University in Split

Faculty of Kinesiology

DOCTORAL STUDY PROGRAMME

IN KINESIOLOGY

Split, 2025.

CURRICULUM AND STUDY ROGRAMME

Doctoral Study programme in Kinesiology

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1. Introduction

1.1. History of the Doctoral Study Programme in Kinesiology

Although the Faculty of Kinesiology, University of Split was established in 2008 and is one of the youngest constituents of the University of Split, the study of kinesiology in Split has a long tradition. Institutional higher education for kinesiology teachers in Split has existed since the academic year 1953/1954, when the study programme in Physical Culture was delivered within the Higher Pedagogical School, later the Pedagogical Academy. Since 1978, the four-year study programme in kinesiology was conducted within the University of Split, Faculty of Philosophy in Zadar – Associated Organisation of Labour in Split, and subsequently within the Faculty of Natural Sciences, Mathematics and Educational Studies – FPMZOP, later the Faculty of Natural Sciences, Mathematics and Kinesiology.

The increased commitment of the staff of the Department of Kinesiology of the Faculty of Natural Sciences, Mathematics and Kinesiology, University of Split, from 2003 onwards, particularly during the adaptation of higher education institutions to the principles of the Bologna Process, together with the growing number of young scientists and the overall support of the professional and scientific community, resulted in the establishment of the Faculty of Kinesiology as an independent constituent of the University of Split. In accordance with the Bologna Declaration, the Faculty delivers undergraduate, graduate and postgraduate studies. From its modest beginnings, with only three permanently employed teachers, the Faculty of Kinesiology today has 37 teachers and 15 non-teaching staff members.

At present, the Faculty of Kinesiology represents a reputable institution capable of independently providing education, as well as professional and scientific training, for all profiles of kinesiologists in kinesiology education, sport, kinesiology recreation and kinesiotherapy. The institution relies exclusively on its own scientific-teaching staff, whose engagement actively contributes to professional and scientific output, thereby creating and promoting the image of the Faculty of Kinesiology within the contemporary scientific and cultural environment.

From 1978 to 2004, the Department of Kinesiology of the Faculty of Natural Sciences, Mathematics and Kinesiology educated teachers of physical education and health education, that is, teachers of kinesiology, with appropriate specialisations. Teachers from the Department of Kinesiology of the Faculty of Natural Sciences, Mathematics and Kinesiology also delivered teaching at postgraduate studies of other institutions in Croatia and abroad. Since 2005, the proposer of the programme has delivered undergraduate and graduate study programmes in kinesiology according to the ECTS system.

The Doctoral Study Programme in Kinesiology was launched in 2007 and has been delivered since the academic year 2008/2009. At that time, the Faculty employed young and capable

junior researchers and young scientists with a good command of English, oriented towards international cooperation and committed to the development of the Faculty's scientific quality and productivity. Within the institution, and particularly among young researchers, there was a very positive and optimistic atmosphere regarding the improvement of the quality of scientific work.

The Doctoral Study was structured according to the principles of the Bologna Declaration, with a duration of three years and a total of 180 ECTS credits, as the third and highest level of education leading to the academic degree of Doctor of Science in the area of Social Sciences, field of Kinesiology.

Over time, the programme was improved in order to ensure that the needs and requirements of doctoral students were met. The amendments primarily related to teaching, which was enhanced with the aim of improving doctoral students' research and scientific skills, preparing them for the independent development of scientific projects, and strengthening their methodological competences in collecting high-quality data and applying appropriate statistical analyses.

The study programme is based on contemporary scientific knowledge, which teachers transfer to students through lectures and other forms of teaching activities, as the teachers have been involved in scientific activity through work on a large number of scientific research projects. The establishment of the Institute of Kinesiology, equipped for field and laboratory research, further contributed to the advancement of scientific activity. This enabled the expansion of cooperation with sports clubs and organisations at all levels, increased opportunities for doctoral students to participate in projects, and strengthened the interest of external stakeholders in cooperation. Doctoral students are free to borrow and use equipment for the implementation of research and data analysis.

1.2. Changes Introduced by the New Amendments to the Study Programme

Since the launch of the Doctoral Study and up to the proposal of these amendments, 40 ECTS credits out of the total 180 ECTS credits required for the qualification were allocated to the teaching component related to courses within the Doctoral Study. Although this structure had not changed, the teaching process had increasingly moved closer to scientific research work. For this reason, and in line with the current global trend towards fully research-based doctoral studies, these amendments to the study programme abolish compulsory, i.e. formal teaching, thereby establishing a fully scientific research-oriented Doctoral Study.

