



PRELIMINARY PLAN OF STUDY ACCADEMIC YEAR 2019-2020

SURNAME _____ NAME _____

SERIAL _____ ADDRESS _____

PHONE _____

E-MAIL _____

IMPORTANT

PLEASE, NOTE THAT THIS IS A PRELIMINARY PLAN OF STUDY. THE OFFICIAL PLAN OF STUDY - THAT CAN ALSO BE DIFFERENT FROM THIS - MUST BE SUBMITTED VIA WEB AFTER THE ENROLMENT, WITHIN THE PERIOD THAT WILL BE COMMUNICATED BY THE STUDENTS ADMINISTRATIVE OFFICE.

1st YEAR COURSE Mandatory Educational activities			
Distribution	Formative activity	CFU	SSD
1 semester	Advanced industrial chemistry with lab	9	CHIM/04
1 semester	Chemical processes and industrial plants	6	CHIM/04
1 semester	Economics and management	6	SECS-P/08
Total CFU mandatory 1st year →			21

Activities to choose

TABLE 1 - DISTINCTIVE 9 CFU COURSES

Students must earn 9 CFU by selecting one of the following items

Selection	Distribution	Formative activity	CFU	SSD
<input type="checkbox"/>	2 semester	Applied organic chemistry with lab	9	CHIM/06
<input type="checkbox"/>	2 semester	Chemistry of inorganic materials with lab	9	CHIM/03
<input type="checkbox"/>	2 semester	Energy: source, conversion and storage with lab	9	CHIM/02

TABLE 2 DISTINCTIVE COURSES¹

Students must earn 24 CFU by selecting 4 of the following items; at least 1 of them (6 CFU) must belong to CHIM/02, CHIM/03 or CHIM/06 class.

Selection	Distribution	Formative activity	CFU	SSD
<input type="checkbox"/>	1 semestre	Catalytic Methodologies in organic synthesis (Course subscribed by Master in Scienze Chimiche)	6	CHIM/06
<input type="checkbox"/>	1 semestre	Concepts and methods in organic synthesis	6	CHIM/06
<input type="checkbox"/>	1 semestre	Environmental electrochemistry (Not activated for the current academic year)	6	CHIM/02
<input type="checkbox"/>	1 semestre	Industrial processes and scale-up	6	CHIM/04
<input type="checkbox"/>	1 semestre	Nanotechnology of inorganic materials	6	CHIM/03
<input type="checkbox"/>	1 semestre	Photochemical Processes and Photocatalysis (Course mutated by Master in Scienze Chimiche)	6	CHIM/02
<input type="checkbox"/>	1 semestre	Physical chemistry of formulations	6	CHIM/02

¹ students from the bachelor in Applied and Environmental Chemistry classes 21 and 1-27 can choose distinctive courses also within the courses of the master degree in Chemical Sciences (courses in english only) and in Industrial Chemistry, subject to the approval of the commission study plans.



UNIVERSITY OF MILAN - DEPARTMENT OF CHEMISTRY
MASTER'S DEGREE COURSE IN INDUSTRIAL CHEMISTRY – F7Y

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<input type="checkbox"/>	1 semestre	Recycle and Life Cycle Assessment (LCA) of products and processes	6	CHIM/04
<input type="checkbox"/>	2 semestre	Advanced Chemistry and Physics of Polymers	6	CHIM/04
<input type="checkbox"/>	2 semestre	Environmental control and sustainability management	6	CHIM/12
<input type="checkbox"/>	2 semestre	Heterogeneous catalysis (<i>Not activated for the current academic year</i>)	6	CHIM/02
<input type="checkbox"/>	2 semestre	Metal Science and Corrosion	6	CHIM/02
<input type="checkbox"/>	2 semestre	Polymer degradation and stability	6	CHIM/04
<input type="checkbox"/>	2 semestre	Process development	6	CHIM/04
<input type="checkbox"/>	2 semestre	Synthetic methods in biotechnology	6	CHIM/06
Total CFU distinctive courses →				

INTEGRATIVE AND RELATED COURSES

Students must earn 12 CFU by selecting 2 of the following integrative courses

Selection	Distribution	Formative activity	CFU	SSD
<input type="checkbox"/>	1 semester	Patents and Management of Innovation <i>Course subscribed by the Master in Chemical Sciences</i>	6	SECS-P/07
<input type="checkbox"/>	2 semester	Chemical safety	6	IUS/07
<input type="checkbox"/>	2 semester	Medicinal chemistry <i>Course subscribed by Master in Scienze Chimiche</i>	6	CHIM/08

Total CFU integrative courses →

2ND YEAR Mandatory Educational activities

Formative activity	CFU	Disciplinary scientific sector
Thesis work and Final dissertation	39	
English proficiency ²	3	L-LIN/12
Total CFU mandatory	42	

FREE CHOICE COURSES

The students must earn 12 credits by freely choosing within all the activated courses of the University, provided they are coherent with their educational project, even if they are held in Italian.

