

Module Handbook “Applied Neurosciences in Sports & Exercise“

Essentials of Sports Neurology							
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Module:	Workload (h):	Credits:	Intended stage in course of studies:	Frequency at which the class is offered:	Duration of the module:		
1	240	8	1 st	Annually	1 Semester		
1	Module Structure:						
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants	
	a) Pathophysiology and Neuroanatomy	L	30	90	O	Up to 120	
	b) Neurological and Neurodegenerative Diseases and Injuries	S	30	90	O	20	
2	Alternatives within the Module: none						
3	Prerequisites: none						
4	Contents: M1 focuses on the impartment of neurological knowledge as a basis for further application and research-oriented contents of the program. First, a basic understanding of neuro-anatomical, physiological and pathophysiological mechanisms of the nervous system is established. Specific knowledge with regards to symptoms and syndromes of diseases and injuries within the nervous system (i.e. different types of dementia and epilepsy, multiple sclerosis, concussion) as well as systemic diseases with the nervous system involved (i.e. connective tissue disease, angiopathy) completes the acquisition of neurological knowledge. Due to the application of different teaching and learning arrangements, comprehensive key skills like practicing different types of presenting, or working effectively in small groups are enforced.						
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about mechanisms of pathogenesis and maintaining health ▪ Knowledge about physiology and pathophysiology of the nervous system ▪ Deepened knowledge about specific diseases and injuries of the nervous system and ways to handle them ▪ Development of interpersonal skills and communication competence through working in small groups and presenting results 						
6	Examination: [x] One examination containing contents of courses a) and b)						
	Belongs to	Type	Duration		Emphasis for Module grade		
		Written exam	60-120 min		100%		

	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.												
7	<p>Course Achievement (CA) / Qualified Participation (QP):</p> <table border="1"> <thead> <tr> <th>Belongs to</th> <th>Type</th> <th>Duration</th> <th>CA / QP</th> </tr> </thead> <tbody> <tr> <td>a)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>b)</td> <td>Presentation or Short colloquium</td> <td>ca 10 min.</td> <td>QP</td> </tr> </tbody> </table> <p>Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.</p>	Belongs to	Type	Duration	CA / QP	a)				b)	Presentation or Short colloquium	ca 10 min.	QP
Belongs to	Type	Duration	CA / QP										
a)													
b)	Presentation or Short colloquium	ca 10 min.	QP										
8	<p>Prerequisites for participating in examinations: None</p>												
9	<p>Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.</p>												
10	<p>Emphasis for final grade: 8/120</p>												
11	<p>Utilization for other study programs: Possible for course a)</p>												
12	<p>Module Coordinator: Prof. Dr. Dr. Reinsberger</p>												
13	<p>Language: Teaching language English</p>												

L= Lecture

S = Seminar

O=obligate

F=facultative

Essentials of Exercise Neuroscience						
Essentials of Exercise Neuroscience						
Module: 2	Workload (h): 240	Credits: 8	Intended stage in course of studies: 1 st	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Physiology, Testing and Prescription of Exercise	L	30	90	O	Up to 120
	b) Neurophysiological Aspects of Training and Performance	S	30	90	O	20
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M2 focuses on the impartment of knowledge about exercise neuroscience as a basis for further application and research-oriented contents of the program. First, a basic understanding of physiological mechanisms and adaptations within the different physical components as well as their assessment and general exercise training principles is established. Specific knowledge with regards to the exposure of the nervous system due to training and performance enhancement and failed performance enhancement, respectively (i.e. injury, fatigue, overtraining), completes the acquisition of basic exercise neuroscience knowledge. Due to the application of different teaching and learning arrangements, comprehensive key skills like practicing different types of presenting, or working effectively in small groups are enforced.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about basic principles of exercise physiology ▪ Deepened knowledge about specific exposures to the nervous system due to performance enhancement ▪ Development of interpersonal skills and communication competence through working in small groups and presenting results 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Written exam	60-120 min	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					

7	Course Achievement (CA) / Qualified Participation (QP):			
	Belongs to	Type	Duration	CA / QP
	a)			
	b)	Presentation or Short colloquium	ca 10 min.	QP
<p>Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.</p>				
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.			
10	Emphasis for final grade: 8/120			
11	Utilization for other study programs: Possible for course a)			
12	Module Coordinator: N.N.			
13	Language: Teaching language English			