The Doctoral Study is based on an individual implementation plan selected for each doctoral student according to the project on which the student is working and the objectives of the doctoral dissertation.

2. In General

Study title	**Doctoral Study Programme in Kinesiology**
Scientific areas, fields and branches	Area of **Social Sciences**, field of **Kinesiology**, or **Interdisciplinary Areas of Science** and their corresponding fields and/or branches
Holder / Proposer	University of Split, Faculty of Kinesiology
Provider	University of Split, Faculty of Kinesiology
Duration	3 years
ECTS credits	180
Admission requirements	Completed university undergraduate programme, university graduate programme, or integrated undergraduate and graduate university programme, corresponding to Level 7.1.sv of the Croatian Qualifications Framework (Official Gazette 20/2001).
Learning outcomes acquired upon completion of the study	Upon completion of the study, students will possess the following knowledge and skills, together with the corresponding autonomy and responsibility: 1. Apply advanced principles in research and in the development of new technologies, ideas or processes in different areas of applied kinesiology; 2. Create new procedures and theories that contribute to extending the boundaries of knowledge in the field of research; 3. Critically evaluate published original scientific results of other authors in the field of research; 4. Evaluate new and specialised knowledge, methods and instruments in the field of scientific research; 5. Publish an original scientific paper in a journal indexed in the Web of Science (WoS)/Scopus database; 6. Publish and present scientific research in English; 7. Argue opinions in discussion with other scientists in the field of research; 8. Cooperate in interdisciplinary teams in the planning, implementation and evaluation of international scientific projects; 9. Apply methods for defining and protecting intellectual property; 10. Explain the results of scientific research to other scientists as well as to non-experts; 11. Express personal, professional and ethical positions; 12. Assume ethical and social responsibility for the success of research and for the possible consequences of its impact on the wider community; 13. Address new challenges of society and the economy and, through the application of scientific research results, contribute to social and economic development.
Possibilities for continuation of study	Final qualification level according to the Croatian Qualifications Framework. The student may subsequently undertake postdoctoral training.
Academic title or degree acquired upon completion of the study	Upon completion of the Doctoral Study, the academic degree of **Doctor of Science in the scientific area of Social Sciences** is awarded (**dr. sc. socio.**).

3. Programme Description

3.1. Main Features of the Programme

- The study programme is based on the achievement of the objectives and tasks to be described in the doctoral dissertation project.
- The doctoral dissertation topic is submitted upon admission to the Doctoral Study, as one of the admission requirements, and must be approved before enrollment in the second semester.
- The doctoral dissertation topic may, but does not have to, be related to a formally funded scientific research project of the supervisor or of other natural or legal persons.
- Regardless of the nature of the doctoral dissertation project and of whether it is funded or not, the student and the supervisor are responsible for its implementation.
- During the Doctoral Study, the student, in cooperation with and under the supervision of the supervisor, attends scientific schools, actively participates in scientific congresses and presents papers in English, and publishes scientific papers on the basis of which examinations within the study are taken.
- The Doctoral Study Programme in Kinesiology is completed by the preparation, evaluation and defense of the doctoral dissertation. The doctoral dissertation consists of papers published in publications indexed in WoS/SCOPUS, exclusively under the conditions prescribed by the Regulations on the Doctoral Study Programme in Kinesiology. The evaluation of the doctoral dissertation is carried out by the Committee for the Evaluation of the Doctoral Dissertation, while the final decision is adopted by the Faculty Council. A positively evaluated doctoral dissertation is defended before the Committee for the Defense of the Doctoral Dissertation. The procedure for the evaluation and defense of the doctoral dissertation is regulated in detail by the Regulations on the Doctoral Study Programme in Kinesiology, in the section concerning the evaluation and defense of the doctoral dissertation.
- The study is primarily conducted in Croatian, while certain elements may also be conducted in English.

3.2. Objectives

The objectives of the Doctoral Study may be considered both in terms of the goals pursued by the Faculty of Kinesiology as an institution and those to be achieved by the candidate/doctoral student.

