# Academic Year 2026 Waseda University
# Graduate School of Sport Sciences
# Description of Research Themes and List of Subject Codes

The following is information **as of April 15th, 2025**.

## <Points to note>

1 **Contact your prospective supervisor, discuss your research interest and have your research proposal approved. Make an initial contact with the prospective supervisor by sending an e-mail to the supervisor's e-mail address listed after p.7.**

**<attention>**
We would response only the message related with initial contact. Regarding of the question about admission, by sending an e-mail to **supoken-eng@list.waseda.jp**.

2 **On the message, you should indicate the following information:**

1) The name of the area of specialization,
2) The type of program (Master's Program or Doctoral Program),
3) Your full name,
4) Your contact information (Address, phone number, e-mail address, etc.) and
5) Prospective supervisor's name

*Please attach your CV, and a document file (e.g. PPT, word) describing your research interest.

In some cases, such as overseas business trip, we may not be able to contact the supervisor right away or the reply may be delayed. Please start consulting and confirming with the supervisor early on.

3 Enter the research guidance code in the application form without mistake by referring to the following pages.

## <List of Subject Code : English-based Master's Program>

| Research Area | Subject code [Master] | Specialization | Qualification | Name of supervisor |
|---|---|---|---|---|
| Health and Exercise Science 1 | EN0 | Muscle Biology | Professor | Takayuki Akimoto |
| | EN2 | Exercise Physiology | Professor | Masashi Miyashita |
| | EN1 | Sleep Science | Professor | Masaki Nishida |
| | ENS | Sports Epidemiology | Professor | Susumu Sawada |
| Health and Exercise Science 2 | EN5 | Biodynamics | Professor | Yasuo Kawakami |
| | EN7 | Sport Psychology | Professor | Hiroaki Masaki |
| | EN6 | Sport physiology & Neuroscience | Professor | Yudai Takarada |
| | EN3 | Biomechanics | Professor | Toshimasa Yanai |
| Sport Management | EN8 | Sport Marketing | Professor | Hirotaka Matsuoka |
| | EB0 | Sport & Entertainment Management | Professor | Shintaro Sato |
| | EB4 | Sport Promotion | Professor | Yoshio Takahashi |
| | EB5 | Strategic Management in Sport | Associate Professor | Yoshihiro Oi |

## <List of Subject Code : English-based Doctoral Program>

| Research Area | Subject code [Doctor] | Specialization | Qualification | Name of supervisor |
|---|---|---|---|---|
| Sport Culture | M25 | Culture of Sport | Professor | Kohei Kawashima |
| | M35 | Sport Education | Professor | Eiichiro Fukami |
| | M45 | Sports and Body Culture in Asia | Professor | Ko Takashima |
| Sport Business | N30 | Sport Organization | Professor | Seiichi Sakuno |
| | N26 | Sport Marketing | Professor | Hirotaka Matsuoka |
| | N36 | Sport & Entertainment Management | Professor | Shintaro Sato |
| | N40 | Sport Promotion | Professor | Yoshio Takahashi |
| Sports Medicine | P32 | Health and Behavioral Sciences | Professor | Koichiro Oka |
| | P34 | Sports and Exercise Medicine | Professor | Koji Kaneoka |
| | P36 | Preventive Medicine | Professor | Katsuhiko Suzuki |
| | P38 | Athletic Training | Professor | Norikazu Hirose |
| | P42 | Muscle Biology | Professor | Takayuki Akimoto |
| | P44 | Exercise Metabolism | Professor | Masashi Miyashita |
| | P46 | Functional Anatomy for Orthopaedic Sports Medicine | Professor | Tsukasa Kumai |
| | P50 | Health Education | Professor | Kaori Ishii |
| | P54 | Sleep Science | Professor | Masaki Nishida |
| | P48 | Sports Epidemiology | Professor | Susumu Sawada |
| | P56 | Sports Physiology | Professor | Seiji Maeda |
| | P58 | Applied Physiology | Professor | Motohiko Miyachi |
| | P66 | Environmental Physiology | Associate Professor | Yuri Hosokawa |
| | P68 | Sports Biochemistry and Genetics | Associate Professor | Kumpei Tanisawa |
| Exercise Science | Q05 | Biodynamics | Professor | Yasuo Kawakami |
| | Q30 | Sport Psychology | Professor | Hiroaki Masaki |
| | Q38 | Sport physiology & Neuroscience | Professor | Yudai Takarada |
| | Q42 | Biomechanics | Professor | Toshimasa Yanai |
| | Q48 | Exercise Physiology | Professor | Naoyuki Hayashi |
| Coaching | R30 | Coaching of Budo: Japanese Martial Arts | Professor | Misaki Iteya |

# Academic Year 2026 Waseda University

# Graduate School of Sport Sciences Contents of Research Themes

## Master's program

- Health and Exercise Science

The master's program with a specialization of health and exercise science is designed to help students develop a thorough understanding of the basic principles and comprehensive knowledge related to health and exercise science. Students will learn fundamental research skills in the topic of their choice within the field of specialization. Conducting their own research projects and submitting a master's thesis are required for completing the master's degree program.

