

# M Sc Molecular Life Sciences

## Special qualification **Cell and Molecular Biology**

### Program for fall semester

Please always check CTS (KSL) for details and actual dates!

<b>KSL Nr.</b>	<b>Eligible for special qualification module CMB (or for general module)</b>	<b>ECTS</b>
2216	"Omics" - from genomes to metabolomes, Thu 14-16, ICB Prof. Dr. C.R. Largiadèr, Dr. Rémy Bruggmann	3
2221	Colloquium on host-pathogen interactions, Fri 16.30-18.30, monthly (whole year course), ICB Prof. C. Faso	4 for 2 sem.
2222	Dynamics of cellular contacts: Cell-cell contacts and cell motility, Thu 16-18, ICB Prof. B. Engelhardt and others	3
3809	Cellular and molecular immunology, Thu 10-12, ICB Prof. M. Bachmann et al.	3
4542	Pathogenesis and evolution of infectious diseases, Fri 14-16, DCBP PD Dr. L. Hathaway et al.	3
4582	Molecular Genetics of Model Organism Development (BEFRI), Tue 15-17, UniFR and UniBE Prof. B. Suter, Dr. A. Puoti	3
6983	The genetic code. Thu 08-10, weeks 8-14, DCBP - not in fall 2022 -> replaced by 476834 Prof. A. Schneider	1.5
476834	Bioinformatic concepts, algorithms & applications. Thu 08-10, weeks 8-14, DCBP Prof. P. Mäser	1.5
412058	RNA Biology I (every 4th semester), Thu 16-18, DCBP Prof. N. Polacek	3
412073	RNA Biology II (every 4th semester), Thu 16-18, DCBP Prof. N. Polacek	3
435913	From organelle biochemistry to human disease, Tue 10-12, week 1-7, ICB Prof. J-M Nuoffer et al.	1.5
446839	Antibiotic-resistant bacteria and one health: from the plate to the bedside; Wed 14-16, IFIK Prof. Dr. A. Endimiani et al.	3
<b>KSL Nr.</b>	<b>Eligible for general module only</b>	<b>ECTS</b>
1361	Human genetic history. Weeks 8-14. Wed 13-15 (every 4th semester), Haller Auditorium Prof. L. Excoffier	1.5
2225	Laboratory safety. Block course, 3 days, registration in KSL, IPS Dr. P. von Ballmoos, Prof. Dr. D. Rentsch	1.5
3019	Principles of nucleic acids, Fri 10-12, weeks 1-7, DCBP Prof. R. Häner	1.5
3021	Basic medicinal chemistry - principles of drug action, Fri 10-12, weeks 8-14, DCBP Prof. R. Häner	1.5
3052	Antibiotica: Biosynthesis, mode of action and resistance, Tue 16-18, week 1-7, DCBP (last time: fall 22) PD Dr. M. Page-Adams	1.5
3460	Radicals in Organic Synthesis, Thu 10-12, DCBP Dr. F. Dénès	3
9256	Lecture Series on Advanced Microscopy. MIC, Fri 8-10, ANA PD Dr. R. Lyck	3
10441 10442	Advanced plant biology (B), lectures only: Mon 13-15, Thu 9-11, 3 separate blocks, IPS Prof. D. Rentsch	5
25455	Mikroskopische Methoden mit Praktikum; Tue 16-17 and 3x Tue 13-16, ICB Dr. M. Brauchle	3
25469	Neurogenetics, Tue 13-15, UniFR and UniBE Dr. B. Egger	3
406196	Applied MS spectroscopy, Mon 13-15, week 1-7, DCBP Prof. S. Schürch	1.5
455614	Chemical Ecology I - Lecture and Practical. Tue 13-14 and 8 half days, IPS Prof. C. Robert et al.	5
473205	Systems Biology (BEFRI), Tue 8-10, ICB Prof. B. Towbin et al.	3

The special qualification module (**SPQ-CMB**) must comprise 15 ECTS points from the learning units shown in bold face.

For the general module (GEN), additional credits can be accumulated from master courses of all five specialisations. This module may also contain up to 10 ECTS points in learning units from the BSc programs in Biology, Biochemistry and Molecular Biology, or Chemistry and Molecular Sciences. If a learning unit is not already programmed in KSL, students should ask the head of studies for approval. On request, learning units from outside institutions and other programs (e.g., UniFR or the Swiss Institute for Bioinformatics) may also be included.

The total number of credits of both modules must be at least 30 ECTS points.

Additionally, while the students are enrolled in the program, they must follow two hours per week of **seminar series** according to recommendations made by the prospective MSc supervisor.