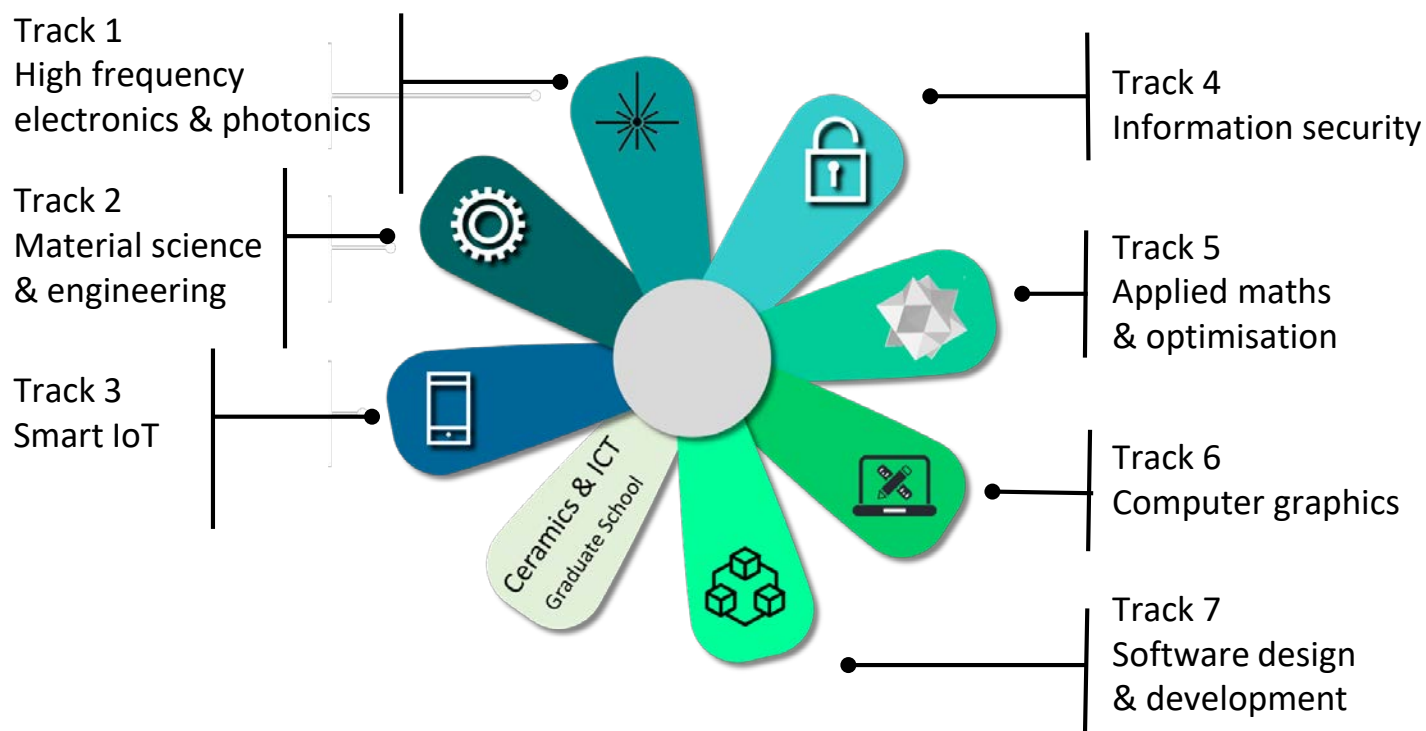


# Ceramics & ICT Graduate School



- Disciplinary courses giving strong skills and a high level of **specialization** in one of the 7 disciplinary domains
- **Interdisciplinary** teachings comprising theoretical and practical courses at the interface between the 7 tracks (cybersecurity, photonics for health, additive manufacturing for 5G, ....)
- Long research/industry working group projects: to get **transverse** skills and interdisciplinary vision through thinking and working approach: **innovation**, creativity processes, co-design...

Contact and registration  
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# Software design and development SDD



## Software design and development - Presentation

The SDD Master degree of the Graduate School has the objective to train computer engineers in research and development in industry, services or research. The concerned sectors are the software development, synthesis and image analysis, the basics of data, data analysis massive, embedded computing, etc.

The Master's degree contributes to meet the very important needs in computer science, whether in engineering, research / development and training. It prepares students for insertion professional or a prosecution doctoral studies.

The scientific field of the master concerns:

- 1) the design and development of software, including embedded software,
- 2) storage, organization and manipulation algorithms data.

In addition to disciplinary skills, the master aims to develop autonomy students, team work, conduct and management of projects and the knowledge of the business world.

## MAJOR COURSES – 63 ECTS\*

### Core courses - 57 ECTS Core teachings

- Algorithmics
- Software engineering
- Computer graphics,
- Data management and analysis,
- Embedded computing

### In-depth Disciplinary courses - 6 ECTS

- Geometric design and mechanical simulation for health
- Data visualization

## MINOR COURSES – 11 ECTS\*

### Interdisciplinary Courses Bridging courses

- Software development tools

### Interdisciplinary Courses 2 elective courses among

- Modelization, Simulation, Optimization
- Scientific computation and parallelisation
- Database security
- Watermarking

### Interdisciplinary scientific project

With a Graduate School's multidisciplinary team, interdisciplinary workshop of one day/year

## INTENSIVE SUPPORT FOR PROFESSIONAL PROJECT – 46 ECTS\*

### Soft skills 12 ECTS

Innovation economy,  
Creativity processes,  
Foreign languages  
(English or French)

### International mobility 5 ECTS

Full time internship in a  
foreign lab or compagny

### Research labworks 5 ECTS

Research Climbing Ropes  
programme

### Research Internship 24 ECTS

Master thesis in a R&D  
company or in a lab

\*1 ECTS = ~10 hours of classes