

**DIBAF
INNOVATION IN BIOLOGICAL, AGRO-FOOD AND FORESTRY
SYSTEMS**

**Degree courses tables
ACADEMIC YEAR 2018 / 2019**

| | | | | | | | | |
|--|--|--|--|--|--|--|---|---|
| or related subjects in group A12 | | | | | | | | |
| Exams chosen by the student (AFS) | | | | | | | A | 6 |
| Exams chosen by the student (AFS) | | | | | | | A | 6 |
| Training | | | | | | | | 8 |
| Final thesis | | | | | | | | 8 |

List of the disciplines of the supplementary or related subjects (optional)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|---|---------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| GROUP A11 | | | | | | | | |
| Biotechnology of the post-collection of fruit and vegetables | AGR/15 | 3 | 2 | 48 | 40 | 8 | W | 6 |
| Biochemical methodology | BIO/10 | 3 | 2 | 48 | 40 | 8 | W | 6 |
| Principles of omic sciences | BIO/11 | 3 | 1 | 48 | 40 | 8 | W | 6 |
| Principles of pathology and biopharmaceutics | BIO/13 | 3 | 2 | 48 | 40 | 8 | W | 6 |
| Plant pathology and principles of phytopathological biotechnologies | AGR/12 | 3 | 2 | 48 | 40 | 8 | W | 6 |
| GROUP A12 | | | | | | | | |
| Chemistry and fermentation biotechnologies - Chemistry and fermentation biotechnologies - Microbiology of fermentation processes | | | | | | | A | 12 |
| | CHIM/11 | 3 | 1 | 48 | 40 | 8 | | 6 |
| | BIO/19 | 3 | 1 | 48 | 40 | 8 | | 6 |
| Plant production biotechnologies - Genetic biotechnologies - Biotechnologies for the improvement of agrarian plants | | | | | | | A | 12 |
| | AGR/07 | 3 | 1 | 48 | 40 | 8 | | 6 |
| | AGR/07 | 3 | 1 | 48 | 40 | 8 | | 6 |

Hours of activity for each CFU

| Didactic activity | Hours of assisted didactic activity per credit | Hours of individual study per credit | Total number of hours per credit |
|--|--|--------------------------------------|----------------------------------|
| Theoretical lesson | 8 | 17 | 25 |
| Practical activity | 8 | 17 | 25 |
| Training and orientation workshop | 2 | 23 | 25 |
| Thesis | 5 | 20 | 25 |

DEGREE COURSE (L-21)

PLANNING AND DESIGN OF LANDSCAPE AND ENVIRONMENT

Didactic pathway

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|--|----------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| Mathematical and statistical analysis | MAT/06 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Drawing and representation | ICAR/17 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Ecology and environmental botanics | BIO/03 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Environmental matrices and landscape transformation - Environmental matrices properties and processes - Landscape geography | | | | | | | | 9 |
| | AGR/13 | 1 | 1 | 48 | 40 | 8 | A | 6 |
| | M-GGR/01 | 1 | 1 | 24 | 20 | 4 | A | 3 |
| Landscape analysis and planning workshop - Landscape planning fundamentals - Elements of architectonic and urban planning | | | | | | | | 12 |
| | ICAR/15 | 1 | 2 | 48 | 40 | 8 | A | 6 |
| | ICAR/14 | 1 | 2 | 48 | 40 | 8 | A | 6 |
| Landscape planning workshop 1 - Urban planning and landscape planning - Rural areas | | | | | | | | 12 |
| | ICAR/21 | 1 | 2 | 48 | 40 | 8 | A | 6 |
| | AGR/10 | 1 | 2 | 48 | 40 | 8 | A | 6 |
| Agrarian systems - Grass systems - Tree systems | | | | | | | | 10 |
| | AGR/02 | 1 | 2 | 40 | 35 | 5 | A | 5 |
| | AGR/03 | 1 | 2 | 40 | 35 | 5 | A | 5 |
| Geopedology | AGR/14 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Cartography and geomatics | AGR/10 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Environmental engineering | AGR/8 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Forest ecosystems - Forest ecology and forestry - Dendrology | | | | | | | A | 7 |
| | AGR/05 | 2 | 1 | 32 | 24 | 8 | | 4 |
| | AGR/05 | 2 | 1 | 24 | 20 | 4 | | 3 |
| Landscape planning workshop 2 - Environmental planning - Forest and protected areas planning | | | | | | | A | 11 |
| | ICAR/20 | 2 | 2 | 48 | 40 | 8 | | 6 |
| | AGR/05 | 2 | 2 | 40 | 35 | 5 | | 5 |
| Landscape planning workshop - Open spaces, parks and gardens | | | | | | | A | 9 |
| | ICAR/15 | 2 | 2 | 48 | 40 | 8 | | 6 |

| | | | | | | | | |
|---|---------|---|---------------|----|----|---|---|----|
| planning - Urban forestry - Urban gardens | AGR/05 | 2 | 2 | 16 | 12 | 4 | | 2 |
| | AGR/03 | 2 | 2 | 8 | 6 | 2 | | 1 |
| Technology of materials | ICAR/12 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| History of gardens and landscapes | ICAR/18 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Final landscape workshop - Urban planning - Landscape planning - Urban planning and technique - Forestry - Landscape planning | | | | | | | A | 18 |
| | ICAR/14 | 3 | 1 AND 2 | 32 | 24 | 8 | | 4 |
| | ICAR/15 | 3 | 1 AND 2 | 48 | 40 | 8 | | 6 |
| | ICAR/21 | 3 | 1 | 24 | 20 | 4 | | 3 |
| | AGR/05 | 3 | 1 AND 2 | 16 | 12 | 4 | | 2 |
| | ICAR/20 | 3 | 2 | 24 | 20 | 4 | | 3 |
| Landscape restoration fundamentals | ICAR/19 | 3 | 1 | 48 | 40 | 8 | W | 6 |
| Environmental law | IUS/10 | 3 | 1 | 48 | 48 | | W | 6 |
| Economy and forestry and environmental appraisal | AGR/01 | 3 | 1 | 48 | 40 | 8 | W | 6 |
| English | | 3 | 2 | 40 | 40 | | W | 5 |
| Exams chosen by the students | | | | | | | | 12 |
| Training | | | | | | | | 3 |
| Final test | | | | | | | | 6 |

Hours of activity for each CFU

| Didactic activity | Hours of assisted didactic activity per credit | Hours of individual study per credit | Total number of hours per credit |
|--|--|--------------------------------------|----------------------------------|
| Theoretical lesson | 8 | 17 | 25 |
| Practical activity | 8 | 17 | 25 |
| Training and orientation workshop | 2 | 23 | 25 |
| Thesis | 5 | 20 | 25 |

**DEGREE COURSE (L-25)
FORESTRY AND NATURAL SCIENCES**

PROTECTED AREAS AND LANDSCAPE MANAGEMENT

| Exam | Professor | SSD | Year | Sem. | Hours | CFUs |
|---|---------------------|----------|------|------|-------|------|
| Mathematics and physics fundamentals | Alvaro Marucci | MAT/05 | 1 | 1 | 64 | 8 |
| Chemistry fundamentals | Roberta Bernini | CHIM/06 | 1 | 1 | 64 | 8 |
| General and systematic zoology | Marzio Zapparoli | BIO/05 | 1 | 1 | 48 | 6 |
| English language | * | L-LIN/12 | 1 | 1 | 48 | 6 |
| Biochemistry and soil chemistry | Stefania Astolfi | AGR/13 | 1 | 2 | 48 | 6 |
| Botanics: - General botanics - Plant diversity | Alfredo Di Filippo | BIO/03 | 1 | 2 | 48 | 6 |
| | Anna Scoppola | BIO/03 | 1 | 2 | 48 | 6 |
| Geology | Sergio Madonna | GEO/02 | 1 | 2 | 48 | 6 |
| IT and statistical abilities | M. A. Pagnotta | | 1 | 2 | 40 | 5 |
| Forestry mechanisation | Danilo Monarca | AGR/09 | 2 | 2 | 48 | 6 |
| Dendrology | Gianluca Piovesan | AGR/05 | 2 | 1 | 48 | 6 |
| Forest ecology | Dario Papale | AGR/05 | 2 | 1 | 48 | 6 |
| Forestry genetics and conservation of biodiversity: - Forestry genetics - Forestry biodiversity conservation | M. A. Pagnotta | AGR/07 | 2 | 1 | 48 | 6 |
| | Marco Simeone | AGR/05 | 2 | 1 | 48 | 6 |
| Dendrometry and elements of forest management | Luigi Portoghesi | AGR/05 | 2 | 1 | 48 | 6 |
| Water and environmental engineering: - Forest hydric regime control activities - Forestry constructions and environment inspection | Salvatore Grimaldi | AGR/08 | 2 | 2 | 48 | 6 |
| | Alvaro Marucci | AGR/10 | 2 | 2 | 48 | 6 |
| Forestry | Bartolomeo Schirone | AGR/05 | 2 | 2 | 48 | 6 |
| Phytogeography and ecology of the plant landscape | Goffredo Filibeck | BIO/03 | 2 | 2 | 48 | 6 |
| Economy and forestry and environmental appraisal | Simone Severini | AGR/01 | 3 | 1 | 56 | 7 |

| | | | | | | |
|--|------------------|--------|-------|---|----|----|
| Extensive zootechnology and wildlife management: - Extensive zootechnology systems - Management of wildlife resources | Bruno Ronchi | AGR/18 | 3 | 1 | 48 | 6 |
| | Andrea Amici | AGR/19 | 3 | 1 | 48 | 6 |
| Forestry technologies | Angela Lo Monaco | AGR/06 | 3 | 1 | 48 | 6 |
| Control and monitoring of phytosanitary emergencies | Angelo Mazzaglia | AGR/12 | 3 | 2 | 48 | 6 |
| Environmental and forestry defence and monitoring: - Forestry pathology - Forestry entomology | Andrea Vannini | AGR/12 | 3 | 2 | 48 | 6 |
| | Stefano Speranza | AGR/11 | 3 | 2 | 48 | 6 |
| Training activities chosen by the student | | | 2 e 3 | | | 12 |
| Training | | | 2 e 3 | | | 4 |
| Final test | | | 3 | | | 4 |

ECOENGINEERING

| Exam | Professor | SSD | Year | Sem. | Hours | CFUs |
|--|--------------------|----------|------|------|-------|------|
| Mathematics and physics fundamentals | Alvaro Marucci | MAT/05 | 1 | 1 | 64 | 8 |
| Chemistry fundamentals | Roberta Bernini | CHIM/06 | 1 | 1 | 64 | 8 |
| General and systematic zoology | Marzio Zapparoli | BIO/05 | 1 | 1 | 48 | 6 |
| English language | * | L-LIN/12 | 1 | 1 | 48 | 6 |
| Cartography and GIS applications | Fabio Recanatesi | AGR/10 | 2 | 1 | 48 | 6 |
| Botanics: - General botanics - Plant diversity | Alfredo Di Filippo | BIO/03 | 1 | 2 | 48 | 6 |
| | Anna Scoppola | BIO/03 | 1 | 2 | 48 | 6 |
| Geology | Sergio Madonna | GEO/02 | 1 | 2 | 48 | 6 |
| IT and statistical abilities | M. A. Pagnotta | | 1 | 2 | 40 | 5 |
| Forestry mechanisation | Danilo Monarca | AGR/09 | 2 | 2 | 48 | 6 |
| Dendrology | Gianluca Piovesan | AGR/05 | 2 | 1 | 48 | 6 |
| Forest ecology | Dario Papale | AGR/05 | 2 | 1 | 48 | 6 |
| Analysis and management of rural and urban landscape: | | | | | | |
| | M. N. Ripa | AGR/10 | 2 | 1 | 48 | 6 |

| | | | | | | |
|---|---------------------|------------|-------|---|----|----|
| - Landscape analysis workshop - Green management | Roberto Ruggeri | AGR/02 | 2 | 2 | 48 | 6 |
| Dendrometry and elements of forest management | Luigi Portoghesi | AGR/05 | 2 | 1 | 48 | 6 |
| Water and environmental engineering: - Forest hydric regime control activities - Forestry constructions and environment inspection | Salvatore Grimaldi | AGR/08 | 2 | 2 | 48 | 6 |
| | Alvaro Marucci | AGR/10 | 2 | 2 | 48 | 6 |
| Forestry | Bartolomeo Schirone | AGR/05 | 2 | 2 | 48 | 6 |
| Biochemistry and soil chemistry | Stefania Astolfi | AGR/13 | 1 | 2 | 48 | 6 |
| Economy and forestry and environmental appraisal | Simone Severini | AGR/01 | 3 | 1 | 56 | 7 |
| Renewable resources and energy: - Renewable energy - Forestry use | Maurizio Carlini | ING/IND 09 | 3 | 1 | 48 | 6 |
| | Rodolfo Picchio | AGR/06 | 3 | 1 | 48 | 6 |
| Forestry technologies | Angela Lo Monaco | AGR/06 | 3 | 1 | 48 | 6 |
| Safety and accident prevention in the agro-forest sector | Andrea Colantoni | AGR/09 | 3 | 2 | 48 | 6 |
| Environmental and forestry defence and monitoring: - Forestry pathology - Forestry entomology | Andrea Vannini | AGR/12 | 3 | 2 | 48 | 6 |
| | Stefano Speranza | AGR/11 | 3 | 2 | 48 | 6 |
| Training activities chosen by the student | | | 2 e 3 | | | 12 |
| Training | | | 2 e 3 | | | 4 |
| Final test | | | 3 | | | 4 |