### Health and Exercise Science 1

By Akimoto, Sawada, Miyashita, Nishida

Health and exercise science is an interdisciplinary field of research/studies and the discipline of health and exercise science focuses on the integration of exercise/physical activity into health care, sports performance, disease prevention and rehabilitation. The primary focus of this course is promoting health and preventing and treating disease through healthy behaviors, emphasizing physical activity and nutrition.

Graduate students in this course will explore physiology, psychology, nutrition, metabolism, public health and physiological principles of exercise. We specifically focus on the following themes and instruct related research.

<Master's Thesis Advisor>

| **Subject code** | Specialization | Qualification | Name |
|---|---|---|---|
| **EN0** | Muscle Biology | Professor | Takayuki Akimoto |
| **ENS** | Sports Epidemiology | Professor | Susumu Sawada |
| **EN2** | Exercise Physiology | Professor | Masashi Miyashita |
| **EN1** | Sleep Science | Professor | Masaki Nishida |

**Health and Exercise Science 2**

By Kawakami, Masaki, Takarada, Yanai

The master's program with a specialization of health and exercise science focuses on the integration of exercise/physical activity into health care, sports performance, disease prevention and rehabilitation. In this directed research, graduate students will learn fundamental research skills directly from the experts who specialize in the field of exercise science, such as cognitive neuroscience, biodynamics, biomechanics, motor control, motor nerve physiology and sport psychology. The goal for all students enrolled in this directed researches are to complete their own research proposal, conduct experiments and write a master's thesis to fulfill the requirement for the master's degree.

<Master's Thesis Advisor>

| **Subject code** | Specialization | Qualification | Name |
|---|---|---|---|
| **EN5** | Biodynamics (Biomechanics & Exercise Physiology) | Professor | Yasuo Kawakami |
| **EN7** | Sport Psychology | Professor | Hiroaki Masaki |
| **EN6** | Sport physiology & Neuroscience | Professor | Yudai Takarada |
| **EN3** | Biomechanics | Professor | Toshimasa Yanai |

## ● Sport Management

### Sport Management (Directed Research M) A/B

By Matsuoka, Sato, Takahashi, Oi

The master's program with a specialization of sport management focus on the effective management of sport organizations such as national and international sport governing bodies, professional sports leagues, teams and clubs. Students will acquire knowledge on various management elements related to sport such as Sport management, Sport marketing, Sport governance, Sport policy, Sport event and facility management, and Sport finance and economics. From these academic viewpoints, students will analyze sport phenomena, conduct their own academic as well as practical research projects and prepare a master's thesis which is required for completing the master's degree program.

<Master's Thesis Advisor>

| **Subject code** | Specialization | Qualification | Name |
|---|---|---|---|
| **EN8** | Sport Marketing | Professor | Hirotaka Matsuoka |
| **EB0** | Sport & Entertainment Management | Professor | Shintaro Sato |
| **EB4** | Sport Promotion | Professor | Yoshio Takahashi |
| **EB5** | Strategic Management in Sport | Associate Professor | Yoshihiro Oi |

## Each Professor's Research Topics

### 1. Sport Humanities and Pedagogy Research Area

| Research Domain | Culture of Sport（Doctoral Program） | **Supervisor's Name** | **Kohei Kawashima** |
|---|---|---|---|
| Research Topics | | Degree | Doctor of Philosophy, Brown University |
| Description | Based on methodologies of history of sport and anthropology of sport, my field of study covers the histories and contemporary societies of the United States and Japan. More specifically, I welcome projects that seek to investigate the meanings and roles of any or all of class, race/ethnicity, and/or gender identities for and through the foundation and development of modern sports in the United States and/or Japan during the early-modern and/or modern eras. I also welcome projects that target at the process of the spread of American ideologies and philosophies of sport, and/or specific games of sports, such as baseball, American football, basketball, and volleyball to Meiji, Taisho, Showa, Heisei, and Reiwa Japan, and their impacts over the thoughts and activities of athleticism in Japan. | | |
| Keywords | United States, class, race, ethnicity, gender, Japan, history, anthropology | | |
| Web page | | | |
| E-mail | kawashimakohei■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Sport Education（Doctoral Program） | **Supervisor's Name** | **Eiichiro Fukami** |
|---|---|---|---|
| Research Topics | Effective teaching and coaching methods in PE classes and youth sports teams | Degree | Ph.D., Tsukuba University |
| Description | This course will pursue how people can develop a love of exercise and sports, enjoy sports throughout their lives, and enrich their lives. In particular, focusing on children who lack confidence or have difficulty with exercise, we would like to clarify what kind of approach instructors need to take in order for them to enjoy and engage in sports. The research approach includes visiting schools and clubs to observe classes and activities, reading literature on physical education and sports, and actually testing what they have learned theoretically through physical exercise. In this course, we welcome not only those who aim to become leaders, but also those who love sports and want to bring joy and inspiration to many people through sports. | | |
| Keywords | PE class, PE teacher, teaching, coaching, sport team, | | |
| Web page | | | |
| E-mail | eiichiro■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| | | | |
|---|---|---|---|
| Research Domain | Sports and Body Culture in Asia (Doctoral Program) | **Supervisor's Name** | **Ko Takashima** |
| Research Topics | History of Sports, Asian History | Degree | Doctor of Letters, Kyoto University |
| Description | This course offers guidance on history of sports and body culture in Asia. My research interests include (1) introduction of modern western sports into East Asia, (2) transnational relationships among East Asian countries through sports, (3) history of sports in imperial Japan. Students are required to acquire knowledge and methodology of history and sport sciences as well as to view sports and body culture critically from a broad perspective. | | |
| Keywords | Asia, History | | |
| Web page | | | |
| E-mail | taka-shimako■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

