

Studies Plan

EDCH - Chemistry and Chemical Engineering 2023-24

Core courses

Courses	Language Code	Section	Teacher	Exam	Credit
Advanced Solid State and Surface Characterization (Next time: Spring 2024)					
E	CH-633	EDCH	Mensi Oveisi Schouwink	Oral	2
AI in chemistry and beyond: Highlights in the field (Next time: 2025-26)					
E	ChE-605	EDCH	Schwaller Vacat	Term paper	1
AI in chemistry and beyond: Success stories (next time Fall-Spring 2024-25)					
E	ChE-607	EDCH	Smit Vacat	Term paper	1
AI in chemistry and beyond: Trends in the field (From fall 2023 to spring 2024)					
E	ChE-606	EDCH	Schwaller Vacat	Term paper	1
Basic and advanced NMR - Level 1 A (EPFL) (Next time Winter 24 (block))					
E	CH-601(x)	EDCH	Abriata Bornet Emsley Patiny Piveteau	Oral	2
Basic and advanced NMR - Level 1 B (Sion) (Next time Fall 23-Spring 24)					
E	CH-601(y)	EDCH	Bornet Piveteau	Oral	2
Basic and advanced NMR - Level 2 (EPFL) (Next time Winter 24 (block))					
E	CH-703	EDCH	Abriata Bornet Emsley Patiny Piveteau	Oral	2
Basic principles of drug action at the cardiovascular system (Next time Spring 24)					
E	CH-602	EDCH	Diviani Hummler Beermann Kellenberger	Written	1
Basic principles of drug action at the nervous system (Next time Spring 24)					
E	CH-603	EDCH	Invited lecturers Kellenberger	Written	1
Chemical Biology Seminar Series 1 (Next time 2025-26)					
E	CH-635	EDCH	Fierz Heinis Vacat	Project report	1
Chemical Biology Seminar Series 2 (Next time Fall 23-Spring 24)					
E	CH-636	EDCH	Aye Fierz Vacat	Project report	1
Chemical Biology Seminar Series 3 (From fall 2024 to spring 2025)					
E	CH-637	EDCH	Aye Heinis Vacat	Project report	1

Chemical Probes for Imaging in Biology*(Next time November 23)*

E	CH-634	EDCH	Johnsson	Term paper	1
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Chemosensory receptors: Applications for biosensors and medical therapies*(Next time Fall semester 23)*

E	CH-628	EDCH	Pick	Oral	1
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Efficient Synthetic Routes Towards Bioactive Molecules*(Next time Winter 24 (block))*

E	CH-620	EDCH	Cramer	Multiple	2
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Frontiers in Chemical Synthesis. Towards Sustainable Chemistry*(Next time: Spring 2026)*

E	CH-707	EDCH	Hu Waser	Multiple	2
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Frontiers in Organic Synthesis. Part III Stereochemistry*(Next time: Spring 2025)*

E	CH-709	EDCH	Hu Waser	Multiple	2
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Frontiers in Organic Synthesis. Part II Synthesis of carbo- and hetero-cycles*(Postponed)*

E	CH-708	EDCH	Hu Waser	Multiple	2
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Hands-on with Research Data Management in Chemistry*(Next time Winter 24 (block))*

E	ChE-601	EDCH	Borel Gabella Varrato	Project report	1
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Highlights energy research and chemical engineering 1*(Next time Fall 25-Spring 26)*

E	ChE-610	EDCH	Luterbacher Queen Vacat	Project report	1
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Highlights energy research and chemical engineering 2*(Next time Fall 23-Spring 24)*

E	ChE-611	EDCH	Boghossian Queen Vacat	Project report	1
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Highlights energy research and chemical engineering 3*(Next time Fall 25-Spring 26)*

E	ChE-612	EDCH	Boghossian Queen Vacat	Project report	1
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Inorganic chemistry "Applications and spin-offs"*(Next time Fall 24)*

E	CH-711	EDCH	Mazzanti Severin	Oral presentation	2
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Inorganic chemistry "Fundamentals and properties"*(Next time Fall 26)*

E	CH-610	EDCH	Mazzanti Severin	Oral presentation	2
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Inorganic chemistry "Techniques and methods"*(Next time Fall 25)*

E	CH-611	EDCH	Mazzanti Severin	Oral presentation	2
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Introduction to the ChemInfo ELN of ISIC*(Next time Fall 24 Pre-registration required)*