Methods I – Research Skills						
Methods I – Research Skills						
Module: 3	Workload (h): 150	Credits: 5	Intended stage in course of studies: 1 st and 2 nd	Frequency at which the class is offered: Annually	Duration of the module: 2 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Developing a Research Problem	S	30	60	O	20
	b) Reporting and Presenting Research Results	S	15	45	O	20
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M3 focuses on the understanding of research processes in general and the development of working proficiently and systematically in neuroscientific settings in detail. These competences include the identification of a research problem, as well as the ability to summarize the current state of research by purposeful searching, analyzing and assessing literature (i.e. evidence-based medicine). In addition, different ways of presenting research results appropriately, together with critically deliberating, represent further scientific skills that are practiced and enforced in this module. Due to the implementation of different presenting settings, comprehensive key skills like presenting and communication competences, or working effectively on one's own or in small groups are developed.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Basic understanding of scientific skills in research settings ▪ Capability of searching, analyzing and assessing literature ▪ Competences in gathering and conveying research results ▪ Development of (inter-) personal skills, methodological and communication competences 					
6	Examination: [x] 4 component examinations					
	Belongs to	Type	Duration	Emphasis for Module grade		
	a)	Abstract	ca 1 page	25%		
	b)	Presentation	ca 10 min	25%		
		Scientific Poster + short Presentation	ca 3 min	25%		
		Review	3-5 pages	25%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					

	Belongs to	Type	Duration	CA / QP
	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.			
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until all component examinations are passed.			
10	Emphasis for final grade: 5/120			
11	Utilization for other study programs: no			
12	Module Coordinator: Dr. Reinecke			
13	Language: Teaching language English			

Methods II – Statistical Skills						
Methods II – Statistical Skills						
Module: 4	Workload (h): 150	Credits: 5	Intended stage in course of studies: 1 st and 2 nd	Frequency at which the class is offered: Annually	Duration of the module: 2 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Understanding Different Statistical Methods and Concepts	L	30	60	O	Up to 120
	b) Applied Statistics in Neuroscientific Research Settings	S / eLearning	30	30	O	20
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M4 focuses on the exposure to research methods in biostatistics with a strong neuroscientific emphasis. The impartment of a theoretical understanding of statistics (i.e. descriptive – test statistics; parametrical – non-parametrical; epidemiology; regression analysis; testing for differences or correlations) and its purposeful application, are key abilities to achieve in this module. Through the implementation of eLearning in course b) the theoretical understanding is proved and developed by dealing with concrete statistical examples. The presentation and discussion of statistical results represent further important learning objectives. Besides statistical competences, comprehensive key skills like working self-organized alone and in small groups, will help develop problem solving strategies.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Deepened knowledge about research methods in the field of neuroscience and biostatistics ▪ Capability of planning, accomplishing, analyzing, interpreting and evaluating experiments ▪ Development of problem solving strategies, self-organization as well as communication and presenting competences 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Written exam	60-120 min	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					

	Belongs to	Type	Duration	CA / QP
	a)			
	b)	Presentation or 2-4 homework	ca 10 min. 1-2pages each	QP
Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.				
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.			
10	Emphasis for final grade: 5/120			
11	Utilization for other study programs: Possible for course a)			
12	Module Coordinator: Prof. Dr. Dr. Reinsberger			
13	Language: Teaching language English			

Methods III – Measurement Skills						
Methods III – Measurement Skills						
Module: 5	Workload (h): 240	Credits: 8	Intended stage in course of studies: 1 st	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Developing Methodological Competences in Applied Neurosciences	S	45	75	O	20
	b) Applying Methodological Competence in Neuroscientific Settings	S	30	90	O	20
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M1 focuses on the impartment of knowledge and skills regarding neuroscientific measurement techniques. A basic understanding of medical and technical correlations of different methods (i.e. EEG, MRT, PET, EMG, ANS-diagnostics) is fundamental to achieve before students can apply that mainly theoretical understanding in planning, conducting and analyzing small experiments on their own in the lab and in the field. Working in small groups and dealing with problems regarding methodological problems or surrounding conditions during the experimental periods enforce the development of problem solving strategies, communication and (inter-) personal skills.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Deepened knowledge about neuroscientific measurement techniques ▪ Capability of the appropriate application and evaluation of selected neuroscientific measurement techniques, as well as interpretation and presentation of results ▪ Development of problem solving strategies 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Oral exam	10-30 min	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		

	a)			
	b)	Written homework or presentation	2-3 pages ca 10 min.	QP
	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.			
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.			
10	Emphasis for final grade: 8/120			
11	Utilization for other study programs: no			
12	Module Coordinator: Dr. Vieluf			
13	Language: Teaching language English			

