
Modulhandbuch

Neurosensory Science and Systems - Structured Doctoral Programme

im Summer semester 2025

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Module

olt133 - Language courses

Module label	Language courses		
Module code	olt133		
Credit points	6.0 KP		
Workload	180 h		
Applicability of the module	<ul style="list-style-type: none"> • Structured Doctoral Programme Environmental Sciences and Biodiversity (Doctoral Programme) > Module • Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 		
Responsible persons			
Prerequisites			
Skills to be acquired in this module	Development and/or improvement of language skills.		
Module contents	The PhD student should improve his or her language skills in a language not being his or her mother tongue. If the student is going for a lab visit abroad other languages than English or German can be choosen.		
Recommended reading			
Links			
Languages of instruction	German, English		
Duration (semesters)	1 Semester		
Module frequency	halbjährlich		
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		Active participation	
Type of course	Course selection		
SWS	0		
Frequency	SuSe and WiSe		

olt134 - Additional module in communication

Module label	Additional module in communication		
Module code	olt134		
Credit points	6.0 KP		
Workload	180 h		
Applicability of the module	<ul style="list-style-type: none">• Structured Doctoral Programme Environmental Sciences and Biodiversity (Doctoral Programme) > Module• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module		
Responsible persons			
Prerequisites			
Skills to be acquired in this module			
Module contents			
Recommended reading			
Links			
Languages of instruction	English , German		
Duration (semesters)	1 Semester		
Module frequency			
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		BE	
Type of course	Course selection		
SWS	0		
Frequency	SuSe and WiSe		

olt161 - Transferable skills / Scientific career

Module label	Transferable skills / Scientific career		
Module code	olt161		
Credit points	12.0 KP		
Workload	360 h		
Applicability of the module	<ul style="list-style-type: none">• Structured Doctoral Programme Environmental Sciences and Biodiversity (Doctoral Programme) > Module• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module		
Responsible persons			
Prerequisites			
Skills to be acquired in this module			
Module contents			
Recommended reading			
Links			
Languages of instruction	English , German		
Duration (semesters)	1 Semester		
Module frequency			
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		Active participation	
Type of course	Course selection		
SWS	2		
Frequency	SuSe and WiSe		
Workload attendance time	28 h		

olt164 - Mentoring

Module label	Mentoring	
Module code	olt164	
Credit points	6.0 KP	
Workload	180 h	
Applicability of the module	<ul style="list-style-type: none">• Structured Doctoral Programme Environmental Sciences and Biodiversity (Doctoral Programme) > Module• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons		
Prerequisites		
Skills to be acquired in this module		
Module contents		
Recommended reading		
Links		
Languages of instruction	German, English	
Duration (semesters)	1 Semester	
Module frequency		
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		KL
Type of course	Course selection	
SWS	0	
Frequency	SuSe and WiSe	

olt165 - Additional module "Transferable Skills"

Module label	Additional module "Transferable Skills"	
Module code	olt165	
Credit points	6.0 KP	
Workload	180 h	
Applicability of the module	<ul style="list-style-type: none">• Structured Doctoral Programme Environmental Sciences and Biodiversity (Doctoral Programme) > Module• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons		
Prerequisites		
Skills to be acquired in this module		
Module contents	Development of additional and improved knowledge on transferable skills.	
Recommended reading		
Links		
Languages of instruction	German, English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Active participation
Type of course	Course selection	
SWS	0	
Frequency	SuSe and WiSe	

olt201 - Summer School / Congress

Module label	Summer School / Congress			
Module code	olt201			
Credit points	6.0 KP			
Workload	180 h			
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 			
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) Mouritsen, Henrik (module responsibility) 			
Prerequisites	English language skills; Presentation skills;			
Skills to be acquired in this module	Development of competence in the presentation and discussion of research findings in the international context. Obtaining an overview of related research fields. Social skills (networking) in the international scientific community should be developed.			
Module contents	The PhD students participate at summer schools or international congresses. They prepare their own presentation, show their work in the form of posters or oral presentations and discuss their findings with an audience. Since the participation at summer schools and workshops includes the cooperation with scientists from other national and/or international research institutions, the students extend their knowledge and socialise with the scientific community.			
Recommended reading				
Links				
Language of instruction	English			
Duration (semesters)	1 Semester			
Module frequency	unregelmäßig			
Module capacity	unlimited			
Examination	Prüfungszeiten	Type of examination		
Final exam of module			at congresses: active participation with posterpresentation and/or talk at summer schools: active participation	
Type of course	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SuSe and WiSe	28
Course selection			WiSe	0
Total module attendance time				28 h