FORESTRY RESOURCES AND INTERNATIONAL COOPERATION

| Exam | Professor | SSD | Year | Sem. | Hours | CFUs |
|---|--------------------|----------|------|------|-------|------|
| Mathematics and physics fundamentals | Alvaro Marucci | MAT/05 | 1 | 1 | 64 | 8 |
| Chemistry fundamentals | Roberta Bernini | CHIM/06 | 1 | 1 | 64 | 8 |
| General and systematic zoology | Marzio Zapparoli | BIO/05 | 1 | 1 | 48 | 6 |
| English language | * | L-LIN/12 | 1 | 1 | 48 | 6 |
| Forest pedology | Sara Marinari | AGR/14 | 1 | 2 | 48 | 6 |
| Botanics: - General botanics - Plant diversity | Alfredo Di Filippo | BIO/03 | 1 | 2 | 48 | 6 |

| | | | | | | |
|---|---------------------|--------|-------|---|----|----|
| | Anna Scoppola | BIO/03 | 1 | 2 | 48 | 6 |
| Geology | Sergio Madonna | GEO/02 | 1 | 2 | 48 | 6 |
| IT and statistical abilities | M. A. Pagnotta | | 1 | 2 | 40 | 5 |
| Forestry mechanisation | Danilo Monarca | AGR/09 | 2 | 2 | 48 | 6 |
| Dendrology | Gianluca Piovesan | AGR/05 | 2 | 1 | 48 | 6 |
| Forest ecology | Dario Papale | AGR/05 | 2 | 1 | 48 | 6 |
| Inventories and forest defence: - Geomatics and forestry inventories - Defence from fires in the Euro-Mediterranean region | Anna Barbati | AGR/05 | 2 | 1 | 48 | 6 |
| | Piermaria Corona | AGR/05 | 2 | 1 | 48 | 6 |
| Dendrometry and elements of forest management | Luigi Portoghesi | AGR/05 | 2 | 1 | 48 | 6 |
| Water and environmental engineering: - Forest hydric regime control activities - Forestry constructions and environment inspection | Salvatore Grimaldi | AGR/08 | 2 | 2 | 48 | 6 |
| | Alvaro Marucci | AGR/10 | 2 | 2 | 48 | 6 |
| Forestry | Bartolomeo Schirone | AGR/05 | 2 | 2 | 48 | 6 |
| Alpiculture | Alessio Valentini | AGR/17 | 2 | 2 | 48 | 6 |
| Economy and forestry and environmental appraisal | Simone Severini | AGR/01 | 3 | 1 | 56 | 7 |
| Adaptation and quality of forestry resources: - Improvement of forestry genetics - Wood technologies workshop | Mario Ciaffi | AGR/07 | 3 | 1 | 48 | 6 |
| | Manuela Romagnoli | AGR/06 | 3 | 1 | 48 | 6 |
| Forestry technologies | Angela Lo Monaco | AGR/06 | 3 | 1 | 48 | 6 |
| International cooperation | Blasi | AGR/01 | 3 | 2 | 48 | 6 |
| Environmental and forestry defence and monitoring: - Forestry pathology - Forestry entomology | Andrea Vannini | AGR/12 | 3 | 2 | 48 | 6 |
| | Stefano Speranza | AGR/11 | 3 | 2 | 48 | 6 |
| Training activities chosen by the student | | | 2 e 3 | | | 12 |
| Training | | | 2 e 3 | | | 4 |
| Final test | | | 3 | | | 4 |

DEGREE COURSE (L-26)

FOOD TECHNOLOGY AND OENOLOGY

FOOD INDUSTRIES (TECHNOLOGICAL)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|--|-------------------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| Maths | MAT/05 | 1 | 1 | 48 | 48 | 0 | BIANNUAL (S) / ANNUAL (A) | 6 |
| Chemistry - mod. General chemistry - mod. Chemistry of organic compounds related to the food industry | | | | 88 | 80 | 8 | A | 11 |
| | CHIM/03 | 1 | 1 | 40 | 40 | 0 | | 5 |
| | CHIM/06 AGR/13 | 1 | 2 | 48 | 48 | 0 | | 6 |
| Physics | FIS/07 | 1 | 1 | 48 | 48 | 0 | W | 6 |
| Biology and general microbiology - mod. General biology - mod. General and oenological microbiology | | | | 96 | | | A | 12 |
| | BIO/05 | 1 | 1 | 48 | 40 | 8 | | 6 |
| | AGR/16 | 1 | 1 | 48 | 40 | 8 | | 6 |
| Food technologies of unit operations | AGR/15 | 1 | 2 | 64 | 64 | 0 | W | 8 |
| Genetics of vines and plants related to the food industry | AGR/07 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| European food law | IUS/03 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| Further language knowledge (English B1/English B2) | | 1 | 2 | 40 | 40 | 0 | W | 5 |
| Food biochemistry | BIO/10 | 2 | 1 | 48 | 48 | 0 | W | 6 |
| Food microbiology | AGR/16 | 2 | 1 | 48 | | | | 6 |
| Food technologies - module 1 - module 2 | | | | 96 | | | A | 12 |
| | AGR/15 | 2 | 1 | 48 | 48 | 0 | | 6 |
| | AGR/15 | 2 | 1 | 48 | 48 | 0 | | 6 |
| Quality of tree and trees and vegetable production - mod. Tree production - mod. Vegetable production | | | | 96 | | | A | 12 |
| | AGR/03 | 2 | 1 | 48 | 48 | 0 | | 6 |
| | AGR/04 | 2 | 1 | 48 | 48 | 0 | | 6 |
| Defence of food | AGR/12 | 2 | 2 | 48 | 48 | 0 | | 6 |
| Principles of agro-food and wine | AGR/01 | 2 | 2 | 64 | 64 | 0 | | 8 |

| | | | | | | | | |
|---|---------|---|---|-----|----|---|--|----|
| economy | | | | | | | | |
| Zootechnology and animal production | AGR/17 | 2 | 2 | 48 | 48 | 0 | | 6 |
| Molecular transformations and fermented food | CHIM/11 | 3 | 1 | 80 | 72 | 8 | | 10 |
| Food conservation, conditioning and distribution | AGR/15 | 3 | 1 | 48 | 48 | 0 | | 6 |
| Food science | MED/49 | 3 | 2 | 48 | 48 | 0 | | 6 |
| Machinery for the food and wine industry | AGR/09 | 3 | 2 | 48 | 48 | 0 | | 6 |
| Chosen by the student | | | | | | | | |
| | | 3 | | | | | | 12 |
| Useful knowledge to enter the job market | | | | | | | | 9 |
| | | 1 | | 25 | | | | 1 |
| | | 2 | | 100 | | | | 4 |
| | | 3 | | 100 | | | | 4 |
| Training in companies | | 3 | | 225 | | | | 9 |
| Technological profile | | | | | | | | |
| For the final thesis | | 3 | | 150 | | | | 6 |

FOOD INDUSTRIES (GASTRONOMIC)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|--|-------------------|------|------|-------|-----------------------------|---------------------------|--|------|
| Maths | MAT/05 | 1 | 1 | 48 | 48 | 0 | BIA NN UAL (S) / AN NU AL (A) | 6 |
| Chemistry - mod. General and inorganic chemistry - mod. Chemistry of organic compounds related to the food industry | | | | 88 | | | A | 11 |
| | CHIM/03 | 1 | 1 | 40 | 40 | 0 | | 5 |
| | CHIM/06 AGR/13 | 1 | 2 | 48 | 48 | 0 | | 6 |
| Physics | FIS/07 | 1 | 1 | 48 | 48 | 0 | W | 6 |
| Biology and general microbiology - mod. General biology | | | | 96 | | | A | 12 |
| | BIO/05 | 1 | 1 | 48 | 40 | 8 | | 6 |

| | | | | | | | | |
|--|--------------|---|---|-----|----|---|---|----|
| - mod. General and oenological microbiology | AGR/16 | 1 | 1 | 48 | 40 | 8 | | 6 |
| Food technologies of unit operations | AGR/15 | 1 | 2 | 64 | 64 | 0 | W | 8 |
| Genetics of vines and plants related to the food industry | AGR/07 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| European food law | IUS/03 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| Further language knowledge (English B1/English B2) | | | | | | | W | |
| | | 1 | 2 | 40 | 40 | 0 | | 5 |
| Food biochemistry | BIO/10 | 2 | 1 | 48 | 48 | 0 | W | 6 |
| Food microbiology | AGR/16 | 2 | 1 | 48 | | | | 6 |
| Food technologies - module 1 - module 2 | | | | 96 | | | A | 12 |
| | AGR/15 | 2 | 1 | 48 | 48 | 0 | | 6 |
| | AGR/15 | 2 | 1 | 48 | 48 | 0 | | 6 |
| Quality of tree and trees and vegetable production - mod. Tree production - mod. Vegetable production | | | | 96 | | | A | 12 |
| | AGR/03 | 2 | 1 | 48 | 48 | 0 | | 6 |
| | AGR/04 | 2 | 1 | 48 | 48 | 0 | | 6 |
| Defence of food | AGR/12 | 2 | 2 | 48 | 48 | 0 | | 6 |
| Principles of agro-food and wine economy | AGR/01 | 2 | 2 | 64 | 64 | 0 | | 8 |
| Food history, culture and languages | L-FIL-LET/14 | 3 | 1 | 48 | 48 | 0 | | 6 |
| Molecular transformations and fermented food | CHIM/11 | 3 | 1 | 80 | 72 | 8 | | 10 |
| Food conservation, conditioning and distribution | AGR/15 | 3 | 1 | 48 | 48 | 0 | | 6 |
| Food science | MED/49 | 3 | 2 | 48 | 48 | 0 | | 6 |
| Gastronomic technologies and logistics of catering | AGR/09 | 3 | 2 | 48 | 40 | 8 | | 6 |
| Chosen by the student | | 3 | | | | | | 12 |
| Useful knowledge to enter the job market | | | | | | | | 9 |
| | | 1 | | 25 | | | | 1 |
| | | 2 | | 100 | | | | 4 |
| | | 3 | | 100 | | | | 4 |
| Training in companies | | 3 | | 225 | | | | 9 |
| Technological profile | | | | | | | | |
| For the final thesis | | 3 | | 150 | | | | 6 |

VITICULTURE AND OENOLOGY (OENOLOGICAL)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Bia nnu al (S) / Annual (A) | CFU s |
|--|-------------------|------|------|-------|-----------------------------|---------------------------|-------------------------------------|-------|
| Maths | MAT/05 | 1 | 1 | 48 | 48 | 0 | BIA N N U A L (S) / A N N U A L (A) | 6 |
| Chemistry - mod. General and inorganic chemistry - mod. Chemistry of organic compounds related to the food industry | | | | 88 | | | A | 11 |
| | CHIM/03 | 1 | 1 | 40 | 40 | 0 | | 5 |
| | CHIM/06 AGR/13 | 1 | 2 | 48 | 48 | 0 | | 6 |
| Physics | FIS/07 | 1 | 1 | 48 | 48 | 0 | W | 6 |
| Biology and general microbiology - mod. General biology - mod. General and aenological microbiology | | | | 96 | | | A | 12 |
| | BIO/05 | 1 | 1 | 48 | 40 | 8 | | 6 |
| | AGR/16 | 1 | 1 | 48 | 40 | 8 | | 6 |
| Principles of food technologies of unit operations | AGR/15 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| Genetics of vines and plants related to the food industry | AGR/07 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| European food law | IUS/03 | 1 | 2 | 48 | 48 | 0 | W | 6 |
| Further language knowledge (English B1/English B2) | | | | | | | W | |
| | | 1 | 2 | 40 | 40 | 0 | | 5 |
| Food biochemistry | BIO/10 | 2 | 1 | 48 | 48 | 0 | W | 6 |
| Food microbiology | AGR/16 | 2 | 1 | 48 | 48 | 0 | W | 6 |
| Oenology 1 | AGR/15 | 2 | 1 | 64 | 64 | 0 | W | 8 |
| Viticulture 1 | AGR/03 | 2 | 1 | 64 | 64 | 0 | W | 8 |
| Defence of vines - Entomology - Pathology | | | | 96 | | | A | 12 |
| | AGR/11 | 2 | 2 | 48 | 48 | 0 | | 6 |
| | AGR/12 | 2 | 2 | 48 | 48 | 0 | | 6 |
| Principles of agro-food and wine economy | AGR/01 | 2 | 2 | 64 | 64 | 0 | | 8 |
| Exam chosen by the student (second year) | | 2 | 2 | | | | | 12 |
| Principles of chemistry and fermentation biotechnologies | CHIM/11 | 3 | 1 | 48 | 48 | 0 | W | 6 |
| Oenology 2 | AGR/15 | 3 | 1 | 64 | 64 | 0 | W | 8 |
| Machinery for the food and wine industry | AGR/09 | 3 | 2 | 48 | 48 | 0 | W | 6 |

| | | | | | | | | |
|--|---|---|-----|-----|--|--|---|----|
| Exam chosen by the student (third year) | | 3 | | | | | | 6 |
| Chosen by the student | | 3 | | | | | | 12 |
| Useful knowledge to enter the job market | | | | | | | | 9 |
| | | 1 | | 25 | | | | 1 |
| | | 2 | | 100 | | | | 4 |
| | 3 | | 100 | | | | 4 | |
| Training in companies Oenological profile | | | | | | | | 9 |
| | | 2 | | | | | | 4 |
| | | 3 | | | | | | 5 |
| For the final thesis | | 3 | | 150 | | | 6 | |

