

Join Junia

as a visiting professor in



**HEALTH AND
ENVIRONMENT**



**SMART SYSTEMS
AND ENERGIES**



**BUSINESS AND
MANAGEMENT**



**AGRICULTURE
AND LANDSCAPE**



**ELECTRONICS,
PHYSICS AND
ACOUSTICS**



**BUILDING
AND URBAN
ENVIRONMENT**



**COMPUTER
SCIENCE AND
MATHEMATICS**



**FOOD
SCIENCES**



Blended learning
and online teaching
encouraged



Language of Instruction:
English or French



Mobility periods are eligible
for Erasmus Plus funding



Meals and lodging
provided



Interested people should get in contact
with international.cooperation@junia.com

*If you have questions concerning a course in your topic
or field, the international office can put you in contact
with the relevant academic staff.*

incoming opportunities

year 2022.2023



Number of teaching hours



Ideal Period



Level



Language



Blended/Virtual mobility

HEALTH AND ENVIRONMENT

| | | | | | | |
|--|--|-----------|---------------------|--------|---------|--------------------|
| | Industrial water management, waste water treatment, water re-use... | 15 to 20h | Between April - May | Master | English | Open to discussion |
| | Alternative use of polluted sites / sustainable management of polluted areas / lanscape management | 20 to 30h | Between Sept - Dec | Master | English | Open to discussion |
| | Solid waste management | 20 to 30h | February - March | Master | English | Open to discussion |
| | Polluted sediment management / treatment / valorization | 5 to 10h | Between April - May | Master | English | 100% possible |
| | The role of biomass in the bioeconomy: from bioenergy to green chemistry | 20 to 30h | Januray | Master | English | Open to discussion |
| | Ecological restoration | 20 to 30h | Between Sept - Dec | Master | English | Open to discussion |

SMART SYSTEMS AND ENERGIES

| | | | | | | |
|--|--|------------|---------------------|--------|---------|--------------------|
| | Power systems analysis using PowerFactory software | 12 to 16h | Between Oct - Nov | Master | English | No |
| | Advanced Fluid Dynamics | 15h to 20h | To be discussed | Master | English | Open to discussion |
| | Advanced Heat Transfer | 15h to 20h | To be discussed | Master | English | Open to discussion |
| | Energy Management System | 12 to 15h | Between Sept - Dec | Master | English | Open to discussion |
| | Electric Power Distibution | 12h | Between April - May | Master | English | Open to discussion |

BUSINESS AND MANAGEMENT

| | | | | | | |
|--|---|---------------------|---------------------------|---------|--------------------|--------------------|
| | Project Management | 32h | October | Master | English | Open to discussion |
| | Export | 12 to 16h | October | Master | English | Open to discussion |
| | Communication and crisis management | 12 to 16h | September - December | Master | English | Open to discussion |
| | Digital communication | 12 to 16h | September - December | Master | English | Open to discussion |
| | BtoB marketing | 4 to 12h | Sept - Dec or Feb - March | Master | English | Open to discussion |
| | Consumer behaviour | 12 to 16h | Fall or Spring semester | Master | English | Open to discussion |
| | Brand strategy | 8h to 16h | Fall or Spring semester | Master | English | Open to discussion |
| | Communication policy | 8h to 16h | Fall or Spring semester | Master | English | Open to discussion |
| | Business intelligence | 8 to 12h | September - December | Master | English | Open to discussion |
| | Cross-cultural management | 16 to 20h | September - December | Master | English | Open to discussion |
| | Market Research | 4 to 16h | Fall or Spring semester | Master | English | Open to discussion |
| | Marketing strategy -Strategic analysis | 8 to 12h | October - December | Master | English | Open to discussion |
| | Business model and value proposition canvas | 8 to 12h | Fall or Spring semester | Master | English | Open to discussion |
| | Business development | 8 to 12h | Fall or Spring semester | Master | English | Open to discussion |
| | Purchase | 12 to 16h | January - February | Master | English | Open to discussion |
| | Sales enablement | 8 to 12h | September - December | Master | English | Open to discussion |
| | Sales negotiation | 12 to 24h | September - January | Master | English | Open to discussion |
| | Market research | 4 to 16h | Fall or Spring semester | Master | English | Open to discussion |
| | Digital business | 8 to 16h | Feb - March | Master | English | Open to discussion |
| | Digital communication | 8 to 20h | Sept - Jan or April - May | Master | English | Open to discussion |
| Supply chain management | 20h | September - January | Master | English | Open to discussion | |
| Financial Analysis (analysis of consolidated financial statements and IFRS / Cost of capital and Governance) | 15 to 30h | April - May | Master | English | Possible 100% | |

