

**Attachment****Second Cycle Degree CHEMISTRY****Classe LM-54 DM 270/04****Academic year 2014-2015****1<sup>st</sup> year**

<b>Semester A</b>				
Course Title	SSD	CFU	hours	TAF
Advanced Physical Chemistry I Course	CHIM/02	6	48	B
Advanced Inorganic Chemistry I Course	CHIM/03	6	48	B
Advanced Organic Chemistry I Course	CHIM/06	6	48	B
Advanced Analytical Chemistry	CHIM/01	6	48	B
Advanced Biological Chemistry	BIO/10	6	48	B
		30		

<b>Semester B</b>				
Course Title	SSD	CFU	hours	TAF
Advanced Physical Chemistry II Course	CHIM/02	6	48	B
Advanced Inorganic Chemistry II Course	CHIM/03	6	48	B
Advanced Organic Chemistry II Course	CHIM/06	6 (4lect+2lab)	32 lect 24 lab	B
Course 1*		6	48	C
Course 2*		6	48	C
		30		

\*Courses 1, 2, and 3 to be selected among the following course sets

**Chemistry for life**

Course Title	SSD	CFU	hours	TAF
Bioorganic Chemistry	CHIM/06	6	48	C
Biophysical Chemistry	CHIM/02	6	48	C
Metabolomics	CHIM/03	6	48	C
Protein crystallography	CHIM/03	6	48	C
Surface chemistry and nanomaterials	CHIM/02	6	48	C
Elements of Computational Organic Spectroscopy	CHIM/06	6	48	C

### **Chemistry for a sustainable development**

Course Title	SSD	CFU	hours	TAF
Remediation of contaminated sites	CHIM/02	6	48	C
Industrial Biotechnology	CHIM/02	6	48	C
Agriculture and Food Chemistry	CHIM/02	6	48	C

## **2<sup>nd</sup> year**

Semester C		
Course Title	CFU	TAF
Student choice	6	D
Student choice	6	D
Course 3*	6	C
Health and Safety Safeguard in the Working Environment	1	F
Internship in a Company**/in a research lab	11	F
	30	

Semester D		
Course Title	CFU	TAF
Experimental project for final dissertation	30	E

\*Courses 1, 2, and 3 to be selected among the following course sets

### **Chemistry for life**

Course Title	SSD	CFU	hours	TAF
Nanocarriers	CHIM/03	6	48	C
Metal-based drugs	CHIM/03	6	48	C
Informatics for chemistry and biology	BIO/10	6	48	C
Smart polymers and biomaterials	CHIM/03	6	48	C

### **Chemistry for a sustainable development**

Course Title	SSD	CFU	hours	TAF
Environmental Physical Chemistry	CHIM/12	6	48	C
Environmental Spectroscopy	CHIM/12	6	48	C
Sustainable and efficient energy	CHIM/02	6	48	C
Green Chemistry and Catalysis	CHIM/06	6	48	C
NMR applications for Food Chemistry	CHIM/03	6	48	C

**\*\* At the moment the following Companies are available for the SCDC internship:**

Novartis Vaccines Italia (Siena)  
Nuova Solmine s.p.a (Scarlino-Grosseto)  
Biochemie Lab. (Florence)  
Syndial-ENI (Milan)  
Colorobbia s.p.a (Empoli)  
Dompè Farmaceutici (Milan-L'Aquila)