

## GGNB Methods Courses 2014: Overview March - August 2014

Last Update: 17 Feb 2014

### Short Methods Courses & Method Seminars; Extended Methods Courses Mar - Aug 2014 (A)

\* course will also be offered in the next course announcement (September 2014 - February 2015)

Department/Group	Supervisor(s)	UniVZ	ID	*	Title of Course	Credits	Date A
<b>Biochemistry</b>							
Jahn, Reinhard	Kühnel, Karin / Metje, Janina	340004	A 036	*	Protein purification and characterization	1.0	15-16 May 2014
Tittmann, Kai	Sautner, Viktor / Prajapati, Sabin / v. Pappenheim, Fabian R.	340018	A 064	*	Principles and methods of protein purification by chromatography	1.0	10-11 Mar 2014
Urlaub, Henning	Atanassov, Ilian / Hofele, Romina / Karaca, Samir / Qamar, Saadia /	340020	A 065	*	Sequence analysis of proteins and their post-translational modifications by MALDI-ToF and electrospray ionization (ESI) mass spectrometry	1.0	24-26 Mar 2014
Rehling, Peter	Wuttke, Jan-Moritz	340021	A 092	*	Subcellular fractionation	0.5	8 May 2014
Fischle, Wolfgang	Fischle, Wolfgang/ Hamada, Kyoko	340044	A 075	*	Chromatin Immunoprecipitation (ChIP)	1.0	28-30 Apr 2014
Feußner, Ivo	Herrfurth, Cornelia	340045	A 016	*	Introduction to lipid analysis	1.0	Aug 2014 (tba)
Jahn, Reinhard	Milovanovic, Dragomir / Witkowska, Agata	340046	A 033	*	Reconstitution of neuronal exocytosis	1.0	6-7 Mar 2014
Lührmann, Reinhard	Agafonov, Dmitry	340073	A 082		Affinity purification methods for the isolation of large heterogeneous macromolecular assemblies	1.0	14-16 May 2014
Tittmann, Kai	Tietzel, Michael / Kupski, Oliver	340077	A 071	*	Thermodynamic characterization of biomolecular interactions by isothermal titration calorimetry	1.0	13-14 Mar 2014
Fischle, Wolfgang	Fischle, Wolfgang / Finn, Ron	340113	A 074	*	Hydrodynamic analysis of proteins and protein complexes by analytical ultracentrifugation	1.0	8-9 May 2014
Tittmann, Kai	Schröder-Tittmann, Kathrin	340158	A 125		Fed-batch fermentation of an <i>E. coli</i> strain in a fully automated bioreactor	1.5	26-28 May 2014
Walter, Lutz	Walter, Lutz / Zaitseva, Olena	340184	A 138	*	High-throughput single-cell quantitative microfluidic RT-PCR	1.0	22-23 May 2014

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### Biochemistry (continued)

Konrad, Manfred	Karamitros, Christos	340200	A 151	*	Introduction to steady-state kinetics	1.0	22-23 May 2014
Rehling, Peter	Levchenko, Maria / Lorenzi, Isotta	340211	A 163	*	Native membrane protein complex isolation	0.5	25 Mar 2014
Rehling, Peter	Schendzielorz, Alexander / Naumenko, Nataliia	340212	A 164		<i>In vitro</i> import into purified mitochondria	1,0	15-16 Apr 2014
Outeiro, Tiago F.	Lopes da Fonseca, Tomás / Eisbach, Sibylle	340215	A 167		Selected methods used in the investigation of protein aggregation	1.0	early May 2014 (tba)

### Molecular Biology & Genetics

Dobbelstein, Matthias	Landmann, Hannes / Wienken, Magdalena	340017	A 011		Polymerase Chain Reaction I and advanced applications	1.0	June 2014
Gruber, Jens	Gruber, Jens	340022	A 068	*	Mechanisms of RNA silencing	1.0	April 2014
Brenig, Bertram	Schütz, Ekkehard	340098	A 113	*	NGS and HTP SNP typing	1.0	tba
Jakobs, Stefan	Jensen, Nickels	340191	A 147	*	Mutagenesis and screening strategies to design photoswitchable fluorescent proteins	1.0	18-19 Mar 2014
Fischer, André	Barth, Jonas / Benito, Eva / Urbanke, Hendrik	340218	A 084	*	Chromatin-immunoprecipitation and epigenomic gene-profiling in the adult brain	1.0	7-8 Apr 2014

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### Cell Biology & Microbiology, Imaging

