

# PRESENTATION

## JOB OPPORTUNITIES

**Profile:** Business Technician

**Functions:** The Business Senior Technician is an expert on the second level that provides complex consulting service (also in legal matters) and design on farms; moreover, he carries out European Union programs.

He is put on the Professional Register of Doctors in Agronomy and Forestry, Section A.

**Competences:**

- practising of consulting service and design in farms;
- practising of design of artefacts, also complex, in the serving of the agricultural territory.

**Career opportunities:** Private practice of senior agronomist, after passing the state certification exam for the exercise of the profession. Consultancy activities in the serving of Statutory Corporation, of specialized Courts and of private companies in this field.

**Profile:** Technical Designer of Community Programs

**Functions:** The Technical Designer of Community Programs is a senior expert on the second level that develops complex tasks of designer in farms, in professional offices and in public administration, carrying out European Union programs.

He is put on the Professional Register of Doctors in Agronomy and Forestry, Section A.

**Competences:**

- designing of European Union programs for the employment of the community economic resources designed for the agricultural section;
- designing and managing, in the areas of competence of Land Reclamation Authority, of the works of collective retailing and of the works of hydraulic drainage of the territory;
- examining of projects and allocating of contributions for land improvement works in farms.

**Career opportunities:** Private practice of senior agronomist, after passing the state certification exam for the exercise of the profession. Consultancy activities in the service of Statutory Corporation, of specialized courts and of private companies in this field.

## EDUCATIONAL GOALS

**Specific objectives:** The course provides students, graduates of the first level, a deep training about professional themes and of research in the field of the applications of agricultural engineering. The latter is geared to face complex problems of design and management of technical interventions affecting farming, and to collaborate with other professionals for the transformation of vast areas from dry to well-watered ones, for the land reclamation and the drainage of areas without natural drains and for the drafting of projects for the development of the rural area.

The course is based on subjects of highly topical interest that make use of the experience of the teachers of the Faculty, gained in their long professional work and of research in Sicily and in Europe; therefore the practical experiences of continuous and updated research of teachers overflow in their teachings, making use of field excursions and technical visits on farm.

The Graduated in the "Agro-engineering" Master's degree course will consolidate knowledge acquired in the three years first level degree in specific areas such as agronomy, herbaceous and tree crops growing, protected crops, zootechnis, economy and applied pedology, essential for the full education in the professional subjects of the field.

During the course the means for the representation of agricultural land through the study of territorial informative systems and the assisted design will be provided; moreover specific professional knowledge about the most complex irrigation systems (including the study and the use of water supplies, agricultural systems, the management and the use of conventional water resources and not, for irrigation) will be improved and/or developed.

In his/her education, based on technical knowledge acquired in the previous level of study, the Master's degree graduated is able to:

- create, manage and assess development projects, plans of territory stability, urban and landscape planning, studies for the classification of the rural area;
- carry out technical consulting service to the judicial authorities on economic evaluative and hydraulic issues concerning the rural area;
- choose system for the processing, preservation and packaging of agricultural products;
- study and design activities concerning the animal farming with respect to the rules on the disposal of sewage, on animal welfare and on the protection of consumer health;
- head, administer and manage agro-industrial business;
- plan and carry out activities for the direction of works and trials of rural and agro-industrial buildings, also in seismic areas, within the limits established by the professional system of Agronomist;
- plan, head the work, test and manage irrigation systems, including dams that are not within of the Dams National Office;
- plan and manage the businesslike or on a large-scale agricultural mechanization, as well as the agro-industrial plant engineering;
- manage the security issues in the use of the machines and the workplaces, the quality certification of products and of processes and the respect of the hygiene standards to protect the consumers health;
- study, plan and manage integrated systems for the production, promotion and use of renewable energy sources.

The didactic work will be conducted with lessons, laboratory and field excursions and technical visit on farm, specialized seminars and ongoing tests. The expected time for graduation is 2 academic years. To achieve the final title, the student must have acquired 120 ECTS, including those related to a deep knowledge of a European language, apart from Italian, except the special rules for the protection of linguistic minorities.

