

# Study programme - M.Sc. Integrative Neuroscience

## First semester (foundational courses)

You must take 30 CP total: 28 CP core courses (PF) plus 2 CP of 8 CP electives (WPF). An additional 5 CP are offered optionally (WF).

1 S E M E S T E R	<b>Modul GA1</b> <b>Molecular and Cellular Neuroscience</b>  <b>9 CP (PF) + 2 CP (WPF)</b>	<b>Modul GB</b> <b>Systems and Behavioural Neuroscience</b>  <b>7 CP (PF) + 2 CP (WPF)</b>	<b>Modul GC</b> <b>Theoretical and Computational Neuroscience</b>  <b>6 CP (PF) + 4 CP (WPF)</b>	<b>Modul X</b> <b>Professionalism/ Practical experience</b>  <b>6 CP (PF) + 5 CP (WF)</b>
	<b>Cellular Neurophysiology</b> 101 L: 2 SWS / 3 CP 101 T (WPF): 1 SWS / 1 CP 101 P: 2 SWS / 2 CP	<b>Integ. Compar. Neuroanatomy</b> 103 L: 3 SWS / 3 CP 103 T (WPF): 2 SWS / 2 CP 103 P: 1 SWS / 1 CP	<b>Theoretical Neuroscience I</b> 105 L: 3 SWS / 3 CP 105 T (WPF): 2 SWS / 2 CP	<b>Lab Rotation I</b> 190 LR: 4 SWS / 6 CP
	<b>Basic Molecular &amp; Cell Biology</b> 102 L: 3 SWS / 3 CP 102 T (WPF): 1 SWS / 1 CP 102 P: 1 SWS / 1 CP	<b>Neuroethology</b> 104 L: 2 SWS / 3 CP	<b>Mathematical Foundations</b> 106 L: 2 SWS / 3 CP 106 T (WPF): 2 SWS / 2 CP	<b>Journal Club / Neurocolloquium</b> 180/185 S (optnl.): 4 SWS / 3 CP <b>Introduction to Matlab</b> 107 T (optnl.): 2 SWS / 2 CP

Legend: CP = Credits, SWS = hours per semester week, PF = core course, WPF = elective course, WF = optional course

L = Lecture/Vorlesung, T = Tutorial/Übung, P = Practical or lab work/Laborpraktikum, S = Seminar, LR = Laboratory rotation/Spezialpraktikum

# Study programme - M.Sc. Integrative Neuroscience

## Second semester (foundational courses continued)

You must take 30 CP: 28 CP core courses (PF) plus 2 CP of 8 CP electives (WPF). An additional 3 CP are offered optionally (WF).

2 S E M E S T E R	<b>Modul GA2</b> <b>Molecular and Cellular Neuroscience</b> <b>8 CP (PF) + 4 CP (WPF)</b>	<b>Modul GB</b> <b>Systems and Behavioural Neuroscience</b> <b>8 CP (PF)</b>	<b>Modul GC</b> <b>Theoretical and Computational Neuroscience</b> <b>6 CP (PF) + 4 CP (WPF)</b>	<b>Modul X</b> <b>Professionalism/ Practical experience</b> <b>6 CP (PF) + 2 CP (WF)</b>
	<b>Molecular &amp; Cellular Neurobiology</b> 111 L: 2 SWS / 3 CP 111 T (WPF): 2 SWS / 2 CP 111 P: 2 SWS / 2 CP	<b>Systems Neurophysiology</b> 113 L: 3 SWS / 3 CP 113 P: 2 SWS / 2 CP	<b>Theoretical Neuroscience II</b> 115 L: 3 SWS / 3 CP 115 T (WPF): 2 SWS / 2 CP	<b>Lab Rotation II</b> 190 LR: 4 SWS / 6 CP
	<b>Development &amp; Plasticity</b> 112 L: 2 SWS / 3 CP 112 T (WPF): 2 SWS / 2 CP	<b>Learning &amp; Memory</b> 114 L: 3 SWS / 3 CP	<b>Biological Statistics</b> 116 L: 2 SWS / 3 CP 116 T (WPF): 2 SWS / 2 CP	<b>Journal Club</b> 180 S (optnl.): 2 SWS / 2 CP <b>Neurocolloquium</b> 185 S (optnl.): 2 SWS / 1 CR

Legend: CP = Credits, SWS = hours per semester week, PF = core course, WPF = elective course, WF = optional course

L = Lecture/Vorlesung, T = Tutorial/Übung, P = Practical or lab work/Laborpraktikum, S = Seminar, LR = Laboratory rotation/Spezialpraktikum

# Study programme - M.Sc. Integrative Neuroscience

## Third semester (advanced courses)

You must take 30 CP: 24 CP of 36 CP electives (WPF) plus 6 CP core courses (PF). An additional 3 CP are offered optionally (WF).

