



**PADERBORN
UNIVERSITY**



MASTER PROGRAM

APPLIED

NEUROSCIENCES

IN SPORTS &

EXERCISE



APPLIED

NEUROSCIENCES IN SPORTS & EXERCISE

The international M.Sc. “Applied Neurosciences in Sports & Exercise” (ANSE) focuses on neuroscientific aspects of physical activity in sports and health care settings. Academic knowledge and research skills are conveyed within the two major scopes “Neurological and Neurodegenerative Diseases and Injuries” and “Training and Performance Development”. Graduates will be enabled to pursue careers in related research or applied clinical occupational fields.

TARGET GROUP

Are you an undergraduate seeking a bachelor degree in sports sciences, neurosciences, healthcare sciences or physical therapy planning your academic future? Applying for this international Master’s Degree Program should be of further consideration if you:

- are interested in the combination of neuroscience and sports & exercise
- are interested in (neuro-) scientific thinking and working
- are interested in applied research that transfers basic knowledge to therapy and performance
- are interested to study in an inter-cultural surrounding

KEY AREAS OF EDUCATION

“Diseases and Injuries” (M1, M6, M8) focusses on the impartment of specific knowledge of symptoms and syndromes of diseases and injuries within the nervous system (i.e. different types of dementia and epilepsy, Multiple Sclerosis, concussion). Furthermore, the impact of physical activity in prevention and rehabilitation will be centered in different learning arrangements (literature based, experimental, applied).

“Training and Performance” (M2, M7, M9) focusses on the impartment of specific knowledge of the central nervous activity during training and competition (i.e. mechanisms leading to fatigue, injury, overtraining). Furthermore, the impact of appropriately managing exposure and recovery will be centered in different learning arrangements (literature based, experimental, applied). Gaining methodological competences (M3, M4, M5) represents another key area of education.

APPLIED NEUROSCIENCES IN SPORTS & EXERCISE (M.SC.)

		M1	M2	M3	M4	M5
Semester	1	<ul style="list-style-type: none"> • Essentials of Sports Neurology • 8 ECTS 	<ul style="list-style-type: none"> • Essentials of Exercise Neuroscience • 8 ECTS 	<ul style="list-style-type: none"> • Methods I – Research Skills • 5 ECTS 	<ul style="list-style-type: none"> • Methods II – Statistical Skills • 5 ECTS 	<ul style="list-style-type: none"> • Methods III – Measurement Skills • 8 ECTS
	2	<ul style="list-style-type: none"> • Applied Sports Neurology • 5 ECTS 	<ul style="list-style-type: none"> • Applied Exercise Neuroscience • 5 ECTS 			1 out of 2 Study Projects
	3	<ul style="list-style-type: none"> • Internship • 6 ECTS 	2 out of 3 Modules		<ul style="list-style-type: none"> • M8 “Therapy” • M9 “Performance and Exercise Neuroscience” • 30 ECTS each 	
	4	M14				

CAREER

PERSPECTIVES

Graduates of the Master's Degree Program will be qualified to pursue a professional or a research career in the seminal field of combining neuroscientific and sports and exercise related aspects. There is increasing demand of professional expertise and scientific work:

- to improve prevention and rehabilitation of neurological and neurodegenerative diseases (i.e. dementia, epilepsy, multiple sclerosis) by a differentiated application of the drug 'physical activity' and
- to improve exposure and recovery management in sports and exercise from a neuroscientific perspective to increase performance

APPLICATION

- Each winter semester (begins October)
- No tuition fees
- From abroad: Online application via Uni-Assist, deadline May 31st

ADMISSION

REQUIREMENTS

The following requirements are necessary to apply to the M.Sc. "Applied Neurosciences in Sports & Exercise":

- A certificate of university entrance
- Completion of an undergraduate degree in sports sciences, neurosciences, healthcare sciences or physical therapy (180 credit points) at a German state university or a similar qualification from a foreign country
- Proficiency of English language at level B2 of the European Reference Framework for Languages (CEFR)

PADERBORN CITY

Paderborn is a dynamic city of almost 150,000 inhabitants that charms visitors with its friendly green environment. Unique is its combination of tradition and modernity: high-tech companies stand alongside medieval churches. The world's largest computer museum and the seat of Charlemagne from 777 A.D. are both located in this peaceful town. Paderborn is built around its cathedral and park, which contains multiple bubbling sources of the Pader, Germany's shortest river.

The quality of life is very high in Paderborn. There are ample opportunities for outdoor and indoor sports, many parks and lakes, and traditional as well as modern festivals and events. 22,000 students ensure the city has a lively cultural scene. In comparison to many other German cities, Paderborn remains affordable and has sufficient student and guest housing. Paderborn has big-city facilities, but on a small-town scale that is personal and inviting.

Paderborn is one of the few cities in Germany with a young and growing demographic. It has excellent schools, a strong start-up culture and is home to global high-tech companies, including many family-run businesses in the engineering, furniture, steel, automotive, electrical appliances, IT, health care, textile, and food industries. Among the most renowned businesses in Paderborn and surroundings are Phoenix Contact, Atos, Miele, Wincor Nixdorf, Benteler, Hella, dSPACE, Claas, Schüco, and Stute. Many a student has found employment in these firms after an internship or research project.





10 GOOD REASONS FOR PADERBORN UNIVERSITY

1. Professional – We are not only interested in ensuring you successfully complete your degree. Finding a good job is just as important. Our network with firms and businesses in the region and beyond will provide you with opportunities during and after your studies.

2. Affordable – There are no tuition fees in Germany, not even for international students. It's a state-funded system that offers a very good standard of higher education. Although a degree is easy on your finances, it is not easy on your brain: you will need to study hard!

3. Compact – A campus university means that you will find everything you need (library, housing, cafeteria, shopping, entertainment) within walking distance.

4. Safe – No one gets lost in Paderborn: this is a safe and tolerant city. Most people can converse in English and are happy to help you. You do not need to worry about walking home alone.

5. Supportive – You're given plenty of personalized support, starting with your application here. Every student's situation is unique and we try to find answers for everyone.

6. Personal – You are never an anonymous student here. There are counselors in the faculties and in the International Office who are on hand to help you in any way you need. Additionally, international student organizations provide study support as well as social events.

7. Communicative – International students are invited to attend our special German-language courses before they commence their studies. For our English-language Master degree programs you

do not need to speak German, but a little knowledge of the language will help make your stay here more comfortable.

8. Comfortable – Paderborn offers high-quality student housing at reasonable prices. The International Office supports you in finding a place to live that meets your needs.

9. Practical – The companies located in and around Paderborn offer numerous opportunities for internships as well as practical subjects for a thesis. We will help you gain your first job experience during your studies.

10. Fair – All students have equal opportunities at Paderborn University. There is also very little hierarchy between students and professors. Students are expected to be independent and to manage their own course of study. You will easily receive the support you need if you come prepared and motivated.



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