



SPORTS & PHYSIOTHERAPY

COURSE DESCRIPTION

Sports & Physiotherapy

Udayana University offers a study abroad program in Sports Science and Physiotherapy organized by the Faculty of Engineering and the Medical Faculty's Department of Physiotherapy. This comprehensive course covers theories, practices, physical trainings, workshops and excursions, designed for university students and sports professionals or physiotherapists. The 15-week course is offered every semester; all subjects are credited into European Credit Transfer System (ECTS). The amount of credits to be earned each semester is 30 ECTS.

MODULES

1. Water Sports (8 ECTS)
2. Sports Science & Physiotherapy (5 ECTS)
3. Physical Health & Fitness (7 ECTS)
4. Sports of the Tropics (5 ECTS)
5. Indonesian Language, History & Culture (5 ECTS)

EXCURSIONS & WORKSHOPS (tentative)

- Surfing Lessons at Bali Green Surf School
- Yoga Class at Pranava Yoga Bali
- Gravity Yoga at Pranava Yoga Bali
- Acro Yoga
- 1- Day Traditional Balinese Massage Workshop
- Canyoning: Guided Tour Through Bali Hidden Canyon
- River Rafting
- Scuba Diving
- Crossfit
- Muay Thai
- Surf Motion
- Visit Ocean Protection Project
- Traditional Healing: Taman Usada
- Movement Therapy

ELIGIBILITY

Bachelor students and master students in Sports Science, Physiotherapy, Physical Education or Medicine are eligible to join the study abroad program. Also sports practitioners and professionals from related backgrounds are welcome to participate in this course.

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ASSESSMENT & MARKING

Students have to meet all assessment criteria to be eligible for the final markings. The criteria include:

- Minimum of 75% of the class, workshop and excursion attendance. (Students have to sign the attendance list every time participating in class/excursions.)
- Submit all required assignments
- Attend mid and final exam
- Show active participation and ability in soft skills

GRADING AND CURRICULUM

Academic systems differ from country to country. In Indonesia, tertiary education is administered directly under the Ministry of Higher Education & Research. The full semester study abroad program does not grant a degree, but the courses provide students a maximum of 30 credit points/course, which are transferable to home universities. For the full amount of 30 ECTS Students have to participate in class, case studies, guest lectures, academic excursions/site visits and student's project.

An attendance of at least 75% is a prerequisite for admission to the exams. An absence of more than 3 weeks at a time leads to a deregistration. Compulsory attendance starts from the first day of orientation week.

WEEKLY EXCURSIONS

An academic excursion is organized once a week, i.e. every Thursday/Friday. The weekly excursions are the integral part of the study abroad program at Udayana University. Participation during the excursion is essential and also included in the 75 % attendance.

At the end of every excursion, students will be asked to submit a report paper to the class coordinator. The report must include the description of activities, a critical review on the topics related to study background and recommendation. Two excursion reports are compulsory to be submitted. The mark from these paper will influence until 10% of the final assessment of all subjects.

CERTIFICATES

Students will receive their official certificates from Udayana University personally at the farewell event or in digital form approximately 4 weeks after the final exams by email. At the end of the program, students who satisfactorily have completed all course requirements will be awarded with certificates as follows:

- A certificate stating that the student has attended the course for fully 15 weeks.
- An Academic Transcript showing the student performance on the program. The grades in the transcript are the final marks.
- A certificate stating that the student has participated in the workshop or certain academic excursions (on request).

SPORTS & PYSIOTHERAPY

CODE	MODULE	CLASS		GUEST LECTURING	WORKSHOP	EXCURSION	SELF STUDY		PAPERS & EXAMINATION	TOTAL WORKLOAD	CREDITS
		WEEKLY	TOTAL				WEEKLY	TOTAL			
SP.01	WATER SPORTS	2	24	16	24	16	9	130	30	240	8
SP.02	SPORTS SCIENCE & PHYSIOTHERAPY	2	24	2	4	4	6	90	24	148	5
SP.03	PHYSICAL HEALTH & FITNESS	2	24		30	6	8	120	30	210	7
SP.04	SPORTS OF THE TROPICS	2	24	2	12	6	5	75	24	143	5
BI.02	INDONESIAN LANGUAGE, HISTORY & CULTURE	2	24			8	6	90	24	146	5

WORKLOAD

1. WATER SPORTS

Lecturing Team	Gede Parta Kinandana, S.FT Prof. Dr. Dr. I Nyoman Adiputra
Time	weekly
Duration	240 hours in total
Credit Points	8 ECTS
Department	Physiotherapy, University of Udayana
Location	Sudirman Campus

COURSE DESCRIPTION

As the island of Bali offers various types of beaches and stunning landscapes with adventurous rivers, water sports have become an integral part of local daily activities. This course takes the nature potentials of perfect ocean waves, deep blue coral reefs, spring rivers and the local tradition of yoga practices as perfect conditions and study materials to learn the techniques of water sports. This course will enable participants to attain basic skills in water sports through careful training.