Applied Sports Neurology						
Applied Sports Neurology						
Module: 6	Workload (h): 150	Credits: 5	Intended stage in course of studies: 2 nd	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Treating Diseases with Sports and Exercise	S	30	60	O	20
	b) Applying Sports and Exercise in the Treatment of Neurological Diseases	S	30	30	O	20
2	Alternatives within the Module: none					
3	Prerequisites: Module 1 is passed.					
4	Contents: M6 focuses on research and occupation-oriented application of the theoretical knowledge based on the contents of M1. First, mode of action of sports and exercise in neurological therapy is imparted and discussed based on recent literature. At the same time, students get the chance to experience and prove the application of sports and exercise in therapeutic groups of patients with specific neurological or neurodegenerative diseases (i.e. dementia, epilepsy, MS). Evaluating and critically reflecting these work experiences is a key element for future occupational practice. Working with patients with different physical and / or cognitive impairments is supposed to improve (inter-) personal as well as communication skills with regards to the “therapist – patient” relationship.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about the mode of action of sports and exercise in the neurological therapy and prevention ▪ Transfer of knowledge into practice with patients; development of didactic competences ▪ Acquisition of occupational competences related to prescription and application of sports and exercise in therapy and prevention settings ▪ Development of (inter-) personal and communication skills through working with patients 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Report	10-15 pages	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					

	Belongs to	Type	Duration	CA / QP
	a)	Presentation or Short colloquium	ca 10 min	QP
	b)	Protocols (work experience) or Short colloquium	3-5 pages each ca 10 min.	QP
Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.				
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.			
10	Emphasis for final grade: 5/120			
11	Utilization for other study programs: no			
12	Module Coordinator: Prof. Dr. Dr. Reinsberger			
13	Language: Teaching language English			

Applied Exercise Neuroscience						
Applied Exercise Neuroscience						
Module: 7	Workload (h): 150	Credits: 5	Intended stage in course of studies: 2 nd	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Applied Neuroscience of Training and Competition	S	30	60	O	20
	b) Exercise Science	S	30	30	O	20
2	Alternatives within the Module: none					
3	Prerequisites: Module 2 is passed.					
4	Contents: M7 focuses on research and occupation-oriented application of the theoretical knowledge based on the contents of M2. First, mode of action of training and performance enhancement within the nervous system is imparted and discussed based on recent literature for different sports. In doing so, the understanding of opportunities and limitations of dealing appropriately with neurophysiological exposures during training and competition is as fundamental as identifying symptoms related to a mismatch in dealing with neurophysiological exposures. At the same time, students get the chance to experience and prove the monitoring of neurophysiological exposures in selected sports settings with (competitive) athletes and sports teams. Evaluating and critically reflecting these work experiences is a key element for future occupational practice. Working with athletes and sports teams with different levels of expertise, as well as varying sports specific neurophysiological demands will improve (inter-) personal as well as communication skills with regards to the “trainer –athlete / team” relationship.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about sports specific exposures to the nervous system ▪ Transfer of knowledge into practice with athletes; development of didactic competences ▪ Acquisition of occupational competences necessary for appropriately dealing with neurophysiological exposures in competitive sports ▪ Development of (inter-) personal and communication skills through working with athletes 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Report	10-15 pages	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					

7	Course Achievement (CA) / Qualified Participation (QP):			
	Belongs to	Type	Duration	CA / QP
	a)	Presentation or Short colloquium	ca 10 min	QP
	b)	Protocols (work experience) or Short colloquium	3-5 pages each ca 10 min.	QP
Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.				
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.			
10	Emphasis for final grade: 5/120			
11	Utilization for other study programs: no			
12	Module Coordinator: N.N.			
13	Language: Teaching language English			

Study Project „Therapy“						
Study Project „Therapy“						
Module: 8	Workload (h): 900	Credits: 30	Intended stage in course of studies: 2 nd and 3 rd	Frequency at which the class is offered: Annually	Duration of the module: 2 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of Participants
	a) Introduction "Specific Topic"	S	30	810	F	20
	b) Group Discussion and Report	S	60		F	20
2	Alternatives within the Module: none					
3	Prerequisites: Modules 1 and 5 are passed.					
4	Contents: Neurological topics within current research questions in the area of sports medicine are implemented in theoretical and practical (experimental, conceptual) small group work. Topics are either research or occupation related and allow the transfer of theoretical knowledge into scientific work, including the application of relevant neuroscientific methods.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Competences in developing a relevant research question within the area of sports neurology and using appropriate methods to answer that question based on an experimental design, or a conceptual framework ▪ Deepened competences in working in small groups ▪ Competences in scientific writing 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Project Report	50-150 pages	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		
	a)	Presentation	ca 15 min.	QP		
	b)					

