

module code /
module title

MN-LAB2 / Lab Project 2

date / version of the module
description

23.02.23

1	INFORMATION ON THE MODULE	
1a	module code	MN-LAB2
1b	module title (German title)	Klicken Sie hier, um Text einzugeben.
1c	module title (English title)	Lab Project 2
1d	credit points	15
1e	responsible for the module	Dr. Udo Ernst
1f	type of module	compulsory module
1g	programs using the module	M.Sc. Neurosciences
1h	organizational unit offering the module	Klicken Sie hier, um Text einzugeben.
1i	content-related prior knowledge or skills	Prior completion of modules F1, F2 and F3 is recommended. Prior completion of module S1 (Advances Programming: Data Analysis & Modeling) is highly recommended for projects in data analysis and/or modelling. To ensure lab animal safety, projects in experimental Neurosciences can only be chosen if competence in safe handling of lab animals has been certified (by completion of module MN-S2 (Laboratory Animal Science)).
1j	learning contents	<p>Students will be trained in an advanced lab project on scientific objectives and work techniques in a laboratory (clinics etc.), in Bremen, elsewhere in Germany or abroad.</p> <ol style="list-style-type: none"> The students can select their preferred working group and topic with the help of a mentor. Students will get involved in all phases of an experimental/theoretical research project: Development of working hypotheses, experimental design, method selection, experimental and/or theoretical work, analysis of the data/numerical results. <p>This part includes compulsory elective choices (Wahlpflicht, WP) of 7-9 weeks duration:</p>

		<p>WP1: Students undertake the practical work integrated in a research group at the University of Bremen</p> <p>WP2: Students undertake the practical work as internship students integrated in an external national or international research group</p> <p>3. Students will write a research report and present and discuss the outcome of their project results in a seminar.</p>																																																
1k	learning outcomes/ competencies/ targeted competencies	<p>Students...</p> <ul style="list-style-type: none"> are able to work on a research topic with relative independence can propose suitable paradigms (experiments, models, ...) for investigating a specific research question can acquire, analyse, statistically evaluate, and interpret data on an advanced level... ...and/or can develop, implement, and simulate models on an advanced level can summarize the results of their project in a scientific report and oral presentation 																																																
1l	<p>calculation of student workload</p> <p>(part a: calculation of presence time and working hours)</p>	<p>The total amount of the presence time and working hours of the module has to be calculated additionally in the detailed calculation a) to c).</p> <p>a) detailed calculation: SWS / presence time/working hours in each course of the module</p> <table border="1"> <tr> <td><input type="checkbox"/></td> <td>lecture(s) with</td> <td></td> <td>SWS/ contact hours</td> <td></td> <td>hours of presence time</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>1 seminar(s) with</td> <td>1</td> <td>SWS/ contact hours</td> <td>14</td> <td>hours of presence time</td> </tr> <tr> <td><input type="checkbox"/></td> <td>exercise(s) with</td> <td></td> <td>SWS/ contact hours</td> <td></td> <td>hours of presence time</td> </tr> <tr> <td><input type="checkbox"/></td> <td>internship(s) with</td> <td></td> <td>sum of working hours</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>seminar(s) with</td> <td></td> <td>SWS/ contact hours</td> <td></td> <td>total hours of presence time</td> </tr> <tr> <td><input type="checkbox"/></td> <td>laboratory/laboratories with</td> <td></td> <td>SWS/ contact hours</td> <td></td> <td>total hours of presence time</td> </tr> <tr> <td><input type="checkbox"/></td> <td>tutorial(s) with</td> <td></td> <td>SWS/ contact hours</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>excursion(s) with</td> <td></td> <td>SWS contact hours in total</td> <td></td> <td>working hours</td> </tr> </table> <p><input checked="" type="checkbox"/> other form of course (e.g. block seminar), namely this:</p> <p>Supervised self study unit</p> <p>with 6 SWS / with totally 84 contact hours <input checked="" type="checkbox"/> presence time <input type="checkbox"/> working hours</p>	<input type="checkbox"/>	lecture(s) with		SWS/ contact hours		hours of presence time	<input checked="" type="checkbox"/>	1 seminar(s) with	1	SWS/ contact hours	14	hours of presence time	<input type="checkbox"/>	exercise(s) with		SWS/ contact hours		hours of presence time	<input type="checkbox"/>	internship(s) with		sum of working hours			<input type="checkbox"/>	seminar(s) with		SWS/ contact hours		total hours of presence time	<input type="checkbox"/>	laboratory/laboratories with		SWS/ contact hours		total hours of presence time	<input type="checkbox"/>	tutorial(s) with		SWS/ contact hours			<input type="checkbox"/>	excursion(s) with		SWS contact hours in total		working hours
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		<p>= sum of presence time and working hours:</p> <p>98</p>
	<p>calculation of student workload</p> <p>(part b: preparation time and follow-up work/self-study)</p>	<p>b) working hours for preparation/follow-up work of the course(s) and/or self-study</p> <p>= sum of working hours:</p> <p>282</p>
	<p>calculation of student workload</p> <p>(part c: exam preparation etc.)</p>	<p>c) exam preparation (incl. examination)</p> <p>= sum of working hours:</p> <p>70</p>
	<p>calculation of student workload</p> <p>(total amount of hours including a) - c))</p>	<p>Total amount of the presence time and working hours a) to c):</p> <p>450h</p>
1m	<p>description of possible optional courses in the module</p>	<p><u>Can a student choose between different courses within the module?</u></p> <p>YES</p> <p><u>Short description of selection option</u></p> <p>The module includes compulsory elective choices (Wahlpflicht, WP) of 7-9 weeks duration (see learning content)</p> <p>WP1: Students undertake the practical work integrated in a research group at the University of Bremen</p> <p>WP2: Students undertake the practical work integrated as internship students in an external national or international research group</p>
1n	<p>language(s) of instruction</p>	<p> <input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French </p> <p><input type="checkbox"/> Other, namely this:</p> <p>Klicken Sie hier, um Text einzugeben.</p>
1o	<p>frequency</p>	<p>(regular cycle module is offered) e.g.: winter semester, yearly or summer semester, yearly or each semester</p> <p>winter semester yearly</p> <p>Klicken Sie hier, um Text einzugeben.</p>
1p	<p>duration</p>	<p>Other, namely this:</p> <p>half semester module</p>

