

Master and PhD Program Computational Neuroscience Recommended Courses and Programs, WiSe 2021/22

These courses are recommended for **senior master students** of Computational Neuroscience (at least in their 3rd semester) and for **PhD students** as Courses on Advanced Topics / Hard Skill Courses.

We recommend that master students in the 1st and 2nd semesters concentrate on the compulsory BCCN courses: <https://www.bccn-berlin.de/courses-and-modules.html>

Please choose courses for Individual Studies and Advanced Topics **upon consultation with your mentor!** Only master courses can be recognized for Courses on Advanced Topics.

You can also search for courses yourself in the course catalog of the respective university.

HU Berlin: <https://agnes.hu-berlin.de>

TU Berlin: <https://moseskonto.tu-berlin.de/moses/verzeichnis/index.html>

FU Berlin: <https://www.fu-berlin.de/vv/de/fb>

For questions and feedback: graduateprograms@bccn-berlin.de

As not all offered courses of Berlin universities are online yet, this is a preliminary version of the list.

TITLE	CONTACT	LINK and INFO
TU Berlin		
Current Topics in Computational Neuroscience (seminar series, in English)	Prof. Henning Sprekeler (h.sprekeler@tu-berlin.de)	TU Berlin Current Topics Computational Neuroscience (to be updated)
Integrated Lecture Machine Learning I (lecture + tutorial)	Prof. Klaus Robert Müller (klaus-robert.mueller@tu-berlin.de)	TU Berlin Machine Learning (to be updated)
Integrated Lecture Cognitive Algorithms (lecture + tutorial)	Prof. Klaus Robert Müller (klaus-robert.mueller@tu-berlin.de)	TU Berlin Machine Learning (to be updated)
Python Programming for Machine Learning	Prof. Klaus Robert Müller (klaus-robert.mueller@tu-berlin.de)	TU Berlin Machine Learning (to be updated)
Ethical and social challenges of emerging technologies: Automation, robotics, AI (project, in English)	Prof. Sabine Ammon (ammon@tu-berlin.de)	TU Berlin Knowledge Dynamics and Sustainability in the Technological Sciences (to be updated)
Journal Club: Philosophy and Ethics of Design and Technology (seminar, in English)	Prof. Sabine Ammon (ammon@tu-berlin.de)	TU Berlin Knowledge Dynamics and Sustainability in the Technological Sciences (to be updated)
Applications of Robotics and Autonomous Systems / (Project, in English)	Sahin Albayrak and Orhan Can Görür (lehre@lists.dai-labor.de)	TU Applications of Robotics and Autonomous Systems (to be updated)
Robotics - Robotics - Computational Biology - Robotics Project	Prof. Oliver Brock (oliver.brock@tu-berlin.de)	TU Berlin Robotics (to be updated)

TITLE	CONTACT	LINK and INFO
Quality and Usability Lab - Sprachkommunikation / Speech Communication - Medieninformatik Einführung - Computer-supported Interaction - Communication Acoustics (MOOC) - Usable Privacy - Biometric Identification and Verification - Affective Computing - Neuro-Usability - Study Project Quality and Usability - Medienprojek (Modul: Interdisziplinäres Medienprojekt) - Forschungskolloquium Usability	Prof. Sebastian Möller (sebastian.moeller@telekom.de)	TU Berlin Quality and Usability Lab (to be updated)
Stochastic Processes in Neuroscience I (lecture)	Prof. Tilo Schwalger (tilo.schwalger@tu-berlin.de) Prof. Wilhelm Stannat (wilhelm.stannat@tu-berlin.de)	TU Berlin Stochastic processes in neuroscience I (to be updated)
Stochastic Processes in Neuroscience II (lecture)	Prof. Tilo Schwalger (tilo.schwalger@tu-berlin.de) Prof. Wilhelm Stannat (wilhelm.stannat@tu-berlin.de)	TU Berlin Stochastic processes in neuroscience II (to be updated)
Stochastic Models in Neuroscience (seminar)	Prof. Tilo Schwalger (tilo.schwalger@tu-berlin.de) Prof. Wilhelm Stannat (wilhelm.stannat@tu-berlin.de)	TU Berlin Stochastic models in neuroscience (to be updated)
Nichtlineare Dynamik und Strukturbildung (seminar, in German)	Prof. Harald Engel (harald.engel@tu-berlin.de)	TU Berlin Nichtlineare Dynamik und Strukturbildung (to be updated)
HU Berlin		
Neurophysiologie (lecture, in German)	Prof. Michael Brecht (michael.brecht@bccn-berlin.de) Prof. Matthias Hennig (matthias.hennig@biologie.hu-berlin.de)	HU Berlin Neurophysiologie
Statistical Physics (lecture, in English)	Prof. Edda Klipp (edda.klipp@rz.hu-berlin.de)	HU Berlin Statistical Physics
Modelle zellulärer Prozesse (lecture, in German)	Prof. Edda Klipp (edda.klipp@rz.hu-berlin.de)	HU Berlin Modelle zellulärer Prozesse
Introduction to Complex Systems (lecture + seminar, in English)	Prof. Dirk Brockmann (dirk.brockmann@hu-berlin.de)	HU Berlin Introduction to Complex Systems