LEARNING OBJECTIVES

- The course is intended to equip students with basic skills in water sports such as wave surfing, river rafting and diving
- By the end of the course, students will understand the core techniques of water sports, have gained basic skills in various water sports and undergone yoga training
- Students are trained for the next level of course to become a water sports instructor

COURSE CONTENT

1. **Introduction to the landscapes of Bali and available water sports.** Brief about Bali island, the topography, landscape, water area; introduction to culture, traditions and potentials of water sports.
2. **Bali Green Surf.** Introduction to the coaches from Bali Green Surf. Familiarizing with the beach, waves, winds and the water sport equipment. Understanding the surfing area, types of surfboards and how they work.
3. **Bali Green Surf.** Surfing techniques and exercise. Takes place in the most popular beach in Bali, Seminyak Beach. Introduction of basic techniques and simple trainings from paddling, popping up, paddling out to surf and catching the waves
4. **Bali Green Surf. Surf Training & Exercise.** Provides techniques and sciences to keep physical and mental state in balance. It starts with surfing fitness including workouts for core strength, upper body strength, lower body strength, flexibility, stretching and yoga. The lesson continues in the water, to learn how to catch different kinds of waves.
5. **Surfboard Workshop.** A special full-day workshop to learn how to make a traditional surfboard that fits surfer's needs. Students will be provided with materials and will work closely with local craftsmen

6. **River Rafting.** This outdoor sport activity will be started with a brief introduction to the area and the river. After that it continues with the concept of rafting for sports: understanding team work and leadership in sports, knowing the equipment, balance and safety issues.
7. **SCUBA Diving Theory.** Students will get the basic introduction into diving in Bali including diving philosophy, the importance of knowledge in replacing fear and fantasy, safety rules, and diving equipment. Understanding the risk, developing techniques and skills through comfort.
8. **SCUBA Diving.** One-day trial course: Students will get first insights and learn the basics of scuba diving. Essential part is experiencing the underwater live, the wrecks and diving as a sport. (optional: extending the class for Open Water Diver license at own expenses)
9. **Yoga Science.** After intensive new water sports activities, students will be introduced into Bali's concept of balance and harmony throughout their daily lives. This course shows the philosophy of yoga, types of yoga, the concept of yoga and benefits of yoga in water sports.
10. **Anti-Gravity Yoga.** Students will be introduced to Gravity Yoga, a new type of yoga. By facilitating bending and stretching of the whole body during the exercise, the muscles and joints will be strengthened and rehabilitated, the spine decompressed as the body hangs freely. Anti-gravity yoga is said to benefit emotional, psychological and spiritual health.
11. **Stand-up Paddling.** Students will experience Stand Up Paddle (SUP) boarding, an increasingly popular offshoot of surfing. Students will learn how to cruise over waves while standing up on their boards, maintain an upright stance throughout the activity, and propel themselves over the surface using a single paddle.
12. **Bali Green Surf.** Final Surfing Session at Bali Green Surf, including discussion on progress and surfing experiences.

ASSESSMENT

Attendance (no less than 75 %)

1. Active Participation 50%
2. Submission Excursion Report 10%
3. Final Examination 40%

*Final test with the condition of 75 % attendance

2. SPORTS SCIENCE & PHYSIOTHERAPY

Lecturing Team	I Putu Gde Surya Adhitya, S.FT, M.Fis Dr. Ni Wayan Tianing, S.Si, M.Kes I Made Hendra Satria Nugraha, S.Ft Gede Parta Kinandana, S.Ft
Time	weekly
Duration	150 hours in total
Credit Points	5 ECTS
Department	Physiotherapy, University of Udayana
Location	Sudirman Campus

COURSE DESCRIPTION

The module provides a basic understanding of sports science including the energy system, diet and nutrition, psychological effects of exercises, first aid, management of injuries and herbal remedy. Physiotherapy and fitness concepts are introduced upon the sport activities such as aerobic capacity, anaerobic capacity, muscle power, strength, endurance, agility and speed.