olt202 - Lab visit abroad

Module label	Lab visit abroad	
Module code	olt202	
Credit points	6.0 KP	
Workload	180 h	
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) 	
Prerequisites		
Skills to be acquired in this module	Development of competence in working in a foreign laboratory or in the field to extend and improve knowledge on sampling and analysis methods with adequate technologies. In addition, social skills (networking, teamwork, cross-cultural competence) should be developed.	
Module contents	The PhD students plan their schedule, prepare their practical work and organize their stay at the laboratory of a foreign research institution.	
Recommended reading		
Links		
Languages of instruction		
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Reference text	Please plan the research trip in time.	
Examination	Prüfungszeiten	Type of examination
Final exam of module		oral or written report
Type of course	Course selection	
SWS	0	
Frequency	--	

olt203 - Special techniques in Neurosensory Science and Systems

Module label	Special techniques in Neurosensory Science and Systems		
Module code	olt203		
Credit points	12.0 KP		
Workload	360 h		
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 		
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) 		
Prerequisites			
Skills to be acquired in this module	<p>Development of improved or additional competences in special scientific techniques including laboratory methodologies as well as analysing, modling and interpreting data.</p> <p>This Module will introduce the recommendations on good scientific practice of the German Science Foundation (DFG), and the official procedures for dealing with scientific misconduct at the University of Oldenburg.</p>		
Module contents	<p>The PhD students extend their knowledge on special scientific techniques or good scientific practice through participating at advanced courses including lectures, seminars or intensive courses. Intensive courses can be part of a summer school.</p>		
Recommended reading			
Links			
Languages of instruction	German, English		
Duration (semesters)	1 Semester		
Module frequency	halbjährlich		
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		Active participation	
Type of course	Course selection		
SWS	0		
Frequency	--		

olt204 - Medical basics of Neurosensory Sciences and Systems

Module label	Medical basics of Neurosensory Sciences and Systems		
Module code	olt204		
Credit points	6.0 KP		
Workload	180 h		
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 		
Responsible persons	<ul style="list-style-type: none"> Kollmeier, Birger (module responsibility) 		
Prerequisites			
Skills to be acquired in this module	Development of additional and improved knowledge on numerous topics of scientific field of medicine. The knowledge of the medical bases of neurosensory should be developed.		
Module contents			
Recommended reading			
Links			
Language of instruction	English		
Duration (semesters)	1 Semester		
Module frequency	halbjährlich		
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		Active participation	
Type of course	Course selection		
SWS	0		
Frequency	--		

olt205 - Data analysis using Matlab

Module label	Data analysis using Matlab	
Module code	olt205	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none">• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons	<ul style="list-style-type: none">• Kretzberg, Jutta (module responsibility)	
Prerequisites		
Skills to be acquired in this module		
Module contents		
Recommended reading		
Links		
Languages of instruction	German, English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Active participation
Type of course	Seminar	
Frequency		

olt206 - Journal club

Module label	Journal club	
Module code	olt206	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none">Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons	<ul style="list-style-type: none">Koch, Karl-Wilhelm (module responsibility)	
Prerequisites	English language skills	
Skills to be acquired in this module	Development of additional and improved knowledge on specific research areas. Competences in discussing scientific topics and the general outline of a scientific publication should be developed.	
Module contents		
Recommended reading		
Links		
Language of instruction	English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Active participation and seminar talk.
Type of course	Seminar	
Frequency		

olt207 - Colloquium Neurosensory Science and Systems

Module label	Colloquium Neurosensory Science and Systems	
Module code	olt207	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) Kollmeier, Birger (module responsibility) Henrichs, Kathrin (module responsibility) Grünberg, Beate (module responsibility) 	
Prerequisites		
Skills to be acquired in this module	Development of scientific knowledge, networking skills and presentation skills.	
Module contents	PhD Students present their research topics and results to other PhD Students and discuss them. PhD Students participate in research seminars and get insight in current research topics.	
Recommended reading		
Links		
Language of instruction	English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		SFB-Research seminar: Active participation Hot Topic Seminar and GK-Colloquium: Active participation with at least one talk or poster presentation
Type of course	Seminar	
Frequency		

olt208 - Additional module "Specific knowledge"

