

# Major: Biotechnology

## Master's Programme in Chemical, Biochemical and Materials Engineering

Course substitution arrangements for students who continue their studies according to the curriculum of 2022-2024 during the transitional period of 1.8.2024 - 31.12.2025, when some of the courses of the curriculum 2022-2024 are no longer taught.

<b>Common compulsory courses (3-5 cr)</b>			
<b>Code</b>	<b>Course name</b>	<b>ECTS credits</b>	<b>Equivalence in 1.8.2024 - 31.12.2025</b>
<u>CHEM-E0105</u>	Academic Learning Community	3-5	Please contact the teacher in charge of the course
<b>Compulsory courses (45 cr)</b>			
<b>Code</b>	<b>Course name</b>	<b>ECTS credits</b>	<b>Equivalence in 1.8.2024 - 31.12.2025</b>
<u>CHEM-E3110</u>	Biolab I	5	Individual arrangements, please contact the teacher in charge of the course
<u>CHEM-E3121</u>	Microbial Physiology D	5	The course continues
<u>CHEM-E3190</u>	Metabolism D	5	The course continues
<u>CHEM-E3130</u>	Biolab II	5	CHEM-E3116 Laboratory Course in Industrial Biotechnology
<u>CHEM-E3140</u>	Bioprocess Technology II D	5	CHEM-E3115 Industrial Biotechnology D
<u>CHEM-E8120</u>	Cell Biology D	5	The course continues
<u>CHEM-E3150</u>	Biophysical Chemistry D	5	The course continues
<u>CHEM-E8115</u>	Cell Factory D	5	CHEM-E3111 Cell Engineering D
<u>CHEM-E3160</u>	Biolab III	5	CHEM-E3112 Laboratory Course in Molecular Biotechnology
<b>Specialisation courses (choose 15 cr)</b>			
<b>Code</b>	<b>Course name</b>	<b>ECTS credits</b>	<b>Equivalence in 1.8.2024 - 31.12.2025</b>
<u>CHEM-E3205</u>	Bioprocess Optimization and Simulation D	5	The course continues
<u>AAE-E3100</u>	Energy Carriers D	5	The course continues
<u>CHEM-E4210</u>	Molecular Thermodynamics D	5	The course continues
<u>CHEM-E3170</u>	Systems Biology	5	Self-study material and exam (please contact Paula Jouhten)
<u>CHEM-E8125</u>	Synthetic Biology	5	The course continues
<u>CHEM-E7100</u>	Engineering Thermodynamics, Separation Processes, part 1 D	5	CHEM-E7121 Separation Processes 1 D