PROFILE EXAM - SECOND YEAR (OPTIONAL CHOICE)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|---|--------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| Viticulture 2 and agricultural chemistry - mod. Viticulture 2 - Agricultural chemistry | | | | 96 | | | A | 12 |
| | AGR/03 | 2 | 2 | 48 | 48 | 0 | | 6 |
| | AGR/13 | 2 | 2 | 48 | 48 | 0 | | 6 |
| Viticulture 2 and terroir - mod. Viticulture 2 mod. The soil in the terroir | | | | 96 | | | A | 12 |
| | AGR/03 | 2 | 2 | 48 | 48 | 0 | | 6 |
| | AGR/14 | 2 | 2 | 48 | 48 | 0 | | 6 |

PROFILE EXAM - THIRD YEAR (OPTIONAL CHOICE)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|--|--------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| Wine analysis and special wines | AGR/15 | 3 | 1 | 48 | 48 | 0 | W | 6 |
| Applied oenology | AGR/15 | 3 | 2 | 48 | 48 | 0 | W | 6 |

SECOND-LEVEL DEGREE COURSE (LM-70) FOOD SCIENCE AND TECHNOLOGY

FOOD TECHNOLOGIES (VITERBO)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|---|---------|------|-------|-------|-----------------------------|---------------------------|---------------------------|------|
| Inspection of plant-based products | AGR/12 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| Economy and marketing of agro-food products | | | | | | | | 12 |
| - Economy of the food sector | AGR/01 | 1 | 1 | 52 | 44 | 8 | A | 6 |
| - Agro-food products marketing | AGR/01 | 1 | 1 | 52 | 44 | 8 | A | 6 |
| Exam of the optional group A13 | | 1 | 1 | | | | | 6 |
| Exam of the optional group A14 | | 1 | 1 | | | | | 6 |
| Food bioprocesses and advanced microbic methodologies | CHIM/11 | 1 | 2 | 52 | 44 | 8 | W | 6 |
| Exam of the optional group AGR/15 | | 1 | 2 | | | | | 12 |
| Exam of the optional group A14 | | 1 | 2 | | | | | 12 |
| Evaluation of the environmental impact of the food industry | AGR/15 | 2 | 1 | 52 | 44 | 8 | W | 6 |
| Microbiological techniques for food quality and safety | | | | | | | A | 12 |
| - Microbiological check for food safety | AGR/16 | 2 | 1 | 48 | 40 | 8 | | 6 |
| - Starter and predictive microbiology selection | AGR/16 | | 2 | 48 | 40 | 8 | | 6 |
| Agro-food system law | IUS/03 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Chosen by the student | | 2 | 1 / 2 | | | | | 6 |
| Training | | 2 | | | | | | 6 |
| English language | | 2 | | | | | | 2 |
| Final test | | | | | | | | 16 |
| List of optional exams | | | | | | | | |
| GROUP A13 (one exam with compulsory options) | | | | | | | | |
| Food biotechnologies and microbiology* | CHIM/11 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| Innovation and entrepreneurship in agro-food biotechnology | AGR/05 | 1 | 1 | 52 | 44 | 8 | W | 6 |

| | | | | | | | | |
|--|--------|---|---|----|----|---|---|----|
| Genetic and molecular techniques for the improvement of the quality of animal production | AGR/17 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| *Compulsory for the students who have not taken the 'Food microbiology' exam during their three-year degree course | | | | | | | | |
| GROUP A14 (three exams, free choice) | | | | | | | | |
| Innovation in the conditioning, conservation and transportation for fruit and vegetables | AGR/15 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| Wine analysis and special wines | AGR/15 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| Processes in the technology of cereals and beer | AGR/15 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Traditional and innovative analytics for the agro-food sector | AGR/15 | 1 | 2 | 52 | 44 | 8 | W | 6 |
| 4th-generation products | AGR/15 | 1 | 2 | 52 | 44 | 8 | W | 6 |
| Chemical analysis of agro-food matrices | AGR/13 | 1 | 2 | 52 | 44 | 8 | W | 6 |
| GROUP AGR/15 (one exam with compulsory options) | | | | | | | | |
| Unit operations | | | | | | | | 12 |
| Sensory analysis and consumer science* | AGR/15 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| - Unit operations for the food industry - Sensory analysis and consumer science | AGR/15 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| Innovation in the agro-food industry | | | | | | | | 12 |
| Sensory analysis and consumer science | AGR/15 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| - Enzyme technologies for the food industry - Sensory analysis and consumer science | AGR/15 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| *Compulsory for the students who have not taken the 'Unit operations for the food industry' exam during their three-year degree course | | | | | | | | |

QUALITY AND ENHANCEMENT CURRICULUM (ROME)

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFUs |
|--------------------------------------|---------|------|------|-------|-----------------------------|---------------------------|---------------------------|------|
| Microbic food biotechnologies | CHIM/11 | 1 | 1 | 52 | 44 | 8 | W | 6 |
| Agro-food economy | AGR/01 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Human food and nutrition | BIO/!0 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Exam of the optional group | | 1 | 1 | | | | | 6 |

| | | | | | | | | |
|--|-----------|---|----|----|----|---|---|----|
| Safety / characterisation | | | | | | | | |
| Innovation in the agro-food industry | | | | | | | | 12 |
| Sensory analysis and consumer science | AGR/15 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| - Enzyme technologies for the food industry - Sensory analysis and consumer science | AGR/15 | | 2 | 52 | 44 | 8 | A | 6 |
| Production improvement and control | | | | | | | | 12 |
| BIO/11 | 1 | 2 | 48 | 40 | 8 | A | 6 | |
| - Molecular techniques in production and food quality control - Metabolic biotechnologies and plant improvement | BIO/04 | 1 | 2 | 52 | 44 | 8 | A | 6 |
| Food technologies processes | AGR/15 | 1 | 2 | 48 | 40 | 8 | W | 6 |
| Microbiological techniques for food quality and safety | | | | | | | | 12 |
| AGR/16 | 2 | 1 | 48 | 40 | 8 | A | 6 | |
| - Microbiological check for food safety - Starter and predictive microbiology selection | AGR/16 | 2 | 1 | 48 | 40 | 8 | A | 6 |
| Exams of the optional path | | 2 | 1 | | | | | 6 |
| Agro-food system law | IUS/03 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Chosen by the student | | | | | | | | 12 |
| Training | | | | | | | | 12 |
| English language | | | | | | | | 2 |
| Final test | | | | | | | | 10 |
| List of optional exams | | | | | | | | |
| GROUP SAFETY / CHARACTERISATION (one exam, free choice) | | | | | | | | |
| Food safety | | | | | | | | 12 |
| - Food merceology workshop - Integrated protection of the plants related to the food industry | SECS-P/13 | 1 | 1 | 56 | 48 | 8 | A | 6 |
| | AGR/12 | 1 | 1 | 52 | 44 | 8 | A | 6 |
| Methodologies for food characterisation | | | | | | | | 12 |
| CHIM/01 | 1 | 1 | 56 | 48 | 8 | A | 6 | |
| - Paired analytical techniques - Spectroscopic methods | CHIM/02 | 1 | 1 | 48 | 40 | 8 | A | 6 |
| ENHANCEMENT PATH (one exam) | | | | | | | | |
| Food science and cultural processes | M-FIL/02 | 2 | 1 | 52 | | | W | 6 |
| Biodiversity and plant enhancement | BIO/01 | 2 | 1 | 52 | | | W | 6 |
| History and geography of human food consumption | BIO/08 | 2 | 1 | 52 | | | W | 6 |
| Landscape ecology and enhancement of agro-food products | BIO/03 | 2 | 1 | 52 | | | W | 6 |
| Economy and company management | SECS-P/08 | 2 | 1 | 48 | | | W | 6 |
| QUALITY PATH (one exam) | | | | | | | | |

| | | | | | | | | |
|---|------------|---|---|----|----|---|---|---|
| Food science and cultural processes | M-FIL/02 | 2 | 1 | 52 | 48 | 8 | W | 6 |
| Food anthroozoonosis | VET/06 | 2 | 1 | 52 | 48 | 8 | W | 6 |
| Environmental causes of food contamination | BIO/06 | 2 | 1 | 52 | 48 | 8 | W | 6 |
| Processes and plants | ING-IND/25 | 2 | 1 | 48 | 48 | 8 | W | 6 |

SECOND-LEVEL DEGREE COURSE (LM-73) FORESTRY AND ENVIRONMENTAL SCIENCES

FORESTS AND ENVIRONMENT

| Subjects titles (exams) and modules | SSD | Year | Sem. | TSH | C.A. | P.A. | C.T. | CFU S |
|---|--------|------|------|-----|------|------|------|-------|
| Forest ecophysiology | AGR/05 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Forest genetics and Biotechnology - Forest biotechnology - Forest genetics | | | | | | | M | 12 |
| | AGR/05 | 1 | 1 | 48 | 40 | 8 | | 6 |
| | AGR/07 | 1 | 1 | 48 | 44 | 4 | | 6 |
| Monitoring soil quality | AGR/13 | 1 | 1 | 48 | 44 | 4 | W | 6 |
| Principles of remote sensing and modeling in forestry | AGR/05 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Research support for sustainable forest management | AGR/05 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Advanced forest pathology | AGR/12 | 1 | 2 | 48 | 40 | 8 | W | 6 |
| Silviculture II and Wood products - Silviculture of Mediterranean and temperate forests - Wood-based biocomposites | | | | | | | M | 13 |
| | AGR/05 | 1 | 2 | 56 | 44 | 12 | | 7 |
| | AGR/06 | 1 | 2 | 48 | 40 | 8 | | 6 |
| Forest management planning | AGR/05 | 2 | 1 | 56 | 48 | 8 | W | 7 |
| Forest economics and policy | AGR/01 | 2 | 1 | 48 | 44 | 4 | W | 6 |
| Applied hydrology | AGR/08 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Vertebrates of forest ecosystems | BIO/05 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Free selection of disciplines (AFS) | | | | | | | | 12 |
| Traineeship in research laboratories, professional enterprises, public administrations and other organisations | | | | 100 | | 100 | | 4 |
| Technical English language | | | | 100 | 100 | | | 4 |
| Thesis – written in English or Italian | | | | | | | | 20 |
| Sem. Semester TSH Total supervised hours C.A. Class activities (hours) P.A. Practical activities (hours) C.T. Course type: S = single module; M = multiple modules CFU Credits (CFU) | | | | | | | | |

MEDFOR

1st year in partner Universities* - 2nd year in Viterbo

*MEDFOR consortium (www.medfor.ue) - multiple degrees

| Subjects titles (exams) and modules | SSD | Year | Sem. | TSH | C.A. | P.A. | C.T. | CFUs |
|---|--------|------|------|-----|------|------|------|------|
| Different options in the first year Universities (Univ Padova IT; Univ Lisbon P; Univ Lleida SP) | | | | | | | | 48 |
| One common e-learning course | | | | | | | | 3 |
| One common winter course at the University of Valladolid (Spain) | | | | | | | | 9 |
| Forest biotechnology* | AGR/05 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Forest ecophysiology* | AGR/05 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Principles of remote sensing and modeling in forestry* | AGR/05 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Research support for sustainable forest management* | AGR/05 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Forest tree cropping* | AGR/05 | 2 | 1 | 48 | 36 | 12 | W | 6 |
| Monitoring soil quality* | AGR/13 | 2 | 1 | 48 | 44 | 4 | W | 6 |
| Traineeship in research laboratories, professional enterprises, public administrations and other organisations | | | | 100 | | 100 | | 4 |
| Thesis – written in English or Italian | | | | 130 | 130 | | | 26 |
| * Students must select five courses out of the six listed, for a total of 30 CFU | | | | | | | | |

