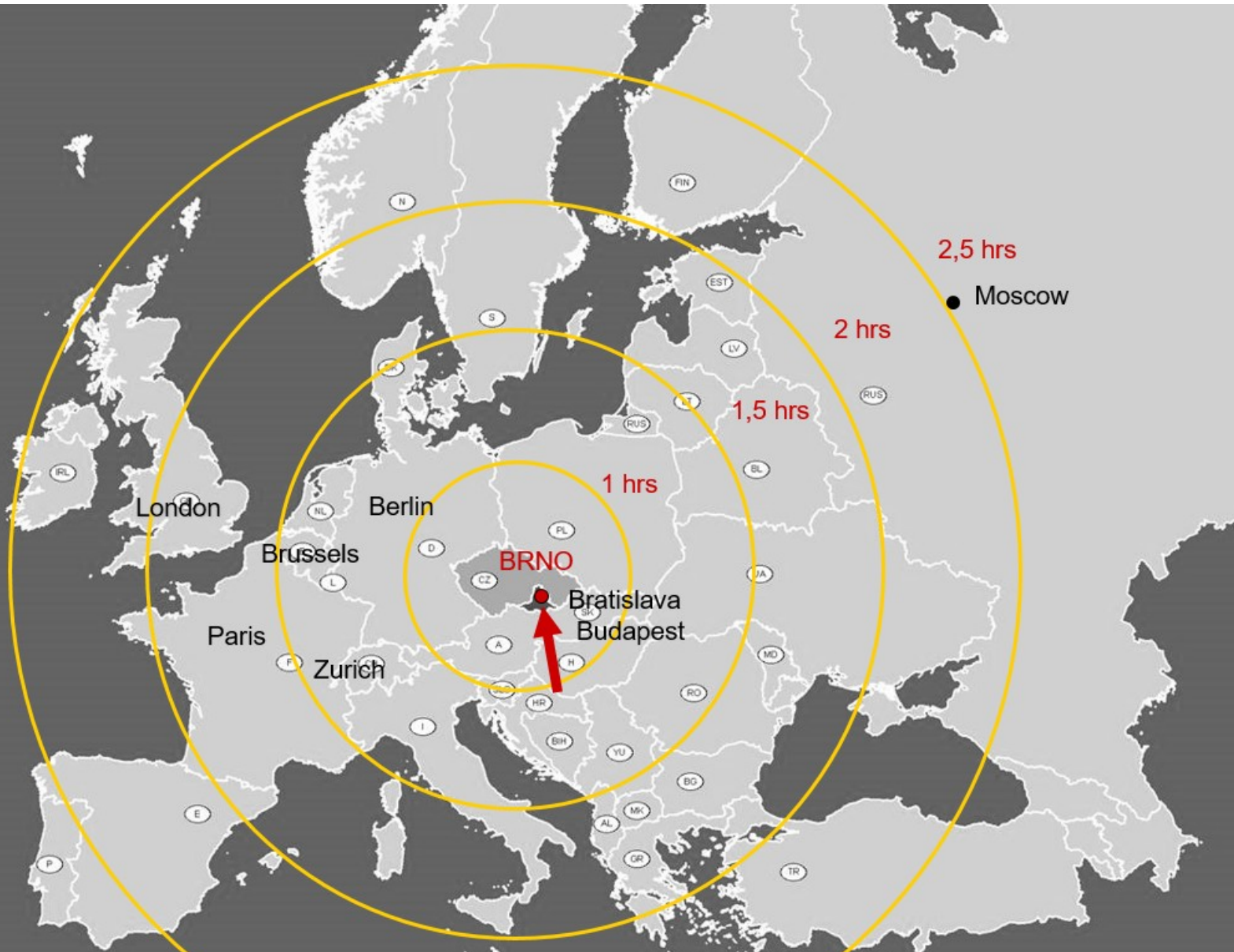




Masaryk University

Faculty of Sports Studies

Strategic location in Central Europe



Brno: popular student city



MUNI
SPORT

Masaryk University



Masaryk University

- 2nd largest university in the Czech Republic
- 100 years of experience
- 9 faculties
- 32 000+ students
- Top level research
- Strong international community



MU Faculties

9 faculties with more than 200 departments, institutes and clinics:

- Economics and Administration
- Law
- Medicine
- Science
- Arts
- Education
- Informatics
- Social Studies
- Sports Studies



Wide study opportunities

- Full degree programs in Czech and English
- Various Exchange and study-abroad programs
- Summer Schools



Services for incoming students

- [ONLINE application](#)
- [International Student Guide](#)
- [Course catalogue](#)
- [Accommodation](#)
- [Orientation week](#)
- [International Students Club](#)



Faculty of Sports Studies

- Founded in 2002
- 1200+ students
- expanding dynamically and promoting attributes of healthy lifestyle
- Bachelor's, Master's and PhD study programmes
- Research in the field of biomechanics, physiology, sports medicine, sociology of sport etc.