incoming opportunities

year 2022.2023



Number of teaching hours



Ideal Period



Level



Language



Blended/Virtual mobility

AGRICULTURE AND LANDSCAPE

| | | | | | | |
|--|---|----------|--------------------|--------|---------|--------------------|
| | Agriculture and Climate Change: adaptation and/or mitigation strategies | 4 to 8h | February - March | Master | English | Open to discussion |
| | Biocontrol for Sustainable Crop Protection (Beneficial microorganisms used in plant protection; Plant protection using resistance inducers activating plant immunity against pathogens) | 8h | January | Master | English | Open to discussion |
| | Animal production systems: ovine (sheep) and goat production systems | 8h | April- May | Master | English | Open to discussion |
| | Animal production systems: bovine (meat) production systems | 8h | April - May | Master | English | Open to discussion |
| | Feed evaluation systems, roughage production (systems) | 8h | October - November | Master | English | Open to discussion |
| | Quality Labels and agricultural production | 8h | October - November | Master | English | Open to discussion |
| | Robotics in agriculture: introduction to robotics, role of robotics in agriculture, pros and cons | 8h | October - November | Master | English | Open to discussion |
| | Livestock systems in your country | 4h to 8h | April - May | Master | English | Open to discussion |

ELECTRONICS, PHYSICS AND ACOUSTICS

| | | | | | | |
|--|---|------------|---|---|------------------------------|--------------------|
| | Hardware for Artificial Intelligence | 8h | Between Sept - March | Master | English | Open to discussion |
| | Linux for Embedded Systems | 28h | January - February | Master 2 | English | no |
| | Workshop on Auditory display of Natural Data: data conditioning, state-of-the-art methods, development of new methods | 10 to 20h | September - March | Master (+ possibly 3 rd year of bachelor) | English (French possible) | Partly possible |
| | Workshop on Bio-inspired materials in connection to the M2 module "Bio-Nano-Tech" | 10 to 20 h | May - December (other dates are also possible depending on the Junia didactic needs) | Master (+ possibly 3 rd year of bachelor) | English (French possible) | Open to discussion |

COMPUTER SCIENCE AND MATHEMATICS

| | | | | | | |
|--|--|------------|--------|------------|---------|--------------------|
| | Modelling with PDEs | 8-12h | Spring | BSc2, BSc3 | English | No |
| | Quality control and uncertainty in engineering | 8-12h | Spring | BSc2, BSc3 | English | No |
| | Laplace transforms and transfer functions / Z transforms and discrete-time systems | 8-12h | Spring | BSc2, BSc3 | English | No |
| | Optimization for engineering (Linear programming and Lagrange multipliers) | 8-12h | Spring | BSc2, BSc3 | English | No |
| | Computer Architecture & Networks | 20h to 30h | Spring | BSc2 | English | Open to discussion |
| | Advanced Programming (C language) | 20h to 30h | Spring | BSc2 | English | Open to discussion |
| | Software Design (Java language) | 20h to 30h | Spring | BSc2 | English | Open to discussion |

incoming opportunities

year 2022.2023



Number of
teaching hours



Ideal
Period



Level



Language



Blended/Virtual
mobility

BUILDING AND URBAN ENVIRONMENT



| | Number of teaching hours | Ideal Period | Level | Language | Blended/Virtual mobility |
|--|--------------------------|------------------------|--------|-------------------|--------------------------|
| Urban Management Project | 8h-15h | Between Jan and March | Master | English | Open to discussion |
| Intelligent Transportation System and Traffic Management | 20h | January - April | Master | English | Open to discussion |
| Road Safety | 15h | January - April | Master | English | Open to discussion |
| Planning and Desigh of Urban Space | 8-12h | September - November | Master | English | No |
| GIS and Urban Planning | 8-12h | Oct - Nov or Jan - Feb | Master | English | Open to discussion |
| Sustainable architecture / construction | 8h | January - April | Master | English or French | Open to discussion |
| Architecture History Culture | 4-8h | September - November | Master | English or French | Open to discussion |
| Construction 4.0 | 4h | December | Master | English or French | Open to discussion |
| Technical textiles and nonwovens | 8h | September - October | Master | English or French | Open to discussion |
| Textile metrology (physical textile testing) | 8h | September - November | Master | English or French | Open to discussion |
| Fibrous Material | 15 h | Between Sept and Nov | Master | English | Possible 100% |
| Advanced technical textiles | 8 h | Between Sept and Oct | Master | English or French | Open to discussion |
| Functional textiles | 8h | September - November | Master | English or French | Open to discussion |
| Surface treatments (textile finishing) and coating | 8h | January - April | Master | English or French | Open to discussion |