## 2. Sport Business Research Area

| | | | |
|---|---|---|---|
| Research Domain | Sport Organization（Doctoral Program） | **Supervisor's Name** | **Seiichi Sakuno** |
| Research Topics | management for physical education and sport | Degree | Ph.D., Kanazawa University |
| Description | The relationship between people and sports is not limited to "to play" and "to watch" but is wide-ranging including "to support" and "to know." In addition, these relationships often involve some sort of organizations. In this research guidance course, we deepen the understanding of organizations as a framework for grasping and explaining diverse physical education and sport and carry out research on organizational management methods based on this. Furthermore, we aim to acquire basic knowledge as well as research and analysis methods (quantitative and qualitative) for driving forward research based on each student's interest. Research themes include leadership, motivation, organization, and human resource management in management of various sports organizations and we grasp them primarily from the perspective of micro- to meso-level organizational theory. In addition, the course also offers guidance on a wide range of themes including volunteer management and collaboration between school sports and community sports (see the website for details). | | |
| Keywords | sport organization, community sports, sport club, HRM, management for physical education | | |
| Web page | https://sakuno.w.waseda.jp/ | | |
| E-mail | sakuno■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Sport Marketing (Master's Program, Doctoral Program) | **Supervisor's Name** | **Hirotaka Matsuoka** |
|---|---|---|---|
| Research Topics | sport management, sport marketing, sport consumer behavior | Degree | Ph.D. (sport management), Ohio State University |
| Description | Marketing is indispensable in business of sport organizations for both professional sports clubs and teams that sell "spectator sports" and clubs and associations that sell "participation sports." Sport marketing can be divided into "marketing of sport" that offers sports by efficiently producing them, and "marketing through sport" in which businesses implementing promotional activities by leveraging sports, and in both these cases utmost priority is placed on understanding the sport consumers (those who play or watch sports). The course focuses on understanding sport consumers' psychology and behavior, which is necessary for effective marketing in sport business sites and the students acquire research methods required for their interpretation. Research themes may include motivation of sport spectators, fans' commitment to a particular sport team, perception of service quality and satisfaction among sport participants and spectators, impact of sports club promotion and that of sports sponsorship. | | |
| Keywords | sport business, sport marketing, sport consumer, sport sponsorship | | |
| Web page | | | |
| E-mail | matsuoka-hiro■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Sport & Entertainment Management (Master's Program, Doctoral Program) | **Supervisor's Name** | **Shintaro Sato** |
|---|---|---|---|
| Research Topics | consumer behavior in sport, tourism, & entertainment; sport management | Degree | Ph.D. (Sport Management), University of Florida |
| Description | Do we really know what kinds of experiences can make consumers happy? Why do some businesses succeed while others do not? How can sport and entertainment products contribute to city and community development? To answer these questions, our lab takes a multi-disciplinary approach (e.g., psychology, strategic management, economics) to conduct various research in sport, tourism, and entertainment contexts. The mission of our lab is to provide scientific evidence that can help various stakeholders' decision-making processes, including cities and government, companies, and consumers. Members of our lab are highly expected to (1) deliver academic presentations at recognized conferences and (2) publish scientific papers in peer-reviewed journals during the program. | | |
| Keywords | sport management, consumer behavior in sport, tourism and entertainment | | |
| Web page | | | |
| E-mail | satoshintaro■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Sport Promotion (Master's Program, Doctoral Program) | **Supervisor's Name** | **Yoshio Takahashi** |
|---|---|---|---|
| Research Topics | Sport Policy, Sport Promotion, Sport Sociology | Degree | Dr. Sport and Wellness Promotion, University of Tsukuba |
| Description | Sport is a culture that has spread as an activity for spending happy hours of leisure and boredom. Such culture develops in space and time constrained by the social environment and social and cultural institutions. Therefore, this research program aims to develop the ability to analyze sports-related policies, administration, politics, and economics using humanities and social science methods. Graduate students are expected to have an interest in social issues, to write papers on the relationship between sport and these issues using logical thinking, and to have the motivation and ability to not only promote sport, but also to propose and implement solutions to social issues through sport. | | |
| Keywords | Policy Process, Public Administration, Sports Promotion, Sociology of Sport | | |
| Web page | | | |
| E-mail | takahashi.yoshio■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Strategic Management in Sport (Master's Program) | **Supervisor's Name** | **Yoshihiro Oi** |
|---|---|---|---|
| Research Topics | Strategic Management in Sport<br>Global Sport Business | Degree | Doctor of Business Administration,<br>Chuo University |
| Description | This course gives you a real and hands-on experience of the global sports business. You will learn both theory and real-world practice, moving back and forth between them in an exciting way. We will look at the sports business from a strategic point of view and explore how it works today, as it continues to change and become more complex.<br>With 25 years of experience in the sports business world, I will explain how professional sports leagues and organizations are managed. We will also learn how athletes build their careers, how sports generate revenue through media and sponsorship, the economic and social impact of major sports events, and the latest trends such as digital media and fan engagement.<br>This course is not just about memorizing facts. You will be encouraged to think deeply about what the sports business really means to society. | | |
| Keywords | Strategic Management in Sport, Global Sport Business | | |
| Web page | | | |
| E-mail | y.oi■waseda.jp (Please change the "■" to "@" when sending an e-mail) | | |

