

CHEMISTRY (M.S.)

For details about this program, including program description, admission requirements, and contact information, click here (<https://www.montclair.edu/graduate/programs-of-study/chemistry-ms/>).

Program Requirements

Code	Title	Credits
Core Courses		
CHEM 540	Advanced Physical Chemistry ¹	3
Select two of the following:		6
CHEM 520	Advanced Inorganic Chemistry ¹	
CHEM 530	Advanced Organic Chemistry ¹	
CHEM 560	Advanced Analytical Chemistry	
CHEM 570	Advanced Biochemistry	
Research Options		
Select one of the following options:		3-9
<i>Graduate Literature Search Option</i>		
CHEM 598	Graduate Literature Search (Complete two times for a total of 2 credits.)	
CHEM 599	Graduate Seminar	
<i>Thesis Option</i>		
CHEM 595	Graduate Research	
CHEM 698	Master's Thesis	
Submit the completed Thesis original and one copy to the Graduate Office. See Thesis Guidelines for details.		
Culminating Experience		
Make a seminar presentation in conjunction with Research option. Graduate School must be notified when complete.		
Electives		
Complete 18 credits of electives if choosing the Graduate Literature Search option. Complete 12 credits of electives if choosing the Thesis option. See list below.		
Total Credits		30

¹ Students in the combined B.S. Chemistry/M.S Chemistry program complete these courses as part of the undergraduate major.

Electives

Code	Title	Credits
CHEM 510	Hazardous Materials Management	3
CHEM 520	Advanced Inorganic Chemistry	3
CHEM 525	Bioinorganic Chemistry	3
CHEM 530	Advanced Organic Chemistry	3
CHEM 532	Organic Synthesis	3
CHEM 534	Separation and Analysis	3
CHEM 538	Drug Design in Medicinal Chemistry	3
CHEM 542	Quantum Chemistry and Spectroscopy	3
CHEM 544	Chemical Thermodynamics and Electrochemistry	3
CHEM 548	Chemical Kinetics	3
CHEM 560	Advanced Analytical Chemistry	3
CHEM 570	Advanced Biochemistry	3

CHEM 590	Special Topics in Advanced Chemistry	3
CHEM 595	Graduate Research	1-6

Research and Thesis Option - 2 Year Roadmap

First Year			
Fall	Credits	Spring	Credits
Core Course		3 Core Course	3
Elective Course		3 Elective course	3
CHEM 595		2 CHEM 595	2
		8	8
Second Year			
Fall	Credits	Spring	Credits
Core Course		3 Elective Course	3
Elective Course		3 CHEM 698	3
CHEM 595		2 Culminating Experience	
		8	6

Total Credits 30

Research and Thesis Option - 15 Month Roadmap

First Year			
Fall	Credits	Spring	Credits
Core Course (Complete in the Summer term)		3 Elective Course (Complete in the Winter term)	3
CHEM 595 (Complete in the Summer term)		2 Elective Course	3
Core Course		3 CHEM 595	2
Elective Course		3 Core Course	3
CHEM 595		2	
		13	11

Second Year			
		Summer	Credits
		Elective Course	3
		CHEM 698	3
		Culminating Experience	
			6

Total Credits 30

Literature Search Option - 2 Year Roadmap

First Year

Fall	Credits	Spring	Credits
Core Course		3 Core Course	3
Elective Course		3 Elective Course	3
Elective Course		3 Elective Course	3
		CHEM 598	1
	9		10

Second Year

Fall	Credits	Spring	Credits
Core Course		3 Elective Course	3
Elective Course		3 CHEM 599	1
CHEM 598		1 Culminating Experience	
	7		4

Total Credits 30

Literature Search Option - 15 Month Roadmap

First Year

Fall	Credits	Spring	Credits
Elective Course (Complete in the Summer term)		3 Elective Course (Complete in the Winter term)	3
Core Course		3 CHEM 598 (Complete in the Winter term)	1
Elective Course		3 Core Course	3
Elective Course		3 Elective Course	3
		Elective Course	3
		CHEM 598	1
	12		14

Second Year

	Summer	Credits
	Core Course	3
	CHEM 599	1
	Culminating Experience	
		4

Total Credits 30