However, it is strongly recommended to use the distinctive courses or, if appropriate, the integrative courses of the Master Degree in Chemical Sciences, provided they have not been already chosen.

For this purpose, you find in appendix a list of the courses of the Master Degree in Chemical Sciences.

Selection	Distribution	Formative activity	CFU	SSD
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

² Students are requested to earn 3 credits of English proficiency before they enter the laboratory thesis. However, it is strongly recommended to acquire these credits in the 1st year of their studies.

This can be done in the following ways:

- by acquiring the B2 level in the test provided by the University.

- by presenting an internationally recognized certificate of B2 level, as defined by C.E.F. (Common European Framework), or equivalent (list available on the website of the SLAM: <http://www.unimi.it/studenti/100312.htm>).

A special session of the test will allow the 1st year students to evaluate the level of their English. The test will be organized by SLAM: for information on test and English courses, please see: <http://www.unimi.it/ENG/student/100315.htm>

A course of English Proficiency (advanced) will be organized in preparation to the test for those students that have not reached the B2 level. More detailed information will be found at the link: <http://www.unimi.it/ENG/student/100315.htm>



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<input type="checkbox"/>				
Total CFU free choice →				

TOTAL (Indicate the total credits of the selected courses including the 21 and 42 mandatory credits of the 1st and 2nd year)→	
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NOTES: _____

date _____ signature _____

SPACE FOR COMMISSION

PLAN OF STUDIES: APPROVABLE NOT APPROVABLE

IF ANY OBSERVATIONS _____

date _____ The President _____



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APPENDIX

LIST OF THE COURSES OF THE MASTER DEGREE IN CHEMICAL SCIENCES

Distribution	COURSES	CFU	Sector
1 semestre	Advanced methods in organic synthesis (2° year)	6	CHIM/06
1 semestre	Analisi chimiche ambientali	6	CHIM/01
1 semestre	Catalytic Methodologies in organic synthesis	6	CHIM/06
1 semestre	Chimica dell'ambiente	6	CHIM/12
1 semestre	Chimica delle sostanze organiche naturali	6	CHIM/06
1 semestre	Chimica elettroanalitica avanzata	6	CHIM/01
1 semestre	Chimica Metallorganica	6	CHIM/03
1 semestre	Chimica quantistica	6	CHIM/02
1 semestre	Cristallochimica	6	CHIM/02
1 semestre	Environmental electrochemistry (<i>subscribed by the LM in Industrial Chemistry - Not activated for the current academic year</i>)	6	CHIM/02
1 semestre	Metodi fisici avanzati in Chimica Organica	6	CHIM/06
1 semestre	Photochemistry	6	CHIM/02
1 semestre	Processi Catalitici	6	CHIM/02
1 semestre	Sintesi e applicazioni di materiali inorganici	6	CHIM/03
1 semestre	Sintesi e tecniche speciali organiche	6	CHIM/06
1 semestre	Metodi matematici applicati alla chimica	6	MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08, MAT/09
2 semestre	Banche dati ed elementi di chemoinformatica	6	CHIM/06
2 semestre	Chimica Bioinorganica	6	CHIM/03
2 semestre	Chimica Bioorganica	6	CHIM/06
2 semestre	Chimica dei composti eterociclici	6	CHIM/06
2 semestre	Chimica dello stato solido	6	CHIM/03
2 semestre	Chimica Fisica dello stato solido e delle superfici	6	CHIM/02
2 semestre	Chimica supramolecolare	6	CHIM/03
2 semestre	Chimica teorica	6	CHIM/02
2 semestre	Elettrochimica	6	CHIM/02
2 semestre	Fotoluminescenza e risonanze magnetiche: applicazioni in chimica inorganica e metallorganica	6	CHIM/01
2 semestre	Homogeneous catalysis	6	CHIM/03
2 semestre	Metodi chimico-fisici di indagine applicati a sistemi molecolari e nanostrutturati	6	CHIM/02
2 semestre	Nanoparticelle: chimica ed applicazioni	6	CHIM/06
2 semestre	Physical chemistry of disperse systems and of interfaces	6	CHIM/02
2 semestre	Simulation modeling of biomolecules	6	CHIM/02
2 semestre	Structural biology and enzymology (<i>Mutuated by "Protein engineering and molecular enzymology" of the MD in Molecular Biotechnology and Bioinformatic</i>)	6	BIO/10
2 semestre	Strutturistica Chimica	6	CHIM/03
2 semestre	Programming C	6	INF/01