

**INTERNATIONAL MASTER OF SCIENCE COURSE IN INNOVATION DEVELOPMENT IN AGRIFOOD SYSTEMS
(IDEAS)**

PLAN OF STUDY FOR PART- TIME STUDENTS (academic Year 2020-2021)

Code	Didactic activity	ECTS	Ex	Assessment	Evaluation
I year - I semester					
AGR07	Modern plant breeding strategies	9 (6L - 3Ex/Lab)	1	Exam	Vote
	I.C. Food and food components from agrifood wastes and novel sources	6 (4L - 2Ex/Lab)	1	Exam	Vote
AGR15	Technology management of wastes for food production (3 ECTS, 2L - 1Ex/Lab)				
AGR16	Food bioprocesses from wastes and novel sources (3 ECTS, 2L - 1Ex/Lab)				
I year - II semester					
AGR02	Advanced data analysis methods for sustainable agronomic and environmental management	6 (4L - 2Ex/Lab)	1	Exam	Vote
AGR03	Fruit tree eco-physiology and strategies to cope with climate change	9 (6L - 3Ex/Lab)	1	Exam	Vote
II year - I semester					
	I.C. Innovative and smart technologies in crop protection	9 (6L - 3Ex/Lab)	1	Exam	Vote
AGR11	Innovative and advanced control strategies of plant feeders (3 ECTS, 2L - 1Ex/Lab)				
AGR12	Smart technologies to manage plant pathogens (6 ECTS, 4L - 2Ex/Lab)				
	I.C. Sustainable field cropping systems for bio-based sectors and bio-energy	9 (6L - 3Ex/Lab)	1*	Exam	Vote
AGR02	Non-food and industrial energy cropping systems (3 ECTS, 2L - 1Ex/Lab)				
AGR09	Mechanization and monitoring of cropping systems (3 ECTS, 2L - 1Ex/Lab)				
AGR10	Sustainable non-food and industrial energy supply chains and processing systems (3 ECTS, 2L - 1Ex/Lab)				
II year - II semester					
AGR01	Circular economy and policies	6 (4L - 2Ex/Lab)	1	Exam	Vote
AGR13	I.C. Innovation in biomass and wastes management in agrifood systems	9 (6L - 3Ex/Lab)	1	Exam	Vote
	Sustainable biomass management (6 ECTS, 4L - 2Ex/Lab)				
	Biomass and wastes characterization (3 ECTS, 2L - 1Ex/Lab)				
III year - I semester					
	Didactic activity chosen by the student	9	1**	Exam	Vote
III year - II semester					
	Traineeship, aimed at preparing the master degree thesis	7			
	Master degree activity	14			
IV year - I semester (The students will choose two learning activities (total 18 ECTS) between the following six options)					



	I.C. Sustainable innovative technologies improving soil, microorganism and plant interactions (Option 1)	9 (6L - 3Ex/Lab)			
AGR12	Sustainable innovative approach in managing soil-borne pathogens (3 ECTS, 2L - 1Ex/Lab)		1*	Exam	Vote
AGR13	Sustainable clean soil strategies(3 ECTS, 2L - 1Ex/Lab)				
AGR16	Soil microbiota management improving agricultural systems (3 ECTS, 2L - 1Ex/Lab)				
	I.C. Innovation in managing fresh commodities losses (Option 2)	9 (6L - 3Ex/Lab)			
AGR12	Innovative technologies in managing postharvest diseases (3 ECTS, 2L - 1Ex/Lab)		1*	Exam	Vote
AGR16	Biotechnologies for shelf life improvement (3 ECTS, 2L - 1Ex/Lab)				
AGR15	Innovative active packaging (3 ECTS, 2L - 1Ex/Lab)				
	I.C. Eco-friendly technologies for biomass recycling (Option 3)	9 (6L - 3Ex/Lab)			
AGR11	Eco-friendly insect mediated biomass recycling (3 ECTS, 2L - 1Ex/Lab)		1*	Exam	Vote
AGR13	Waste biorefinery (3 ECTS, 2L - 1Ex/Lab)				
ING IND22	Biomaterials from agri-food wastes (3 ECTS, 2L - 1Ex/Lab)				
	I.C. Biodiversity mainstreaming in crop production (Option 4)	9 (6L - 3Ex/Lab)			
AGR07	Genetic resilience to climate change (3 ECTS, 2L - 1Ex/Lab)		1*	Exam	Vote
AGR11	Biodiversity and ecosystem services in agriculture (3 ECTS, 2L - 1Ex/Lab)				
AGR12	Host-pathogen interactions and microorganism diversity (3 ECTS, 2L - 1Ex/Lab)				
	I.C. Innovation in fruit and vegetable crops (Option 5)	9 (6L - 3Ex/Lab)			
AGR03	Sub-tropical and semi-arid fruit crops (3 ECTS, 2L - 1Ex/Lab)		1*	Exam	Vote
AGR04	Innovative and sustainable vegetable cultivation (3 ECTS, 2L - 1Ex/Lab)				
	I.C. Innovative thinking in bioeconomy scenarios (Option 6)	9 (6L - 3Ex/Lab)			
CHIM12	Innovation, creative thinking and sustainability (3 ECTS, 2L - 1Ex/Lab)		1	Exam	Vote
SPS10	Social innovation in local community and enterprises (3 ECTS, 2L - 1Ex/Lab)				
SECS-P08	Innovative enterprises management (3 ECTS, 2L - 1Ex/Lab)				
IV year - II semester					
	Further skills to facilitate the entrance into the work world	3			
	Master degree activity and degree examination	6		Exam	Vote
	Total	120	11		

Code: Academic disciplines for Italian university research and teaching;

I.C.=integrative courses, 1*: students will choice 2 exam among the six learning activities proposed as options 1-6; options 1**=chosen by the student.