		Curriculum Molecular Sciences 2018-2019 - 1st year													
		All courses taught in English, unless otherwise indicated													
		As of the first year 2016-2017, Chemistry and Molecular Life Sciences are English taught programmes													
		The Science programme is not a fully English taught programme													
		Chemistry													
	code	**1st Quarter**	**ec**		code	**2nd Quarter**	**ec**		code	**3rd Quarter**	**ec**		code	**4th Quarter**	**ec**
	NWI-MOL001A	Chemical analysis	3	Tutor	NWI-MOL010	Biochemistry project	6		NWI-MOL005	Reactions and kinetics project	6		NWI-MOL014	Electricity & Magnetism 1A	3
Tutor	NWI-MOL079	Structure of Atoms and molecules	3		NWI-MOL080	Molecular structure	3		NWI-MOL007	Reactions and kinetics	3		NWI-MOL018	Thermodynamics project	6
	NWI-MOL008A	Biochemistry					6	Tutor	NWI-MOL017	Thermodynamics	3	Tutor	NWI-MOL019	Spectroscopic techniques	3
	NWI-MOL004	Mathematics 1	3		NWI-MOL009A	Mathematics 2-3					6		NWI-MOL020	Environmental chemistry and sustainability	3
	NWI-MOL003	Mechanics 1A	3												
or: E/NL	NWI-MOL003B	Mechanica 1B *													
			12				15				18				15
		Molecular Life Sciences													
	NWI-MOL001A	Chemical analysis	3	Tutor	NWI-MOL010	Biochemistry project	6		NWI-MOL005	Reactions and kinetics project	6		NWI-MOL014	Electricity & Magnetism 1A	3
Tutor	NWI-MOL079	Structure of Atoms and molecules	3		NWI-MOL080	Molecular structure	3		NWI-MOL007	Reactions and kinetics	3		NWI-MOL021	Celbiophysics project	6
	NWI-MOL008A	Biochemistry					6	Tutor	NWI-MOL017	Thermodynamics	3	Tutor	NWI-MOL019	Spectroscopic techniques	3
	NWI-MOL004	Mathematics 1	3		NWI-MOL009A	Mathematics 2-3					6		NWI-MOL022	Aspects of the Molecular Life Sciences	3
	NWI-MOL003	Mechanica 1A	3												
or: E/NL	NWI-MOL003B	Mechanics 1B *			0										
			12				15				18				15
		Science													
E	NWI-MOL001A	Chemical analysis	3	E	NWI-IPC002	Languages and Automata	3	Tutor E	NWI-MOL017	Thermodynamics	3	E	NWI-MOL026	Mathematics 4	3
Tutor E	NWI-MOL079	Structure of Atoms and molecules	3	E	NWI-MOL080	Molecular structure	3	E	NWI-MOL007	Reactions and kinetics	3				
E	NWI-MOL008A	Biochemistry					6					NL	*NWI-NP032B*	*Inleiding neuroscience (elective)*	*3*
E	NWI-MOL004	Mathematics 1	3	E	NWI-MOL009A	Mathematics 2-3					6	Tutor E	*NWI-MOL019*	*Spectroscopic Techniques(elective)*	*3*
E	NWI-MOL003	Mechanics 1A	3	E	NWI-MOL012	Mechanics 2A	3			***Kies 6 ec uit:***					
or: E/NL	NWI-MOL003B	Mechanica 1B *		of: NL	NWI-NP036	Rotaties en periodieke bewegingen	3	E	*NWI-MOL006*	*Reactions and kinetics project ++*	*3*	NL	NWI-NP037	Electriciteit en Magnetisme	6
								E	*NWI-MOL024*	*Fourier analysis & mechanical waves*	*3*	of E	NWI-MOL014	Electricity & Magnetism 1A	3
								NL	*NWI-MOL098*	*Object orientatie*	*3*				
	NWI-MOL103B	**Panorama Science: Science and society - essay**											**NWI-MOL103B**	**Panorama Science, project**	**6**
			12				15				18				15
*	**Mechanica 1B**	**Mechanics on more challenging physics level for students of Molecular Sciences**							***++: Er is een beperkt aantal plaatsen beschikbaar in de 6 ec-variant MOL005***						
		In Dutch													