Objectives of the Institution

- Educating highly competent scientists directly and indirectly connected with the Faculty of Kinesiology, University of Split
- Achieving a high level of quality in scientific output at the Faculty of Kinesiology
- Developing supervisory capacities within the Faculty of Kinesiology

Objectives of Doctoral Students

- Acquiring a high level of competence in scientific research in the field of kinesiology and related sciences
- Attaining high scientific productivity, both in terms of quality and quantity
- Establishing networks with distinguished scientists from Croatia and abroad

The above is planned to be achieved through intensive scientific research work conducted by candidates in cooperation with highly competent supervisors. The achievement of these objectives is verified through the publication of papers in high-quality journals and publications, as well as through knowledge assessments, i.e. examinations, which doctoral students take on the basis of the papers they have published. In addition, doctoral students' competence development is further supported by attendance at scientific schools and scientific congresses.

3.3. Admission to the Doctoral Study

- The right to enroll in the Doctoral Study shall be granted to applicants who have completed a university undergraduate programme, a university graduate programme, or an integrated undergraduate and graduate university programme, with a minimum of 300 ECTS credits, corresponding to Level 7.1.sv of the Croatian Qualifications Framework (Official Gazette 20/2001).
- Upon admission, the student must demonstrate a certain level of previous scientific engagement in the area of the project objectives and tasks. In this regard, upon admission, the student must obtain 5 ECTS credits in the category "scientific papers" within the topic of the proposed doctoral dissertation project.
- The decision on whether the student meets the admission requirements for the Doctoral Study referred to in the preceding points shall be made by the Faculty Council of the Faculty of Kinesiology, based on the proposal of the Doctoral Study Committee.
- The student proposes the doctoral dissertation topic and supervisor upon admission to the study, which constitutes one of the admission requirements.

- The doctoral dissertation topic must belong to the field of kinesiology, or to one of the branches of kinesiology.
- The proposed supervisor must give consent to the proposed appointment, which is the responsibility of the student, while the supervisor's eligibility is assessed by the Doctoral Study Committee.
- The topic is evaluated by the Committee for Acceptance of the Doctoral Dissertation Topic, in accordance with the procedure prescribed by the Regulations on the Doctoral Study Programme in Kinesiology.
- The final decision on the acceptance or rejection of the proposed topic and proposed supervisor shall be made by the Faculty Council, and the procedure must be completed before enrollment in the second semester.
- Students shall begin the programme from the first semester.

3.4. Structure and Organization of the Doctoral Programme

Scientific research work is central to the Doctoral Study, and ECTS credits, with a minimum of 180, are acquired through activities related to original scientific research resulting in the preparation and defense of the doctoral dissertation. The student may enroll in up to five extracurricular courses, with a maximum of three courses per semester, exclusively during the first two semesters.

After completion of the admission procedure, the doctoral student is assigned one or more supervisors. In addition to the supervisor(s), one or more co-supervisors may also be appointed. A supervisor at the Doctoral Study may be a scientist holding a scientific-teaching or scientific position who obtained a doctoral degree at least two years prior to the date of being proposed as supervisor, provided that he/she meets one of the following two requirements:

- Within the past 10 years, he/she has published at least 10 papers in journals indexed in SCOPUS/WoS[1], of which at least 3 were published in the past 5 years. Of the total number of papers, that is, 10 papers, at least 3 must be related to the topic of the doctoral dissertation for which he/she is being proposed as supervisor; and/or

- Within the past five years, he/she has published at least five papers in journals indexed in SCOPUS or WoS[2]. Of these, at least three papers must be related to the topic of the doctoral dissertation for which he/she is being proposed as supervisor.

[1] All journals in which the papers are published must have been assigned an Impact Factor (WoS) or a CiteScore index (Scopus) at the time of publication of the paper.
[2] All journals in which the papers are published must have been assigned an Impact Factor (WoS) or a CiteScore index (Scopus) at the time of publication of the paper.

The supervisor/co-supervisor is proposed by the student, the eligibility of the proposed persons is verified by the Doctoral Study Committee, and their appointment is approved by the Faculty Council. As a rule, one supervisor may simultaneously supervise two candidates within this Doctoral Study. Under the same conditions, the supervisor may be a scientist from Croatia or abroad. If the supervisor is not employed at the Faculty, the student must be assigned a co-supervisor employed at the Faculty, in accordance with the conditions described above.

During the study, and no later than by enrollment in the fifth semester, the student has the right to change the supervisor/co-supervisor once. The change of supervisor/co-supervisor shall be carried out in the same manner and under the same conditions as the initial appointment. Exceptionally, changes may occur more than once or after the prescribed deadline only in cases of force majeure and extraordinary circumstances.