	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.
8	Prerequisites for participating in examinations: None
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.
10	Emphasis for final grade: 30/120
11	Utilization for other study programs: no
12	Module Coordinator: Prof. Dr. Dr. Reinsberger
13	Language: Teaching language English

Study Project "Performance and Exercise Neuroscience"						
Study Project „Performance and Exercise Neuroscience“						
Module: 9	Workload (h): 900	Credits: 30	Intended stage in course of studies: 2 nd and 3 rd	Frequency at which the class is offered: Annually	Duration of the module: 2 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of Participants
	a) Introduction "Specific Topic"	S	30	810	F	20
	b) Group Discussion and Report	S	60		F	20
2	Alternatives within the Module: none					
3	Prerequisites: Modules 2 and 5 are passed.					
4	Contents: Training or performance enhancement related topics within current research questions in the area of exercise neuroscience are implemented in theoretical and practical (experimental, conceptual) small group work. Topics are either research or occupation related and allow the transfer of theoretical knowledge into scientific work, including the application of relevant neuroscientific methods.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Competences in developing a relevant research question within the area of exercise neuroscience and using appropriate methods to answer that question based on an experimental design, or a conceptual framework ▪ Deepened competences in working in small groups ▪ Competences in scientific writing 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Project Report	50-150 pages	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		
	a)	Presentation	ca 15 min.	QP		
	b)					

	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.
8	Prerequisites for participating in examinations: None
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.
10	Emphasis for final grade: 30/120
11	Utilization for other study programs: no
12	Module Coordinator: N.N.
13	Language: Teaching language English

Internship						
Internship						
Module: 10	Workload (h): 180	Credits: 6	Intended stage in course of studies: 2 nd	Frequency at which the class is offered: Annually	Duration of the module: 4 weeks	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
			160	20	O	individual
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: Through observing and self-contained working in a potentially relevant occupational field, the internship is supposed to create the possibility for students to compare the choice of academic study with the occupational reality and furthermore, help realizing a proper occupational decision. The internship is designed full-time for four weeks. In well-grounded conditions it is possible to split the four weeks. It is based on an individual preference of the students whether the internship takes place in an English speaking setting.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about occupational settings ▪ Integrating learning outcomes from the study program into occupational practice ▪ Consequences for occupational orientation 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Report	10-15 pages	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		
	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.					
8	Prerequisites for participating in examinations:					

	None
9	Prerequisites for assigning Credits: The assignment of credits is restricted until the examination is passed.
10	Emphasis for final grade: 6/120
11	Utilization for other study programs: no
12	Module Coordinator: Dr. Reinecke
13	Further notes:

Nutrition						
Nutrition						
Module: 11	Workload (h): 150	Credits: 5	Intended stage in course of studies: 3 rd	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Nutritional Medicine	V	30	45	F	Up to 120
	b) Nutrition in Sports and Exercise	V	30	45	F	Up to 120
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M11 focuses on the impartment of knowledge regarding correlations and interdependency of nutrition, physical activity, health and performance, with a strong emphasis on the significance of the nervous system. Basics in nutritional medicine include topics like the relation of nutrition and genetics, causes, pathogenesis and prevention of nutrition and lifestyle dependent chronic diseases (i.e. obesity, diabetes mellitus, food allergies, hypertension) as well as the relevance of nutrition in brain metabolism and in diseases of the nervous system (i.e. dementia). In the area of sports nutrition, knowledge about specific nutritional needs and conditions in different sports is acquired (i.e. nutrition in different competitive periods, eating disorders, alternative nutritional habits, application of dietary supplements, reference values for the supply of nutrients). Besides the impartment of knowledge, the development of problem solving strategies through the ability of creating nutritional schedules depending on individual needs and conditions with regards to lifestyle, sport and exercise as well as maintaining or improving health in general is considered a key competence to achieve within this module.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about relations of nutrition, lifestyle, physical activity, health / diseases and performance (focus on nervous system) ▪ Competences in providing appropriate nutrition schedules for individual dietary needs ▪ Development of problem solving strategies with the objective of optimizing nutrition, lifestyle and health 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Written exam	60-120 min	100%		