E	CH-609	EDCH	Patiny Schwaller Vacat	Project report	1
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Mass spectrometry, principles and applications*(Next time: Fall 2023. Pre-registration form**<https://docs.google.com/forms/d/e/1FAIpQLSd5lyrEGUar8FBwxPqnIW1JBoPBr4YQjiA1yRGt3E7kOL-nXQ/viewform>*

E	CH-728	EDCH	Gasilova Menin Ortiz Trujillo Patiny	Oral	3
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Medicinal chemistry: concepts and case studies from the pharmaceutical industry*(Next time Spring 24)*

E	CH-604	EDCH	Quancard	Oral	1
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Modern Organic chemistry-Highlights in the field*(From fall 2022 to spring 2023)*

E	CH-640	EDCH	Vacat Zhu	Project report	1
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Modern Organic chemistry-Success stories*(From fall 2024 to spring 2025)*

E	CH-642	EDCH	Cramer Vacat	Project report	1
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Modern Organic chemistry-Trends in the field*(Next time Fall 23-Spring 24)*

E	CH-641	EDCH	Vacat Waser	Project report	1
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Organic semiconductors*(Next time Fall 24)*

E	ChE-613	EDCH	Nüesch	Oral	3
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Principles and Applications of X-ray Diffraction*(Next time: Fall 2023. Pre-registration form**<https://docs.google.com/forms/d/e/1FAIpQLSd5lyrEGUar8FBwxPqnIW1JBoPBr4YQjiA1yRGt3E7kOL-nXQ/viewform>*

E	CH-632	EDCH	Schouwink	Written	2
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Synergism between Art of Total Synthesis and High Level**Strategic Design (MOM)***(Next time Summer 24)*

E	CH-622	EDCH	Zhu	Multiple	2
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Other doctoral courses (EDOC)

Courses				Exam	Credit
Language Code	Section	Teacher			
Information literacy for chemists					
<i>(Next time Fall 23)</i>					
E	ENG-619	EDCH	Borel Palatella Pasquier	Project report	1
Scientific Writing (EDCH) (1) (Fall)					
<i>(Next time Fall 23)</i>					
E	ENG-613(1)	EDCH	Bless	Project report	1
Scientific Writing (EDCH) (2) (Spring)					
<i>(Next time: Spring 24)</i>					
E	ENG-613(2)	EDCH	Bless	Project report	1
Statistical methods in atomistic computer simulations					
<i>(Next time Winter 2025)</i>					
E	MSE-639	EDMX	Cerioti	Project report	2

External courses

Courses				Exam	Credit
Language Code	Section	Teacher			
Sciencepreneurship: Sustainability & AI					
<i>(Registration only via course website to this Summer School)</i>					
E	MGT-650	EDCH	Dyson	Oral	1
Synchrotron Diffraction & Scattering Methods					
<i>(Registration via https://sites.google.com/view/bm01school2024)</i>					
E	CH-810	EDCH	Queen	Project report	2

Master courses

Courses				Exam	Credit
Language Code	Section	Teacher			
Asymmetric catalysis for fine chemicals synthesis					
E	CH-435	CGC	Waser	During the semester	2
Catalysis for emission control and energy processes					
E	ChE-410	CGC	Kröcher	Written	3
Chemistry of f elements					
E	CH-427	CGC	Mazzanti	Written	2
Computational methods in molecular quantum mechanics					
E	CH-452	CGC	Bonella	Oral	4

Frontiers in chemical biology*(Pas donné en 2023-24)*

E	CH-412	CGC		Written	3
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Fundamentals of solid-state materials

E	MSE-423	MX	Marzari	Written	4
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Heterogeneous reaction engineering

E	ChE-403	CGC	Renken	Written	4
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Molecular quantum dynamics

E	CH-453	CGC	Vanicek	Oral	3
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Physical and computational organic chemistry*((pas donné en 2023-24))*

E	CH-431	CGC		Oral	2
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Structure and reactivity

E	CH-432	CGC	Cramer	Oral	3
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Sustainable chemistry and engineering in Industry

E	CH-407	CGC	Biasi Brocklehurst Godineau Lovelie Gomez Nanchen Robvieux Waser	During the semester	2
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Total synthesis of natural products

E	CH-438	CGC	Zhu	Written	3
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