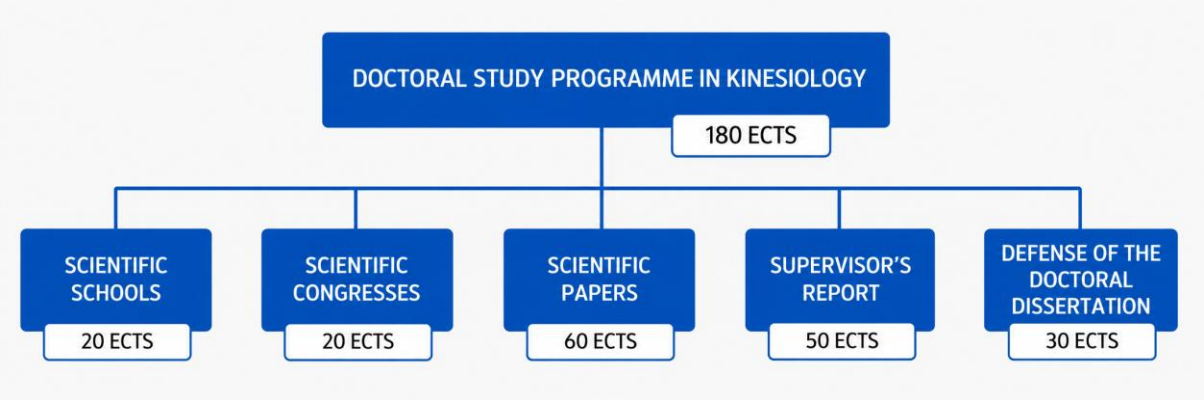

Figure 1. Programme structure

The entire Doctoral Study consists of the following categories/activities (Figure 1):

- scientific schools
- scientific congresses
- scientific papers
- supervisor's reports

After successfully fulfilling the requirements in all the above categories/activities, the student initiates the procedure for the evaluation and defense of the doctoral dissertation.

At the end of each semester, and before enrollment in the next semester, the student is required to demonstrate scientific activity. Enrollment in the next semester shall be approved in accordance with the provisions of the Regulations on the Doctoral Study Programme in Kinesiology, pursuant to the decision of the Doctoral Study Committee.

- Advancement from the first to the second semester requires 30 ECTS credits, but not fewer than 5 ECTS credits, including 5 ECTS credits from the category "scientific schools", as well as an approved dissertation topic and supervisor.
- Advancement from the second to the third semester requires 60 ECTS credits, but not fewer than 25 ECTS credits, including at least:

    1. 10 ECTS credits from the category "scientific papers" (cumulative from the beginning of study),
    2. 10 ECTS credits from the category "scientific schools" (cumulative from the beginning of study), and
    3. 5 ECTS credits from the category "scientific congresses" (cumulative from the beginning of study).

- Advancement from the third to the fourth semester requires 90 ECTS credits, but not fewer than 45 ECTS credits, including at least:

    1. 20 ECTS credits from the category "scientific papers" (cumulative from the beginning of study),
    2. 15 ECTS credits from the category "scientific schools" (cumulative from the beginning of study), and
    3. 10 ECTS credits from the category "scientific congresses" (cumulative from the beginning of study).

- Advancement from the fourth to the fifth semester requires 120 ECTS credits, but not fewer than 85 ECTS credits, including at least:

    1. 30 ECTS credits from the category "scientific papers" (cumulative from the beginning of study),
    2. 20 ECTS credits from the category "scientific schools" (cumulative from the beginning of study),
    3. 15 ECTS credits from the category "scientific congresses" (cumulative from the beginning of study), and
    4. 20 ECTS credits based on the supervisor's positive evaluation/report on the student's scientific work to date, which is a prerequisite for enrollment in the semester.

- Advancement from the fifth to the sixth semester requires 150 ECTS credits, but not fewer than 115 ECTS credits, including at least 30 ECTS credits based on the supervisor's positive evaluation/report on the student's scientific work to date, which is a prerequisite for enrollment in the semester.

Any shortfall in ECTS credits upon enrollment in the sixth semester, specifically:

1. 30 ECTS credits from the category “scientific papers”, and
2. 5 ECTS credits from the category “scientific congresses”,

must be fulfilled by the student no later than prior to submission of the doctoral dissertation.