	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.								
7	<p>Course Achievement (CA) / Qualified Participation (QP):</p> <table border="1"> <thead> <tr> <th>Belongs to</th> <th>Type</th> <th>Duration</th> <th>CA / QP</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.</p>	Belongs to	Type	Duration	CA / QP				
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8	<p>Prerequisites for participating in examinations: None</p>								
9	<p>Prerequisites for assigning Credits: The assignment of credits is restricted until the examination is passed.</p>								
10	<p>Emphasis for final grade: 5/120</p>								
11	<p>Utilization for other study programs: Possible for courses a) and b)</p>								
12	<p>Module Coordinator: Prof. Dr. Heseke</p>								
13	<p>Language: Teaching language English</p>								

General Studies						
General Studies						
Module: 12	Workload (h): 150	Credits: 5	Intended stage in course of studies: 3 rd	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	Depends on the offer and student's choice using the Campus Management System					
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: Free choice within the Campus Management System of Paderborn University.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> Experiences beyond the own professional issues to broaden one's perception 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Depends on the selected courses / module (i.e. written exam with a maximum of 4 hours, homework with a maximum of 25 pages, oral exam with a maximum of 45 minutes)				
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		
		Depends on the selected module				
	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.					
8	Prerequisites for participating in examinations:					
9	Prerequisites for assigning Credits:					

	The assignment of credits is restricted until the examination is passed and - if existing - Qualified Participation is verified.
10	Emphasis for final grade: 5/120
11	Utilization for other study programs:
12	Module Coordinator: Dr. Reinecke
13	Language: Depends on the selected module

Communication						
Communication						
Module: 13	Workload (h): 150	Credits: 5	Intended stage in course of studies: 3 rd	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Health Communication	S	30	60	F	20
	b) Utilizing Communication in Sports and Exercise	S	15	45	F	20
2	Alternatives within the Module: none					
3	Prerequisites: none					
4	Contents: M13 focuses on the impartment of knowledge regarding basic principles of (health) communication and interaction. Learning and analyzing theories and different perspectives of communication and interaction is as fundamental as practicing communication and interaction strategies in occupational settings.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Knowledge about basic communication and interaction principles ▪ Competences in problem solving strategies during communication processes 					
6	Examination: [x] One examination containing contents of courses a) and b)					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Demonstration lesson (theory and practice)	10-15 pages ca 15 min.	100%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					
	Belongs to	Type	Duration	CA / QP		
	a)	Presentation or Short colloquium	ca 10 min	QP		
	Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.					
8	Prerequisites for participating in examinations:					

	None
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the examination is passed.
10	Emphasis for final grade: 5/120
11	Utilization for other study programs: no
12	Module Coordinator: Dr. Reinecke
13	Language: Teaching language English

Master Thesis						
Master Thesis						
Module: 14	Workload (h): 900	Credits: 30	Intended stage in course of studies: 4 th	Frequency at which the class is offered: Annually	Duration of the module: 1 Semester	
1	Module Structure:					
	Courses	Teaching methods	Class time (h)	Study time (h)	Status (O/F)	Number of participants
	a) Progress Reports	S	15	45	O	20
	b) Thesis			780	O	Individual
	c) Defending the Thesis			60	O	individual
2	Alternatives within the Module: none					
3	Prerequisites: Modules 1, 2, 3, 4, 5 as well as the study project (M8/M9) are passed.					
4	Contents: The Master Thesis incorporates relevant research questions within the area of sports neurology or exercise neuroscience. Topics can emerge from former modules (i.e. study project). In the seminar students report about the progress of the thesis and problem strategies are developed.					
5	Learning outcomes / Competences: <ul style="list-style-type: none"> ▪ Capability of acting appropriately in research processes ▪ Competences in scientific writing ▪ Competences in communicating and presenting 					
6	Examination: [x] two component examinations					
	Belongs to	Type	Duration	Emphasis for Module grade		
		Thesis	Max. 80 pages or research manuscript incl. Review	66,67%		
		Defending the Thesis	30-45 min	33,33%		
	Information about the concrete terms and conditions of the examination is provided by the lecturer within the first 3 weeks of the lecture period.					
7	Course Achievement (CA) / Qualified Participation (QP):					

	Belongs to	Type	Duration	CA / QP
	a)	progress report	ca 15 min	QP
Information about the concrete requirements for Course Achievement or Qualified Participation is provided by the lecturer within the first 3 weeks of the lecture period.				
8	Prerequisites for participating in examinations: None			
9	Prerequisites for assigning Credits: The assignment of credits is restricted until Qualified Participation is verified and the component examinations are passed.			
10	Emphasis for final grade: 30/120			
11	Utilization for other study programs: no			
12	Module Coordinator: Lecturer within the program			
13	Language: Teaching language English			

Abbreviations:

L = Lecture

S = Seminar

O = obligate

F = facultative