COURSE OF STUDY: Innovation Development of Agrifood Systems (IDEAS)
ACADEMIC YEAR: 2023/24
ACADEMIC SUBJECT: Sustainable non-food and industrial energy supply chains and processing systems (module of the IC Sustainable field cropping systems for bio-based sectors and bio-energy)

General information	
Year of the course	*II*
Academic calendar (starting and ending date)	*I semester (9/10/2023 – 26/01/2024)*
Credits (CFU/ETCS):	*3*
SSD	*AGR/10*
Language	*English*
Mode of attendance	*Attendance not mandatory*

Professor/ Lecturer	
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Department and address	*Scienze del Suolo della Pianta e degli Alimenti, via Amendola 165/A - Bari*
Virtual room	"supply chains" team in MS *Teams*
Office Hours (and modalities: e.g., by appointment, on line, etc.)	by appointment set by email

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
75	*16*	*14*	*45*
CFU/ETCS			
3	*2*	*1*	

Learning Objectives	*Provide theoretical principles and application skills in biomass supply chain*
Course prerequisites	*Knowledge of principles of physics*

Teaching strategie	
Expected learning outcomes in terms of	
Knowledge and understanding on:	○ Use of biomass for non-food applications ○ Geographic information system (GIS) ○ Biomass supply chain
Applying knowledge and understanding on:	○ Capacity to realize a GIS project for biomass supply chain management
Soft skills	• *Making informed judgments and choices* ○ Ability of realizing an integrated project • *Communicating knowledge and understanding*

	○ Ability to use informatics for results presentation • *Capacities to continue learning* ○ Ability to continue learning by consulting books, papers and WEB
Syllabus	
Content knowledge	• Biomass for non-food applications • Collection, treatments, storage of biomass • Biomass mapping by Geographic Information System • Geographic Information System for biomass supply chain management
Texts and readings	Lecture notes
Notes, additional materials	www.qgis.org
Repository	*Course materials are made available on the course team in MS Teams*

Assessment	
Assessment methods	*The exam consists of an oral exam on the topics developed during the course. During the oral exam the design work, carried out by the students during the course, will be evaluated.*
Assessment criteria	• *Knowledge and understanding* ○ Use of biomass for non-food applications ○ Biomass supply chain • *Applying knowledge and understanding* ○ Capacity to realize a GIS project for biomass supply chain management • *Autonomy of judgment* ○ to design a biomass supply chain as a function of the different feedstocks • *Communicating knowledge and understanding* ○ Ability to clearly communicate the knowledge to specialists and non-specialists • *Communication skills* ○ Use of informatic tools • *Capacities to continue learning* ○ Ability to learn and deepen in a self-directed and autonomous way
Final exam and grading criteria	*The mark ranges between 0/30 and 30/30, the exam is passed with a mark >= 18/30*
Further information	