

**JUNIA** Grande  
école  
d'ingénieurs

2021.2022

# Join Junia ISA as a visiting professor in



**FOOD  
SCIENCES**



**AGRICULTURAL  
SCIENCE**



**ENVIRONMENTAL  
SCIENCE**



**AGRICULTURAL  
ECONOMICS**

**JUNIA** ISA



France  
**agro**<sup>3</sup>



Language of Instruction:  
English or French



Mobility periods are eligible  
for Erasmus Plus funding



Meals and lodging  
provided

**JUNIA** ISA



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 2021.2022



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	December	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

## SMART SYSTEMS AND ENERGIES






	Fuel cell systems: an alternative for energy	12 to 15h	Between Sept-Dec	Master	English	Open to discussion
	Wind energy conversion systems: control and diagnosis	12 to 15h	Between Sept-Dec	Master	English	Open to discussion
	Electric power distibution	12h	Between April - May	Master	English	Open to discussion
	Topology optimization	20h	to be discussed	Master	English or French	Open to discussion

## BUSINESS AND MANAGEMENT


	International marketing	12 to 16h	September-December	Master	English	Open to discussion
	Export	12 to 16h	October	Master	English	Open to discussion
	Communication and crisis management	12 to 16h	November-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	September-December	Master	English	Open to discussion
	Brand strategy	4 to 8h	September-December	Master	English	Open to discussion
	Communication policy	8 to 16h	September-December	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
	Marketing strategy -Strategic analysis	8 to 12h	October-December	Master	English	Open to discussion
	Business model and value proposition canvas	8 to 12h	1 <sup>st</sup> or 2 <sup>nd</sup> semester	Master	English	Open to discussion
	Business development	8 to 12h	1 <sup>st</sup> or 2 <sup>nd</sup> 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
	Market research	4 to 16h	1 <sup>st</sup> or 2 <sup>nd</sup> semester	Master	English	Open to discussion
	Digital business	8 to 16h	Feb-March	Master	English	Open to discussion
Financial Analysis (analysis of consolidated financial statements and IFRS / Cost of capital and Governance)	15 to 30h	April-Mai	Master	English	Possible 100%	

# incoming opportunities


year 2021.2022

 Number of teaching hours	 Ideal Period	 Level	 Language	 Blended/Virtual mobility
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## AGRICULTURE AND LANDSCAPE

					
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
Specialized crop management (orchard, vine, fruit and vegetal, common or exotic)	8h	April-May	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

## ELECTRONICS, PHYSICS AND ACOUSTICS

					
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 module M2 "Bio-Nano-Tech"	10 to 20 h	May-December <i>(other dates are also possible depending on the Junia didactic needs)</i>	Master (+ possibly 3 <sup>rd</sup> year of bachelor)	English (French possible)	Open to discussion

## BUILDING AND URBAN ENVIRONMENT

					
Urban Management Project	8h-15h	January-March	Master	English	Open to discussion
Sustainable refurbishment	8h-15h	September-October	Master	English	Open to discussion
Fibrous Material	15 h	September-November	Master	English	Possible 100%
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

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year 2021.2022



Number of  
teaching hours



Ideal  
Period



Level




Language



Blended/Virtual  
mobility

## COMPUTER SCIENCE AND MATHEMATICS

	Modelling with PDEs	8-12h	Spring	BSc2, BSc3	English	No
	Post-quantum cryptography	8-12h	Fall	Master1, Master2	English	No
	Quantum computing	8h	Spring	Master1, Master2	English	No
	Introduction to artificial intelligence	20 to 30h	To be discussed	BSc2	English	No

## FOOD SCIENCES

	CSR concepts in the agrofood sector	8h	Sept-January	Master	English	No
	Cleaning and disinfection: applications in food processing	8 to 12h	Sept-January	Master	English	No
	Food processes : Sterilization & pasteurization	4 to 12h	Oct-Nov	Master	English	Open to discussion
	Food processes : Preservative methods (ex: drying, freezing, evaporation)	8 to 16h	Oct-Nov	Master	English	Open to discussion
	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	November-May <i>(to be discussed)</i>	Master	French / English	No
	Biotechnologies	8 to 12h	November-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	November-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	November-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-May2022	Master	English	No	

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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

	Renewable Energy Systems	8-12h	to be discussed	Master	French, English	Open to discussion
	Smart-grids : concepts and applications	8-12h	to be discussed	BSc3, MSc	French, English, Portuguese, German	Open to discussion
	Energy management in Electrical Grids	8-12h	to be discussed	Master	French, English, Portuguese, German	Open to discussion
	Topology optimization	20h	to be discussed	Master	French or English	Open to discussion

## BUSINESS AND MANAGEMENT

	SAP / ERPSim (HEC Montreal serious game on SAP R4/hana) - Level 1 instructor workshop	24h	to be discussed	for staff	English, French, Italian	no
	introduction workshop to ERPSim serious game using SAP (supply chain management, production management)	24h	to be discussed	BSc3 , MSc	English, French, Italian	no
	PowerQuery and PowerPivot workshop : cases in agrofood sector	8 to 16h	to be discussed	BSc3 , MSc	English, French, Italian	no
	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	

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Blended/Virtual mobility

## AGRICULTURE AND LANDSCAPE

	Plant Breeding and Genetics (Breeding methods and Biotechnologies used in Plant Breeding)	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	4 to 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
	Role of iron in plant pathogen interaction (including a focus on ISR)	8h	to be discussed	BSc3, MSc	French, English	Open to discussion
	Precision agriculture / Precision livestock farming	4h to 8h	To be discussed	Master	English	Open to discussion

## BUILDING AND URBAN ENVIRONMENT

	Reading the city: Space, Self and Other(s)	8-12h	second semester (january-june)	BSc3, Master	English	open to discussion
	Methods for the investigation of public spaces	8-12h	second semester (january-june)	BSc3, Master	English	open to discussion
	Futur cities: Smart, Resilient and inclusive	8-12h	second semester (january-june)	BSc3, Master	English	open to discussion
	Creativity & the city	8-12h	second 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	Possible 100%
	Construction materials	8-12h	to be discussed	BSc3	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
	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
	Fibrous Material	15 h	to be discussed	MSc	French, English	Possible 100%

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## COMPUTER SCIENCE AND MATHEMATICS

	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
	Elliptic curve cryptography	8-12h	to be discussed	BSc2 , BSc3, Master	French, English	Open to discussion
	Solving ordinary differential equations	8-12h	to be discussed	BSc2 , BSc3, Master	French, English	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
	Production management and industrial performance workshops	8 to 24h	to be discussed	BSc4 , MSc	English, French, Italian	no
	Optimization cases in agrofood sector (linear programming / Excel solver)	8 to 16h	to be discussed	BSc4 , MSc	English, French, Italian	no
	PowerQuery and PowerPivot workshop : cases in agrofood sector	8 to 16h	to be discussed	BSc4 , MSc	English, French, Italian	no
	Sensory Evaluation	8 to 24h	to be discussed	MSc	French, English	no
	Nutrition applied to food industries	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
Macronutrient functionality in foods	4 to 8h	to be discussed	BSc3, Msc	French, English	no	



# JUNIA ISA

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