



4xI@NCU

INTERNATIONALISATION

Comprehensive internationalisation represents the most critical factor to soar scientific potential, top-quality research, and worldwide recognition of NCU as a research university.



INTERDISCIPLINARITY

We will create platforms for idea exchange and use them to foster frontier fields and assure sustainable development of the entire academic community.



INNOVATION

We aim to reinforce the impact of academia on society and business environments and become active participants in the global R+D sector.



INTEGRITY

Integrity of the entire academic community - including the scientific, teaching, and administrative units - will be crucial for sustainable development within the university.





Astrophysics & Astrochemistry



- exoplanets and astrobiology
- star formation
- evolution of galaxies
- computational astrochemistry
- molecular interactions

- biomarkers
- metabolomics
- nano/microparticles
- regenerative medicine
- transplantation
- diseases of affluence

Towards Personalized Medicine



From Fundamental Optics to Applied Biophotonics



- atomic optical clocks
- quantum optics
- quantum cryptography
- plasmonics
- biomedical photonics
- photonic nanostructures

- ergodic systems
- cognitive science
- quantum information
- open systems
- big data

Dynamics, Mathematical Analysis & Artificial Intelligence



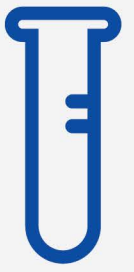
Interacting Minds, Societies, Environments



- language and culture evolution
- complex environmental systems
- urban and memory studies
- archaeology
- organizational culture



EMERGING FIELDS



2019

Life Sciences

- selection of emerging fields based on the analysis of indicators supported by the results of internal competition for priority research teams

- Metabolic civilization diseases
- Ecology and biodiversity

2020

Arts, Humanities & Social Sciences

- competition for 4 emerging fields: 2 in Arts, Humanities and Social Sciences and 2 in Life Sciences

- Conservation and restoration of the cultural heritage
- Logic and philosophy of science

2022/2026

Physical Sciences & Engineering

- evaluation of the emerging fields and competitions for the new ones in all three fields of science

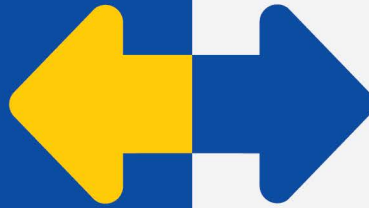
- Polymer science and multifunctional nanomaterials
- Automation and control systems
- Soil science, microbiology and agricultural genetics
- Global environmental changes



PROJECT MANAGEMENT

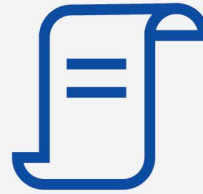


Vice-Rector
for Research



International
Advisory Board

University
Think Tank



Priority Research Areas

Fields of Science

5x

3x

Centers of Excellence

Scientific Councils

Coordinator + Scientific Council

emerging fields

sustainable
development



management of the Centers



new staff recruitment



monitoring and evaluation



organisation of internal contests



monitoring and evaluation of
emerging fields and PhD schools