FOOD SCIENCES



| | Number of teaching hours | Ideal Period | Level | Language | Blended/Virtual mobility |
|---|--------------------------|---|--------|-----------------|--------------------------|
| Cleaning and disinfection: applications in food processing | 8 to 12h | Sept - January | Master | English | No |
| Nutrition (functional foods, impact of processes on the nutritional quality...) | 4 to 8h | February - March | Master | English | Open to discussion |
| Six Sigma - Process Capability and Process Performance - Statistical Process Control | 8h | Between Nov - May <i>(To be discussed)</i> | Master | French, English | No |
| Biotechnologies | 8 to 12h | Between Nov - May <i>(To be discussed)</i> | Master | French, English | No |
| Packaging (roles, types of packaging materials for food, considerations for use of different packaging materials, environmental issues) | 8 to 12h | Between Nov - May <i>(To be discussed)</i> | Master | French, English | No |
| Industry 4.0 (the digital transformation of the food industry, how are companies doing?, benefits of Industry 4.0, implementation and technologies) | 8h | Between Nov - May <i>(To be discussed)</i> | Master | French, English | No |
| (New) Analytical techniques in food sciences (or food industry) | 4 to 8h | Oct - Nov 2021 or April - May 2022 | Master | English | No |

outgoing teaching offer

year 2022.2023



Number of
teaching hours



Ideal
Period



Level



Language



Blended/Virtual
mobility

HEALTH AND ENVIRONMENT

| | | | | | | |
|--|---|-----------|-----------------|------------|-----------------|--------------------|
| | Monitoring of environmental pollutants / soil & GW quality investigation | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Contaminated land issues / polluted sites management / remediation techniques | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Toxicology - Ecotoxicology - environmental risk assessment | 8-12h | To be discussed | BSc3 , MSc | French, English | Open to discussion |
| | Phytoremediation/ Phytomanagement | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Pollutants: origins, behaviour, pollutants chemistry | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Introduction to biostatistics with the R software | 20 to 30h | To be discussed | Master | French, English | Open to discussion |

SMART SYSTEMS AND ENERGIES

| | | | | | | |
|--|---|------------|-----------------|----------------|-------------------|--------------------|
| | Photovoltaic system sizing, implementation, control and production forecast | 8-12h | To be discussed | BSc3 or Master | French or English | Open to discussion |
| | Advanced Fluid Dynamics | 15h to 20h | To be discussed | Master | English | Open to discussion |
| | Advanced Heat Transfer | 15h to 20h | To be discussed | Master | English | Open to discussion |
| | Renewable Energy Systems | 8-12h | To be discussed | Master | French, English | Open to discussion |

BUSINESS AND MANAGEMENT

| | | | | | | |
|--|--|----------|-----------------|-----------------|-----------------|--------------------|
| | Enterprise systems (introduction to ERP, criteria for ERP selection) - blended learning (with hands-on learning) | 8 to 16h | To be discussed | BSc3, Msc | French, English | no |
| | Marketing applied to food product development: a French case study | 8 to 20h | To be discussed | BSc3 or Master | French, English | Open to discussion |
| | Market data analysis through consumer panel and retail scanner panel: a French case study | 4 to 8h | To be discussed | Master | French, English | Open to discussion |
| | Market research: surveys | 4 to 8h | To be discussed | BSc 3 or Master | French, English | Open to discussion |
| | Introduction to marketing (extracts) | 4 to 12h | To be discussed | BSc 3 or Master | French, English | Open to discussion |
| | Enterprise Risk Management | 8-20h | To be discussed | Master | English | Open to discussion |
| | Financial Services and Fintech Introduction | 8-20h | To be discussed | Master | English | Open to discussion |
| | International Finance | 8-12h | To be discussed | Master | English | Open to discussion |
| | Enterprise Control Management | 8-20h | To be discussed | Master | English | Open to discussion |

outgoing teaching offer

year 2022.2023



Number of teaching hours



Ideal Period



Level



Language



Blended/Virtual mobility

AGRICULTURE AND LANDSCAPE

| | | | | | | |
|--|---|----------|-----------------|-----------------|-----------------|--------------------|
| | Plant Breeding and Genetics (Breeding methods and Biotechnologies used in Plant Beeding) | 8h | To be discussed | Master | French, English | Open to discussion |
| | Biocontrol for Sustainable Crop Protection (Biocontrol of plant pathogens using microorganisms and natural substances; Plant immunity and induced resistance in plants against plant pathogens) | 8h | To be discussed | Master | French, English | Open to discussion |
| | French livestock systems | 2-8h | To be discussed | Master | French, English | Open to discussion |
| | Milk production and dairy chain | 4 to 12h | To be discussed | Master | French, English | Open to discussion |
| | Quality signs in agricultural products in France | 4 to 8h | To be discussed | Master | French, English | Open to discussion |
| | Role of iron in plant pathogen interaction (fincluding a focus on ISR) | 8h | To be discussed | BSc3, MSc | French, English | Open to discussion |
| | Precision agriculture / Precision livestock farming | 4 to 8h | To be discussed | Master | English | Open to discussion |
| | Agriculture and climate change (climate collage serious game 4h + impacts of CC on agriculture in France 4h) | 8h | To be discussed | BSc 3 or Master | English, French | Open to discussion |
| | Veal calves production systems and welfare | 3-4h | To be discussed | BSc 3 or Master | English, French | Open to discussion |
| | Animal welfare | 4-12h | To be discussed | BSc 3 or Master | English, French | Open to discussion |