## 3. Sport Medicine Research Area

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|---|---|---|---|
| Research Domain | Health and Behavioral Sciences Research Guidance (Doctoral Program) | **Supervisor's Name** | **Koichiro Oka** |
| Research Topics | health and behavioral sciences; behavioral epidemiology | Degree | Ph.D. (Human Sciences), Waseda University |
| Description | The course offers guidance for research on behavioral change, especially, reducing sedentary behavior and physical inactivity in various setting (workplace, community, hospital, and school, etc). Specifically, (1) development of lifestyle modification program based on behavioral theory (e.g., ecological model focusing on environmental factors), (2) interventions for reducing sedentary behavior in the workplace, (3) dissemination of health information utilizing health communication, (4) development/evaluation of a program for long-term care prevention among frail older adults (improvement of physical function, prevention of dementia, etc.), (5) application of cognitive behavioral therapy for senior citizens' self-management of knee and back pain, (6) improvement of non-cognitive ability among children and adolescents through sports/outdoor activities, and (7) psychological support for athletes based on cognitive behavioral therapy. The course supports the students so that they will learn the perspective and specific methods of behavioral scientific approach that is useful in practice of health promotion through health care, welfare, medical/nursing/rehabilitation, school education and sports instructions. | | |
| Keywords | sedentary behavior, physical inactivity, behavioral change, health communication, cancer prevention, dog walking, cardiometabolic health, long-term care prevention, musculoskeletal disorders, cognitive behavioral therapy, mental health, non-cognitive ability, walkability/built environment, social capital | | |
| Web page | https://www.koka.tokyo/ | | |
| E-mail | koka■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Sports and Exercise Medicine (Doctoral Program) | **Supervisor's Name** | **Koji Kaneoka** |
|---|---|---|---|
| Research Topics | sports medicine; orthopedics, biomechanics | Degree | Ph.D. in medical science, Tsukuba University |
| Description | The course clarifies pathogenesis of spine disorder among athletes such as back pain and intervertebral disc disorder as well as spine injuries using methods such as epidemiological research, biomechanical analysis, and electromyographic analysis. Using the outcome, we will come up with methods to prevent disorders and injuries that are based more on scientific facts, implement them in practice, and assess their effects in search of more effective preventative measures. Moreover, we will develop exercise therapy for a wider range of patients, not limited to athletes, with spine disorders represented by back pain using the knowledge gained in this process and practice them. | | |
| Keywords | back pain, cervical spine injury, traumatism mechanism, disability prevention, impact biomechanics, exercise therapy | | |
| Web page | | | |
| E-mail | kaneoka■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Preventive Medicine (Doctoral Program) | **Supervisor's Name** | **Katsuhiko Suzuki** |
|---|---|---|---|
| Research Topics | applied physiology, internal medicine, immunology | Degree | M.D., Ph.D (medical sciences), Hirosaki University |
| Description | We study methodology on analyses and assessments of physical stress and tissue damage due to exhaustive exercise and training together with their preventive countermeasures such as nutrition, supplementation, rehydration and alternative medicine. Specifically, host defense mechanisms such as leukocyte functions, stress hormone and cytokine dynamics, oxidative stress responses, and skeletal muscle and other organ damage/recovery are analyzed in relation with exercise and training. Also, pathological process and prevention of lifestyle-related disease and aging are studied by human and animal studies. Students are required for some experiences of biological and chemical experiments, statistical analyses and presentation skills so that they can acquire advanced methods and techniques of medical and life sciences-based approach for research activities. | | |
| Keywords | exercise, leukocyte, cytokine, inflammation, oxidative stress, aging, lifestyle-related disease | | |
| Web page | http://www.f.waseda.jp/katsu.suzu/english | | |
| E-mail | katsu.suzu■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Athletic Training (Doctoral Program) | **Supervisor's Name** | **Norikazu Hirose** |
|---|---|---|---|
| Research Topics | athletic training, conditioning, athletic injury prevention, talent identification and development | Degree | Ph.D., University of Tokyo |
| Description | The Evidence Based Research in Athletic Training course introduces the research process in athletic training with an emphasis on evidence-based practice. This course will focus on research associated with prevention and reconditioning of common athletic injuries. Additionally, the course will explore strength and conditioning research. Ongoing projects include treatment of skeletal muscle and myofascial injuries, role of neuromuscular control in lower extremity injuries, conditioning strategy in hot environment and development of effective fitness training for soccer players. The course will involve a multidisciplinary approach, incorporating scientific (research) and practical application based on clinical studies. | | |
| Keywords | athletic training, prevention of sports injuries, conditioning, football (soccer) | | |
| Web page | | | |
| E-mail | toitsu_hirose■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Muscle Biology (Master's Program, Doctoral Program) | **Supervisor's Name** | **Takayuki Akimoto** |
|---|---|---|---|
| Research Topics | athletic training, conditioning, athletic injury prevention, talent identification and development | Degree | Ph.D. in medical science, University of Tsukuba |
| Description | Study on the mechanism of muscle plasticity by mechanical stress.<br>The main research topics of the current laboratory are (1) Molecular mechanism of skeletal muscle plasticity by mechanical stress, (2) Molecular mechanism of exercise-induced health benefits, and (3) the development of *in vitro* construction of skeletal muscle tissue.<br>For Ph.D. candidates, I would like to train you to be a scientist who can set autonomous subjects that you are willing to explore, conduct experiments, analyze data, write and publish papers, and obtain research funding. | | |
| Keywords | Molecular & Cellular Biology, Reverse Genetics, Biotechnology, Transcriptional regulation, Post-transcriptional regulation, Vision, Hard-work, Team-work | | |
| Web page | https://www.waseda.jp/sem-muscle/index.html | | |
| E-mail | axi■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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|---|---|---|---|
| Research Domain | Exercise Metabolism (Master's Program, Doctoral Program) | **Supervisor's Name** | **Masashi Miyashita** |
| Research Topics | Exercise Metabolism, Exercise Physiology, Exercise Nutrition, Eating Behaviour | Degree | Ph.D., Loughborough University, United Kingdom |