TITLE	CONTACT	LINK and INFO
Cognition, behaviour and evolution (lecture + seminar, in English)	Prof. York Winter (york.winter@charite.de)	HU Berlin Cognition Behaviour Evolution
Kognitionswissenschaft I (lecture series, in German)	Prof. Martin Rolfs (martin.rolfs@hu-berlin.de)	n/a
Seminar zur nichtlinearen Dynamik und statistischen Physik (research seminar, in German)	Prof. Igor Sokolov (igor.sokolov@physik.hu-berlin.de) Prof. Benjamin Lindner (benjamin.lindner@physik.hu-berlin.de)	HU Berlin Nichtlineare Dynamik und statistische Physik
Seminar zur Neurophysik (seminar, in German)	Prof. Benjamin Lindner (benjamin.lindner@physik.hu-berlin.de)	HU Berlin Neurophysik
Multivariate Statistical Analysis I (lecture)	Dr. Matthias Eckardt (m.eckardt@hu-berlin.de)	HU Berlin Multivariate Statistical Analysis
Datenanalyse II (Seminar, in German)	Dr. Sigbert Klinke (sigbert@wiwi.hu-berlin.de)	HU Berlin Datenanalyse
FU Berlin		
Verhalten (block course, in German)	Prof. Constance Scharff (constance.scharff@fu-berlin.de)	FU Berlin Verhalten
Structure and Function of Neural Circuits I and II (lecture + seminar, in English)	Prof. Mathias Wernet (mathias.wernet@fu-berlin.de)	FU Berlin Structure and Function of Neural Circuits
Autonomous Vehicles (research seminar, in German)	Dr. Daniel Göhring (drgoehring@zedat.fu-berlin.de)	FU Berlin Autonomous Vehicles
Artificial and Collective Intelligence (research seminar, German/English)	Prof. Tim Landgraf (tim.landgraf@fu-berlin.de)	FU Berlin Artificial and Collective Intelligence
Journal Club Computational Biology (seminar)	Prof. Knut Reinert (knut.reinert@fu-berlin.de)	FU Berlin Journal Club Computational Biology
Einführung in die Neurobiologie und Neuroinformatik für Bioinformatiker (lecture, in German)	Prof. Peter Robin Hiesinger (p.rh@fu-berlin.de) Prof. Ursula Koch (ursula.koch@fu-berlin.de)	FU Einführung Neurobiologie Neuroinformatik
The mammalian brain: structure, function and plasticity (lecture + seminar, in English)	Prof. Ursula Koch (ursula.koch@fu-berlin.de)	FU Berlin The mammalian brain: structure, function and plasticity
Molekulare Neurogenetik (lecture, seminar + practical, German/English)	Prof. Stephan Sigrist (stephan.sigrist@fu-berlin.de)	FU Berlin Molekulare Neurogenetik

TITLE	CONTACT	LINK and INFO
<p>Master Program Cognitive Neurosciences Modules: - Perception and Action - Information Processing and Consciousness - Affective and Social Neuroscience - Neurocognitive Methods and Data Analysis - Probabilistic and Statistical Modelling - Computational Cognitive Neuroscience - Neurocognitive Methods Practical - Research Workshop</p>	<p>Mirjam Bartscherer (studium-psy@fu-berlin.de)</p>	<p>Cognitive Neuroscience all courses</p> <p>Please contact the project coordinator for information about currently offered courses.</p>
Courses offered by other schools and graduate programs in Berlin		
<p>Berlin School of Mind and Brain (PhD and master courses) Modules: - Basic Philosophical Concepts and Philosophy of Mind (lecture + tutorial) - Ethics and Neuroscience (lecture + tutorial) - seminars</p>	<p>Dr. Dirk Mende (mb-master@hu-berlin.de)</p>	<p>Mind & Brain Master all courses</p> <p>Only the two listed lectures/tutorials are open to master students of other programs.</p> <p>All seminars not flagged as “for Mind and Brain students only!” may be attended by master students from other programs.</p> <p>Module Focus Theme Mind and Brain: - You have to attend *two seminars* (at least 75 % of all sessions) = *10 ECTS* - In both courses you have to fulfill smaller class requirements (usually a presentation) - In ONE of the two courses you have to write a 20 p. paper (1 page equals 2000 characters without spaces) You don't have to attend both courses in the same semester.</p>
<p>Master Program Medical Neurosciences - Nervous System: Structure, Function, and Development - Neurophysiology - Neuropathophysiology - Data and Statistics - Critical Thinking - Neuropathophysiology - Neurotransmitter Systems - Neuronal Systems - Clinical Neuroscience - Advanced Problems and Topics in Neuroscience - Scientific Communication</p>	<p>Dr. Benedikt Salmen (benedikt.salmen@charite.de)</p>	<p>Medical Neurosciences all courses</p> <p>Please contact the contact person for information about currently offered courses.</p>
<p>Master Program Molecular Medicine - Human Genetics - Functional Genomics - Developmental Genetics - Infections and Immune Response - Cardiovascular Diseases and Therapy - Cancer Diseases - Maintenance and Integrity of the Endocrine System</p>	<p>Dr. Sarah Bhargava (sarah.bhargava@charite.de)</p> <p>Dr. Eddy Rijntjes (eddy.rijntjes@charite.de)</p>	<p>Molecular Medicine all courses</p> <p>Please contact the project coordinator for information about currently offered courses.</p>

TITLE	CONTACT	LINK and INFO
<p>Berlin Mathematical School Basic Courses and Advanced Courses covering the following topics:</p> <ul style="list-style-type: none"> - Differential geometry, global analysis, and mathematical physics - Algebraic and arithmetic geometry, number theory - Probability, statistics, and financial mathematics - Discrete Mathematics and combinatorial optimization - Geometry, topology and visualization - Numerical analysis and scientific computing - Applied analysis and differential equations 	<p>TU, HU, FU office@math-berlin.de</p>	<p>BMS Basic Courses BMS Advanced Courses</p> <p>Please contact the contact person for information about currently offered courses.</p>