1q	Literature (<i>optional</i>)	Klicken Sie hier, um Text einzugeben.
1r	more information on the module (<i>optional</i>)	Klicken Sie hier, um Text einzugeben.
2	INFORMATION ON THE MODULE EXAMINATION (see also AT Art. 5 section 8)	
2a	type of examination	<input checked="" type="checkbox"/> module exam; i.e. exam with only one component (MP) <input type="checkbox"/> combination exam, i.e. exam with several components (administered by instructors) (KP) <input type="checkbox"/> partial exam; i.e. exam with several components (administered by registrar) (TP)
2b	exam components or prerequisites (<i>type, number</i>)	<p><i>PL</i> = graded component of the examination <i>SL</i> = ungraded component of the examination, coursework <i>PVL</i> = prerequisite of the examination (see AT Art. 5 Section 10)</p> <p><input checked="" type="checkbox"/> PL 1 <input type="checkbox"/> SL <input type="checkbox"/> PVL justification</p> <p>If necessary, further explanations:</p>
2c	Give this information for combination examinations only: Weights (in percentage) of component grades	<p>PL 1:</p> <p>PL 2:</p> <p>PL 3: Klicken Sie hier, um Text einzugeben.</p> <p>PL 4: Klicken Sie hier, um Text einzugeben.</p> <p>If necessary, further comments:</p> <p>Klicken Sie hier, um Text einzugeben.</p>
2d	form of examination (see AT BPO/AT MPO Art. 8, 9 and 10)	<div> <input type="checkbox"/> Assignment <input type="checkbox"/> Oral examination (single) <input type="checkbox"/> Presentation, oral </div> <div> <input type="checkbox"/> Written examination <input type="checkbox"/> Group examination, oral <input checked="" type="checkbox"/> Presentation and written assignment </div> <div> <input type="checkbox"/> Portfolio <input type="checkbox"/> Project report <input type="checkbox"/> Bachelor Thesis </div> <div> <input type="checkbox"/> Internship report <input type="checkbox"/> Colloquium <input type="checkbox"/> Master Thesis </div> <p><input type="checkbox"/> Other (concrete definition is given in the examination regulations):</p> <p>Klicken Sie hier, um Text einzugeben.</p>
2e	language(s) of instruction	<div> <input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French </div> <p><input type="checkbox"/> Other, namely this:</p> <p>Klicken Sie hier, um Text einzugeben.</p>