ELECTRONICS, PHYSICS AND ACOUSTICS

| | | | | | | |
|--|--|----------|--------------------|----------|-----------------|----|
| | Geometric optics, mechanics, thermodynamics, electromagnetism, wave physics, quantum mechanics | 8 to 30h | April - May - June | BSc1,2,3 | French, English | no |
| | Special relativity, general relativity, astronomy, cosmology | 8 to 30h | April - May - June | Master | French, English | no |

COMPUTER SCIENCE AND MATHEMATICS

| | | | | | | |
|--|--|----------|--------------------|---------------------|-----------------|--------------------|
| | Analysis, algebra, differential equation | 8 to 30h | April - May - June | BSc1 | French, English | no |
| | Applications of Markov chains and random processes | 8-12h | To be discussed | BSc2 , BSc3, Master | French, English | Open to discussion |
| | Networking and IoT | 8-12h | To be discussed | BSc2 , BSc3, Master | French, English | Open to discussion |
| | Modern cryptography (elliptic curves, post-quantum, ...) | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Reinforcement learning | 8-12h | To be discussed | Master | French, English | Open to discussion |

outgoing teaching offer

year 2022.2023



Number of
teaching hours



Ideal
Period



Level



Language



Blended/Virtual
mobility

BUILDING AND URBAN ENVIRONMENT

| | | | | | | |
|--|--|----------|--------------------------------|--------------|-------------------|--------------------|
| | Reading the city: Space, Self and Other(s) | 8-12h | Spring semester (January-June) | BSC3, Master | English | open to discussion |
| | Methods for the investigation of public spaces | 8-12h | Spring semester (January-June) | BSC3, Master | English | open to discussion |
| | Futur cities: Smart, Resilient and inclusive | 8-12h | Spring semester (January-June) | BSC3, Master | English | open to discussion |
| | Creativity & the city | 8-12h | Spring semester (January-June) | BSC3, Master | English | open to discussion |
| | Energy transition - policies for energy transition | 8-12h | To be discussed | Master | French, English | Open to discussion |
| | Construction materials | 8-12h | To be discussed | BSC3 | French, English | open to discussion |
| | Soil mechanics | 8-12h | To be discussed | BSC3 | French, English | open to discussion |
| | Construction 4.0 | 8-12h | To be discussed | BSC3, Master | French, English | open to discussion |
| | Strength of Materials | 8-12h | To be discussed | BSC3 | English | Open to discussion |
| | Continuum mechanics | 8-12h | To be discussed | BSC3 | English | Open to discussion |
| | Sustainable architecture / construction | 4h to 8h | To be discussed | BSC3, Master | French, English | open to discussion |
| | Architecture History Culture | 4h to 8h | To be discussed | BSC3, Master | French, English | open to discussion |
| | Fibrous Material | 15h | To be discussed | MSc | French, English | Possible 100% |
| | Functional textiles | 8h | To be discussed | Master | English or French | open to discussion |

FOOD SCIENCES

| | | | | | | |
|--|---|-----------|-----------------|-------------|-----------------|----|
| | Food Safety Management Systems | 8 to 16h | To be discussed | MSc | French, English | no |
| | HACCP and Prerequisite programmes | 8 to 16h | To be discussed | BSc3 or MSc | French, English | no |
| | Sensory Evaluation | 8 to 24h | To be discussed | MSc | French, English | no |
| | Nutrition applied to food companies | 8 to 16h | To be discussed | MSc | English, French | no |
| | Sensory Evaluation | 8 to 24h | To be discussed | MSc | French, English | no |
| | Design of experiments | 12 to 24h | To be discussed | MSc | French, English | no |
| | Dairy processings | 4 to 8h | To be discussed | BSc3, Msc | French, English | no |
| | Food and industrial fermentation | 4 to 12h | To be discussed | MSc | French, English | no |
| | Introduction to quality strategies | 8 to 12h | To be discussed | BSc3, Msc | French, English | no |
| | Introduction to brewing process and ingredients | 2 to 6h | To be discussed | BSc3, Msc | French, English | no |

JUNIA Graduate school
of science
and engineering
HEI·ISEN·ISA

2 rue Norbert Ségard
59014 Lille cedex
FRANCE

JUNIA.COM



INTERNATIONAL.COOPERATION@JUNIA.COM