Curriculum Molecular Sciences 2018-2019 - 2nd year

All standard courses taught in English

x When possible, 3 ec courses in the MLS programme after Q7 are given on Wednesdays

P = priority course MLS

I = Mo/Tue; II = Thur/Fri

Starting in 2017-2018, Chemistry courses and all Molecular Life Sciences priority courses will be taught in English

		Chemistry										Tutor				
	code	**5th Quarter**	**ec**		code	**6th Quarter**	**ec**		code	**7th Quarter**	**ec**		code	**8th Quarter**	**ec**	
	NWI-MOL027	DNA technology	3		NWI-MOL032	Crystal structure	3		NWI-MOL046	Quantum mechanics 2	3		NWI-MOL056	Chemical bonding	3	
	NWI-MOL016	Linear algebra	3		NWI-MOL012	Mechanics 2A	3		NWI-MOL042	Fourier analysis	3		NWI-MOL025	Electricity and Magnetism 2A	3	
	NWI-MOL040	Thermodynamics 2	3		NWI-MOL041	Quantum mechanics 1	3		NWI-MOL045	Microscopic techniques	3					
	NWI-MOL033	Programming in Matlab	3		NWI-MOL102	Inorganic chemistry*	3		NWI-MOL047	Synthesis of biomolecules	3		NWI-MOL048A	Organic chemistry lab	6	
	NWI-MOL028	Statistics	3		NWI-MOL044	Inorganic chemistry lab*	3					**or**	NWI-MOL034	Condensed matter lab (max 16)	3	
						* mixed schedule of course and lab				***Choose from e.g.:***	***3***		NWI-MOL050	Condensed matter	3	
									NWI-MOL035	*Chemistry and society*	*3*	**or I**	NWI-BB017C*	Biochemistry-Molecular Biology II	6	
									NWI-FCEM02B	*Writing about Science*	*3*	NL/E	*NWI-FCEM02B*	*Writing about Science*	*3*	
									NWI-MOL043	*Bioinorganic chemistry*	*3*	NL/E?	*NWI-NB046C*	*Chemie en Fysica vd Atmosfeer*	*3*	
									NWI-MOL108	*Magnetic resonance in chemistry**	*3*					
													** if you take BB017C, MOL025 is optional*			
										** prerequisite for MOL110 in year 3*						
			15				15				15				15	
		Molecular Life Sciences														
	NWI-MOL027	DNA technology	3		NWI-MOL032	Crystal structure	3	**P I**	**NWI-BB023B**	**Animal Cell biology**	**6**	**P I**	**NWI-BB017C**	**Biochemistry-Molecular Biology II**	**6**	
	NWI-MOL075	Bioinformatics A	3		NWI-MOL036	General Physiology	3	I	BB024B	Physiology of microorganisms	6	I	NWI-BB048B	Endocrinology	6	
	NWI-MOL031	Biochemistry in the living cell	3		NWI-MOL076	Programming: Matlab	3									
	NWI-MOL105	Inorganic biochemistry	3		NWI-MOL038	Genetics	3	**P II**	**NWI-MOL054**	**Toxicology**	**6**	**P II**	**NWI-MOL049A**	**Chemical biology project**	**6**	
