

# 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](mailto: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%	

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year 2022.2023



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Ideal  
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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 <sup>rd</sup> 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 <sup>rd</sup> 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

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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

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Blended/Virtual  
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## 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

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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

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## 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  
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