LEARNING OBJECTIVES

Upon completion of the course, participants will have acquired a general knowledge of sports and physiotherapy which is essential for appropriate physical activities, exercises and remedy. Participants will be able to conduct fitness testing, demonstrate basic techniques of physiotherapy and clinical aspects of sports injuries.

REFERENCES

- Kjaer, Michael., et all. 2003. Text Book Of Sport Medicine Basic And Clinical Aspect Of Sport Injury And Physical Activity.
- Sports Medicine for the Primary Care Physician, 3rd edition; Sport Notes
- The Physiology Of Training; Sport physiotherapy applied science & practice
- Managing Sport Injury. 4th editions. Christopher M. Norris

COURSE CONTENT

1. **Introduction to sports science & physiotherapy.**
2. **Pre-exercise evaluation.** History, HEENT, cardiac, pulmonary, abdomen, neurology, musculoskeletal, dermatology and genitourinary. Identifying the majority of medical problems that affect athletes. The physician needs to inquire chronic medical illnesses, surgical history, allergies, and current medications, including prescription and over-the-counter medicines.
3. **Diet and nutrition.** Caloric requirements, macronutrients and micronutrients, fluid requirements, age considerations, nutrition for athletes (carbohydrate loading, pre-game meal, post-game meal).
4. **Physiology of exercise (strength, endurance, power, flexibility).** Definition of strength, endurance, power and flexibility exercises, physiology of strength, endurance, power and flexibility exercises, concept of strength, endurance, power and flexibility exercises.

5. **Physiological effect of exercise on body system.** Understanding the basis for the various principles of training in order to evaluate and design physical fitness programs; understanding how the body adapts to short and long term exercises, enabling different and specific program designs; description and explanation of the body's response to exercises and the adaptation to exercise training in order to maximize human performance; environmental factors affecting exercise.
6. **Injury Prevention.** Overview injury prevention, etiology and strategic injury (primary, secondary, tertiary prevention, injury etiology, intrinsic and extrinsic factors of injury)
7. **Energy system of sports.** Fuels for energy, mechanism of the intracellular energy system, phosphagen system, body response to various trainings, physical and environmental factors affecting performance, environmental factors affecting exercises.
8. **Biomechanics of sport (running, swimming, cycling, surfing).** Movement patterns – exploring the essence and purpose of movement analysis, qualitative analysis of sports movements, movement patterns and the geometry of motion, quantitative measurement and analysis of movement, forces, the human body and the anatomy of movement.
9. **Sports injuries.** Types of sports injuries; classification of injury prevention; risk factors of sports injuries; principles of injury prevention; principles of rehabilitation and training in sports.
10. **First aid for sports injuries.** Definition of first aid for sports injuries, importance of first aid; first aid for scratches, cramps, sprain and strain; first aid for fractures and joint dislocations; first aid for head and spine injuries; first aid for heart attacks.
11. **Management of sports injuries.** Overview; professional teamwork to deal with sports injuries; principles of training and rehabilitation.
12. **Taping in Sports.** Overview Taping, contraindication and indication of taping, application of taping in sports.

ASSESSMENT

Attendance (no less than 75 %)

Assignments 50%

1. Designing the program of pre-exercise examination
2. Designing the program of diet meal of a sport

Final exam 50%

3. PHYSICAL HEALTH AND FITNESS

Lecturing Team	Gede Parta Kinandana, S.FT I Made Hendra Satria Nugraha, S.Ft
Time	weekly
Duration	210 hours in total
Credit Points	7 ECTS
Department	Physiotherapy, University of Udayana
Location	Sudirman Campus

COURSE DESCRIPTION

The course emphasizes physical activities and fitness throughout comprehensive workouts and exercises on muscles. In addition to regular workouts, participants will learn about basic scientific gym concepts including supplements, diet, bulking and shaping.