| Description | My research interests are in the physiology and nutrition of physical activity (exercise/sports and daily activities) and public health with an interest in both the basic science of physical activity and the applied aspects that relate to health in physical activity. Much of my work has examined the effects of physical activity on risk factors for cardiovascular disease. A major focus of my research has concerned the effects of physical activity on fat (triacylglycerol), carbohydrate (glucose) and protein (amino acids) metabolism after meals in humans. Another main activity includes physical activity and appetite regulation, nutrition and exercise performance, and recovery science in humans. I also have an established network with my domestic and international collaborators including academic institutions and industries for conducting cutting-edge research on physical activity and health or performance. | | |
| Keywords | postprandial metabolism, appetite regulation, exercise performance, public health | | |
| Web page | https://miyashita.w.waseda.jp/en/index.html | | |
| E-mail | m.miyashita■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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|---|---|---|---|
| Research Domain | Functional Anatomy for Orthopaedic Sports Medicine (Doctoral Program) | **Supervisor's Name** | **Tsukasa Kumai** |
| Research Topics | Sports Medicine; Functional Anatomy; Orthopedic Foot & Ankle Surgery; Dance Medicine; Cycling Medicine | Degree | Ph.D. in medical science, Nara Medical University |
| Description | Musculoskeletal overuse injury may be a great trouble to cause athletes not only performance loss but also carrier ending. Understanding pathomechanics from a point of view of functional anatomy is essential to provide proper treatments and prevention strategies to the injuries. Aim of this course is to establish an idea for athletes to help prevent injuries and return earlier to play. Our laboratory will give opportunities of biomechanical analysis, electromyography, ultrasound technique, cadaver dissection. The main research interests of our lab are (1) anatomical evidences for sports specific motions and disorders, (2) the morphology and repair process of tendon-bone junction (enthesis biology), (3) the morphology and function of heel fat pad, (4) soft-tissue elasticity by shear wave elastography, (5) echo-guided intervention and surgery, (6) extracorporeal shock wave therapy. | | |
| Keywords | functional anatomy, tendinopathy, overuse injury, minimally invasive treatment | | |
| Web page | https://prj-kumai-waseda.w.waseda.jp/ | | |
| E-mail | kumakumat■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Health Education(Doctoral Program) | **Supervisor's Name** | **Kaori Ishii** |
|---|---|---|---|
| Research Topics | growth and development, health education | Degree | doctor (medicine), Tokyo Medical University |
| Description | one of Japan's most important issues is the maintenance and improvement of lifelong physical and psychological health. Therefore, it is crucial to develop effective measures for acquiring a healthy lifestyle. In order to increase healthy lifestyles, it is necessary to understand the health behaviors of the population and how these behaviors can affect physical and psychological health, identify the factors related to these health behaviors, and establish and promote an approach method. The course is concerned with health promotion in the field of health education (particularly physical activities and sedentary behaviors). The main theme of this course is applying various theories of health education, elucidating factors which are related to the promotion of physical activities and the decrease of sitting activities in each stage of life, from childhood to old age, and discussing methods to promote these activities. The course aimed to assess the health promotion needs of the population, scientifically identify solutions, and determine specific methods that can be utilized in the health education setting. | | |
| Keywords | health behavior, growth and development, behavioral science | | |
| Web page | | | |
| E-mail | ishiikaori■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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|---|---|---|---|
| Research Domain | Sleep Science<br>(Master's Program, Doctoral Program) | **Supervisor's Name** | **Masaki Nishida** |
| Research Topics | sleep science, sleep medicine, sports science, chronobiology, psychiatry | Degree | M.D., Ph.D. Institute of Science Tokyo |
| Description | The laboratory aims to explore the intricate relationship between sleep, biological (circadian) rhythms, and sports or physical activity. Key research themes include:<br>1. The effects of sleep and daytime sleepiness on sports performance and physical activity.<br>2. The influence of sports and physical activity on sleep quality and patterns.<br>3. Investigating the associations between biological rhythms—particularly chronotype (morning or evening preference), social jet lag, and physical activity.<br>In the English-master's degree program, there is a strong emphasis on conducting cross-sectional research utilizing survey data. Applicants interested in experimental research should note that effective communication with participants is essential. Therefore, a functional level of Japanese proficiency is recommended. | | |
| Keywords | sleep, circadian rhythm, wearable device, electroencephalography, sleep disorder | | |
| Web page | https://nishida.w.waseda.jp | | |
| E-mail | nishida■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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|---|---|---|---|
| Research Domain | Sports epidemiology (Master's Program, Doctoral Program) | **Supervisor's Name** | **Susumu Sawada** |
| Research Topics | sports epidemiology, physical activity epidemiology, public health | Degree | Ph.D. in medicine, Juntendo University |
| Description | Sports epidemiology provides scientific evidence to society to solve the issues of preventive medicine, public health, and several sports fields.<br>· For master program, doctoral program [first half]<br>Our team will support you as follows, 1) setting an appropriate research theme, 2) finding relevant papers related to the theme, 3) critical appraisal of related papers, 4) making an appropriate study design for solving the research question, 5) implementation of the study, 6) appropriate analysis of the data, 7) appropriate interpretation of the results, 8) writing of the master thesis.<br>Through these processes, we will support the master's program students to become experts who contribute to society by utilizing scientific evidence. Also, we will support the building of the basic ability to proceed to the second half of the program for doctoral students.<br>· For doctoral program [second half]<br>Our team will support you as follows, 1) setting a research theme that's necessary to solve in society, 2) making high-quality study design for solving the research theme, 3) implementation of the study using appropriate methods, also appropriate analysis and interpretation of the results, 4) providing a research environment for cooperating with internationally renowned researchers to create high-quality papers.<br>Through these processes, we will support the building of the ability to solve the problem in preventive medicine, public health, and several sports fields. | | |