Nave, Klaus-Armin	Möbius, Wiebke	340025	A 044	*	Subcellular localization of proteins by immunoelectron microscopy of cryosections	1.0	5-6 May 2014
Olympus / Bodenschatz Lab	Tarantola, Marco / Schmidt, Helge / Deubel, Henrik	340027	A 046	*	Theory and basics of fluorescence microscopy and imaging / Introduction to life science research applications FRET, FRAP, FLIM, caging–uncaging, GFP, Fluorescence microscopy of living cells	1.0	tba
Hell, Stephan / Egner, Alexander	Hell, Stephan / Egner, Alexander	340125	E 01		Advanced Light Microscopy	3.0	9-14 Mar 2014
Frahm, Jens	Roeloffs, Volkert / Tan, Zhengguo / Wang, Xiaoqing / Zhang, Zhongshuai	340210	A 162		Basic principles of MRI and Real-Time MRI	1.0	3-4 Jun 2014
Luther, Stefan	Christoph, Jan	340214	A 166		Visualization of Scientific Data - Methods Course	0.5	8 May 2014
Pöhlmann, Stefan	Winkler, Michael Blazejewska, Paulina	340221	A 171	*	Viral transduction systems	1,0	3-6 Jun 2014

### Developmental Biology, Anatomy & Histology

Hahn, Heidi	Nitzki, Frauke / Pyczek, Joanna	340084	A 028		<i>In situ</i> hybridization of paraffin embedded tissue sections	1.0	19-21 May 2014
Shcherbata, Halyna	Shcherbata, Halyna	340085	A 056	*	Introduction to basic histology techniques	1.0	Apr or May 2014
Dobbelstein, Matthias	Lizé, Muriel	340181	A 129		Preparation of mouse embryonic fibroblasts (culture of primary cells)	1.0	tba

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### Vertebrate Animal Models

Bayer, Thomas A.	Wirths, Oliver	340034	A 002	*	Alzheimer's disease: Behavioural and neuropathological analysis of transgenic mouse models	1.0	3-4 Jun 2014
Brembeck, Felix	Tala, Suranand B.	340086	A 107		Tissue processing and immunohistochemistry on tissue sections of genetically engineered mouse models	1.0	1 Apr 2014
Bähr, Mathias	Lingor, Paul	340219	A 139	*	<i>In vitro</i> and <i>in vivo</i> models for Parkinson's disease research	0.5	29 Apr 2014

### Molecular & Cellular Neuroscience, Electrophysiology

Rhee, JeongSeop	Rhee, JeongSeop	340038	A 096	*	Nerve cell culture and patch-clamp recordings from nerve cells	1.0	28-30 Apr 2014
Rizzoli, Silvio	Vreja, Ingrid / Truckenbrodt, Sven / Zhang, William	340039	A 089		High resolution microscopy in synapses	1.0	6-7 Mar 2014
Stühmer, Walter	Pardo, Luis	340040	A 063	*	Patch clamp	1.0	26-28 Mar 2014
Fiala, André / Göpfert, Martin	Riemensperger, Thomas Geurten, Bart	340087	A 083	*	<i>Drosophila</i> Neurogenetics	1.0	31 Mar-2 Apr 2014
Gollisch, Tim	Khani, Mohammad/ Rozenblit, Fernando/ Schreyer, Helene	340185	A 140		Multielectrode Array Recordings from the Retina	1.0	10-12 Mar 2014
Moser, Tobias	Wichmann, Carolin / Chakrabarti, Rituparna	340196	A 149	*	Basic methods of transmission electron microscopy - from tissue preparation to 3D reconstruction	1.0	June 2014
Brose, Nils	Krüger, Dilja	340197	A 153	*	Isolation of synaptic compartments for quantitative biochemical analysis	1,0	29-30 Apr 2014
Stühmer, Walter / Hörner, Michael /	Stühmer, Walter / Hörner, Michael / Schlüter, Oliver	340095	E 03		ENI Electrophysiology Training (ENI-ELECTRAIN)	4.0	5-16 May 2014
Staiger, Jochen	Staiger, Jochen / Schmidt, Manuela	340223	A 172		Cellular and circuit mechanisms of somatosensory information processing	0.5	21 May 2014

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### Theoretical, Systems & Behavioral Neuroscience

Gail, Alexander	N.N.	340043	A 073		Introduction to Matlab in Systems Neuroscience	1.0	29 Apr-6 Jun 2014 (tbc)
Antal, Andrea	Strenzke, Nicola / Hoch, Gerhard	340054	A 041		Auditory and visual evoked potentials	1.0	1 Apr 2014
Ehrenreich, Hannelore	Begemann, Martin / Bartels, Claudia	340137	A 012		Translational Neuroscience: Schizophrenia	2.0	13-15 Jun 2014
Geisel, Theo / Timme, Marc / Wolf, Fred	Geisel, Theo / Timme, Marc / Wolf, Fred	530399	A 022		Theoretical and Computational Neuroscience: Collective Dynamics Biological Neural Networks II	2.0	Fridays, SoSe 2014

