HEADING

Degree classification - Denomination and code: L-26 Food industry
Degree title: Dottore
Length of course: 3 years
Total number of credits required to complete programme: 180
Years of course currently available: 1st, 2nd, 3rd
Access procedures: Open, subject to completion of self-assessment test prior to enrolment
Course code: G30

PERSONS/ROLES

Head of Study Programme
Prof.ssa Claudia Picozzi

Tutors - Faculty
Tutor per i piani di studio:
- lettera iniziale cognome studenti A-BE: Prof. Alberto Giuseppe Barbiroli
- lettera iniziale cognome studenti BF-BZ: Prof. Matias Pasquali
- lettera iniziale cognome studenti C-CL: Prof. Dimitrios Fessas
- lettera iniziale cognome studenti CM-DE: Prof.ssa Gabriella Giovanelli
- lettera iniziale cognome studenti DF-F: Prof. Riccardo Guidetti
- lettera iniziale cognome studenti G-L: Prof.ssa Sabrina Dallavalle (Responsabile docenti Tutor per i piani di studio)
- lettera iniziale cognome studenti M-O: Prof.ssa Maria Grazia Fortina
- lettera iniziale cognome studenti P-S: Prof.ssa Daniela Martini
- lettera iniziale cognome studenti T-Z: Prof.ssa Monica Laureati (Responsabile Erasmus)

Referente DSA: Prof.ssa Sara Limbo

Degree Course website
https://scienzeristorazione.cdl.unimi.it/

Course management for the Faculty of Agricultural and Food Sciences (Science and Technology area)
via Celoria 2 - Milano Città Studi   Phone 0250316511-0250316512   Lunedì, mercoledì e venerdì dalle 10.30 alle 12.30; martedì e giovedì dalle 14 alle 16.   https://informastudenti.unimi.it/saw/ess?AUTH=SAML

Degree programme head
Phone 0250319174   Email: presidenza.risto@unimi.it

Student registrar
via Celoria 18 - Milano Città Studi   Phone 0250325032   https://www.unimi.it/it/node/360   https://www.unimi.it/it/node/359

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives
The bachelor degree in Foodservice Science and Technology aims at preparing graduates with specific professional knowledge and skills for the needs of companies and organizations operating in the foodservice field.
The degree course is provided by the Department of Food, Environmental and Nutritional Sciences (DeFENS) in cooperation with the Department of Agricultural and Environmental Sciences - Production, Landscape, Agroenergy (DISAA).

Expected learning outcomes
Graduates in Foodservice Science and Technology will have acquired knowledge, skills and competences related to:
- food processing, preservation and distribution in foodservice companies;
- quality and safety of catering services;
- planning of meals and diet according to the nutritional needs of the target consumers;
- design and layout of foodservice facilities
- economic management and marketing of catering services and companies;
- inspection, planning and control of catering services in public administrations;
- chemical-physical, nutritional, sensorial, microbiological and entomological analyses of foodstuffs;
- development of methods to evaluate food quality and safety;
- surveys on food consumption and hygiene of populations and specific segments of the population;
- historical, motivational, sociological and psychological investigations on food consumption and preferences;
- publishing and technical-scientific dissemination on food consumption;
- food legislation and promotion of traditional gastronomic products and the "Mediterranean diet".

At the end of the studies the graduates will have autonomy of judgment which will allow him/her to acquire the information necessary to implement measures to improve the quality and efficiency of fooservice systems and related activities. In addition, the graduates will be able to communicate effectively, also using an European language, usually English, in the foodservice field.

**Professional profile and employment opportunities**

The professional figure of the foodservice technologist operates at different levels for the preparation, marketing and supply of food, beverages and full meals. Graduates have the skills to independently carry out professional activities in numerous fields, including the management, control and quality assurance of production processes, preservation and transformation of foodstuffs and food products; evaluation of chemical, physical, sensorial, microbiological and nutritional characteristics of finished, semi-finished products and raw materials; planning and control of the hygienic-sanitary and safety aspects of food products from field to fork in both private and public structures; preparation and supply of meals for foodservice; global supply chain quality management, also with reference to product traceability issues; management of food safety in the distribution sector; teaching, professional training, marketing, communication and publishing relevant to food science and technology. Thanks to the multidisciplinary nature of the training, graduates will be able to cover various roles in foodservice companies, in small and large-scale retail, in companies and public alert offices, public planning institutions, control and certification bodies and analytical laboratories. Graduates will also be able to find employment in agro-food companies and in agritourism field. They will be able to collaborate in the design of collective foodservicesystems and in the activities of consultancy companies.

