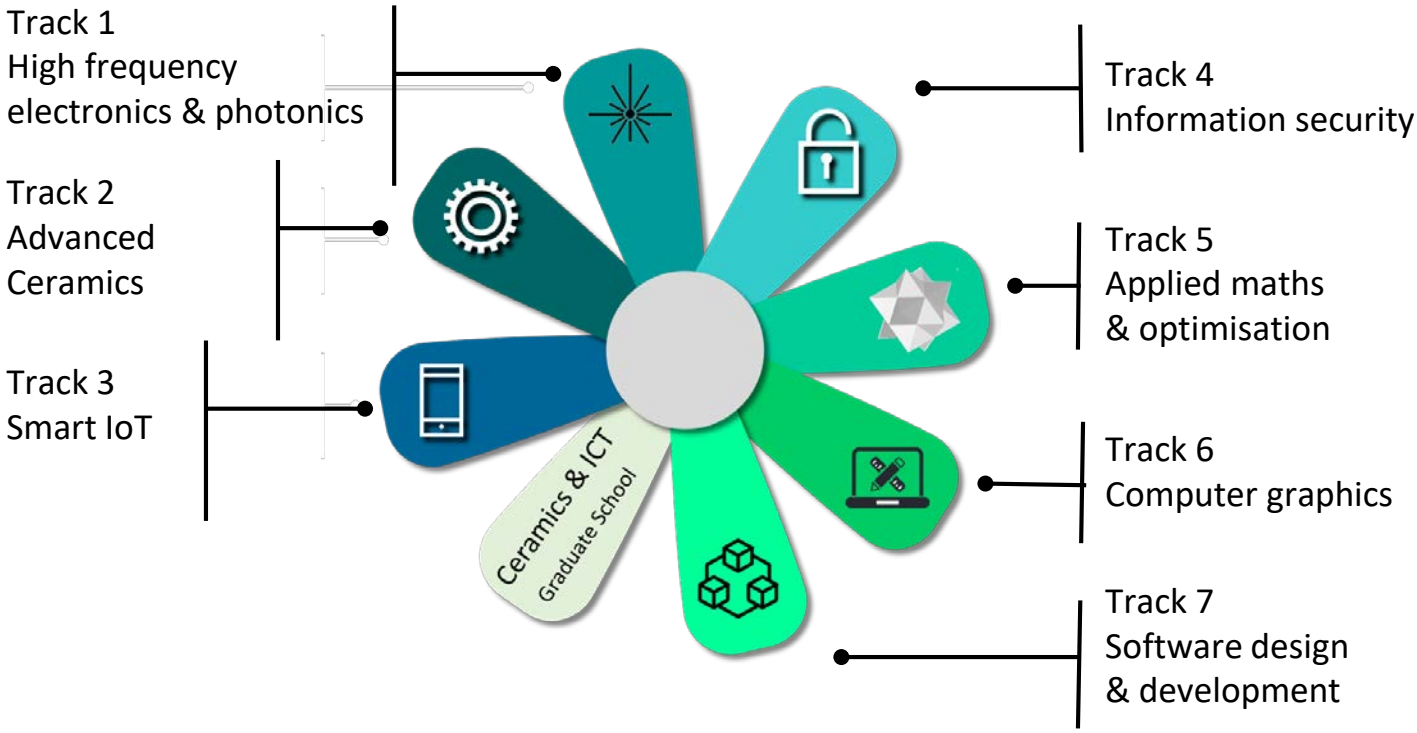
Innovation Cross-Fertilisation Research

Ceramics & ICT

TACTIC 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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Advanced Ceramics
ACe

Advanced Ceramics - Overview

The ACe GS track has the objective to train high-level specialists in the field of ceramic materials and processes for professional integration into the industry (engineering level) or research (R & D, academic, ...) .

The training is mainly based on fundamental and thematic courses covering in a transversal way the physical and chemical aspects of functional ceramic materials and their processes of elaboration, shaping, surface treatments and control.

The themes addressed concern the current socio-economic issues of Energy, Health and ICT.

The training provides students with knowledge of the socio-economic world and the relational and behavioral skills needed for teamwork.

MAJOR COURSES – 63 ECTS*

Core courses - 57 ECTS
Core teachings

- Advanced Ceramic Materials
- Elaboration Processes of Bulks and Films
- Solid State Physics and Chemistry
- Measurement of Physical Properties of Materials

In-depth Disciplinary courses - 6 ECTS
2 elective courses among

- Fluid Dynamics
- Physico-chemical characterizations of Surfaces and Interfaces
- Structure and properties of complex functional materials
- Physics of Condensed Matter and Quantum Mechanic

MINOR COURSES – 11 ECTS*

Interdisciplnary Courses
Bridging courses

- Electromagnetism,
- Laser Radiation,
- Actives and Passives devices in RF and Microwaves

Interdisciplnary 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
3 ECTS

Full time internship in a foreign lab or compagny

Research labworks
6 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

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