### Structural Biology

Bennati, Marina	Liu, Guoquan / Pievo, Roberta / Halbmaier, Karin	340055	A 003	*	EPR-Spectroscopy	1.5	5-7 Mar 2014
Pena, Vlad	Schmitzova, Jana / Steuerwald, Ulrich / De, Inessa / de Moura,	340059	A 102		Crystallization of biological macromolecules	1.0	16-17 Jun 2014
Stark, Holger	N.N.	340060	A 061	*	3D structure determination of macromolecular complexes by single particle cryo-EM	1.0	April 2014
Ficner, Ralf	Neumann, Piotr	340130	A 103		X-ray crystallography	2.5	24-28 Mar 2014

### Biophysics, Bioinformatics and Statistics

Friede, Tim	Konietsche, Frank / Lange, Katharina	340061	A 100	*	Basic statistics for graduate students in the life sciences	1.0	14-17 Apr 2014
Mitkovski, Mišo	Mitkovski, Mišo / Ioannis Alexopoulos	340066	A 098	*	Introduction to image processing in biology with ImageJ	1.0	3-4 Apr 2014
Walter, Lutz	Brameier, Markus	340068	A 067	*	Introduction to Bioinformatics Methods	1.0	May 2014
Grubmüller, Helmut / Schmidt, Christoph F.	Grubmüller, Helmut / Schmidt, Christoph F.	340166	A 025		Current Topics in Biophysics – Lecture Series	1.0	Fridays, SoSe 2014
Grubmüller, Helmut	von Ardenne, Benjamin	340168	A 024		Introduction to molecular dynamic simulation	1.0	SoSe 2014, tba
Steinem, Claudia / Janshoff, Andreas	Mey, Ingo / Noeding, Helen	340203	A 169	*	Atomic Force Microscopy vs. Scanning Ion Conductance Microscopy; versatile tools to study surfaces and surface properties	1.0	15-16 May 2014

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### Biophysics, Bioinformatics and Statistics (continued)

Steinem, Claudia	Gleisner, Martin / Mey, Ingo	340067	A 133	*	Using biosensors to study analyte-ligand interactions: basic principles and applications	0,5	27 May 2014
Kollmar, Martin	Mühlhausen, Stefanie	340131	A 116	*	Protein family analysis as basis for experiments and experimental data interpretation	1.0	20-21 Mar 2014
Beißbarth, Tim	Wachter, Astrid	340172	A 126	*	Introduction to R and microarray analysis	1.0	9-11 Apr 2014
Baret, Jean-Christophe	Riechers, Birte	340179	A 128_2		Introduction to Microfluidics	1.0	10-11 Apr 2014
Meyer, Ralph	Holkar, Rohit	340188	A 115		Introduction to LaTeX	1.0	17 Jun & 24 Jun 2014
Wolf, Fred	Florez, Juan	340190	A 148		Algorithm thinking: An introduction to programming logic	1,0	14-15 Apr 2014
Enderlein, Jörg	Ghosh, Siddharth	340201	A 154		Optics in Microscale to Nanoscale: From Rainbow to Plasmonic	1.5	31 Mar-2 Apr 2014
Grubmüller, Helmut / de Groot, Bert / Hub,	Grubmüller, Helmut / de Groot, Bert / Hub, Jochen	340204	A 170		Biomolecular Physics and Simulations	1.5	Mondays, SoSe 2014
Beißbarth, Tim/ Bonn, Stefan / Posnien, Nico	Beißbarth, Tim/ Bonn, Stefan / Posnien, Nico	340208	A 157	*	Next Generation Sequencing (NGS) – Analysis of RNAseq and ChIP-seq data	1.5	Apr/May 2014
Meyer, Ralph	Holkar, Rohit	340213	A 165		Introduction to LaTeX - extended course	2.0	3-7 Mar 2014
Helmer,Markus/ Rozenblit, Fernando	Helmer,Markus/ Rozenblit, Fernando	340156	A 123		Python programming introductory course	2.0	31 Mar, 1, 2, 7, 8 Apr 2014

### Extended Methods Courses

Hell, Stephan / Egner, Alexander	Hell, Stephan / Egner, Alexander	340125	E 01		Advanced Light Microscopy	3.0	9-14 Mar 2014
Stühmer, Walter / Hörner, Michael /	Stühmer, Walter / Hörner, Michael / Schlüter, Oliver	340095	E 03		ENI Electrophysiology Training (ENI-ELECTRAIN)	4.0	5-16 May 2014