For example, graduates have the skills to:
- production management and quality control in catering and banqueting companies;
- development, innovation and research in the area of quality assurance;
- training and selection of staff involved in collective and commercial foodservice;
- certification of production processes and of the self monitoring systems applied to collective foodservices;
- participation in the management of public procurement for foodservice;
- management and supervision of food supplies and food analysis s in large-scale retail;
- development of processes and products in the foodservice system.

**Initial knowledge required**

**Qualifications and knowledge required for admission**

Applicants to the degree programme must hold a secondary-school diploma, or other equivalent qualification, and a basic knowledge in scientific subjects (mathematics, chemistry, physics and biology).

**Admission assessment**

Admission to this Bachelor's degree programme is open, subject to a mandatory, non-selective, assessment test before enrolment. The test is aimed at ascertaining that the candidate meets admission requirements in the basic scientific disciplines (mathematics, chemistry, physics and biology) as provided by upper secondary school, and an understanding of elementary logic.

The test required for admission to the degree programme is TOLC-AV, an online test provided by the Consortium of Inter-University Integrated Access Systems (CISIA - https://www.cisiaonline.it).

For topics and details of the test, please view the page https://www.cisiaonline.it/en/area-tematica-tolc-agraria-veterinaria/struttura-della-prova-e-syllabus/

It is possible to take the TOLC-AV test at the University of Milan or any other member university of CISIA.

The calendar with available locations and dates is published on the page https://tolc.cisiaonline.it/calendario.php?l=gb.

Enrollment procedures and deadlines are indicated in the call for applications published on the page https://scienzeristorazione.cdl.unimi.it/it/iscriversi

**Admission for transfer or graduate students**

Transfer students from a degree programme of the University of Milan, or another university, and graduate students will be waived from the test only if admitted to years subsequent to the first.

To this end, a specific request for prior career assessment must be submitted by accessing the online service as indicated in the call for applications.

These candidates must provide a full transcript of records (exams lists, subject areas, credits, grades) and attach the course
syllabi. For more details and dates, please refer to the call for applications. Students admitted to the first year will be required to take the test and register for the call.

Additional learning requirements (OFA) and remedial activities

Students admitted with a score lower than or equal to 4 in the Mathematics section of the TOLC-AV test will have to fulfil additional learning requirements (OFA), within the first year of the programme. In order to fulfil their OFA, students will be offered a remedial Mathematics course with a final assessment test. Students who do not pass the OFA test within the deadline are not allowed to take second- or third-year exams. Alternatively, students may fulfil their learning requirements by passing the Mathematics exam in the study plan. Learn more at https://scienzeristorazione.cdl.unimi.it/it/studiare/le-matricole

Compulsory attendance

Course attendance is strongly recommended.

Internship criteria

Students are required to complete an internship awarding 14 credits (CFU). The internship can only be started after passing all first-year exams and obtaining foreign language proficiency and computer skills certificates. Internship activities may include the following:
- operational activities in a corporate function;
- management activities;
- inspection and control activities;
- communication and training activities;
- experimental laboratory activities for learning technical skills and/or method and process validation;
- data processing and application of physical, statistical and/or review models;
- in-depth bibliographic and documentary research on a specific topic.

