

2nd Semester (SS) – Pflichtkurs “Theoretical Neuroscience II”, Wahlpflichtkurs Tutorial

Number/Title		SW1-12	Lead	Lecturers	Contents	Time & Place
115L	Theoretical Neuroscience II	3 sws (18 x)	A Wendemuth J Braun	A Wendemuth J Braun	Klausur 120 mi (SW13-14)	Tue, 09:00 – 11:00 R001 gKW, Wed, 11:00 – 13:00 R001
115T	Tutorial	2 sws (12x)	A Wendemuth	David Philippou-Hübner Robin Cao	HA	Mon, 16:00 – 18:00 R102

Inhalt und Niveau der Vorlesungen:

Struktur:

Praktikum:

Webseite:

No	Date	Wk/KW	Lecture	Tutorial	
1	Tue, Apr 10	01/15	JB Biological motivation: multi-unit activity, behavioral learning & memory, source separation.	Mon, Apr 9	Public Holiday – Easter Monday
2	Tue, Apr 17	02/16	AW Firing-rate models	Mon, Apr 16	AW Mathematical preliminaries
3	Wed, Apr 18	02/16	AW State-space analysis		
4	Tue, Apr 24	03/17	AW Recurrent networks / associative memory	Mon, Apr 23	AW State-space analysis
5	Tue, May 1	04/18	Public Holiday – Labour Day	Mon, Apr 30	AW Networks / associative memory
6	Wed, May 2	04/18	JB Feedforward networks / perceptrons		
7	Tue, May 8	05/19	JB Hebbian plasticity	Mon, May 7	AW
8	Tue, May 15	06/20	JB Correlation-based plasticity	Mon, May 14	JB Correlation-based plasticity
9	Wed, May 16	06/20	JB Models of visual development		
10	Tue, May 22	07/21	JB Classical conditioning / Rescorla-Wagner rule	Mon, May 21	JB Coordinate transforms
11	Tue, May 29	08/22	JB Temporal difference learning	Mon, May 28	Public Holiday – Whit Monday
12	Wed, May 30	08/22	JB Policy learning		
13	Tue, Jun 5	09/23	AW Introduction to causal models	Mon, Jun 4	JB Rescorla-Wagner
14	Tue, Jun 12	10/24	JB Actor-critic models	Mon, Jun 11	JB Policy learning
15	Wed, Jun 13	10/24	DH Multivariate distributions		

16	Tue, Jun 19	11/25	AW K-Means / Expectation maximization	Mon, Jun 18	AW Expectation maximization
17	Tue, Jun 26	12/26	AW Principal components analysis	Mon, Jun 25	AW Principal components analysis
18	Wed, Jun 27	12/26	AW Sparse Coding		
		13/27	Lab week		
		14/28	Lab week		
		15/29	Week Off – FENS 2012, Barcelona		
		16/30	Exam week SS2012		
		17/31	Exam week SS2012		
		18/32	2nd Exam week WS2011/12		