	NWI-MOL028	Statistics	3		NWI-MOL037	MLS and society	3	II	NWI-BB020B	Adaptation physiology	6	**P II**	**NWI-BB034B**	**Neurobiology**	**6**	
								II	NWI-BB085B	Brain and behaviour	6					
								II	NWI-BB047C	Hum. Embryology & Developm. Biol.	6	II	NWI-BB025B	Medical pathology	6	
									NWI-BB028B	History of biology	3					
									NWI-FCEM02B	Writing about Science	3	NL/E	NWI-FFIL100	Philosophy (Biological topics)	3	
								P	**NWI-MOL047**	**Synthesis of biomolecules**	**3**	NL/E	NWI-FCEM02B	Writing about Science	3	
									NWI-MOL108	Magnetic resonance in chemistry	3					
			15				15				15				15	
		Science Zie ook de voorkeursprofielen in de studiegids														
	Keuzes	**(uit voorkeursprofielen)**			***Verplicht***								***Keuzes***	***onder meer:***		
	NWI-MOL027	DNA technology	3		NWI-MOL092	Panorama Science: energy & sustainability			NWI-MOL092	Panorama Science: energy & sustainability	6		*NWI-MOL056*	*Chemical bonding*	*3*	
	NWI-MOL075	Bioinformatics A	3		***Keuzes***	**(check voorkeursprofielen)**			***Keuzes***	**(check voorkeursprofielen)**			*NWI-MOL051*	*Project spectroscopie*	*3*	
	NWI-MOL016	Linear Algebra	3		NWI-MOL032	Crystal structure	3		NWI-NB027B	Neurofysica 1	3	*I*	*NWI-BB017C*	*Biochemistry-Molecular Biology II*	*6*	
NL	NWI-NB001C	Voortgezette Mechanica	6		NWI-MOL036	General Physiology	3	I	NWI-BB023B	Animal Cell biology	6	*II*	*NWI-BB034B*	*Neurobiology*	*6*	
NL	NWI-MOL039	Fysisch practicum			NWI-MOL039	Fysisch practicum	6		NWI-MOL046	Quantum mechanics 2	3		*NWI-MOL050*	*Condensed matter*	*3*	
	NWI-MOL040	Thermodynamics 2	3		NWI-MOL041	Quantum mechanics 1	3		NWI-MOL047	Synthesis of biomolecules	3		*NWI-FCEM02B*	*Writing about Science*	*3*	
	NWI-MOL028	Statistics	3			*overige keuzes bv:*				*overige keuzes bv:*			*NWI-FFIL100*	*Filosofie (Bio)*	*3*	
					NWI-MOL102	*Inorganic chemistry*	*3*		*NWI-FCEM02B*	*Writing about Science*	*3*		*NWI-MOL025*	*Electricity and Magnetism 2A*	*3*	
					NWI-MOL044	*Inorganic chemistry lab*	*3*		*NWI-MOL085*	*Programmeren Matlab voor NW*	*3*		*NWI-MOL049A*	*Chemical biology project*	*6*	
					NWI-MOL038	*Genetics*	*3*		*NWI-MOL108*	*Magnetic resonance in chemistry*	*3*		*NWI-MOL048B*	*Organic chemistry lab*	*6*	
					NWI-NB002D	*Electromagnetisme*	*6*		NWI-NB013C	*Kwantummechanica*	6					