LEARNING OBJECTIVES

- Students are trained to maintain the level of physical fitness.
- Students are able to analyze the functional anatomy and its relation to gym science.
- Students understand the basic skills and techniques of gym through appropriate muscle workouts and fitness.
- Students will be able to demonstrate basic knowledge about scientific gym concepts
- Students are able to understand gym nutrition, including ergogenic aid, supplements and the benefits of them

REFERENCES

- Fahey TD. 2005. Weight Training Basics. A Complete Guide for Men & Women. McGraw-Hill Company.
- Sports Medicine for the Primary Care Physician, Third Edition; Sport Notes
- The Physiology of Training; Sport physiotherapy applied science & practice

COURSE CONTENT

1. **Basic introduction & knowledge of scientific gym concepts.** The benefits of weight training; the basics of designing a program
2. **How muscle contract and grow.** Muscle Structure and nervous system, muscle size : neural activation, energy, and skill, Coordinating cellular, neural, elastic, and skill component of strength.
3. **Muscle Contraction and Musculoskeletal Torque.** Understanding concentric, isometric, and eccentric type of muscle contraction. Understand and apply the biomechanical concepts of musculoskeletal torque during exercise.
4. **Functional anatomy and workout of chest and shoulder.** The chest muscle, exercise for the chest muscle, exercise for the back of the arm, and rotator cuff exercise.
5. **Functional anatomy and workout of lower extremity muscles.** Multi-joint lower-body exercises, auxiliary exercises for the lower body, advanced lift & functional training.

6. **Physiology of exercise (strength, endurance, power, flexibility).** Definition of strength, endurance, power and flexibility exercises, physiology of strength, endurance, power and flexibility exercises, concept of strength, endurance, power and flexibility exercises.
7. **Functional anatomy and workout of trunk muscle.** Abdominal fat: bad & ugly; the abdominal muscles; effective exercises for abdominal muscles; the core & kinetic chain .The back muscles, exercises for the upper back, middle back and lower back.
8. **Building Power & Speed.** Importance of Power and Speed during activity daily living, Types of exercise that help to improve and enhance your power and speed. Instrument to test your power and speed.
9. **Core Muscles: recent advances in gym science.** Anatomy of core muscles, function of core muscles, core muscles versus other trunk muscles, exercises to activate core muscles, core muscles & their effect for the body.
10. **Functional training, alternative training and corrective exercise.** Develop exercise which allow individuals to perform the activities of daily life more easily and without injuries. Subject focusing on training without machines such as kettle bells, free weights and functional equipment. Corrective exercise focusing on muscular instability and imbalance.
11. **Gym supplements, diet, bulking, shaping.** Essential nutrients; healthy, high-performance diet & food guide pyramid; diet, exercises, weight control; losing weight: weight training, aerobics & diet.
12. **Ergogenic aids:** Drugs & supplements that help to enhance performance as well as to build physical fitness. Good and bad about drugs, and how to use it purposefully.

GYM & OUTDOOR ACTIVITIES

Essential part of this subject is implementing the acquired knowledge into practice. Following the meetings at class, students will work on their fitness throughout comprehensive workouts and exercises on muscles together with the course coordinator at the gym or outdoors.

ASSESSMENT

Attendance in class, excursion and gym (no less than 75 %)

1. Active Participation in class 10 %
2. Active Participation in gym 20 %
3. Submission Assignment 20%
4. Submission of Student Project 20%
5. Final Examination 30%

*Final test with the condition of 75 % attendance

4. SPORTS OF THE TROPICS

Lecturing Team	Putu Ayu Sita Saraswati, S,FT Made Hendra Satria Nugraha, S.FT M. Widnyana, Prof. Dr. dr. I Nyoman Adiputra, Dr. Ngakan Ketut Acwin Dwijendra
Time	weekly
Duration	150 hours in total
Credit Points	5 ECTS
Department	Physiotherapy, University of Udayana
Location	Sudirman Campus

COURSE DESCRIPTION

This course offers comprehensive knowledge about various types of sports in tropical countries, especially in South East Asia. It describes the nature of the tropical climate and environment, which influences the nature of physical activities, also in the context of society, culture, tradition and equipment.