Degree programme final exams

The final exam consists in the discussion of a paper on the internship in front of a board of faculty members. The student will write the paper under the guidance of a supervisor. The final exam awards 3 credits (CFU). Upcoming graduates must comply with the following:
- pass all exams for core and supplementary courses, for a total of 144 CFU, and earn 13 CFU for electives;
- earn 3 credits for foreign language proficiency;
- earn 3 credits for computer skills;
- carry out a practical internship in a public or private organization, or on campus, for a total of 14 CFU;
- write a report on the internship.
During the final exam, candidates will present their final paper, highlighting the purpose and findings of their work, and skills learned. The paper can be written and discussed in Italian or English. The score awarded by the board will take into account the candidate's presentation and the supervisor's assessment. Regulations for the awarding of degree marks is posted on the page https://www.unimi.it/en/education/faculties-and-schools/agricultural-and-food-sciences

Notes

Computer skills

Students who are supposed to earn 3 credits (CFU) for basic computer skills, as provided by their degree programme, have to attend the "Computer Science Course 3CFU". It is a blended course with a compulsory final exam. The first exam session is scheduled for January, and more will follow according to a calendar to be made available on the course delivery platform. Students who have already fulfilled an ICT Assessment during their previous studies should submit the related certification to their Academic Board, seeking its acknowledgement: it will be evaluated and they will receive a positive or negative feedback. The "Computer Science Course 3CFU" course is managed by the CTU - Teaching and Learning Innovation and Multimedia Technology Centre.

For-credit assessment

In order to obtain their degree, students must be proficient in English at a B1 level under the Common European Framework of Reference for Languages (CEFR). This proficiency level may be certified as follows:
- By submitting a language certificate attesting B1 or higher level in English and issued no more than three years before the date of submission. You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/297/. The certificate must be uploaded during the enrolment procedure, or subsequently to the portal http://studente.unimi.it/uploadCertificazioniLingue;
- By taking a placement test offered by the University Language Centre (SLAM) between October and December of the first year. Students who fail the test will be required to take a SLAM course. The placement test is mandatory for all those who do not hold a valid certificate attesting to B1, B2, or higher level. Those who have not taken the placement test by the end of December or fail the end-of-course exam six times must obtain the necessary certification privately before graduating.

**EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM**

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment. The agreements entered into by the University with over 300 universities from the 27 EU member countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organizations. Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

**Study and internships abroad**

Students enrolled in the degree program have the opportunity to spend periods of study and internship abroad. This is a unique opportunity to enrich their curriculum in an international context. For the European Erasmus+ program, the geographical areas where the partner universities reside are mainly in France, Germany, Norway, the Netherlands, the United Kingdom, Portugal, Spain and Sweden. Otherwise, The Erasmus + Traineeship allows you to accede a training internship abroad at research centers, institutions and laboratories. Information on international mobility is available on the page https://www.unimi.it/en/international/study-abroad

**How to participate in Erasmus mobility programs**

The students of the University of Milan can participate in mobility programmes, through a public selection procedure. Ad hoc commissions will evaluate:
- Academic career
- the candidate's proposed study programme abroad
- his/her foreign language proficiency
- the reasons behind his/her application

Call for applications and informative meetings

The public selection for Erasmus+ mobility for study generally begins around February each year with the publication of a call for applications specifying destinations and requirements. Regarding the Erasmus+ Mobility for Traineeship, the University of Milan usually publishes two calls a year enabling students to choose a destination defined by an inter-institutional agreement or to find a traineeship position on their own. The University organizes informative meetings to illustrate mobility opportunities and rules for participation.

**Erasmus+ scholarship**

The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which may be supplemented by the University funding for disadvantaged students.

**Language courses**

Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University Language Centre (SLAM).

https://www.unimi.it/en/node/8/
Learn more at https://www.unimi.it/en/node/274/
For assistance, please contact:
International Mobility Office
Via Santa Sofia 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
Contacts: InformaStudenti; mobility.out@unimi.it
Student Desk booking through InformaStudenti

<table>
<thead>
<tr>
<th>1st COURSE YEAR Core/compulsory courses/activities common</th>
<th>Ects</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus</td>
<td>8</td>
<td>MAT/05</td>
</tr>
<tr>
<td>Elements of physics</td>
<td>8</td>
<td>FIS/05, FIS/03</td>
</tr>
<tr>
<td>English assessment B1 (3 ECTS)</td>
<td>3</td>
<td>ND</td>
</tr>
<tr>
<td>Fundamentals of chemistry and physical chemistry</td>
<td>8</td>
<td>CHIM/02</td>
</tr>
<tr>
<td>Introductory economics and statistics</td>
<td>8</td>
<td>AGR/01</td>
</tr>
<tr>
<td>Organic chemistry</td>
<td>6</td>
<td>CHIM/06</td>
</tr>
<tr>
<td>Principles of biology</td>
<td>6</td>
<td>BIO/10, BIO/05, BIO/01</td>
</tr>
</tbody>
</table>
## 2nd COURSE YEAR Core/compulsory courses/activities common

