M Sc Molecular Life Sciences
Special qualification Biochemistry/Chemical Biology

Program for spring semester

-> Please always check KSL for details and actual dates!

<table>
<thead>
<tr>
<th>KSL Nr.</th>
<th>Eligible for special qualification module BCCB (or for general module)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>405520</td>
<td>Genomics of microorganisms, Tue 16-18, DCB Prof. N. Polacek</td>
<td>1.5</td>
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<tr>
<td>415819</td>
<td>Cell and gene therapy, Wed 14-16, IZB Prof. Dr. A. Marti</td>
<td>1.5</td>
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<tr>
<td>2226</td>
<td>Membrane biochemistry, Wed 16-18, IBMM Prof. M. Hediger et al.</td>
<td>3</td>
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<tr>
<td>3456</td>
<td>Advanced medicinal chemistry - from target to drug, Fri 10-12, DCB PD J. Hunziker</td>
<td>1.5</td>
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<tr>
<td>3457</td>
<td>Nucleic acid analogues, Fri 10-12, DCB Dr. P. Küpfer, Dr. M. Hollenstein</td>
<td>1.5</td>
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<tr>
<td>406196</td>
<td>Applied MS spectroscopy, Thu 13-15, DCB Prof. S. Schürch</td>
<td>1.5</td>
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<tr>
<td>407145</td>
<td>Clinical Chemistry and Laboratory Medicine- An Introduction, Mon 13-15, DCB Dr. C. Fuhrer</td>
<td>1.5</td>
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<tr>
<td>407148</td>
<td>Introduction to Radiopharmaceutical Chemistry, Wed 10-12; DCB Prof. A. Türler</td>
<td>1.5</td>
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<tr>
<td>3455</td>
<td>Enzyme mechanisms and enzyme models, Thu 8-10, DCB PD T. Darbre</td>
<td>3</td>
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<tr>
<td>11502</td>
<td>Molecular Life Sciences Journal Club, Wed 9-10, biweekly, DCB Dr. A. Eberle</td>
<td>2</td>
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<tr>
<td>2217</td>
<td>* &quot;Oms&quot;: Practical introduction to genomics and transcriptomics, block course during the summer break; Registration by email to lecturer Prof. C. Largiadèr</td>
<td>2.5</td>
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<tr>
<td>430236</td>
<td>Bioenergetics – from archaeal sorcery to human diseases, Tue 10-12, week 1-7, DCB Prof. Ch. Von Ballmoos</td>
<td>1.5</td>
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<tr>
<td>3461</td>
<td>Forensic chemistry and toxicology, Thu 10-12, DCB Dr. W. Bernhard</td>
<td>3</td>
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<thead>
<tr>
<th>KSL Nr.</th>
<th>Eligible for general module only</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>9577</td>
<td>Lipid biology, a major research target of the post-genomic era, Tue 16-18, DCB Prof. A. Stocker</td>
<td>1.5</td>
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<tr>
<td>3460</td>
<td>Radicals in Organic Synthesis, Fri 8-10, DCB Prof. P. Renaud</td>
<td>3</td>
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<tr>
<td>3463</td>
<td>* Lab course: Crystal structure determination, Mon 8-18, Tue, 8-16, Wed 8-12, DCB PD P. Macchi, Dr. J. Hauser</td>
<td>4</td>
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<tr>
<td>407144</td>
<td>Applied Optical Spectroscopy in Chemical Biology, Fr 15-17, week 1-7, DCB Prof. R. Hänser, Dr. O. Khorev</td>
<td>1.5</td>
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</table>

The special qualification module (SPO-BCCB) must comprise 15 ECTS points from the learning units shown in boldface.

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.

* Please note that space restrictions may apply to lab courses.
### Time table for spring semester

*Learning units shown in dark blue qualify for the module SPQ-BCCt*

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>08.15-09.00</td>
<td>Lab course: Crystal structure determination</td>
<td>Lab course: Crystal structure determination</td>
<td>Lipid biology</td>
<td>Lab course: Crystal structure determination</td>
<td>MLS Journal Club</td>
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<td>09.15-10.00</td>
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<td></td>
<td>Enzyme mechanisms and enzyme models</td>
<td>Radicals in Organic Synthesis</td>
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<tr>
<td>10.15-11.00</td>
<td></td>
<td>Bioenergetics – from archaeal sorcery to human diseases</td>
<td>Introduction to Radio-pharmaceutical Chemistry</td>
<td>Forensic chemistry and toxicology</td>
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<td>11.15-12.00</td>
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<td>Advanced medicinal chemistry – From target to drug</td>
<td>Nucleic acid analogues</td>
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<td>12.15-13.00</td>
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<td>Applied MS Spectroscopy</td>
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<td>13.15-14.00</td>
<td>Clinical Chemistry and Laboratory Medicine - An Introduction</td>
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<td>Applied Optical Spectroscopy in Chemical Biology</td>
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<td>14.15-15.00</td>
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<td>Cell and gene therapy</td>
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<td>15.15-16.00</td>
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<td>Biochemistry seminars</td>
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<tr>
<td>16.15-17.00</td>
<td>Biochemistry seminars</td>
<td>Genomics of microorganisms</td>
<td>Membrane biochemistry</td>
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<td>17.15-18.00</td>
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