- For the submission for evaluation and defense of the doctoral dissertation in the sixth semester, the student must have obtained:
    1. 20 ECTS credits from the category “scientific schools” (cumulative from the beginning of study),
    2. 60 ECTS credits from the category “scientific papers” (cumulative from the beginning of study),
    3. 20 ECTS credits from the category “scientific congresses” (cumulative from the beginning of study), and
    4. 50 ECTS credits from the category of the supervisor’s positive evaluation/report.

Of the 60 ECTS credits obtained in the category “scientific papers”, at least 50 ECTS credits must come from papers previously defended in examinations and related to the doctoral dissertation topic.

When enrolling in a higher semester, from the second to the fifth, a student may have fewer than the nominal cumulative ECTS credits per semester (30/60/90/120), provided that the other minimum requirements in each category for the respective semester have been met. Any shortfall in ECTS credits upon enrollment in the sixth semester, whether by category or overall, must be fulfilled before submission of the doctoral dissertation.

By defending the doctoral dissertation, the student obtains an additional 30 ECTS credits, amounting to a total of 180 ECTS credits, which represents the minimum number of ECTS credits required for completion of the study.

3.5. Evaluation of Individual Activities and ECTS Credits

Published papers shall be evaluated on the basis of the quality of the journal/publication in which the paper was published. Details are presented in the table below.

Attendance at scientific congresses shall be evaluated on the basis of oral presentations of papers at scientific congresses in Croatia and abroad. For the acquisition of ECTS credits under this activity, only presentations delivered by the doctoral student in English shall be recognized. Each oral presentation in English shall be awarded 5 ECTS credits, regardless of whether the doctoral student's paper was published in full in the congress proceedings or only as an abstract. The allocation of credits for attendance at congresses shall be carried out independently of the allocation of credits for scientific papers. Therefore, at the same congress, the doctoral student may obtain credits in two categories/activities: the category/activity "scientific congresses", if he/she delivered an oral presentation in English, and the category/activity "scientific papers", if the paper was published in full in the proceedings of that congress.

In the category "scientific congresses", one oral presentation per scientific congress shall be credited. This means that, in order to obtain the minimum required 20 ECTS credits in this category, the doctoral student must attend at least four congresses

The category "scientific schools" includes attendance at scientific schools and seminars, i.e. educational activities. The doctoral student attends scientific schools of his/her own choice. The Faculty of Kinesiology shall organize one scientific school per semester, with topics and lecturers defined in accordance with the needs and interests of doctoral students, as well as the teachers of the Faculty of Kinesiology. By attending one scientific school during a semester, the doctoral student may fulfil all requirements of the Doctoral Study in this category/activity, since each school organized by the Faculty of Kinesiology shall be awarded 5 ECTS credits. The doctoral student shall participate in the costs of the scientific school organized by the Faculty in the amount determined by the Faculty Council for each school individually.

The doctoral student is not required to fulfil the requirements in this category by attending scientific schools organized by the Faculty of Kinesiology, but may also attend other scientific schools. The evaluation and allocation of credits for such scientific schools shall be carried out by the Doctoral Study Committee. The student has the right to request the Committee's opinion on such a scientific school prior to attending it.

Table 2. Overview of ECTS Credit Allocation by Individual Categories/Activities

Category/Activity "Scientific Papers"	ECTS	Category/Activity "Scientific Congresses"	ECTS	Category/Activity "Scientific Schools"	ECTS
Scientific papers published in full text in journals/publications indexed in WoS/SCOPUS – publications ranked in the 1st and 2nd quartile of quality #	20	Oral presentation of a paper in English	5	Attendance at a scientific school	5
Scientific papers published in full text in journals/publications indexed in WoS/SCOPUS – publications ranked in the 3rd quartile of quality #	15				
Scientific papers published in full text in journals/publications indexed in WoS/SCOPUS – publications ranked in the 4th quartile of quality #	10				
Scientific papers published in full text in journals/publications indexed in WoS/SCOPUS – publications not included in quartile ranking #	5				

according to the CiteScore index (Scopus) or the Impact Factor (WoS), or an equivalent index of the same citation database if the indexing method changes during the course of study.