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Ects</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry and biochemical analysis of food</td>
<td>8</td>
<td>BIO/10</td>
</tr>
<tr>
<td>Biotic contamination of food and environments</td>
<td>8</td>
<td>AGR/11, VET/04, AGR/12</td>
</tr>
<tr>
<td>Catering technology</td>
<td>8</td>
<td>AGR/15</td>
</tr>
<tr>
<td>Food chemical analysis</td>
<td>9</td>
<td>AGR/15</td>
</tr>
<tr>
<td>Food of animal and plant origin</td>
<td>16</td>
<td>(5) AGR/19, (5) AGR/03</td>
</tr>
<tr>
<td>Human nutrition</td>
<td>8</td>
<td>BIO/09, MED/49</td>
</tr>
<tr>
<td>Microbiology I</td>
<td>6</td>
<td>AGR/16</td>
</tr>
<tr>
<td>Sensory analysis of food</td>
<td>6</td>
<td>M-PSU/05, AGR/15</td>
</tr>
</tbody>
</table>

Total compulsory credits: 63

## 3rd COURSE YEAR Core/compulsory courses/activities common

<table>
<thead>
<tr>
<th>Learning activity</th>
<th>Ects</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business economy and elements of food legislation</td>
<td>8</td>
<td>IUS/15, IUS/13, AGR/01</td>
</tr>
<tr>
<td>Community nutrition</td>
<td>6</td>
<td>BIO/09, MED/49</td>
</tr>
<tr>
<td>Design, logistic and sustainability for foodservices</td>
<td>8</td>
<td>AGR/09, AGR/15</td>
</tr>
<tr>
<td>Food microbiology and hygiene</td>
<td>9</td>
<td>AGR/16</td>
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<tr>
<td>Quality management systems in food service</td>
<td>6</td>
<td>SECS-P/13, AGR/15</td>
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</table>

Total compulsory credits: 37

## COURSE YEAR UNDEFINED Core/compulsory courses/activities common

<table>
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<th>Ects</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science Course</td>
<td>3</td>
<td>INF/01</td>
</tr>
</tbody>
</table>

Total compulsory credits: 3

### Further elective courses

Students must earn 13 credits for elective activities, which can be chosen from the list of courses offered by the University of Milan, provided that the Academic Board recognise them as congruent with the study programme. Students may also obtain elective credits by attending seminars, conferences or refresher courses organised by this University or another entity and offered yearly under the label “Professional development for the food service industry”, with the Academic Board's approval. Among elective courses offered by this Faculty, the Academic Board recommends those listed in the table below. For activities included in the Professional development for the food service industry bundle, students may be awarded a minimum of 1 and up to 4 credits.

| Equal opportunities and scientific careers | 3    | SPS/09 |
| Food Law                                   | 4    | IUS/03 |
| Health and safety in the workplace (T.U. 81/08) | 2    | AGR/09 |
| Inspection of Foods of Animal Origin       | 4    | VET/04 |

Laboratory: Sustainability and Sustainable Development

| Laboratory: Sustainability and Sustainable Development | 4    | (1.5) SPS/04, (0.25) IUS/01, (0.75) SECS-P/01, (0.5) AGR/13, (1) ND |

Mass Market Retailers: Organization, processes and food safety

| Mass Market Retailers: Organization, processes and food safety | 4    | AGR/15 |

Packaging for foodservice

| Packaging for foodservice | 4    | AGR/15 |

Safety of fish products and derivatives

| Safety of fish products and derivatives | 4    | AGR/20, VET/04 |

Supplier's planning and food quality

| Supplier's planning and food quality | 5    | BIO/09 |

### End of course requirements

| Final exam | 3 | NA |
| Stage      | 14| NA |

Total compulsory credits: 17