The course of study includes therefore a didactic course consisting of 11 compulsorily exams, an exam chosen by the student, with the addition of a foreign language test, the practical training by structures that have an agreement, and the final exam on specific themes of the course of study.

The subjects chosen by the student (9 ECTS) can be acquired in accordance with the article n.10, paragraph 5, letter a) of the DM 270/04, freely choosing among the available teachings from other degree courses of the Department of Agricultural and Forest Sciences, of other Departments of the University and of other Italian and Foreign universities.

At the end of the course of study the student achieve the title Agro-engineering graduate and, after passing the state certification for the professional qualification, is put on the Professional Register of Doctors in Agronomy and Forestry, Section A (Senior Agronomist).

**Making judgments:** The Master's degree graduated consolidates his critical capacity so to analyze the elements and interactions of complex realities in territorial area.

As part of the professional activity, he is able to assess the implications and the results of participations that he plans and makes carry out in the farm and in the territory.

It is also able to assess the consequences and the implications of his own work collaborating in activities of strategical and impact environmental assessments.

The expected learning outcomes are achieved by developing the student's ability to compare different solutions for the treated problem also arranging special papers.

The check of the expected outcomes is done by testing, during ongoing tests or the final exam, the student's critical capacity and his ability to predict the effects of his choices.

**Communication skills:** The Master's degree graduated in Agro-engineering has the ability to expose and support his thesis and assessments of his interventions participations in their complexity, both using the

specific vocabulary and exposing clearly and precisely the meaning of them, to the public or private customer, engaging with other professionals with incisiveness.

In particular, he is able to expose the importance of a correct approach to the environmental issues, the broader impact of the works designed and executed on the social context and their bearableness.

The achieved communication skills allow him to collaborate with the judicial authorities in subjects related to the agricultural engineering and economy.

The expected learning outcomes are achieved with the student's ability to use the tool of the presentation of the knowledge acquired, orally or in writing, during the exam.

The check of the expected outcomes is done by an evaluation on the ability of exposition of the problems treated using a specific language related to the specific themes of the course of study but also clear for an inexperienced audience.

**Learning skills:** As part of the specialist subjects of the agricultural engineering and of territory issues, the Master's degree graduated is able to deepen his refresher technical and scientific career, identifying and analysing the whole of the researches of the subjects in the field.

The grounding acquired allow him to be able to attend successfully a second level master, research courses and scientific and professional applying his knowledge in his field of activity.

The educational path projects himself in the broader context of the ongoing research, providing him the tools for the analysis and the independent assessment of the meaning of the researches, that he consults gaining a continuous enrichment for his area of interest.

The expected learning outcomes are achieved by respecting the logical sequence or any prerequisites, according to the academic regulations of the course of study, the teaching that will be in the Schedule of Studies with the objective to develop the ability to understand the practical aspects and the ability to use the research outcomes.

The aim of the check, carried out during the exams, is testing the student's ability to use the acquired knowledge to solve new problems, to recognize the need for further analysis and to use the outcomes of the research in the field.

## **FEATURES OF THE FINAL EXAM**

The degree is achieved by passing the final exam (Degree exam). To be admitted to the Degree exam, the student must:

- have passed all the exams and acquired the ECTS (European Credit Transfer System Credits) related to the distinctive formative activities, to those related to the disciplines and supplementary ones, to those chosen by the student;
- have done the training by a university structure or by other public or private corporation and have written a paper summarizing the training activities done, as required by the academic regulations;
- have written a concluding report for the final exam (called thesis) which will be explained and assessed.