MANAGEMENT AND DESIGN OF URBAN GREEN INFRASTRUCTURES

1st year in Moscow (PFUR) - 2nd year in Viterbo (UNITUS) Double degree

| Subjects titles (exams) and modules | SSD | Year | Sem. | TSH | C.A. | P.A. | C.T. | CFUs |
|---|-----------|------|------|-----|------|------|------|------|
| Economy | SECS-P/06 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Urban ecology | BIO/07 | 1 | 1 | 64 | 56 | 8 | W | 8 |
| Phytopathology and Plant Protection | AGR/12 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Introduction to geodesy, cartography and GIS | ICAR/06 | 1 | 2 | 48 | 40 | 8 | W | 6 |
| Landscape design, architecture and city-planning | ICAR/14 | 1 | 2 | 64 | 56 | 8 | W | 8 |
| Data analysis and statistics | SECS-S/02 | 1 | 2 | 48 | 40 | 8 | W | 6 |
| Principles of remote sensing and modelling in forestry | AGR/05 | 2 | 1 | 48 | 40 | 8 | W | 6 |

| | | | | | | | | |
|---|--------|---|---|-----|-----|-----|---|----|
| Soil pollution and monitoring | AGR/13 | 2 | 1 | 48 | 44 | 4 | W | 6 |
| Phytotechnologies for remediation and improvement of urban environment - Phytotechnologies to protect water and soil in urban areas - Trees and plants to improve air quality of urban areas | AGR/05 | 2 | 1 | 48 | 44 | 4 | M | 6 |
| | AGR/05 | 2 | 1 | 48 | 44 | 4 | M | 6 |
| Urban forestry | AGR/05 | 2 | 2 | 48 | 44 | 4 | W | 6 |
| Urban hydrology | AGR/08 | 2 | 2 | 48 | 44 | 4 | W | 6 |
| Free selection of disciplines (AFS) | | | | | | | | |
| Traineeship in research laboratories, professional enterprises, public administrations and other organisations | | | | 100 | | 100 | | 4 |
| Thesis - written in English | | | | 140 | 140 | | | 28 |
| Sem. Semester TSH Total supervised hours C.A. Class activities (hours) P.A. Practical activities (hours) C.T. Course type: S = single module; M = multiple modules CFU Credits (CFU) | | | | | | | | |

| Didactic activity | Hours of assisted didactic activity per credit | Hours of individual study per credit | Total number of hours per credit |
|--|---|---|---|
| Theoretical lesson | 8 | 17 | 25 |
| Practical activity | 8 | 17 | 25 |
| Training and orientation workshop | 2 | 23 | 25 |
| Thesis | 5 | 20 | 25 |

SECOND-LEVEL DEGREE COURSE (LM-8) INDUSTRIAL BIOTECHNOLOGY FOR HEALTH AND WELLBEING

INDUSTRIAL BIOTECHNOLOGY FOR HEALTH AND WELLBEING

| Exam | SSD | Year | Sem. | Hours | Theoretical activity (A.T.) | Practical activity (A.P.) | Biannual (S) / Annual (A) | CFU |
|--|-----------|------|------|-------|-----------------------------|---------------------------|---------------------------|-----|
| Microbic biotechnologies | BIO/19 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Spectroscopic and computational methods for the study of biomolecules - Spectroscopic methods - Computational methods | CHIM/02 | 1 | 1 | 48 | 40 | 8 | A | 9 |
| | CHIM/07 | | 1 | 24 | 16 | 8 | | 6 |
| | | | | | | | | 3 |
| Biochemical characterisation of pharmacologically active molecules | BIO/10 | 1 | 1 | 48 | 40 | 8 | W | 6 |
| Biostatistics and experimental data analysis | SECS-S/02 | 1 | 1 | 48 | 32 | 16 | W | 6 |
| Industrial catalysis and biocatalysis - Principles of catalysis - Industrial biocatalysis | CHIM03 | 1 | 1 | 24 | 24 | | A | 6 |
| | AGR/13 | | 1 | 24 | 20 | 4 | A | 3 |
| Applied omics sciences | BIO/11 | 1 | 2 | 48 | 32 | 16 | W | 6 |
| Chemistry of bioactive substances | CHIM/06 | 1 | 2 | 48 | 48 | | W | 6 |
| Genetic toxicology | BIO/18 | 1 | 2 | 48 | 40 | 8 | W | 6 |
| English language (B2) | | 1 | 2 | 32 | 24 | 8 | W | 4 |
| Training | | | | | | | | 3 |
| Exam chosen among similar and supplementary exams | | | | | | | | 6 |
| Exam chosen among similar and supplementary exams | | | | | | | | 6 |
| Exam chosen among similar and supplementary exams | | | | | | | | 6 |
| Exams chosen by the student (AFS) | | | | | | | | 12 |
| Final test (dissertation) | | | | | | | | 32 |
| SIMILAR AND INTEGRATED EXAMS | | | | | | | | |
| Sustainable biorefineries and biotechnologies | BIO/19 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Functional food | MED/42 | 2 | 1 | 48 | 40 | 8 | W | 6 |
| Pharmacogenetics | BIO/18 | 2 | 1 | 48 | 40 | 8 | W | 6 |

| | | | | | | | | |
|--|--------|---|---|----|----|----|---|---|
| Animal molecules biotechnologies | BIO/05 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Plant molecules biotechnologies | BIO/01 | 2 | 2 | 48 | 40 | 8 | W | 6 |
| Industrial applications of microscopic techniques | BIO/05 | 2 | 2 | 48 | 24 | 24 | W | 6 |
| Applied neurophysiology | BIO/09 | 2 | 2 | 48 | | 48 | W | 6 |

FIVE-YEAR SINGLE CYCLE DEGREE COURSE (LMR-02) HERITAGE CONSERVATION AND RESTORATION

| Subject area | CFUs |
|--|--------|
| Scientific training | 24 -32 |
| Historical and historical-artistic training | 40 -48 |
| Conservation and restoration methodologies | 24 -32 |
| Conservation and restoration sciences and technologies | 32 -48 |
| Cultural heritage | 16 -32 |
| Law and finance training | 12 |
| Supplementary and related training activities | 16 |
| Chosen by the student | 8 |
| Language competence | 4 |
| Final test | 10 |
| The study plan includes 300 CFUs, 90 of which are obtained through participation in workshops. The study plan must be agreed with the president of the degree course or the tutor professors. | |

STUDY PLAN PFP1

| Exam | SSD | CFUs |
|---|---------------------|------|
| Scientific training | | |
| Elements of general physics | FIS/07 | 8 |
| Historical and historical-artistic training | | |
| * Classic archaeology | L-ANT/07 | 8 |
| * Medieval art history | L-ART/01 | 8 |
| Conservation and restoration sciences and technologies | | |
| * Materials science and technology | ING-IND/22 | 8 |
| Microbiology and biodeterioration of cultural heritage materials | BIO/19- AGR/12 | 8 |
| Geology | GEO/07 | 8 |
| Wood science and technology | AGR/06 | 8 |
| Elements of chemistry and chemistry workshop | CHIM/01 - AGR/13 | 8 |
| Workshop activities PFP1 | | |
| Stone artefacts | | 18 |
| SECOND YEAR | | |
| Scientific training | | |
| * Chemistry of restoration | CHIM/12 | 8 |
| Historical and historical-artistic training | | |
| Medieval archaeology | L-ANT/08 | 8 |
| Modern art history | L-ART/02 | 8 |
| Methodology for historical-artistic research and restoration | L-ART/01 | 8 |
| Conservation and restoration methodologies | | |
| * Executive procedures and artistic techniques documentation | L-ART/04 | 8 |
| Supplementary and related training activities | | |
| IT applied to cultural heritage | INF/01 | 8 |

| | | |
|---|--------------|----|
| Language competence | | |
| English language | L-LIN/12 | 4 |
| Workshop activities PFP1 | | |
| Mural paintings | | 18 |
| THIRD YEAR | | |
| Scientific training | | |
| Botanics applied to cultural heritage | BIO/03 | 8 |
| Conservation and restoration sciences and technologies | | |
| Diagnostics and spectroscopy for cultural heritage | CHIM/01 | 8 |
| Zoology applied to cultural heritage | BIO/05 | 8 |
| Historical and historical-artistic training | | |
| History of restoration | L-ART/08 | 8 |
| Cultural heritage | | |
| Prehistoric archaeology | L-ANT/01 | 8 |
| Etruscology | L-ANT/06 | 8 |
| Contemporary art history | L-ART/03 | 8 |
| Photography history and technique | L-ART/03 | 8 |
| Workshop activities PFP1 | | |
| Stucco work | | 18 |
| FOURTH YEAR | | |
| Conservation and restoration methodologies | | |
| Archaeologic research methodology | L-ANT/10 | 8 |
| Methodology for architectonic research | ICAR/19 | 8 |
| Upkeep tools and methods | ICAR/19 | 8 |
| Cultural heritage | | |
| General archival science | M-STO/08 | 8 |
| Law, finance and management training | | |
| * Cultural heritage law | IUS/10 | 6 |
| Supplementary and related training activities | | |
| Sound as cultural heritage | AGR/13 | 8 |
| History of art criticism | L-ART/04 | 8 |
| Italian literature | L-FIL-LET/10 | 8 |
| Workshop activities PFP1 | | |
| Mosaic | | 18 |
| FIFTH YEAR | | |
| Conservation and restoration methodologies | | |
| Museology | L-ART/04 | 8 |
| Law, finance and management training | | |
| Business Administration | SECS-P/07 | 6 |
| Media theory and techniques | SPS/08 | 6 |
| Supplementary and related training activities | | |
| Archaeology and history of Roman art | L-ANT/07 | 8 |
| Workshop activities PFP1 | | |
| Dissertation workshop | | 18 |

STUDY PLAN PFP2

| | | |
|-------------------|-----|------|
| Exam | SSD | CFUs |
| FIRST YEAR | | |

| | | |
|--|---------------------|----|
| Scientific training | | |
| Elements of general physics | FIS/07 | 8 |
| Historical and historical-artistic training | | |
| * Classic archaeology | L-ANT/07 | 8 |
| * Medieval art history | L-ART/01 | 8 |
| Conservation and restoration sciences and technologies | | |
| * Wood science and technology | AGR/06 | 8 |
| * Materials science and technology | ING-IND/22 | 8 |
| Microbiology and biodeterioration of cultural heritage materials | BIO/19- AGR/12 | 8 |
| Elements of chemistry and chemistry workshop | CHIM/01 - AGR/13 | 8 |
| * Wood science and technology | AGR/06 | 8 |
| Workshop activities PFP2 | | |
| Artefacts painted on wood. Artefacts sculpted on wood 1 | | 18 |
| SECOND YEAR | | |
| Scientific training | | |
| * Chemistry of restoration | CHIM/12 | 8 |
| Historical and historical-artistic training | | |
| Medieval archaeology | L-ANT/08 | 8 |
| Modern art history | L-ART/02 | 8 |
| Methodology for historical-artistic research and restoration | L-ART/01 | 8 |
| Conservation and restoration methodologies | | |
| * Executive procedures and artistic techniques documentation | L-ART/04 | 8 |
| Supplementary and related training activities | | |
| IT applied to cultural heritage | INF/01 | 8 |
| Language competence | | |
| English language | L-LIN/12 | 4 |
| Workshop activities PFP2 | | |
| Artefacts painted on wood. Artefacts sculpted on wood 2 | | 18 |
| THIRD YEAR | | |
| Scientific training | | |
| Botanics applied to cultural heritage | BIO/03 | 8 |
| Conservation and restoration sciences and technologies | | |
| Diagnostics and spectroscopy for cultural heritage | CHIM/01 | 8 |
| Zoology applied to cultural heritage | BIO/05 | 8 |
| Historical and historical-artistic training | | |
| History of restoration | L-ART/08 | 8 |
| Cultural heritage | | |
| Prehistoric archaeology | L-ANT/01 | 8 |
| Etruscology | L-ANT/06 | 8 |
| Contemporary art history | L-ART/03 | 8 |
| Photography history and technique | L-ART/03 | 8 |
| Workshop activities PFP2 | | |
| Artefacts on textile | | 18 |
| FOURTH YEAR | | |
| Conservation and restoration methodologies | | |
| Upkeep tools and methods | ICAR/19 | 8 |
| Archaeologic research methodology | L-ANT/10 | 8 |
| Methodology for architectonic research | ICAR/19 | 8 |

| | | |
|---|--------------|----|
| Cultural heritage | | |
| General archival science | M-STO/08 | 8 |
| Law, finance and management training | | |
| * Cultural heritage law | IUS/10 | 6 |
| Supplementary and related training activities | | |
| Sound as cultural heritage | AGR/13 | 8 |
| History of art criticism | L-ART/04 | 8 |
| Italian literature | L-FIL-LET/10 | 8 |
| Workshop activities PFP2 | | |
| Artefacts made with synthetic materials processed and assembled and/or painted | | 18 |
| FIFTH YEAR | | |
| Conservation and restoration methodologies | | |
| Museology | L-ART/04 | 8 |
| Law, finance and management training | | |
| Business Administration | SECS-P/07 | 6 |
| Media theory and techniques | SPS/08 | 6 |
| Cultural heritage | | |
| Contemporary art history in Europe and the Mediterranean | L-ART/03 | 8 |
| Supplementary and related training activities | | |
| Archaeology and history of Roman art | L-ANT/07 | 8 |
| Workshop activities PFP2 | | |
| Dissertation workshop | | 18 |
| * Compulsory exams | | |

