UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2019/20
BACHELOR
Industrial Chemistry (Class L-27)
Students enrolled in the academic year 2019-2020

HEADING

Degree classification - Denomination and code:	L-27 Chemistry
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:	Cap on student, student selection based on entrance test
Course code:	F6X

PERSONS/ROLES

Head of Study Programme

Prof.ssa Laura Maria Raimondi

Tutors - Faculty

Proff. Domenico Albanese, Elena Cariati, Dr. Alessandro Minguzzi

Degree Course website

http://www.ccdchim.unimi.it

Via Golgi, 19 - 20133 MILANO Phone 02 50314419 dal lunedì al venerdì dalle ore 10 alle ore 12, in altri orari previo appuntamento Email: didattica.dipchi@unimi.it

Via Golgi, 19 - 20133 MILANO http://www.chimica.unimi.it

Via Celoria, 22 - 20133 MILANO http://www.unimi.it/studenti/segreterie/773.htm http://www.unimi.infostudente.it

http://www.unimi.it/studenti/matricole/77598.htm

Prof. Dominique Roberto

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

General aims and objectives of the course are the followings:

- To develop in our graduates the qualities needed to become the next generation of high quality chemists operating in chemical research, chemical industry and in the teaching of chemistry
- To make our students realize that chemistry is a fundamental discipline, central to the development of a modern and concerned society
- To provide intellectual stimuli and practical skills for highly determined graduates willing to play leading roles and undertake brilliant careers in the society

In particular, graduates in Industrial Chemistry are expected to gain the following skills:

- The basic knowledge in mathematics and physics to deal with chemical principles and concepts on a scientific basis.
- The ability to understand the practical implications of a wide range of chemical phenomena and to deal with them at the applied level.
- The ability to understand the various aspects of chemical production and its impact on the society.
- The creativity to develop new practical solutions to chemical production-related problems, with particular emphasis on sustainable development and economic benefits.
- The open-mind ed attitude necessary to collaborate with scientists of culturally-related disciplines.

Professional profile and employment opportunities

The students with the degree in Industrial Chemistry would be entitled to work in public and private-owned laboratories as highly qualified technicians. They could operate as assistants of more specialized personnel in the development of new products and/or new materials, collaborate in the design and realization of novel protocols for industrial preparations. They are trained for working on a chemical plant, take care of the validation and control of an established process and in the management of logistics issues, with a special attention devoted to the safety of plants, processes and chemicals. They could find positions in chemical industry, for example oil companies, polymer and material industries, and in public agency. They

can also apply for Master programmes, preferentially in Industrial Chemistry and Management. On average, ca. 70% of our students do so, after receiving the degree in Industrial Chemistry.

Notes

In order to get their degree, students are required to certify their knowledge of the English language at the B1 level. This level can be certified in one of the following ways:
* by submitting their language certificate, taken no more than 3 years before its submittal and attesting a B1 o higher level (for the list of the language certificates which are accepted by the University of Milan, please refer to the website: http://www.unimi.it/studenti/100312.htm).
Students can submit their language certificate during the immatriculation procedure or send it to the Language Centre of the University of Milan (SLAM) via the Infostudente service.
* by sitting the placement test run by SLAM, during the first year exclusively, from September to December. Should they not pass the Placement Test, students will have to attend the English language course organized by SLAM. All students who do not have a valid language certificate must sit the Placement Test. Those students who do not sit the Placement test by December or do not pass the end of course test in one of the 6 attempts granted will have to get a language certificate outside the University of Milan within their degree.

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

The University of Milan supports the international mobility of its students, offering them the opportunity to spend periods of study and training abroad, a unique opportunity to enrich their curriculum in an international context.

How to participate in Erasmus mobility programs

To gain access to mobility programs for study purposes, lasting 3-12 months, the enrolled students of the University of Milan must attend a public selection that starts usually around the month of February each year through the presentation of specific competition announcements, which contain information on available destinations, respective duration of the mobility, requirements and deadlines for submitting the online application.

The selection, aimed at evaluating the proposed study abroad program of the candidate, knowledge of a foreign language, especially when this is a preferential requirement, and the motivations behind the request, is performed by specially constituted commissions.

Each year, before the expiry of the competition announcements, the University organises information sessions for the specific study course or groups of study courses, in order to illustrate to students the opportunities and participation rules.

To finance stays abroad under the Erasmus + program, the European Union assigns to the selected students a scholarship that - while not covering the full cost of living abroad - is a useful contribution for additional costs as travel costs or greater cost of living in the country of destination.

The monthly amount of the communitarian scholarship is established annually at national level; additional contributions may be provided to students with disabilities.

In order to enable students in economic disadvantaged conditions to participate in Erasmus+ program, the University of Milan assigns further additional contributions; amount of this contributions and criteria for assigning them are established from year to year.

The University of Milan promotes the linguistic preparation of students selected for mobility programs, organising every year intensive courses in the following languages: English, French, German and Spanish.

The University in order to facilitate the organisation of the stay abroad and to guide students in choosing their destination offers a specific support service.

More information in Italian are available on www.unimi.it > Studenti > Studiare all¿estero > Erasmus+

For assistance please contact:
Ufficio Accordi e relazioni internazionali
via Festa del Perdono 7 (ground floor)
Tel. 02 503 13501-12589-13495-13502
Fax 02 503 13503
E-mail: mobility.out@unimi.it
Desk opening hour: Monday-friday 9 - 12

1st COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
Analytical chemistry with lab		12	CHIM/01
Complements of mathematics and calculus (F6X)		6	MAT/09, MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08
English assessment B1 (3 ECTS)		3	L-LIN/12
Fundamentals of mathematics		9	MAT/09, MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08
General and inorganic chemistry with lab		12	CHIM/03
General physics		9	FIS/08, FIS/07, FIS/06, FIS/05, FIS/04, FIS/03, FIS/02, FIS/01
Organic chemistry I		7	CHIM/06
	Total compulsory credits	58	

2nd COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
Analytic chemistry II with lab		12	CHIM/01
Inorganic chemistry with Lab		12	CHIM/03
Laboratory of physical chemistry		6	CHIM/02
Organic chemistry II		7	CHIM/06
Organic chemistry lab		10	CHIM/06
Physical chemistry I		6	CHIM/02
Physical chemistry II		6	CHIM/02
	Total compulsory credits	59	

3rd COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
Biological chemistry		6	BIO/10
Chemical plants with lab		12	ING-IND/25
Industrial chemistry		6	CHIM/04
Macromolecular chemistry		6	CHIM/04
Physical chemistry Industrial		6	CHIM/02
Training		12	NA
	Total compulsory credits	48	

Elective courses

End of course requirements

Final exam		3	NA
	Total compulsory credits	3	