Departments

- Department of **Athletics, Swimming and Outdoor Sports**
- Department of **Gymnastics and Combatives**
- Department of **Kinesiology**
- Department of **Sport Pedagogy**
- Department of **Social Sciences and Sport Management**
- Department of **Health Promotion**
- Department of **Sports Games**
- **University Sports Centre**



Study programs

Bachelor's

- **Personal and Condition Trainer**
- **Physiotherapy**
- **Physical Education and Sport**
 - Sports Management
 - Regeneration and Nutrition in Sport
 - Special Education of Security Bodies
 - Collective Games Referee
 - Sports Coaching

Master's

- **Teacher Training in Physical Education for Primary and Secondary Schools**
- **Condition Training and Applied Kinesiology**
- **Applied Sport Education of Security Bodies**
- **Sports Management**

PhD

- **Kinanthropology (ENG)**

Courses in English for exchange students

Sport games

- Futsal
- Basketball
- Table Tennis
- Nontraditional Games



Outdoor sports

- Hiking
- Outdoor activities
- Tourism



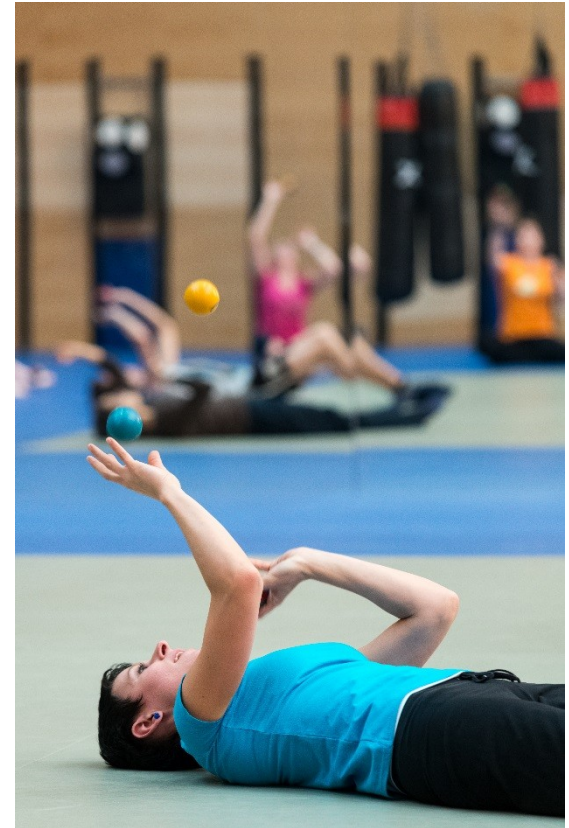
Courses in English for exchange students

Corrective and harmonization exercises

- Corrective exercises
- Adapted physical education
- Harmonization exercises
- Psychomotricity
- Physical activity with diseases and disabilities

Nutrition and physiology

- Physiology of sport and exercise
- Applied sport nutrition



Courses in English for exchange students

Combatives

- Self defence
- Combative activities
- Summer school



Wellness and fitness

- Wellness – health promotion in practice
- Fitness
- Strength training and conditioning
- Body and mind



Courses in English for exchange students

Social sciences and management

- Sociology in sport
- Exercise and sport psychology
- Human Resources Management in sport
- Case studies in sport management
- Sport Business Intelligence:
Digitalization and Social Media in Sport



Information technology in sport

- 2D and 3D motion analysis

First aid

- First Aid



Courses in English for exchange students

Physical education

- Volleyball
- Badminton
- Cognitive hiking
- Climbing
- Pilates
- Spiral stabilization
- Rollpilates
- Fitnessyoga
- Zumba
- Fitness gym
- Wellnes FIT programe