DIBAF

**INNOVATION IN BIOLOGICAL, AGRO-FOOD AND FORESTRY
SYSTEMS**

DEPARTMENT HANDBOOK

ACADEMIC YEAR 2018 / 2019

The courses

Second cycle degree courses

Single cycle degree course

Postgraduate study

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WELCOME

Professor Giuseppe Scarascia Mugnozza

Head of Department

Dear Student,

There are many reasons to enrol in the Department's courses for Innovation in Biological, Agro-Food and Forestry Systems (DIBAF) at the University of Tuscia. Besides the beauty and hospitality offered by the city of Viterbo and its surrounding area/ territory, it must be stressed that/I am proud to state that the University of Tuscia and, in particular, DIBAF rank first place among Italian academic institutes, in particular for the quality of their scientific research. DIBAF teachers belong to internationally recognized body of expertise and regularly publish in the most respected scientific journals in the world. Moreover, DIBAF will give you the opportunity to immerse yourself in a dynamic learning environment, where research, relationships with business and job placements in advanced sectors are combined with a deep bond with the surrounding countryside/landscape/territory. DIBAF is a research laboratory and multidisciplinary teaching hub for biotechnology and environmental chemistry, forest resources and the landscape, processing and safety of agro-food. Various disciplines and complementary approaches are combined and integrated into a coherent set of educational courses to meet the global challenges of environmental sustainability and bio-economy.

DIBAF offers integrated educational courses, at bachelor's and master's level, in particular, courses that lead to the professional skills of biotechnologists / Biologists, Agronomists and Forestry Specialists, Food Technologists and Oenologists. In addition, the Department has numerous partnerships with production companies, corporations, businesses, public institutions, locally, nationally and internationally.

The courses offered prepare highly qualified technicians and professionals for companies, consulting firms, public bodies and independent professional activities, with a central role in the transfer of knowledge and innovations developed within the research activities, including the creation of spin-off companies by our graduates.

DIBAF

DEGREE COURSES

ACADEMIC YEAR 2018/2019

DEGREE COURSE (L-2)

BIOTECHNOLOGY

Course Director

Professor Giuseppe Scapigliati
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Teaching Aims

The educational objectives of the course originated from the need to have graduates with a high level of knowledge and experience to operate in the biotechnology sector. This need is highlighted by the increase in biotechnology products in the production processes of all countries, where, especially in the most technologically advanced, there is intense competition for supremacy in the experimental stages, in patenting and in the implementation of processes that are distinguished for their efficiency and low environmental impact. In this regard, the educational aims concerning the acquisition of knowledge, skills, abilities and behaviour which will permit entry into the world of work in the various biotechnological fields, such as agro-food, industrial, pharmaceutical, medical and veterinary, and in the field of scientific communication or to enable students to undertake studies at higher levels.

Knowledge and skills

The course aims to provide you with the following knowledge:

- structure and function of biological systems, interpreted also in their molecular and cellular aspects;
- cultural and experimental bases of multidisciplinary techniques that characterize the biotechnological operations for production through the analysis and the use of biological systems;
- legislation and bio-ethical issues;
- English language, both written and oral, in the specific field of competence and to exchange general information.

Thanks to very specific training, as a graduate in biotechnology you will be capable of operating in the biotechnology sector in general and, in particular, in those fields where molecules and biological organisms are used for productive purposes, in areas which concentrate on the use of enzymes and cells in bio-transformation, and on genetic manipulation techniques, molecular diagnostics, analytical methodologies and the use of bio-reactors. The training course includes laboratory experiences in

individual lessons, guided /educational visits to companies in the agro-industrial sector, and work experience and traineeships in public or private structures operating in the sector. Participation in the Erasmus student mobility programme is highly recommended and allows the acquisition of credits based on your specific study programme.

Career opportunities

- Management of biological systems or parts of these systems to obtain innovative products which respond to the needs for improvement in the food, health and socio-economic sectors;
- Research in biology with particular regard to genetic modification of organisms or microorganisms;
- Marketing activities of products from research and from biotechnological production and processing methods;
- Application of molecular techniques aimed at bio-monitoring and the preservation of biodiversity.

In addition, as a graduate in Biotechnology, according to Presidential Decree 328/01, you can qualify and register with the 'Ordine Nazionale dei Biologi' (National Registry of Qualified Biologists), as a Biologist (Junior) sect. B. The course also allows you to qualify for other regulated professions such as: qualified agricultural technician, agricultural bio-technologist, and qualified agricultural consultant. If you wish to further your studies at postgraduate level, the University offers master's degree courses in:

- Industrial biotechnology for health and wellbeing (LM-8), a new interdepartmental course of studies;
- Biology for the Safety and Quality of Agricultural Production (LM-7)
- Food Sciences and Technology (LM-70);
- Cellular and Molecular Biology (LM-6).

Degree courses - academic year 2018/19

Dibaf 01 Biotechnology L-2

DEGREE COURSE (L-21)

PLANNING AND DESIGN OF LANDSCAPE AND ENVIRONMENT

Inter-University Bachelor's Degree
University of Tuscia
Sapienza Università di Roma

Course Director

Professor Rita Biasi
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Location

DIFAB Riello,
Via S. Camillo de Lellis, snc
Tel. 0761 357583 - 544
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DIAP - Architecture
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Student Office

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Teaching Aims

The degree course in Planning and Design of Landscape and Environment is a result of the synergy between the University of Tuscia (former Faculty of Agriculture) and the Faculty of Architecture of the University La Sapienza of Rome. The union was forged to meet the growing national and European demand for high-profile technicians able to operate, in an innovative and cross-disciplinary way, on environmental issues of enormous proportions, in terms of landscape, urban and socio-economic impact. The course objective is to equip graduates with strong technical and cultural skills in the analysis, design, management and development of rural, semi-urban and urban areas, in addition to operational capabilities in infrastructure, environmental and landscape planning, with particular reference to agro-forest landscapes, in the light of ongoing environmental changes or of those changes expected for the future.

Knowledge and skills

The knowledge and theoretical, critical-interpretative, methodological and practical skills acquired from the degree course stem from a highly interdisciplinary approach and integration of diverse theoretical studies and practical applications, which will enable immediate entry to the world of work or access to further education. For this purpose, the courses are geared to the acquisition of knowledge in the field of earth sciences, biological, agricultural and forestry systems, environmental sciences, urban planning and landscaping sciences. In addition, graduates will be equipped with the methodological tools for the planning of landscape, urban and environmental rectification projects. In particular, the course structure guarantees the acquisition of fundamental knowledge in the field of environmental and landscape planning and design, by studying the following:

- characteristics, properties and functions of agricultural systems that characterize the territory and the agricultural landscape;
- concepts and techniques for the description, analysis and management of forest ecosystems, forest planning, the design of parks and protected areas, and the rectification of degraded natural environments;
- terrestrial ecosystems through lake or soil sciences, botany, environmental chemistry, and landscape ecology;

- notions of the history of architecture, land planning, and tools for cartographical and topographical analysis and description;
- landscape architecture and design of open spaces;
- urban planning and planning techniques which put into perspective the relation between territory, environment and landscape;
- economics and law, in terms of management and protection of the land and environmental resources.

In a few words, the theoretical and applied activities are aimed at equipping a graduate to operate in areas ranging from the activities of representation and interpretation of the rural and urban landscape, the assessment of environmental change and environmental impact from human activities, from planning protected areas and design of parks, to the management of agro-forestry systems and open spaces, and to the protection, preservation and enhancement of the territory.

This degree course has the Faculty of Architecture of 'La Sapienza' University of Rome as its main didactic centre.

Career opportunities

As a graduate of course L-21, you can register as a 'Junior Planner' with the 'Ordine degli Architetti Pianificatori Paesaggisti e Conservatori – Sezione B' (The Order of Architects for Landscape and Preservation – section B), and as a 'Junior Agronomist and Forestry Expert' with the 'Ordine dei Dottori Agronomi e Dottori Forestali' (The Order of Qualified Agronomists and Forestry Experts – section B). The degree will also enable students to access the Master's degree courses: LM-3 (Landscape Architecture), LM-48 (Regional Urban and Environmental Planning), LM-69 (Agricultural Sciences and Technologies) and LM-73 (Forestry and Environment Science and Technology) or similar Master's degree courses. Employment opportunities and areas of application are those required for 'Green Jobs'.

Degree courses - academic year 2018/19

Dibaf 02 Landscape Planning and Environmental Design L-21

DEGREE COURSE (L-25)

FORESTRY AND NATURAL SCIENCES

DAFNE - DIBAF cross-department course

DAFNE administration office

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Teaching Aims

The degree course in Forestry and Natural Sciences (SFN) deals with forestry and nature management and conservation in all their complexity and entirety. It aims at bridging the gap between natural science knowledge and practical, project-based knowledge.

In order to face the challenges of the contemporary world, the three-year degree course allows graduates to understand and interpret the natural environment's main aspects and issues as well as local and global environments, and to connect them with the sustainable management of forestry and of the other local natural system. The course is aimed at gaining an open perspective on international priorities in the realm of forestry and the protection of the global environment.

The main themes are the analysis of forestry, the monitoring of different ecosystems, the sustainable management and conservation of forestry, the prevention of neglect and the restoration of coastal, hill and mountain areas, the evaluation and development of forestry products and of the services that the woods offer society.

The course has three paths, each offering a deeper knowledge and understanding of different, more specific areas:

- **Protected areas and Landscape Management**

It provides the knowledge and tools needed to operate in protected areas. The course offers insights into the wildlife management and livestock systems, biochemistry and soil chemistry, forestry genetics and the conservation of biodiversity, phyto-genetics and the management of phytosanitary emergencies;

- **Ecoengineering**

This path is oriented towards technological-engineering applications to forestry and nature, with insights into landscape and forestry representation and analysis, mechanisation and use of forestry

resources from the point of view of job safety, the production of renewable energy and the management of urban green areas.

- **Forestry resources and international cooperation**

This path is oriented towards forestry development, with insights into pedology, resource inventory and the prevention of fires, mountain livestock and international cooperation. Students will also deepen their knowledge on the genetic improvement of trees in terms of wood quality.

The three-year course has been developed with the cooperation of professional associations and regional authorities. It gives students an in-depth knowledge of forestry and environmental management and is characterised by a practical approach allowing young graduates an easier start in the job market.

Practical activities are carried out in workshops and on-site. The training includes time spent in the Alpine and Apennine environment with specific exercises and student mobility programmes (Erasmus, training and internships in Italian and foreign companies).

In order to obtain their degrees, students have to total 180 university credits (CFU) and pass a final test. The test requires students to write and discuss a dissertation resulting from a personal detailed analysis of a specific aspect that is in line with their degree course, under the supervision of a professor.

Career opportunities.

Graduates in Forestry resources and international cooperation are able to aptly manage renewable natural resources (forestry in particular) and to deal with biodiversity conservation, the protection of agro-forestry landscape and the management of protected natural areas.

Following a successful state examination, graduates can enter the Agronomists and Forestry national register (section B).

Degree courses - academic year 2018/19

Dafne 03 Forestry and Natural Sciences (L-25)

DEGREE COURSE (L-26)

FOOD TECHNOLOGY AND OENOLOGY

Course Coordinator

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Location

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Student Office

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Teaching Aims

The aim of the undergraduate programme in Food Technology and Oenology is to provide a strong interdisciplinary background in the food, wine and wine-making sectors, as well as training professionals and technicians who have appropriate skills to work independently at all stages of the supply chain, from production to consumption of the food and wine products, including the ability to ensure the health and hygiene safety and quality of products, as well as their storage and distribution. With a view to facilitate the acquisition of specific professional competences whilst allowing graduates to quickly enter the job market, lessons in class are combined with laboratory activities, educational tours, meetings with experts, a practical internship in a company and a final report which sees students apply their newly-acquired knowledge in order to interpret and evaluate a productive or research environment in the food, wine or gastronomic sector.