| Keywords | public health, health promotion, physical activity, physical fitness, biostatistics | | |
| Web page | https://sites.google.com/site/sssawadalab/ | | |
| E-mail | s-sawada■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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|---|---|---|---|
| Research Domain | Sports Physiology (Doctoral Program) | **Supervisor's Name** | **Seiji Maeda** |
| Research Topics | Sports Physiology, Applied Health Science | Degree | Ph.D., University of Tsukuba |
| Description | My research interest is in sports physiology and applied health science. A major focus of our research has concerned the effects of regular exercise and/or dietary improvement on arterial stiffness in middle-aged and older humans. Aging increases arterial stiffness. Increase in arterial stiffness is a key risk factor for cardiovascular disease. Our laboratory has demonstrated that regular aerobic exercise and/or dietary improvement results in a significant decrease in arterial stiffness in middle-aged and older humans. Furthermore, we have showed that vascular endothelium-derived vasoactive factors, such as endothelin-1 and nitric oxide, may be an important mechanism underlying the beneficial effect of regular aerobic exercise on arterial stiffness. | | |
| Keywords | aging, arterial stiffness, cardiovascular disease, exercise, diet | | |
| Web page | | | |
| E-mail | seiji.maeda■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| | | | |
|---|---|---|---|
| Research Domain | Applied Physiology (Doctoral program) | **Supervisor's Name** | **Motohiko Miyachi** |
| Research Topics | Exercise Physiology, Health and Sports Science | Degree | Ph.D., University of Tsukuba |
| Description | In the Applied Physiology Laboratory, professor and students are conducting research to elucidate the mechanism of physical adaptation by sports, exercise and diet, and to devise new methods for improving physical fitness and health status. We provide knowledge and opportunities for acquire the research methods of physiology and epidemiology to clarify the interaction between physical activity and diet for extending healthy life expectancy, and support writing their dissertation and establishing procedures for social implementation of research results. Especially, the doctoral students are gaining knowledge and experience regarding research preparation and performing such as acquisition of research funds and application for ethical review, implementation of safe and efficient experiments and surveys, and management of research execution such as fair publication and disclosure of research findings. Moreover, they aim to publishing academic papers and create intellectual property. The research topics of the Laboratory as follows; (1) associations between types of exercise training and adaptation of respiration, circulation, and metabolism, (2) effective physical activity and eating habits to prevent non-communicable diseases and frailty, (3) new methods of assessment for physical activity and fitness, (4) association between microbiome and lifestyle. Of course, we also support the practice on the research topics desired by each student. | | |
| Keywords | physiology, epidemiology, training, adaptation, physical fitness, microbiota, lifestyle, diet | | |
| Web page | https://w-rdb.waseda.jp/html/100002864_en.html | | |
| E-mail | miyachim■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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| Research Domain | Sports Biochemistry and Genetics (Doctoral program) | **Supervisor's Name** | **Kumpei Tanisawa** |
| Research Topics | exercise biochemistry, sports genetics, genomic epidemiology | Degree | Ph.D (Sport Sciences), Waseda Universty |
| Description | The Sports Biochemistry and Genetics laboratory has been conducting research on the effects of physical activity, diet, and other lifestyles on the human body and health as well as their underlying mechanisms using physiological, biochemical, epidemiological, and genetic approaches. We have also been focusing on the inter-individual variability in the response and adaptation to physical activity and diet as well as exploring their determinants. The current research topics of our laboratory are the following: (1) understanding of inter-individual variability in responses and adaptations to physical activity and diet and their determinants, (2) identification of genetic factors that determine inter-individual variability in physical fitness and athletic performance, (3) establishment of personalized exercise and nutritional prescriptions using genomic information and gut microbiome, (4) understanding of the mechanisms of disease prevention through physical activity and diet. This course offers guidance to students on learning the methods for human studies using biochemistry and genetic approaches as well as the entire process from designing research to writing papers. For students in the doctoral course, I will support students so that they can publish multiple papers in high-quality international journals during their studies. | | |
| Keywords | genetics, genomics, genetic variant, SNP, gut microbiome, omics, inter-individual variability, personalized exercise and nutritional prescriptions, physical activity, fitness, diet, lifestyle, health | | |
| Web page | https://sites.google.com/view/ktanisawa-lab | | |
| E-mail | tanisawa■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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| Research Domain | Environmental Physiology (Doctoral program) | **Supervisor's Name** | **Yuri Hosokawa** |
| Research Topics | Athletic Training, Sports Safety, Thermal Physiology | Degree | Ph.D. in Exercise Science, University of Connecticut (USA) |
| Description | Our research area focuses on exercise physiology in extreme heat and the etiology of exertional heat illness via a multidisciplinary approach by linking sports science, epidemiology, biometeorology, and public health. We aim to investigate and disseminate evidence-based treatment and prevention methods for exertional heat illness and other exertional disorders commonly observed in athletic, prehospital settings.<br>Furthermore, we are actively practicing the application of athletic training and sports medicine in the workplace to enhance workplace safety and improve workers' performance.<br>Key ongoing research and themes include (1) injury surveillance studies, (2) evidence-based policy-making for the prevention of sports-related sudden deaths, (3) development of heat acclimatization programs for tactical athletes, (4) establishment of exertional heat stroke pre-hospital management, and (5) evaluation of heat tolerance among athletes. | | |
| Keywords | exertional heat illness, heat tolerance, sports safety, prehospital medicine, event medicine, sudden deaths in sports | | |
| Web page | https://prj-spo.w.waseda.jp/spo/ | | |
| E-mail | yurihosokawa■waseda.jp.（Please change the "■"to "@"when sending an e-mail） | | |