MUNI SPORT

Sports facilities



Laboratories



Regular events

- International **Summer School of Combatives**
- International **Summer School of Sport and Exercise Sciences**
- International **Summer School of Team Psychology in Practice**
- International conference **Sport and Quality of Life**



The core areas of faculty research

▪ ***Dynamic and Kinematic Aspects of Movement***

(Kinematic analysis of motion, Plantar pressure distribution diagnosis, Development of insoles, Isokinetic dynamometrics, Prevention of injuries – falling techniques, Analysis and application of personal self-defence techniques, Research and Diagnostics of movement abilities, Qualitative and quantitative physical activity indicators of selected population segments, Movement skills development and population fitness)

▪ ***Biomedical Aspects of Movement***

(Metabolic syndrome, Population nutritional characteristics, Food nitrates and muscular performance, Sports nutrition, The effect of PA on the course of selected oncological diseases treatment, Sports Physiotherapy, Overtraining, Human posture diagnostic, Extreme physical and mental stress, Workplace ergonomics, PA risks, Obesity (total, segmented), Sarcopenia, MicroRNA profile)

▪ ***Social Aspects of Physical Education and Sport***

(Managerial-economic aspects, Sport management, Business in sport, Sport organizations professionalization, Education, gradation and professionalism of sports teachers, Education towards safe behavior, Senior age - active aging, PA of people with specific needs, The relationship of sociodemographic characteristics and PA, Active forms of transport)

Dynamic and Kinematic Aspects of Movement

- **Kinematic analysis of motion**
 - 3D kinematic analysis of human motion
 - Kinematic analysis of sport movement technique

- **Dynamic analysis of motion**
 - Plantar pressure distribution diagnosis
 - Development of insoles
 - Isokinetic dynamometrics

- **Prevention of injuries – falling techniques**
- **Analysis and application of personal self-defence techniques**
- **Research and Diagnostics of movement abilities**
- **Qualitative and quantitative physical activity indicators of selected population segments**

- **Movement skills development and population fitness**
 - Intervention programs effectiveness (stimulation of strength, speed, endurance, flexibility, coordination skills)
 - The effectiveness of different types of sports training periodization
 - Economy of endurance running (influence of step technique and the ground)
 - Intervention programs influence on movement economy
 - Intervention programs influence on selected indicators of population fitness

Biomedical Aspects of Movement

➤ Nutrition issues

- Metabolic syndrome research
- Population nutritional characteristics research
- Children population nutrition
- Food nitrates and muscular performance
- Sports nutrition

➤ Exercise and Health

- Physical activity and health status
- The effect of physical activity on the course of selected oncological diseases treatment
- Sports Physiotherapy
- Overtraining of children doing sports
- Research of human posture diagnostic optimization methods
- Research of body reactions to extreme physical and mental stress
- Back and peripheral hand circulation muscles dysfunction while working on PC
- Workplace ergonomics and its modification to reduce sick leave days
- Physical activity risks and methods of their identification
- Physical activity and obesity (total, segmented)
- Sarcopenia and physical activity
- Different types of physical activity impact on changes in microRNA profile

➤ Anthropometric and somatometrical characteristics of different population groups

Social Aspects of Physical Education and Sport

- **Physical activity risks and methods of their identification**
- **Managerial-economic aspects**
 - Sport management research center
 - Managerial concepts of quality and performance and their integration into sports organizations
 - Business in sport
 - Sport organizations professionalization
- **Pedagogical aspects**
 - Application of pedagogical knowledge into an environment of physical education and sport
 - Research of education, gradation and professionalism of sports teachers
 - Education towards safe behavior
- **Psychological aspects**
 - The issue of senior age - experience of an active aging (old age) in good physical condition, intergenerational connection
 - Physical activity for people with specific needs (with regard to age and environment – leisure, school)
- **Sociological aspects**
 - Pathological phenomena in sport, causes and prevention
 - Movement from the sociological point of view
 - The relationship of sociodemographic characteristics and physical activity
 - Active forms of transport in the context of the Czech sedentary society

Research Methods

BIOMOTOR LABORATORY

- 3D kinematic analysis: SIMI motion
- Dynamometric platform and walkway: Bertec, Provec, FitroForce
- Stabilometric platform: FitroSway
- Analysis of pressure distribution: Emed, Pedar
- Telemetry systems including EMG: Mye, Vernier
- Accelerometer sensors: ActiGraph, Garmin