Curriculum Molecular Sciences 2018-2019 - 3rd year — *Important changes are indicated in yellow*

All standard courses taught in English

x When possible, 3 ec courses in the MLS programme after q7 are given on Wednesdays

P = priority course MLS

I = Mo/Tue; II = Thur/Fri

Starting in 2018-2019, 3rd year Chemistry courses and 3rd yr Molecular Life Sciences priority courses will be taught in English

Chemistry

	code	9th Quarter	ec		code	10th Quarter	ec		code	11th Quarter	ec		code	12th Quarter	ec
		Electives, e.g.:	***15***			***Electives, e.g.:***	***15***			***Electives, e.g.:***	***15***			**Bachelor internship**	**12**
		Minor programme or exchange programme				***Minor programme or exchange programme***		I	*NWI-MOL065*	*Chemometrics*	*6*		NWI-MOL086	Academic skills	3
	NWI-MOL029	*Bioinformatics (if available)*	*3*		*NWI-MOL064*	*Spectroscopy of Atoms and Molecules*	*3*		*NWI-MB024C*	*HERA (environmental risk assessment)*	*6*				
II	*NWI-MOL095*	*Organic chemistry*	*6*		*NWI-MOL094*	*Physical organic chemistry*	*3*	II	*NWI-MOL066*	*Structuur, functie en bioinformatica (max 18)*	*6*			***Electives, e.g.:***	
	~~*NWI-NB046C*~~	~~*Chemie en fysica v/d atmosfeer (--> Q8/12)*~~	~~*3*~~		*NWI-MOL071*	*Crystal Growth*	*3*	II	*NWI-MOL054*	*Toxicology*	*6*		~~*NWI-MOL087A**~~	~~*Synthesis lab (organic) (max 18)*~~	~~*3*~~
	NWI-MOL110	*Applied magnetic resonance (max 36)*	*3*		*NWI-MOL059*	*Statistical thermodynamics*	*6*		*NWI-MOL093*	*Stereoselective synthesis*	*3*		~~*NWI-MOL087B**~~	~~*Synthesis lab (inorganic) (if available)*~~	~~*3*~~
I	*NWI-MOL053*	*Pharmacochemistry*	*6*		*NWI-MOL091*	*Green chemistry*	*3*		*NWI-MOL035*	*Chemistry & Society*	*3*		~~*** MOL087B *only after* MOL087A** (total 6 ec)~~		
	NWI-MOL106	*Applied Quantum chemistry*	*3*		*NWI-FFIL101*	*Philosophy 1 (Molecular topics)*	*3*		*NWI-MOL096*	*Metalorganic chemistry*	*3*	E/NL	*NWI-FCEM02B*	*Writing about Science*	*3*
NL	*NWI-FFIL101*	*Filosofie 1 (Natuurkundige onderwerpen)*	*3*	E?	*NWI-MB021B*	*Intr. Geographic Information Systems*	*6*	E/NL	*NWI-FCEM02B*	*Writing about Science*	*3*	E/NL	*NWI-FFIL100*	*Filosofie (Bio)*	*3*
E/NL	*NWI-FCEM02B*	*Writing about Science*	*3*	E?	*NWI-GCSE007*	*Beleid, ondernemerschap en innovatie*	*3*		*NWI-MOL111*	*Biophysical chemistry*	*3*	NL/E?	*NWI-NB046C*	*Chemie en Fysica vd Atmosfeer*	*3*
	*NWI-MOL087A**	*Synthesis lab (organic)*	*3*	E?	*NWI-FC0042B*	*Debating science & society*	*3*								
	*NWI-MOL087B**	*Synthesis lab (inorganic)*	*3*												
	* MOL087B *only after* MOL087A (total 6 ec)														