The course has three professional paths:

- Food industries (technological);
- Food industries (gastronomic);
- Viticulture and oenology (oenological).

Knowledge and skills

The degree course in Food Technology and Oenology will equip you with knowledge of the issues and the methods of investigation of the Science and Technology of Food, and which can be summarized in the following learning outcomes:

- understanding the relationships between biological, chemical, technological and quality issues of food and wine products;
- knowledge of fermentation processes and the main food industry operations and their influence on product quality - “production process, product quality”;
- knowledge of analytical techniques, including non-instrumental techniques, for the characterization of authenticity, quality and safety of food, raw materials, semi-finished products and wine products;
- knowledge of the principles of human nutrition and the nutritional characteristics of food;
- knowledge of the techniques and strategies for the protection of plants and foodstuffs from parasites and pathogens;
- concepts of the main economic theories of supply, demand, production and trade;
- basic knowledge of European food law and wine legislation;
- understanding of the fundamental characteristics of the food and distribution industry, and problems of agro-food markets at national and international level.

The degree course study plan is made up of compulsory courses as well as optional courses, laboratory activities, training in companies, activities aimed at entering the job market and final thesis, for a total of 180 CFUs. Attendance for laboratories and educational visits, meetings, conferences and training activities is compulsory.

Career opportunities

As a graduate in Food Technology and Oenology, you will be able to operate in companies operating in enogastronomy, in the production, processing, storage and distribution of food and wine products. You will also be equipped to work in public and private institutions that carry out the analysis, certification and monitoring for the protection and enhancement of food and wine production.

The possible job opportunities of graduates in Food Technology and Oenology are, in particular:

- Food industries and companies operating in the production, processing, storage and distribution of food;
- Companies working in enogastronomy and in food promotion and enhancement.
- Industries and companies that operate in the wine and wine making industry;
- Manufacturing industries and delivery of meals in catering and restaurant sector chains;
- Industry sectors working in food, adjuvants, ingredients and other materials;
- Public and private bodies that carry out analysis, control and certification of food products;
- Public and private institutions that pay particular attention to innovation regarding the protection and evaluation of food production;
- Traditional and modern distribution companies for the quality control and conservation aspects of production;
- Marketing, promotion and exportation of national food products;
- Research Institutes (centres, universities, etc.)
- Freelance oenologist.

The course prepares students for the profession of biochemical technician and similar roles; the curriculum “ Viticulture and Oenology” enables graduates the right to register as an oenologist; the gastronomic profile allows graduates to qualify as an ‘Meal production expert’. The gastronomic profile also offers a joint programme with the Etoile Culinary Campus Srl of Tuscania, which is an accredited training organisation of the Lazio region (www.scuoladicucinaetoile.com). The gastronomic profile has a limited number of students. Students who are interested are required to pass an entrance exam.

Degree courses - academic year 2018/19

Dibaf 04 Food Technology and Oenology L-26

SECOND LEVEL DEGREE COURSE (LM-70) FOOD SCIENCE AND TECHNOLOGY

Food Technologies Curriculum
Viterbo Campus

Quality and Enhancement curriculum
Rome campus

Unitus course coordinator

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Unitus teaching department

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Teaching Aims

The second level degree course stems from the synergy between the DIBAF department of the University of Tuscia and the departments of Biology and Biotechnologies "Charles Darwin", Environmental biology, chemistry and management of 'La Sapienza' University of Rome. The inter-university course is to train professionals equipped with the scientific bases and the knowledge and skills necessary to perform tasks such as, planning, management, control, coordination and training in the sectors of production, research and development, storage, distribution and administration of food and drink. The course has two paths: Food sciences and technology (Viterbo) and Quality and promotion (Rome), with common activities in the fields of food technologies, food microbiology and food law that will be carried out during class for the University of Tuscia students and in synchronous e-learning for the students of 'La Sapienza' University of Rome. Graduates in Food Sciences and Technology (food sciences and technology) are able to guarantee the safety, quality and healthiness of food products and processed food. They will also use innovative methodologies. Students will also gain the ability to monitor and describe the environmental impact of the processes of food transformation and packaging, in order to manage the procedures for environmental certification and promote the adoption of the best technological practices and/or innovative packaging procedures to mitigate the effects of climate change.

The Quality and Enhancement curriculum, which is available in the Rome campus, aims at training graduates who can actively plan and carry out agro-food research using advanced techniques and financial management competences that are useful to identify and support enhancement product processes.

The academic programme includes 12 exams that allow you to acquire the scientific and methodological knowledge necessary for those of you who want to work in the vast agro-food sector.

Thanks to the freedom available to students who are planning their course of study, to the credits for similar and integrated activities and to the credits students choose freely, food technology graduates have the opportunity of completing their studies based on their individual interests and on strengthening their cultural and professional weaknesses.

The course's administrative management for academic year 2018-2019 is taking place at the Sapienza Università di Roma.

Knowledge and skills

Graduates of the second level degree course in Food Sciences and Technology, food technologies curriculum (LM-70) (Viterbo):

- possess a solid base of theoretical knowledge and practices relative to chemical and microbiological quality control and food safety;
- possess knowledge and competences in innovative technologies for the conservation and transformation of food and in sensory analysis;
- can manage and optimise food industry processes in terms of environmental sustainability and compatibility and can create and carry out research projects and industrial development;
- possess the appropriate professional knowledge and abilities to carry out complex activities of coordination related to the agricultural sector.
- The Quality and Enhancement curriculum (Rome campus) aims at training second level degree graduates (LM-70) possessing:
 - a good molecular and cellular knowledge of the biological systems related to the food industry;
 - the knowledge they need in order to understand complex documents related to company management, economy and agro-food legislation;
 - knowledge related to territory development, biodiversity and plant enhancement;
 - knowledge related to the anthropological, epistemological and ethical aspects of food.

Career opportunities

Graduates will be able to work in food companies and in businesses related to the production, transformation, conservation and distribution of food, in the companies involved in large supermarket chains, in state-run and private organisations that plan, analyse, control, certify and carry out scientific research for the protection and promotion of food production, in training organisations and as self-employed professionals, with particular reference to process and product innovation in the food industry, optimisation of conservation and transformation processes, in production processes related to packaging and additives for the food industry, in the development of research and industrial development projects, in the creation of innovative techniques aimed at the evaluation of the quality of finished products and its related health and safety aspects, in the design of new distribution strategies, in the evaluation of the environmental impact and in the creation of strategies aimed at reducing the main impact categories. Food Sciences and Technology graduates will be able to contribute to the innovation of food businesses and to the development of new 4th range products in order to establish new products with stringent specifics, easily recognisable by consumers and therefore able to compete in our global market.

Graduates of the Quality and promotion curriculum are skilled in mastering food-related technological platforms and in writing or taking part in business development and area development projects. This course prepares students to become food biotechnologists. Graduates of the second level degree course in Food Sciences and Technologies will be able to access the state exam to obtain the qualification to practice the profession of food technologist.

Degree courses - academic year 2018/19

Dibaf 05 Food Sciences and Technology (LM-69)

SECOND LEVEL DEGREE COURSE (LM-73) FORESTRY AND ENVIRONMENTAL SCIENCES

(MSc in English)

Course Director

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ERASMUS coordinator
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Location

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Student Office

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Teaching Aims

The second level degree course of Forestry and Environmental Sciences stems from the need of having a second level degree graduate whose knowledge and experience allow him or her to operate at a management or coordination level in the sustainable management of forestry resources and in the development of rural and mountain areas, with a focus on the peculiarities of the Mediterranean environment, the planning and management of environmentally friendly infrastructures in urban areas aimed at mitigating environmental issues, and in innovative operational areas where an in-depth knowledge of forestry is required. The marked multidisciplinary approach of the course of study promotes integration into the job market but also provides excellent training for further research at a PhD level.

Skills and knowledge

The course offers three curricula in English that were developed in cooperation with other foreign universities and with the issuing of multiple degrees. These aim of offering a common basis that is oriented to different environments and professional experiences.

- The curriculum: Forests and Environment, in Italian, is the main study pathway to complete forest-environmental studies, alongside highly professional training to consolidate theoretical and practical skills. All the courses take place in Viterbo.
- **The Mediterranean Forestry and Natural Resources Management (MEDfOR) curriculum**, awarding multiple degrees, aims at welcoming students from the whole world. This is possible thanks to the financial support of the European Erasmus + programme; the course is aimed at students from the whole world who would like to deepen their competences in the sustainable management of Mediterranean forests; the first year courses take place in Lisbon (PT) or Lleida (SP). For further information on admission and for other information, please visit www.medfor.uv
- The curriculum: Management and Design of Urban Green Infrastructures (UGI), is taught in English and confers a double degree title (in agreement with the Peoples' Friendship University of Russia, Moscow), and is aimed at providing the skills necessary to operate in the field of green infrastructures in urban areas, also aimed at mitigation of the environmental crisis.

The first-year courses take place in Moscow, while the second-year courses take place in Viterbo.

The work needed for the final dissertation can be carried out at DIBAF or at the other partner universities (Universities of the MEDfOR group and PFUR Moscow). The course also includes internships in external / foreign institutions through the ERASMUS+ programme.

Career opportunities

The SFA master's degree course will prepare you to find employment in a supervisory capacity or as a director, at national and international public institutions, such as central and local state-run administrative bodies (Ministries, Regional, Provincial Offices and Municipalities, public organisations, the Parks Department, the FAO, environmental protection agencies, the United Nations agencies with expertise in forestry and responsible for development, engineering and environmental design, and at businesses and institutions that deal with forest and environmental research and innovation. To work in a freelance capacity, as a graduate in the SFA course, you can register with the 'Albo Professionale dei Dottori Agronomi e Forestali – sezione A' (The National Registry of Qualified Agronomists and Forestry Experts – section A), in the Agronomist and Forestry sector, following the successful outcome of the State Exam.

One year after conferral of the SFA-LM / LS degree, graduate employment rate is 75%, while after five years it reaches 88%. The skills acquired by graduates during their studies are fully utilized by 60% of the graduates, five years after graduation. All graduates expressed a positive opinion on the course they had taken.

Degree courses - academic year 2018/19

Dibaf 06 Forestry and Environmental Sciences (LM-73)

SECOND LEVEL DEGREE COURSE (LM-8) INDUSTRIAL BIOTECHNOLOGY FOR HEALTH AND WELLBEING

Administrator

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Student Office

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Location

DIFAB Riello,
Largo dell'Università snc

Teaching Aims

The second level degree course stems from the synergy of the DIBAF and DEB departments and from the need to complete the course offer in the biotechnology area and, in particular, in industrial biotechnology. The course aims at giving students a sound scientific basis allowing them to plan, produce and recover animal, plants, microbial and synthetic bioactive molecules for the cosmetic, cosmeceutical, nutraceutical and pharmaceutical sectors. Students learn the advanced scientific methods needed to study and develop extraction and characterisation processes of natural substances, the planning of new specific bioactive molecules, the identification of their pharmacogenetic and toxicological effect and the creation of biomolecular, bio-catalytic and microbiological systems which are of fundamental importance in order to use biotechnologies in applied research, industrial production and services related to human health and wellbeing.

The course has two study areas:

- Biotechnological processes and products;
- Structural and functional characterisation of bioactive molecules.

The course includes 8 compulsory courses, 3 courses to be chosen among the 7 available ones (similar and supplementary sectors) and 12 CFUs from training activities chosen by the student (AFS, attività formative a scelta) who can therefore choose specific areas of individual interest. Moreover, there is a B2 English course and practical laboratory activities.

Skills and knowledge

Second cycle degree graduates in Industrial biotechnology for health and wellbeing acquire the following competences:

- theoretical-practical competences in the molecular and genetic sectors;
- competences in omics sciences;
- theoretical-practical competences in the sector of microbial and fermentation biotechnologies;
- theoretical-practical competences related to techniques and instruments to carry out the structural and functional analysis of macromolecules and biologic molecules;
- Chemistry, biochemistry and molecular competences in order to obtain materials of biotechnological interest;
- general biotechnology competences aimed at the scientific and technological development and innovation;
- general sustainability and bio-economy competences.

Career opportunities

This strongly job-oriented course with a theoretical-practical approach allows graduates to quickly enter the job market. The course prepares students to work in highly-specialised intellectual scientific jobs such as biologist and similar (biochemist, biotechnologist, microbiologist, researcher and biological sciences technicians).