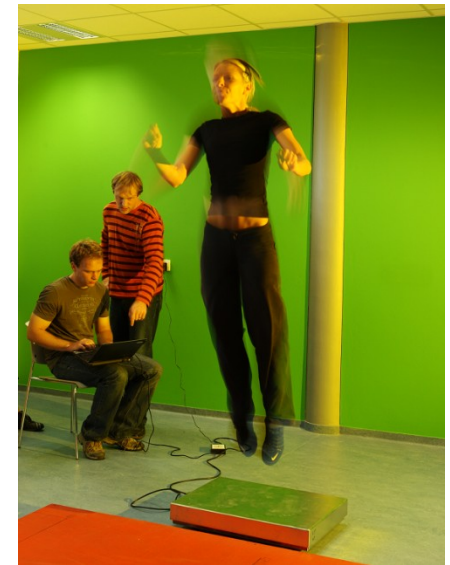


HEALTH SUPPORT LABORATORY

- Bioelectrical impedance: In Body 230
- Indirect calorimetry: Cortex Metylyzer 3B
- Software NutriPro

LABORATORY OF SPORTS MEDICINE

- Bicycle ergometer: KETTLER Ergorace, ERGOLINE Ergoselect 200, LODE Excalibur,
- Treadmills: LODE Katana, SAPILO Warulu,
- Analyzers of respiratory gases: CORTEX Metalyzer 3B, OXYCON Mobile,
- Spirometry: SPIROBANK, MICRO Plus
- Analyzers of heart rate variability: VarCor, TF4 DiANS PF8/4,
- Thermographic cameras: FLUKE TiR, FLIR, SC260
- Jump ergometer: FITTRONIC,
- Anthropometric instrumentarium



Activities and projects

- Biomechanical shoes and insoles (cooperation with company Boty Hanák)
- Interventional exercises for patient with leukemia – PA influence on patients with oncological problems



Activities and projects

FINISHED PROJECTS:

- Nutrition and efficiency of muscle power
- Kinematical analysis of gait in pregnancy
- Analysis of game aspect in tennis
- Load intensity during game in elite basketball female players
- Plyometric intervention and efficiency of running and cycling
- Testing process in elite volleyball female teams
- Comparison of Czech and international governmental elite sport support
- Identity of Police organizations
- PA of school kids – accelerometric measurement

Activities and projects

- Intergeneration context between **grandparents and grandchildren** with special needs in countries with different socio-cultural background (travnikova@fsps.muni.cz)
- **Nutrition and efficiency** of muscle power (pstejskal@fsps.muni.cz)
- Kinematical analysis of gait in pregnancy + **pregnancy shoes** (zvonar@fsps.muni.cz)
- Analysis of game aspect in **tennis** (zhanel@fsps.muni.cz)
- Load intensity during game in elite **basketball** female players (nykodym@fsps.muni.cz)
- Plyometric intervention and efficiency of **running and cycling** (cacek@fsps.muni.cz)
- Testing process in elite **volleyball** female teams (pavlikj@fsps.muni.cz)
- Comparison of Czech and international governmental elite **sport support** (nova@fsps.muni.cz)
- Identity of Police organizations (reguli@fsps.muni.cz)
- Analysis of gait of patients with Parkinson disease (hedbavny@fsps.muni.cz)
- Physical activity effect on mobility, physical abilities and body composition of **senior** women (hlavonova@fsps.muni.cz)

Activities and projects

- Influence of training load on **plantar pressure** (sebera@fsps.muni.cz)
- Influence of self-defense course on psychological personal characteristics of disabled on **wheelchair** (skotakova@fsps.muni.cz)
- Influence of isokinetic interventional program on patients with **osteoarthritis** (tvodicka@fsps.muni.cz)
- Compression sleeves influence on sport **performance and regeneration** (kumstat@fsps.muni.cz)
- Life after **sport career** (svobodova@fsps.muni.cz)
- Innovation of Combative Activities Curricula in University Studies (vit@fsps.muni.cz)
- Profile of participants at **Special Olympics**: aspects of fitness, skills and social behaviour indicators (valkova@fsps.muni.cz)
- Physical activity and capability of **school children** (zvonar@fsps.muni.cz)
- Nutrition and obesity in child age (hrcirikova@muni.cz)
- **Inclusion** in educational process (skotakova@muni.cz)