Molecular Life Sciences

P* I	NWI-BB086	Genomics for Health and Environment (max 15 MLW)	**12**					I	NWI-MB024C	HERA (environmental risk assessment)	6			**Bachelorstage**	**12**
P I	**NWI-BB063B**	**Neuroscience**	**6**	**P I**	**NWI-BB019B**	**Immunology (MAX 120 stud)**	**6**	I	NWI-BB065B	Pathofysiology of the Kidney	6		NWI-MOL086	Academic skills	**3**
P I	**NWI-MOL053**	**Pharmacochemistry**	**6**	**P**	**NWI-MOL107**	**RNA Structure and function**	**6**	**P I**	**NWI-MOL109**	**Chemometrics for Molecular Life Sciences**	**6**				
~~I~~	~~BB024B~~	~~Physiology of microorganisms~~	~~6~~	I	NWI-BB039B	Neurodevelopment (MAX 60?)	6	**P I**	**NWI-BB064B**	**Functional Genomics**	**6**		~~*NWI-MOL087A**~~	~~*Synthesis lab (organic) (max 18)*~~	~~*3*~~
P II	**NWI-MOL095**	**Organic chemistry**	**6**	**P II**	**NWI-MOL078**	**Nanobiotechnology**	**6**	**P II**	**NWI-MOL066**	**Structuur, functie en bioinformatica (max 18)**	**6**		~~*NWI-MOL087B**~~	~~*Synthesis lab (inorganic) (if available)*~~	~~*3*~~
P II	**NWI-MOL104**	**Medical biotechnology (max 25)**	**6**	**P II**	**NWI-BB084B**	**Molecular principles of development**	**6**	**P II**	**NWI-MOL055**	**Molecular basis of Diseases**	**6**		~~*** MOL087B *only after* MOL087A** (total 6 ec)~~		
II	NWI-BB080B	Neurophysiology of cognition and behaviour	6	II	NWI-BB021B	Neurobiophysics	6	II	NWI-BB081B	Cognitive Neuroimaging (Brain dynamics)	6	E/NL	*NWI-FCEM02B*	*Writing about Science*	*3*
P* II	NWI-BB086	Genomics for Health and Environment (max 15 MLW)						~~II~~	~~NWI-MB024C~~	~~HERA (environmental risk assessment)~~	~~6~~	E/NL	*NWI-FFIL100*	*Filosofie (Bio)*	*3*
	****: NWI-BB086 6 ec count as priority course***														
P	**NWI-MOL100**	**Spectroscopy of Biomolecules**	**3**		NWI-MOL091	Green chemistry	3	**P**	**NWI-MOL111**	**Biophysical chemistry**	**3**				
NL	NWI-FFIL101	Filosofie 1 (Natuurkundige onderwerpen)	3	E	NWI-FFIL101	Philosophy 1 (Molecular topics)	3	**P**	**NWI-MOL073**	**Comparative genome analysis (max 30)**	**3**				
E/NL	NWI-FCEM02b	Schrijfcursus	3	E?	NWI-GCSE007	Beleid, ondernemerschap en innovatie	3	E/NL	NWI-FCEM02B	Writing about Science	3				
	NWI-MOL110	Applied magnetic resonance (max 36)	3	E?	NWI-FC0042B	Debating science & society	3								
	*NWI-MOL087A**	*Synthesis lab (organic)*	*3*	NL	NWI-ILSBI03	Inleiding Educatie	3								
	*NWI-MOL087B**	*Synthesis lab (inorganic)*	*3*												
	* MOL087B *only after* MOL087A (total 6 ec)														
		Minor programme or exchange programme				***Minor programme or exchange programme***									
		e.g. Minor Translational Neuroscience													

Science *Zie ook de voorkeursprofielen bij de studieadviseur*

	profiel	**Bio Fysisch**													
		Zie de voorkeursprofielen												**Bachelorstage**	**12**
		Minor programme or exchange programme				***Minor programme or exchange programme***							NWI-MOL086	Academic skills	3
					verplicht:				**verplicht:**						
					NWI-MOL099	**Panorama: Food and Health**			**NWI-MOL099**	**Panorama: Food and Health**	**6**				
	profiel	**Fysisch Chemisch**													
		Zie de voorkeursprofielen												**Bachelorstage**	**12**
		Minor programme or exchange programme				***Minor programme or exchange programme***							NWI-MOL086	Academic skills	3
					verplicht:				**verplicht:**						
					NWI-MOL099	**Panorama: Food and Health**			**NWI-MOL099**	**Panorama: Food and Health**	**6**				
	profiel	**Bio Chemisch**													
		Zie de voorkeursprofielen												**Bachelorstage**	**12**
		Minor programme or exchange programme				***Minor programme or exchange programme***							NWI-MOL086	Academic skills	3
					verplicht:				**verplicht:**						
					NWI-MOL099	**Panorama: Food and Health**			**NWI-MOL099**	**Panorama: Food and Health**	**6**				