3 S E M E S T E R	<b>Modul VA</b> <b>Molecular and Cellular Neuroscience</b>  <b>12 CP (WPF)</b>	<b>Modul VB</b> <b>Systems and Behavioural Neuroscience</b>  <b>12 CP (WPF)</b>	<b>Modul VC</b> <b>Theoretical and Computational Neuroscience</b>  <b>4 CP (WPF)</b>	<b>Modul VD</b> <b>Clinical and Applied Neuroscience</b>  <b>8 CP (WPF)</b>	<b>Modul X</b> <b>Professionalism</b>  <b>6 CP (PF) + 2 CP (WF)</b>
	<u>Genetic models</u> 201L (WPF): 1 SWS / 2 CP 201P (WPF): 2 SWS / 2 CP	<u>Cognitive Neurobiology</u> 211L (WPF): 2 SWS / 3 CP 211P (WPF): 1 SWS / 1 CP	<u>Spiking Networks</u> 221L (WPF): 2 SWS / 3 CP 221P (WPF): 1 SWS / 1 CP	<u>Clinical Neuroscience</u> 241 (WPF): 3 SWS / 4 CP	<u>Philosophy and Ethics of Science</u> 350 Lecture (PF): 2 SWS / 2 CP
	<u>Neuroendocrinology/-inflammation</u> 203L (WPF): 1 SWS / 2 CP 203P (WPF): 2 SWS / 2 CP	<u>Macroimaging</u> 215L (WPF): 2 SWS / 3 CP 215P (WPF): 1 SWS / 1 CP	<u>Spiking Networks</u> 221L (WPF): 2 SWS / 3 CP 221P (WPF): 1 SWS / 1 CP	<u>Behavioral Pharmacology</u> 214L (WPF): 2 SWS / 3 CP 214P (WPF): 1 SWS / 1 CP	<u>Lab Rotation III</u> 190 Lab (PF): 3 SWS / 4 CP
	<u>Neural Signalling</u> 205L (WPF): 1 SWS / 2 CP 205T (WPF): 2 SWS / 2 CP	<u>Microimaging</u> 217L (WPF): 1 SWS / 2 CP 217P (WPF): 2 SWS / 2 CP		<u>Cognitive Neuroimaging</u> 242 (WPF): 3 SWS / 4 CP	<u>Journal Club/Neurocolloquium</u> 180 S (optnl.) 2 SWS / 2 CP 185 S (optnl.) 2 SWS / 1 CP
	<u>Quantitative signal transduction</u> 206L (WPF): 1 SWS / 2 CP 206P (WPF): 2 SWS / 2 CP				

Legend: CP = Credits, SWS = hours per semester week, PF = core course, WPF = elective course, WF = optional course

L = Lecture/Vorlesung, T = Tutorial/Übung, P = Practical or lab work/Laborpraktikum, S = Seminar, LR = Laboratory rotation/Spezialpraktikum

## Study programme - M.Sc. Behavioural Neuroscience

Fourth semester (thesis research)

You must take 30 CP core courses (PF). An additional 3 CP are offered optionally (WF).

4  
S  
E  
M  
E  
S  
T  
E  
R

**Masterarbeit 28 CP**

### **Modul X**

**Professionalism**

**30 CP (PF) + 2 CP (WF)**

### **Scientific Writing**

300 Lecture (PF): 2 SWS / 2 CP

### **Journal Club / Neurocolloquium**

180 S (optnl.): 2 SWS / 2 CP

185 S (optnl.): 2 SWS / 1 CP

Legend: CP = Credits, SWS = hours per semester week, PF = core course, WPF = elective course, WF = optional course

L = Lecture/Vorlesung, T = Tutorial/Übung, P = Practical or lab work/Laborpraktikum, S = Seminar, LR = Laboratory rotation/Spezialpraktikum