LEARNING OBJECTIVES

- Learn and understand socio-culture and environmental considerations in sports especially in tropical countries
- Analyze and discuss relationships between sports, law and governance
- Learn and understand sports, wellness, and traditional herbal remedy
- Learn and understand about aging and exercise

REFERENCES

- Hartley, Hazel. 2009. Sport, Physical Recreation and the Law
- Norman, Van Kay. 2010. Exercise and wellness for older adults 2nd edition

COURSE CONTENT

1. **Sports Recreation.** Definition of sport recreation; How sport recreation is built; Variation of sports recreation
2. **Sports, law and governance.** Definition of sports, sports laws in the world and especially in Indonesia, governance support and sport development
3. **Sociocultural and environmental considerations in sports.** Introduction; socio-culture and sports in the world; Balinese socio-culture; environmental impact of sports; types of sports in different environments
4. **Yoga Philosophy,** Breathing techniques, Asana & Acro Yoga, Meditation, Happy & Hasya Yoga
5. **Sports in hot and humid environments.** Introduction; environmental impact of sports; definition of hot and humid environments; sports in hot and humid environments, sports environment in Bali; types of sports that match with it

6. **Traditional sports.** Definition of traditional sports; the history of traditional sports in Bali; types of traditional sports in Bali/Indonesia; Definition of sports recreation; how sports recreation is built; types of sports recreation and its relations with traditional sports
7. **Traditional Healing:** Traditional healing methods in Bali
8. **Spa & Physiotherapy.** Definition of spa: spa types; the most well-known spa in Bali; spa tools; impacts of spa activities; spa in physiotherapy;
9. **Sports and wellness.** Definition of sports and wellness; the difference between fitness and wellness; components of sports and fitness; components of health and wellness; sports and wellness centres in Bali
10. **Sports and Aging.** Introduction; Physiology of aging; How does sports affect aging; recommendation sports for elderly
11. **Sports and People with Disabilities.** Introduction; How person with disabilities join sport; Paralympic events; Variation of sports that compete in it
12. **Sports events.** Introduction – why sports events are held; sports events in the world; types of competitive sports, how to manage sports events
13. **Sports communities in Bali/Indonesia.** Definition of sports communities; sports communities in Bali and their activity schedule

ASSESSMENT

Attendance in class, workshops & excursion (no less than 75 %)

Assignments 50%

- Project presentation
- Essay

Final exam 50%

5. INDONESIAN LANGUAGE, HISTORY & CULTURE

Lecturing Team	Gusti Ayu Made Suartika, ST., MEngSc., PhD M Swanendri, ST., MT. Dr. Ir. Yenni Ciawi Riri Kertiyasa
Time	weekly
Duration	150 hours in total
Credit Points	5 ECTS
Department	Faculty of Engineering, University of Udayana
Location	Sudirman Campus

COURSE DESCRIPTION

This subject combines a traditional Indonesian language course with units that focus on the history and culture of Indonesia. The emphasis of the language course is on conversation. It introduces students to basic vocabulary in Bahasa Indonesia and provides them the skills necessary to handle day-to-day situations. Besides the language part the course intends to provide students with background knowledge on Indonesia's history and social as well as cultural development. Particular attention is given to historiography of nation-building, religions and society.

LEARNING OBJECTIVES

- Providing the students with the basic skills of Indonesian including key topics which serve as a foundational tool for students to interact and communicate in Bahasa Indonesia
- To broaden and deepen the students' cultural (political, social, religious, historical, art) knowledge of Indonesia
- To understand the development of tourism in Indonesia, particularly in Bali. Oral and written presentations are required

MODE OF INSTRUCTION

The course combines lectures with presentations and discussion.

COURSE CONTENT

Bahasa Indonesia

1. Indonesian greetings, self-introduction, family members
2. Indonesian alphabet, Indonesian numbers
3. Indonesian pronouns
4. Questions & Answers
5. Positive, negative & interrogative statements

6. Dates, Holidays
7. Midterm test
8. Future tense
9. Colours, Exercise on rearranging colours and characters
10. Human characters
11. Shopping dialogue, Making requests
12. Imperatives
13. Text with various inclusive Indonesian verbs

History & Culture

1. Nusantara; history of pre-modern and colonial periods
2. History of Indonesia I: Sumatra and Sulawesi
3. History of Indonesia II: Bali and the structure of Hindu temples
4. Art and Culture: the influence of "local" culture in creating a piece of art
5. History of tourism in Indonesia
6. Culture and eco-tourism
7. Impact of tourism: advantages and disadvantages

ASSESSMENT

Attendance in class (no less than 75 %)

1. Active Participation in class 20%
2. Mid Term Written Test 20%
3. Oral Test 20%
3. Final Written Test 40%

*Final test with the condition of 75 % attendance