Module label	Additional module "Specific knowledge"		
Module code	olt208		
Credit points	6.0 KP		
Workload	180 h		
Applicability of the module	<ul style="list-style-type: none">Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module		
Responsible persons	<ul style="list-style-type: none">Henrichs, Kathrin (module responsibility)		
Prerequisites			
Skills to be acquired in this module	Development of additional and improved knowledge on specific research areas.		
Module contents			
Recommended reading			
Links			
Languages of instruction	German, English		
Duration (semesters)	1 Semester		
Module frequency	halbjährlich		
Module capacity	unlimited		
Reference text	Courses of the modules olt201- olt207 or comparable courses can be accepted		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		See description of the module, from which the course was chosen	
Type of course	Course selection		
SWS	0		
Frequency	--		

olt231 - Advanced presentation techniques

Module label	Advanced presentation techniques	
Module code	olt231	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> Mouritsen, Henrik (module responsibility) 	
Prerequisites	English language skills; Software PowerPoint	
Skills to be acquired in this module	Development of competences in presenting scientific topics.	
Module contents	<p>Courses on advanced presentation skills provide a practical opportunity to enhance current presentation skills and add finesse to the delivery of presentations. The training looks at how to make a presentation persuasive and includes structuring and designing of contributions for conferences, self-evaluation and body language.</p> <p>Other courses of this module focus on voice training for improving economic breathing and for generating an accurate pronunciation or on the formation of strategic networks in the community as key for successful careers in science and industry.</p> <p>The generation of knowledge on the use of special equipment and techniques or the design of a web page for presenting research findings are also included in this module.</p>	
Recommended reading		
Links		
Languages of instruction		
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module	Active participation: Assessment of a poster and/or assessment of two talks.	
Type of course	Course selection	
SWS	0	
Frequency	WiSe	

olt232 - Summer School / Congress

Module label	Summer School / Congress	
Module code	olt232	
Credit points	4.0 KP	
Workload	120 h	
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) Mouritsen, Henrik (module responsibility) 	
Prerequisites	English language skills, presentation skills	
Skills to be acquired in this module	Development of competence in the presentation and discussion of research findings in the international context. Obtaining an overview of related research fields. Social skills (networking) in the international scientific community should be developed.	
Module contents	The PhD students participate at summer schools or international congresses. They prepare their own presentation, show their work in the form of posters or oral presentations and discuss their findings with an audience. Since the participation at summer schools and workshops includes the cooperation with scientists from other national and/or international research institutions, the students extend their knowledge and socialise with the scientific community.	
Recommended reading		
Links		
Language of instruction	English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Reference text	Module should be attended: At any time of the PhD work	
Examination	Prüfungszeiten	Type of examination
Final exam of module		at congresses: active participation with posterpresentation and/or talk at summer schools: active participation
Type of course	Course selection	
SWS	0	
Frequency	--	

olt233 - Didactics

Module label	Didactics	
Module code	olt233	
Credit points	6.0 KP	
Workload	180 h	
Applicability of the module	• Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons		
Prerequisites		
Skills to be acquired in this module		
Module contents		
Recommended reading		
Links		
Languages of instruction		
Duration (semesters)	1 Semester	
Module frequency		
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		BE
Type of course	Seminar	
Frequency		

olt261 - Basics in distribution-free statistics

Module label	Basics in distribution-free statistics		
Module code	olt261		
Credit points	3.0 KP		
Workload	90 h		
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 		
Responsible persons	<ul style="list-style-type: none"> Klump, Georg Martin (module responsibility) Langemann, Ulrike (Module counselling) 		
Prerequisites			
Skills to be acquired in this module	Basics in distribution-free statistics		
Module contents	Basic concepts of distribution-free statistics are introduced to the PhD student. Includes exercises.		
Recommended reading			
Links			
Language of instruction	English		
Duration (semesters)	1 Semester		
Module frequency	halbjährlich		
Module capacity	unlimited		
Examination	Prüfungszeiten	Type of examination	
Final exam of module		Active participation	
Type of course	Seminar		
Frequency			