## 4. Exercise Science Research Area

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| Research Domain | Biodynamics (Master's Program, Doctoral Program) | **Supervisor's Name** | **Yasuo Kawakami** |
| Research Topics | Biodynamics (exercise physiology, biomechanics, functional anatomy) | Degree | Ph.D., (pedagogy), The University of Tokyo |
| Description | In this course students carry out in-vivo measurements of morphological and functional features of the human body and musculoskeletal systems in relevance to the movement performance. Non-invasive visualization and quantification of anatomical and functional attributes of humans and contracting skeletal muscles are measured with tissue-imaging modalities such as ultrasonography and MRI, as well as biomedical analysis using 3-dimensional photonic scanning, dynamometry, electromyography and near infrared spectroscopy. We also collaborate with researchers in the field of anatomy for observations and testing of human donors' specimens. Muscle-tendon-fascia interactions are quantified in search for the factors that affect performance of daily physical activities and sports. Acute as well as chronic changes in the human body due to training, inactivity, growth, aging and fatigue are also in the scope of research. Undergoing projects include but not limited to: 1) Musculotendinous mechanics leading to movement performance or injury, 2) Individual variability & adaptability, and sex difference in musculoskeletal properties, 3) Growth-related changes in body dimensions, neural and anatomical features and exercise performance, 4) Health promotion of the elderly through exercise, and 5) Exercise performance enhancement through the development of outfit, footwear, and devices. | | |
| Keywords | skeletal muscle, tendon and fascia, ultrasound, MRI, biomedical signal & image processing, biometrics and engineering, growth, aging, athletic performance, individual and sex differences | | |
| Web pages | https://sites.google.com/view/waseda-biodynamics-lab-eng/<br>https://www.miraikan.jst.go.jp/research/facilities/HumanMovementPerformance/<br>https://www.instagram.com/kawakami_lab_waseda/ | | |
| E-mail | ykawa■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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| Research Domain | Sport Psychology (Master's Program, Doctoral Program) | **Supervisor's Name** | **Hiroaki Masaki** |
| Research Topics | sport psychology, exercise psychology, cognitive neuroscience, psychophysiology | Degree | Doctor (human sciences), Waseda University |
| Description | The aim of this research supervision is to clarify the cognitive and affective functions associated with sport behaviors by applying psychophysiological methodology (e.g., electroencephalogram, event-related potentials, functional MRI, and eye tracking measurements). The underlying mechanisms of motor learning, choking under pressure during a big game, the beneficial effect of exercise on cognitive functions, and performance monitoring are investigated. For example, when an ongoing movement deviates from the aimed (desired) movement, our brain detects the error and corrects it. We refer to this as performance monitoring. We can investigate these processes by recording event-related potentials. | | |
| Keywords | electroencephalogram, event-related potentials (ERPs), fMRI, eye tracker, motor learning, performance monitoring | | |
| Web page | http://www.waseda.jp/sem-masaki/ | | |
| E-mail | masaki■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