The Master's Degree thesis will be an original report written by the student under the guidance of a supervisor. The topic assigned for the preparation of the Master's Degree thesis can be connected to the activity done during the training according to the curriculum. The assessment of the final exam will also consider the training, according to the criteria established in the Regulation of the Board of the course of study. The Master's Degree exam will consist of the defence of the concluding report with an examining board of teachers nominated by the competent academic bodies. The purpose of the Master's Degree exam is to verify the ability of the student in drawing up a written report concerning his academic training, in supporting his/her topics in front of experts in the field or not. The Council of Interclass "Environment and Agro-forestry Territory" (ATAF) have approved the regulations for the final exam (see Annex) at its meeting on March 14<sup>th</sup>, 2013 that will come into force from October 1<sup>st</sup>, 2013.

## **STUDY PLAN**

### **STUDY PLAN FOR NEW MATRICULATIONS**

Year of matriculation – curriculum – pdf

2014/2015 - AGROINGEGNERIA (Agro-engineering) – download

### **PREVIOUS ACADEMIC YEARS STUDY PLAN**

Year of matriculation – curriculum – pdf

2013/2014 – AGROINGEGNERIA (Agro-engineering) – download

2012/2013 - AGROINGEGNERIA (Agro-engineering) – download

2011/2012 - AGROINGEGNERIA (Agro-engineering) – download

2010/2011 - AGROINGEGNERIA (Agro-engineering) – download

2009/2010 – AGROINGEGNERIA (Agro-engineering) - download

To visit the home page of the course click here

## SUBJECTS

### SUBJECTS IN THE ACADEMIC YEAR 2014/2015

#### FIRST YEAR SUBJECTS

| SUBJECT CODE | SUBJECT NAME  | CFU | TEACHER              | CURRICULUM       |
|--------------|---|-----|----------------------|------------------|
| 03719        | GESTIONE DEI SISTEMI COLTURALI IN SERRA (MODULO) -<br>CROP SYSTEMS MANAGEMENT IN GREENHOUSE (MODULE)  | 6   | FABIO D'ANNA         | AGRO-ENGINEERING |
| 12557        | GESTIONE DELL'IMPRESA AGROALIMENTARE (MODULO) -<br>FOOD PROCESSING MANAGEMENT OF FIRM (MODULE)  | 6   | FILIPPO SGROI        | AGRO-ENGINEERING |
| 03789        | IDROLOGIA AGRARIA E TECNICA -<br>AGRICULTURAL AND TECHNICAL HYDROLOGY   | 6   | GIUSEPPA CRESCIMANNO | AGRO-ENGINEERING |
| 03869        | IMPIANTI IRRIGUI –<br>IRRIGATION SYSTEMS  | 9   | GIUSEPPE PROVENZANO  | AGRO-ENGINEERING |
| 12609        | PEDOLOGIA APPLICATA -<br>APPLIED PEDOLOGY   | 6   | SALVATORE RAIMONDI   | AGRO-ENGINEERING |
| 08054        | POLITICA AGRICOLA DELLA U.E. (MODULO) -<br>EUROPEAN UNION AGRICULTURAL POLICY (MODULE)  | 6   | ALESSANDRO HOFFMANN  | AGRO-ENGINEERING |
| 13884        | POLITICA AGRICOLA E GESTIONE DELL'IMPRESA AGROALIMENTARE C.I. -<br>AGRICULTURAL POLICY AND FOOD PROCESSING MANAGEMENT OF FIRM Integrated Course | 12  | ALESSANDRO HOFFMANN  | AGRO-ENGINEERING |
| 15370        | TECNICA DELLE PRODUZIONI ORTOFLORICOLE C.I. –<br>TECHNIQUE OF HORTICULTURALPRODUCTIONS Integrated Course  | 12  | FABIO D'ANNA         | AGRO-ENGINEERING |