Therefore, graduates in Industrial biotechnology for health and wellbeing can work in:

- State-run and private research institutes and universities;
- Research and development laboratories, production and quality control departments within biotechnology companies and other companies interested in biotechnological innovation;
- Biotechnological companies in the biomedical, cosmetic, nutraceutical, pharmaceutical and environmental sectors;
- Laboratories, testing centres and imaging centres;
- Organisations dealing with the organisation of patent legislation of bioindustry processes and products;
- Jobs related to national state exams in the healthcare industry, based on the requisites stated in article 2 of decree of equivalence with the second level degree course in Biology (LM-6) (D.I. 15/01/2013, published in the Gazzetta Ufficiale of 22 June 2013, n. 145);
- Self-employed professional (national register for biologists, following a successful state exams for the job of senior biologist, section A - DPR n. 328/01);
- Scientific knowledge and specialised printing sector.

Degree courses - academic year 2018/19

Dibaf 07 Industrial biotechnology for health (LM-8)

FIVE-YEAR SINGLE CYCLE DEGREE COURSE (LMR-02) HERITAGE CONSERVATION AND RESTORATION

Qualifying degree for the profession of Cultural Heritage Restorer
(Legislation D.Lgs. 42/2004)

Course Director
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Teaching Aims

The single-cycle Master's Degree course in Heritage Conservation and Restoration LMR-02 qualifies graduates for the profession of Cultural Heritage Restorer. The structure of the course comprises theoretical and methodological studies, and technical activities, including diagnostics, conservation and restoration. All the activities are carried out in the lab and in the workshop, on original artefacts in authentic contexts. Enrolment to the course is accessed by means of tests, while the course programme concludes with a final exam. The study plan offers a historical, scientific and technical foundation, a correct methodological approach, a high ability to recognise, criticise and diagnostics, a sound practical basis as well as intervention and management abilities.

Graduates will be required to possess a good level of responsibility, the commitment to acquire a cultural conscience, appropriate communicative competences and a desire to keep up to date. The course aims at teaching students a strong commitment to research and experimentation thanks to an excellent ethical and professional perspective focussed on the respect and care for the environment and cultural heritage, with a view to it being passed onto future generations.

The LMR-02 course represents a significant enrichment of the cultural offer and of the specialisations related to cultural heritage. The modules are organized along historic and scientific lines, with teaching in the laboratories divided into two areas: 'Artefacts in stone and derivatives; decorated architectonic surfaces (wall paintings, mosaics and stucco work), and 'Painted artefacts on wood and textiles' (wooden sculptures; wooden furnishings and structures; artefacts in manufactured synthetic materials, assembled and/or painted).

This blend of diverse skills and expertise enables wide-range studies that benefit from a solid tradition of historical, theoretical and methodological teaching and opens itself to new training strategies for the conservation and enhancement of the extensive historic-artistic Italian heritage.

Career opportunities

The degree course qualifies graduates to practice the profession of cultural heritage Restorer. Graduates will work as cultural heritage restorers with decisional powers related to their technical competences, working directly and indirectly to increase knowledge and avoid the deterioration of cultural heritage, thus guaranteeing its transmission to the future.

Job opportunities

- Institutions belonging to the Ministry of Tourism and Cultural Heritage (museums, libraries and more);
- state-run and private restoration laboratories;
- private organisations working in diagnostics, conservation and restoration;
- universities and state-run and private research organisations.

Degree courses - academic year 2018/19

Dibaf 08 Conservation and Restoration of Cultural Heritage (LMR-02)

POSTGRADUATE STUDIES PhDs AND MASTER'S DEGREES

Science, Technology and Biotechnology for Sustainability

Coordinator

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Food Curriculum Coordinator

Professor Fabio Mencarelli mencarel@unitus.it

Forest Ecology and Environmental Technologies Curriculum Coordinator

Professor Marco Marchetti marchettimarco@unimol.it

Biological Systems / Bio-based Industries Curriculum Coordinator

Professor Maurizio Petruccioli petrucci@unitus.it

Launched in collaboration with the University of Molise, the PhD programme aims to provide the skills necessary to carry out highly qualified research activities at national and international universities, businesses and institutions, in the sectors of: 1. Agro-food production; 2. Environmental technologies and forest ecology; 3. Biological systems and bioindustry.

The Food curriculum includes theoretical and applied studies and research on the aspects of transformation, conservation and food assessment, and criteria for the management of product quality and sustainability of the processes/processing. Teaching is carried out in collaboration with the National Network of Ph.Ds in Food Science Technology and Biotechnology.

The curriculum: Forest Ecology and Environmental Technologies deals with the structure and function of forest ecosystems, including the soil system, the ecological and productive recovery of ecosystems, forest biodiversity and climate change.

The curriculum: Biological Systems / Bio-industries includes research on basic biology, applied to animal, plant and microbial systems; biotechnology for the enhancement of waste, effluents and rubbish, bio-reclamation and human health; and sustainable agricultural management and plant health of Mediterranean cultivation systems.

The training objectives are: knowledge of English; preparation and statistical analysis of research; assessment of sustainability in complex systems. More details can be found at:

<http://www.unitus.it/it/dipartimento/dibaf/scienze-tecnologie-e-biotecnologie-per-la-sostenibilita/articolo/obiettivi-formativi7>

In the academic year 2017/18 a renewal of this PhD programme (XXXIII cycle) in cooperation with the University of Molise was proposed.

First level Master's Degree in

Enogastronomy - Management, Enhancement and Promotion

Interdisciplinary Master's

DIBAF - DEIM – DAFNE - DISUCOM - DEB

Administrative Offices

DIBAF

Coordinator

Diana De Santis

Contact details

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The aim of the master's degree course is:

- to train highly specialised professionals, with multidisciplinary skills, able to know, understand, evaluate and interpret with expertise the quality of enogastronomic products and activities, and to promote an efficient enhancement and promotion strategy. Today, highly skilled professionals in this field are difficult to find in the current marketplace.
- The course aims to enable students to acquire the technical communicative tools with a view to creating an awareness of the quality of foods, which is essential to successfully evaluate, enhance and/or manage a product.

The master's course will suit students who are interested in working or if they already operate within the agro-food, restaurant or services industries. It could also interest students who wish to follow a freelance career within these environments or to take up a professional activity in the field of communication and in journalism specialising in tourism or enogastronomy.

The master's course is organized in three macro areas, divided into various modules, for a total of 60 CFU:

- Macro area 1
Communication and advertising:
for a total of 7 CFUs
- Macro area 2
Business, management and quality:
for a total of 7 CFUs
- Macro area 3
Agro-food:
for a total of 10 CFU
- **Practical activities and workshops:**
for a total of 10 CFUs
- **Visits to businesses, planning and analysis of case studies, communication and marketing:**
for a total of 16 CFUs
- **The final dissertation**
10 CFUs

The programme offers students the possibility to study single modules, which could be useful to those who wish to improve specific business skills. This could be interesting for professional or cultural reasons, or if students do not possess the required entry qualifications for the course (three-year degree or equivalent), or if they do not wish to attend the entire course. Furthermore, it could give students the opportunity to strengthen technical or marketing skills or to better manage their own business.

It is possible to enrol on single or multiple modular courses, without having to complete the whole master's study programme. You can enrol on the master's degree course if you have a three-year degree in any subject in the field of humanities or science.

You will be granted the postgraduate degree of Master in Enogastronomy - Management, Enhancement and Promotion if you attend the lessons, pass the module exams and the final exam.

http://www.unitus.it/public/platforms/1/cke_contents/186/Bando%20Master%20DIBAF%20Management,%20valorizzazione.pdf

First level Master's Degree in

Guides and interpreters of the landscape and cultural heritage

Coordinator

Professor Giuseppe Scarascia Mugnozza

Contact details

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The Master's degree is aimed at graduates of scientific, biological-agricultural, environmental, architecture and landscape, historical-literary, cultural heritage, communication and sociology disciplines. The Master's degree aims to support and promote new professionals who are able to interpret, guide and educate in the sector of environmental and cultural resources conservation and enhancement in protected areas.

The specific aim is that of training professionals who are able to create connections between the values of a specific territory or site and the natural and cultural processes that determined it and made it as we know it today. Their task is to identify the forces that forged the treasures of our society (parks, protected areas, monuments, museums), find their essence and interpret them in order to give people who wish to visit them an enriching experience. Environmental interpretation methods are gaining momentum throughout the world because they provide tangible answers to those who manage, administer, coordinate or work in protected areas, natural parks, didactic farms, museums, monuments, as well as to visitors and enthusiasts who wish to know, enhance and protect the natural and cultural heritage.

The environmental interpreter's specific professional competences goes hand in hand with such gifts as strong motivation, creativity, and enthusiasm, allowing him or her to continuously renew his job and continuously adapt it to his or her target's needs and the evolutions of the job environment.

Moreover, the specialisation level an interpreter possesses can be extended to the planning and execution of written interpretation (panels, leaflets, texts, etc.), graphic and audio-visual support, dedicated structures, the spatial planning of infrastructures, centres and other interpretation tools. The 12-month Master's degree course includes frontal lessons, exercises, training/internships, project work and a good level of commitment on the part of students for individual study. The degree course has a total of 60 CFUs.

The total number of hours is 1,500, and modules are divided in four large areas as per the attached schedule, for a total of 60 CFUs. The following is a summary of the courses on offer:

Macro Area n. 1 - Protected areas, conservation and promotion instruments, conventions, rules: 8 CFUs equalling 252 hours, 96 of which are frontal lessons. Course presentation, objectives, evaluation tools and creation of the 'class group'; introduction to the work methodology; knowledge and evaluation of the interpretation application scenarios; frontal lessons and laboratories on protected areas, Rete Natura 2000, nature conservation tools and national and regional legislation for sustainable development; knowledge and evaluation of types of regional protected areas.

Macro Area n. 2 - Resource and land heritage knowledge and evaluation 12 CFUs equalling 344 hours, 152 of which are frontal lessons. Basic knowledge and excellencies of the national natural and cultural resource heritage; landscape architecture and museology elements; experiences and good practices in the management of the natural and cultural heritage; territorial marketing elements, promotion of tourism. Resource knowledge and evaluation (Keynotes)

Macro Area n. 3 - Knowledge and application of methods and techniques of heritage interpretation: 24 CFUs equalling 604 hours, 384 of which are laboratory activities and practical application. Knowledge and application of the principles of heritage interpretation, evolution of the national and international experiences, techniques, media involved in heritage interpretation; the interpretation as a system and a management tool for protected areas and/or sites or heritage elements; communication principles and techniques, group management dynamics; practical application interpretation services; guided tours and basic services for orientation, security and

emergency management; storytelling elements; creativity and multidisciplinarity as a work tool; project work.

Macro area 4 - Training: 12 CFUs - 300-hour training in a protected area, a museum, a UNESCO site or an organisation responsible for managing sites or important and representative heritage sites.

Final test: 4 CFUs. The writing of guidelines for an integrated system that is complete with media, programmes, interpretation activities; the carrying out of a practical test and the writing of a presentation of an interpretation medium.

Attendance is compulsory. A maximum of 20% of absences of the total number of hours is accepted. Provided they can offer written proof, students who total a higher amount of absences because of health reasons or other serious matters can have their absences evaluated by the Master's directorate in order to obtain the first level master's degree.

Students with any of the following degrees can access the Master's degree course: Heritage Studies (L-01), Figurative arts, music, entertainment and fashion (L-03), Philosophy (L-05), Geography (L-06), Humanities / Literature Studies (L-10), Languages and Modern Cultures (L-11), Biological Sciences (L-13), Tourism Sciences (L-15), Sciences of Architecture (L-17), Educational and Training Sciences (L-19), Communication Sciences (L-20), Sciences of Regional, Urban and Environmental Planning (L-21), Psychological Sciences and Techniques (L-24), Agricultural and Forestry Sciences and Technologies (L-25), Agro-Food Sciences and Technologies (L-26), IT Sciences and Technologies (L-31), Natural and Environmental Sciences and Technologies (L-32), Geological Sciences (L-34), Sociology (L-40), History (L-42).

The Master's degree course will take place between October 2018 and September 2019. More information on the Master's degree course will be available on the DIBAF website.

First level Master's Degree in

Community narrators

Interdisciplinary Master's Degree

DIBAF - DISTU - DISUCOM

Administrative Offices

DIBAF

Coordinator

Professor Stefano De Angeli

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Knowing how communities see themselves, what they think about their past and how they plan to use this inheritance to build their future.

Landscape, art and archaeological heritage promotion and enhancement, the enhancement and promotion of the cultural values of the territory and of traditional agro-food production are fundamentally important for cultural and financial development given today's high levels of competition, which is characterised by excessive fragmentation and dispersion of "ancient knowledge". In order to respond to these needs and have a positive effect on non-urban land economic growth, this Master's degree course aims at training students to acquire a new specialised competence such as the 'community storyteller', who can respond to the local territory's needs as well as the needs of the main actors working in tourism (animation, promotion, reception, restaurants, territorial marketing and so on) and culture (promotion, museums, archaeological heritage, training, natural and urban landscape, construct upgrade, technologies related to use, creativity and more).