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| Research Domain | Sport physiology & Neuroscience (Master's Program, Doctoral Program) | **Supervisor's Name** | **Yudai Takarada** |
| Research Topics | Physiology, Neuroscience/Motor control,/Motor cortex, Motivation | Degree | Doctor (Multidisciplinary Sciences), University of Tokyo |
| Description | 1) It has been established that force levels of maximal voluntary contraction, in which a person believes their effort to be maximal, fluctuate constantly. Indeed, the maximal voluntary force has been found to be increased by various manipulations such as the sound of a gunshot, hypnotic suggestion, shouting, verbal encouragement, and motivational goal-priming. We search for a reason behind fluctuating maximal voluntary force. 2) Low-intensity resistance exercise combined with vascular occlusion ("KAATU") enhances endocrine response and motor system state, the training of which induces a marked muscular hypertrophy and concomitant increase in strength, even if the exercise load is much lower than that expected to induce muscular hypertrophy. We investigate the acute and long-term effects of the occlusive exercise on physiological and neuroscience-related variables, muscular function, and sport performance. 3) We try to develop a new training method on the basis of scientific findings obtained by the above 1) and 2). [Techniques: surface electromyography, pupillometry, Transcranial magnetic stimulation (TMS), (f)MRI, Upper extremity H-reflex measurement] | | |
| Keywords | Motor control, Motor cortex, Motivation, Resistance training, Vascular occlusion, Maximal volitional force, Force perception | | |
| Web page | https://scholar.google.co.jp/citations?user=8JwZqCIAAAAJ&hl=ja | | |
| E-mail | takarada■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Biomechanics (Master's Program, Doctoral Program) | **Supervisor's Name** | **Toshimasa Yanai** |
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| Research Topics | Sports biomechanics, Motion analysis, Injury mechanics | Degree | Ph.D., University of Iowa |
| Description | This course offers research guidance on biomechanics analysis of sports techniques and performance analytics of selected sports, aiming to help performers improve their techniques and minimize the risk of injuries. In biomechanics analysis, we measure various forces, such as ground reaction force, impact force, fluid force etc., to understand the physical load applied to athlete's body and capture the linear and angular motions of the body to describe the skills of sports performances. In performance analytics, we use various information technologies for gathering and analyzing big-data on baseball and golf to provide objective, valid and reliable observations of the performances. Using the outcome of these analyses and the laws of physics, we evaluate adequacy of the technique for each athlete, identify factors limiting their performance, find biomechanical risk of athletic injuries, and provide the athlete with specific guidelines to overcome the shortcomings. | | |
| Keywords | kinematics, kinetics, musculoskeletal injury, Newton mechanics, videography | | |
| Web page | http://researchers.waseda.jp/profile/en.ca21c8ec285c59a4a979d480589253e7.html | | |
| E-mail | tyanai■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

| Research Domain | Exercise Physiology (Doctoral Program) | **Supervisor's Name** | **Naoyuki Hayashi** |
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| Research Topics | Exercise Physiology, Applied Physiology | Degree | PhD in Medicine, Osaka University |
| Description | Based on physiological research, the teaching focuses on circulatory responses and the roles of sensory information on circulation. Student will conduct experimental research on the circulatory response to exercise itself and sport-supportive procedures (diet, massage, etc.) and its regulatory mechanisms through measurements of the circulatory system in human subjects. Students are mainly guided from the designing their own research questions and conducting research for the writing of their thesis. In addition, students will be guided to be able to make presentations at conferences and publish papers. | | |
| Keywords | peripheral circulation, ocular blood flow, cerebral blood flow, sensory information, vision, massage | | |
| Web page | http://researchers.waseda.jp/profile/en.ca21c8ec285c59a4a979d480589253e7.html | | |
| E-mail | naohayashi■waseda.jp（Please change the "■"to "@"when sending an e-mail） | | |

**5. Sport Coaching Research Area**

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| Research Domain | Coaching of Budo: Japanese Martial Arts (Doctoral Program) | **Supervisor's Name** | **Misaki Iteya** |
| Research Topics | Sports science and Coaching | Degree | Ph.D., Tsukuba University |
| Description | In the martial arts, including Judo, have inherited the traditional practice, however recently is executed the physical, skill, and tactics training to improve competition ability. Interestingly, a person can use the opponent's power in martial arts. In addition, there are particular body movements or manipulations, which do not use in other sports and daily activities. We study to measure the specific physical strength and analyze skill movement, thereby clarifying the efficiency of skills in top athletes. Research topics are:<br>1. Measurement the particular power during technique<br>2. Clarification of the mechanism of skills in experts<br>3. Development of the coaching method. | | |
| Keywords | | | |
| Web page | | | |
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