olt262 - Experimental design and variance analysis

Module label	Experimental design and variance analysis			
Module code	olt262			
Credit points	3.0 KP			
Workload	90 h			
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 			
Responsible persons	<ul style="list-style-type: none"> Colonus, Hans (module responsibility) 			
Prerequisites				
Skills to be acquired in this module	<p>Students should:</p> <ul style="list-style-type: none"> understand the basic logic of statistical inference and experimental designs and be able to correctly interpret empirical statistical results; become familiar with the most common types of analysis of variance and experimental designs, be able to develop an appropriate experimental design for a given research question, and be able to correctly perform the statistical analyses of empirical data. 			
Module contents	<p>Principles of statistical inference, principals of analysis of variance; Contrasts and comparisons among means; single- and two-factor independent group designs; repeated measures designs; multivariate statistical methods</p> <p>Lecturers give input on basic and special topics of experimental designs and analysis of variance</p> <p>Data are analysed in class using SPSS and/or R.</p> <p>Students work in groups in order to prepare a statistical analysis on self-collected data. This is presented and the analysis is carried out by the participants in class.</p>			
Recommended reading				
Links				
Language of instruction	English			
Duration (semesters)	1 Semester			
Module frequency	halbjährlich			
Module capacity	unlimited			
Examination	Prüfungszeiten		Type of examination	
Final exam of module			Active participation	
Type of course	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Seminar				
Tutorial		2	SuSe and WiSe	28
Total module attendance time				56 h

olt263 - Numeric and computer Skills

Module label	Numeric and computer Skills	
Module code	olt263	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none"> Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> Hohmann, Volker (module responsibility) 	
Prerequisites		
Skills to be acquired in this module	Students acquire theoretical knowledge of basic numerical methods and practical skills to apply these methods on physical problems within all areas of experimental, theoretical and applied physics.	
Module contents	Basic concepts of numerical mathematics are introduced and applied to physics problems. Topics include: finite number representation and numerical errors linear and nonlinear systems of equations numerical differentiation and integration function minimization and model fitting discrete Fourier analysis ordinary and partial differential equations.	
Recommended reading		
Links		
Language of instruction	German	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Reference text	Language: English materials, including extensive script, tutorials in English; lecture in German	
	Module should be attended: At any time during the PhD project	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Active participation
Type of course	Course selection	
SWS	0	
Frequency	--	

olt264 - Scientific publishing

Module label	Scientific publishing	
Module code	olt264	
Credit points	6.0 KP	
Workload	180 h	
Applicability of the module	<ul style="list-style-type: none"> • Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module 	
Responsible persons	<ul style="list-style-type: none"> • Thiel, Christiane Margarete (module responsibility) • Klump, Georg Martin (Module counselling) • Kollmeier, Birger (Module counselling) • van de Par, Steven (Module counselling) 	
Prerequisites	English language skills, PhD Studets should have data to publish.	
Skills to be acquired in this module	Development of competences in scientific writing for publishing in international peer-reviewed scientific journal.	
Module contents	The students learn about the importance and structure of scientific publications. For wirting their own (first) publication the PhD Students work together in tandems, small teams or intensive writing classes.	
Recommended reading		
Links		
Language of instruction	English	
Duration (semesters)	1 Semester	
Module frequency	halbjährlich	
Module capacity	unlimited	
Reference text	Events of this module including dates and locations: According to agreement with lecturers	
Examination	Prüfungszeiten	Type of examination
Final exam of module		skript to publish
Type of course	Seminar	
Frequency		

olt209 - Laboratory Animal Science

Module label	Laboratory Animal Science	
Module code	olt209	
Credit points	3.0 KP	
Workload	90 h	
Applicability of the module	<ul style="list-style-type: none">Structured Doctoral Programme Neurosensory Science and Systems (Doctoral Programme) > Module	
Responsible persons		
Prerequisites		
Skills to be acquired in this module		
Module contents		
Recommended reading		
Links		
Language of instruction	English	
Duration (semesters)	1 Semester	
Module frequency	jährlich	
Module capacity	unlimited	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Webbasierte schriftliche Prüfung und aktive Teilnahme am praktischen Teil des Moduls
Type of course	Seminar	
SWS	2	
Frequency	SuSe or WiSe	
Workload attendance time	28 h	