#### SECOND YEAR SUBJECTS

| SUBJECT CODE | SUBJECT NAME  | CFU | TEACHER              | CURRICULUM       |
|--------------|---|-----|----------------------|------------------|
| 13893        | COLTURE DA BIOMASSA E DA ENERGIA C.I. -<br>BIOMASS AND ENERGY CROPS Integrated Course                       | 12  | CLAUDIO LETO         | AGRO-ENGINEERING |
| 13894        | COLTURE ERBACEE DA ENERGIA E DA FIBRA (MODULO) –<br>ENERGY AND FIBRE HERBACEOUS CROPS (MODULE)              | 6   | CLAUDIO LETO         | AGRO-ENGINEERING |
| 17128        | ECOSISTEMI ARBOREI (MODULO) -<br>ARBOREAL ECOSYSTEMS (MODULE)   | 6   | RICCARDO LO BIANCO   | AGRO-ENGINEERING |
| 16089        | GESTIONE DELL'IRRIGAZIONE CON ACQUE NON CONVENZIONALI -<br>IRRIGATION MANAGEMENT WITH UNCONVENTIONAL WATERS | 6   | MASSIMO IOVINO       | AGRO-ENGINEERING |
| 03789        | IDROLOGIA AGRARIA E TECNICA -<br>AGRICULTURAL AND TECHNICAL HYDROLOGY                                       | 6   | GIUSEPPA CRESCIMANNO | AGRO-ENGINEERING |
| 13889        | PRODUZIONI ANIMALI II (MODULO) -<br>ANIMAL PRODUCTION II (MODULE)   | 3   | ADRIANA BONANNO      | AGRO-ENGINEERING |
| 15365        | SISTEMI ZOOTEKNICI II C.I. -  | 6   | ADRIANA              | AGRO-            |

|       |   |   |                    |                      |
|-------|---|---|--------------------|----------------------|
|       | ZOOTECHNICS SYSTEMS II Integrated Course      |   | BONANNO            | ENGINEERING          |
| 14078 | ZOOCOLTURE (MODULO) -<br>ZOOCULTURES (MODULE) | 3 | ADRIANA<br>BONANNO | AGRO-<br>ENGINEERING |

## EXAM TIMETABLE

13893 - COLTURE DA BIOMASSA E DA ENERGIA C.I. (12 cfu)

PRESIDENT OF THE BOARD: CLAUDIO LETO (FULL PROFESSOR - AGR/02)

| DATES   | NOTE  |
|---|---|
| <b>2015/02/09 08:00:00</b><br>SPECIAL SESSION<br>RESERVATION: 2015/01/09 - 2015/02/06 | SAF Department<br>bring your fiscal code and password |
| <b>2015/02/23 08:00:00</b><br>SPECIAL SESSION<br>RESERVATION: 2015/01/23 - 2015/02/20 | SAF Department<br>bring your fiscal code and password |

13892 - CONSERVAZIONE DEL SUOLO C.I. (9 cfu)

PRESIDENT OF THE BOARD: VINCENZO BAGARELLO (ASSOCIATE PROFESSOR - AGR/08)

| DATES  | NOTE  |
|--|---|
| <b>2015/02/09 08:00:00</b><br>SPECIAL SESSION<br>RESERVATION:: 2015/01/09 - 2015/02/06 | SAF Department<br>bring your fiscal code and password |
| <b>2015/02/23 08:00:00</b><br>SPECIAL SESSION<br>RESERVATION:: 2015/01/23 - 2015/02/20 | SAF Department<br>bring your fiscal code and password |

## TEACHERS

TEACHERS - ACADEMIC YEAR 2014/2015

- VINCENZO BAGARELLO
- GIORGIO BAIAMONTE
- VIRILIO CALECA
- FRANCESCO GIUSEPPE CAROLLO
- SEBASTIANO CULLOTTA
- PIERLUIGI FEBO
- LORENZO ANTONIO GIANGUZZI
- ALESSANDRO HOFFMANN
- TOMMASO LA MANTIA
- DONATO SALVATORE LA MELA VECA
- VITO ARMANDO LAUDICINA
- GIUSEPPE LO PAPA
- ALESSANDRO SAITTA
- MAURO SARNO
- LIVIO TORTA