The Master's degree course aims at training highly specialised professionals with multidisciplinary competences who are able to know, understand and interpret in the most accurate and aware way the value, the history, and the founding elements of the cultural structures of territories and promote an effective promotion strategy by working on the territories' narrative heritage. This is done by identifying, collecting, documenting, transforming and delivering such heritage in order to discover what communities think of themselves and of their past and how they plan to use this heritage to build their future through virtuous identity socialisation and the enhancement of the tourism-cultural heritage. The Master's degree course aims at integrating through an individual approach the different types of knowledge needed in order to manage a series of complex and diverse aspects related to the communication of culture and the tradition of local areas in tourism, management, crafts, in local or state-run groups, in cultural, socio-health, school and prison institutions.

All the Master's degree course modules are made up of frontal lessons, laboratory activities and on the field, and they provide a global, qualified and comprehensive training on subjects related to rural areas, the agro-food heritage, the value of our landscape which is now one of the main actors of economic development and whose transformations are the result of ongoing cultural change. The competences acquired during this course are difficult to find in the study offer currently available, and they are useful to anyone who wishes to face the huge cultural heritage of the rural world with the right preparation by using effective enhancement tools that also help public restitution. Public restitution can take different forms: audiovisual documentaries, books, performances, reading, exhibitions, walks/storytelling. During the Master's degree course, students will learn the scientific basis of in-field research such as the use of technology, interview making, sbobinatura???, transcription and archiving, and they will also learn how to edit texts and write scripts. The Master's degree course provides courses on directing, staging and acting, the basics of museum setup and production design, and it teaches students how to use the right hardware and software technology to document, transform, archive and carry out the public restitution of the community's stories.

The systematic knowledge of the subjects of the Master's degree course and the opportunity to enhance them at best in order to develop the local territory can be a competitive advantage for anyone operating in the tourism and culture sectors. The Master's degree course will suit students who are interested in working or who already work in the agro-food, culture, restaurant and reception sectors but also those who wish to have a supporting role in the previously mentioned sectors or to those who want to have a job in communication and in cultural promotion within the tourism and enogastronomy sectors. Who can become a professional storyteller:

- Young local researchers who are still training;
- local socio-cultural operators (directors or people who work in libraries, museums, archives; teachers of any school age;
- tourist guides and environmental guides;
- cultural associations and cooperatives working in local areas and aimed at its enhancement; Pro Loco);
- Administrators and/or employees within local administrations.

Second-level Master's Degree in

Plant nutrition

Administrator

Professor Maurizio Ruzzi

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The Master's degree course is aimed at graduates in medical-scientific, food-technology and agro-food subjects and is therefore aimed at supporting and preparing new professionals who are able to face the different challenges posed by the new 100% plant-based scenario. The specific aim is that of providing the scientific knowledge related to the molecular, metabolic and nutrigenomic aspects of 100% plant-based nutrition in the different physiological scenarios and the main diseases.

The professionals who complete this Master's degree course, which is characterised by several practical activities, have competences which fully respond to the practical clinical and private demand of hospitals and preventive action related to the main diseases.

In particular, the training objectives are:

- provide in-depth knowledge of the main features of 100% plant-based diet, nutritional adequacy prerequisites, nutrients' bioavailability, nutritional strategies;
- provide molecular metabolic, nutrigenomic and nutrigenic approaches in the different 100% plant-based diets;
- teach the evaluation of food quality and nutritional aspects used in plant-based diets;
- teach the application of basic concepts and nutritional strategies learnt to collective restoration, in schools and hospitals, in order to offer balanced 100% plant-based menus;
- provide advanced plant-based nutritional prevention knowledge in physiological conditions, including sport, established diseases such as chronic, neurodegenerative and inflammatory diseases, metabolic syndrome;
- plan 100% plant-based diets, from conception to old age.
- The 24-month Master's degree course includes frontal lessons, exercises, training/internships, project work and a good level of commitment on the part of students for individual study. The degree course has a total of 120 CFUs which are divided as follows;
- Lessons 60 CFUs
- Workshops/internships 30 CFUs
- Training 10 CFUs
- Thesis 20 CFUs

Enrolment is allowed to graduates of any of the following second level degree courses in Biology (LM-6), Biotechnologies (LM-7-8-9), Pharmacy (LM-13) and Medicine (LM-41), Nutrition Sciences (LM-61), Agricultural Sciences and Technologies (LM-69), Food Technologies (LM-70), Forestry (LM-73) and Environmental and Territory Sciences (LM-75).

Students will be granted the postgraduate Master's Degree in Plant-based nutrition if they attend lessons, pass the module exams and the final exam.

The Master's degree course will take place between October 2018 and September 2020. More information on the Master's degree course will be available on the DIBAF website.

Lessons are organised with the following modules:

| | | CFU |
|---|-----|-----|
| Exam | | |
| Vegetal nutrition: basic elements | 6 | |
| Bioactive behaviour in plant-based nutrition | 5 | |
| Essential nutrients in the 100% plant-based diet | 4 | |
| Diet quality | 7 | |
| Functional nutrition in the first 1000 days | 5,5 | |
| Plant evidence-based nutrition in adult age | 4,5 | |
| Plant-based nutrition for women of child-bearing age | | 5 |
| Plant-based nutrition for over 50s | | 4 |
| Plant-based nutrition in sport | | 4 |
| Nurturing growth, concentration and health (3-12 years) | 6 | |
| Plant-based nutrition in the prevention of chronic diseases | 5 | |
| Plant-based nutrition in the prevention of | | |

USEFUL INFORMATION

Alpine Studies Centre – CSALP The University of Tuscia

The Department for Innovation in Organic, Agro-Food and Forestry Systems founded and manages the Alpine Studies Centre (CSALP), an interdepartmental unit of the University of Tuscia, located in, in Pieve Tesino (Trento), for teaching and research purposes. The centre is intended primarily as a summer study and research facility for students of forestry and environmental, agro-food and biotechnology courses. The Centre is also used for teaching and research activities promoted by teachers and students of the University of Tuscia, but is also open to all scientific and educational institutions on request, depending on availability and in accordance with the regulations governing its use. The Centre normally operates two facilities with meeting rooms, classrooms, laboratories and accommodation for about 60 people.

In particular, the Centre is used regularly for:

- Practical work for students of the University of Tuscia;
- Practical work for students of other universities;
- Practical and applied traineeships for undergraduate and doctoral students;
- In the field experimental work in preparation for theses and dissertations;
- Training and specialization courses, summer school;
- Scientific and technological research projects;
- Cultural and scientific dissemination (seminars, workshops and other conference activities);
- Technical and scientific cooperation and practical applied activities for the management and development of the Arboretum of Tesino.

The Alpine Studies Centre is connected to the Arboretum of Tesino which was the result of the cooperation between the Environment Department of the autonomous province of Trento, the University of Tuscia and the towns of Pieve Tesino e Cinte Tesino. The arboretum is 800 metres above sea level and it boasts a large grass area with trees, a swamp area and mixed conifers and broadleaf woods, an area with alders and the 'garden of Europe'.

The natural environment that surrounds the Alpine Studies Centre of the University of Tuscia is part of the Tesino area and covers more than 20,000 ha between the Lagorai and Valsugana Mountain chains. The peaks of the Lagorai close it to the north, separating it from the Val Fiemme, while the Val Vanoi to the east separates it from the mountains of the Pale di San Martino and Primiero. Again towards the east, the narrow hydrographic incisions of the Senaiga torrent and the Val Porra mark the boundary with the town of Feltre for long stretches. Westwards the geographic limits of Val Campelle can be seen and, further south, the channel of the Chieppena torrent.

To the south of the Lagorai mountain ridges, and the Val Vanoi, is the imposing massif of Cima d'Asta, which at 2,850 m is the highest point of Tesino.

Tesino is located in an intermediate position between the Asiago Plateau and the Venetian Pre-Alps, and the Inner Alps. Along the valleys created by the river tributaries of the Brenta, in a predominantly north-south orientation, the currents of moist air from the Adriatic can rise and ensure abundant rainfall all year round, in addition to a certain mitigation of thermal extremes. The different altitudes, aspect and gradient of peaks, slopes and valleys create a marked diversification of microclimate that is reflected in the characteristics of the local forest vegetation.

Woods and pastures are the dominant components of the Tesino landscape. The forest area measures 13,759 hectares and represents more than 50% of the land. It is important to underline that, as owners, the municipalities manage the majority of this natural heritage themselves, along with the

Alpine huts and high altitude pastures, which have been the greatest guarantee of survival for local people in the past.

Initiatives to assist DIBAF students

The DIBAF Department encourages merit and commitment of its first year bachelor's and master's degree students by organising annual awards for the most meritorious students. The competition will be published online, together with all the details, and will expire on the 28th of February, 2018. Students will be evaluated on the basis of a scale of merit, derived by adding the total marks of the vote and the number of credits achieved by the reference date. In case of a tie, the prize will be awarded to the younger student.

As always, with the aim of promoting the diligence and academic achievement of our students, DIBAF has established annual grants for the activities of mentoring and guidance by our senior students (regular students enrolled in master's degree programs) and doctoral students. The activities are structured as follows:

- to welcome first-year students and give information and guidance;
- to take an active role in various orientation initiatives for high school and middle-school students;
- to act as a go-between with the Department Academic Office.

How to reach us

By car

- From North to South: Highway A1 Milano-Napoli Exit at Orte, take the highway Umbro-Laziale (SS675) towards Viterbo, exit Viterbo Nord. DIBAF is 30 km from the exit for Orte.
- From Rome: SS Cassia (SS2) or Cassia bis (SR 2a).
- From Siena: SS Cassia (SS2).
- From Perugia: Highway E45 to Orte then highway Umbro-Laziale (SS675) towards Viterbo, exit Viterbo Nord.
- From Terni: highway Umbro-Laziale (SS675) towards Viterbo, exit Viterbo Nord.

By train

Viterbo has two train stations: Viterbo Porta Romana (FS), Viterbo Porta Fiorentina (FS). The nearest station to reach DIBAF is Porta Fiorentina.

The lines that reach Viterbo are:

- Rome Ostiense-Viterbo
- Orte-Viterbo Montefiascone.

Orte railway station is connected to Viterbo through the 'Cotral' bus service or 'Alitransport' shuttle service. www.trenitalia.com

By bus

The buses of 'Cotral' regional bus lines connect to other towns of the province of Viterbo (www.cotralspa.it).

The closest stop to DIBAF is Viterbo Riello / Piazza Giordano Bruno.

Viterbo is on the 'Francigena' urban service (www.francigena.vt.it).

The students' halls of residence are on a University shuttle service.

ACADEMIC CALENDAR

First semester

Lessons start

24 September 2018

Lessons suspended for assessments and exams

19-23 November 2018

Lessons end* 11 January 2019

Beginning of Christmas holidays 22nd December, 2018

End of Christmas holidays 7th January, 2019

Second semester

Lessons start 25 February 2019

Lessons suspended for assessments and exams

15-18 April 2019

Lessons end* 7 June 2019

Beginning of Easter holidays 19th April 14, 2019

End of Easter holidays 24th April, 2019

Exam Sessions

Between the end of one semester and the beginning of the next, the ordinary exam sessions take place (see below). Moreover, extra sessions are scheduled during the week in which lessons are suspended. The final timetable with dates and places of each exam is available on the student's portal. Booking exams is compulsory for those who wish to take the exam and it has to be done on the Internet on the student's portal (<https://portalestudenti.unitus.it>). On the day of the exam, the student must bring his/her university registration card to the exam.

Winter session (three sessions) 14th January - 22nd February, 2019

Summer session (three sessions) 10th June - 20th September, 2019

Autumn session (two sessions) 19th August - 20th September, 2019

Graduation Sessions

16th-17th May, 2019

18th-19th July, 2019

26th-27th September, 2019

24th-25th October, 2019

12th -13th December, 2019

13th - 14th February, 2020

16-17 April 2020

National holidays

1st January, 6th January, 22nd April (Easter Monday), 25th April, 1st May, 2nd June, 15th August, 1st November, 8th December, 25th December, 26th December

(*) In the case of Food Technology and Oenology:
1st semester lessons end 21st December, 2018
2nd semesters lessons end 31st May, 2019

The academic calendar for the Single-Cycle Degree Course in Heritage Conservation and Restoration can be found in the Heritage Handbook.

OFFICES AND STUDENT SERVICES

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Academic Office Restoration

Location Heritage Department,
Largo dell'Università

Coordinators

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Opening Hours

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Friday 9:00 - 5:00pm
Tel. 0761 357512 - agbib@unitus.it

Coordinator
Laura Tavoloni

For the Single-Cycle Degree Course in Heritage Conservation and Restoration library, please see the Heritage Handbook.

Job Placement and study-work experience

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Erasmus

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Temporary Research Fellows

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Representatives of non-teaching staff

Graziano BUZZI, Anna Maria GALLO, Patrizia SILERI

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