Additional Explanations:

- Credits in this category shall be obtained exclusively through the defense of scientific papers on a topic from the field of kinesiology.
- Within the category "scientific papers", ECTS credits shall be awarded for papers categorized in the publication itself as: (i) original scientific articles (research, original investigation, etc.), (ii) review articles (review, brief review, etc.) or meta-analyses, and (iii) preliminary scientific communications (brief report, preliminary investigation, etc.).
- Letters to the editor and corrections of published articles shall not be credited within the Doctoral Study.
- The recognition or non-recognition of a published paper shall be decided by the Doctoral Study Committee, and the student shall have the right to appeal the decision.3
- In order to obtain ECTS credits in the category "scientific papers", the published paper must be defended before an Examination Committee. For details, see "Defense of Papers before the Committee".
- In the category "scientific papers", only papers in which the doctoral student submitting the paper is the first author, and in which the total number of authors/co-authors does not exceed 10, shall be recognized.

[3] The appeal shall be submitted to the Faculty Council of the Faculty of Kinesiology, through the Student Office, within 15 days of receiving notice of the recognition or non-recognition of the paper.

- For the purpose of obtaining ECTS credits in the category “scientific papers”, the student may submit:

    - scientific papers published during the Doctoral Study
    - papers published up to five years before enrollment in the Doctoral Study, up to a maximum of 50% of the minimum required number of ECTS credits in the category “scientific papers”

- Papers shall be considered published if they have appeared in the print or electronic version of a journal, or if they have been published online “ahead of print” (E-pub ahead of print).
- The quality of the journal/publication shall be determined on the basis of its quality level according to WoS/SCOPUS (see Table 2), as achieved by the journal/publication at the time when the paper was submitted to the journal/publication (“Date of submission”).

3.6. Defense of Papers before the Committee

In order for the student to obtain credits in the category/activity “scientific papers”, the published papers must be defended before an Examination Committee. Examination Committees shall be appointed by the Doctoral Study Committee, taking into account the following criteria:

- Members of the Examination Committee shall be scientists holding a scientific-teaching or scientific position, who are competent in the subject area investigated in the scientific paper being defended and on which the examination is based.
- Appointed committee members must consent to their appointment.
- The Examination Committee shall consist of three members, of whom one shall not be employed at the Faculty.
- The supervisor/co-supervisor of the doctoral dissertation, as well as co-authors of the scientific paper being defended, shall not be appointed to the Committee.

If the student fails to defend the paper before the Examination Committee, he/she shall bear the cost of repeating the defense of the same paper, i.e. the examination, in accordance with the decision of the Faculty Council.

If the student submits another paper, i.e. examination, for defense, a new Examination Committee shall be appointed, and such defense shall be considered a new, first defense.

3.7. Procedure for the Preparation and Defense of the Doctoral Dissertation

The Doctoral Study Programme in Kinesiology leading to the academic degree of Doctor of Science is completed by the preparation and defense of the doctoral dissertation. By defending the doctoral dissertation, the student obtains 30 ECTS credits.

After enrolling in the sixth semester of the study and fulfilling all previously described requirements, the student has the right to initiate the procedure for the evaluation and defense of the dissertation. For this purpose, the student submits the doctoral dissertation, which essentially consists of scientific papers published on the topic of the doctoral dissertation, in which the doctoral student is the first author, with no more than nine co-authors on each individual paper.

The doctoral dissertation consists of papers published in publications indexed in WoS/SCOPUS, exclusively in publications with a CiteScore citation index according to SCOPUS or an Impact Factor according to WoS, awarded at least 50 ECTS credits in accordance with the credit allocation criteria in the category “scientific papers”.

Exceptionally, the student may include additional, non-defended papers as part of the doctoral dissertation if he/she considers that they would enhance the quality of the doctoral dissertation.

In the case referred to in the preceding paragraph, a positive opinion of the Doctoral Study Committee is required as a condition for submission of the doctoral dissertation.

3.7.1. Committee for the Evaluation of the Doctoral Dissertation

The Committee for the Evaluation of the Doctoral Dissertation shall review the doctoral dissertation and provide the candidate with any comments. Members of the Committee for the Evaluation of the Doctoral Dissertation may not require the candidate to make changes that are inconsistent with the research plan and protocol specified in the final version of the doctoral dissertation topic.

Within 30 to 60 days from the date of adoption of the decision appointing the Committee, the Committee for the Evaluation of the Doctoral Dissertation shall submit to the Faculty Council a report on the evaluation of the doctoral dissertation.

3.7.2. Committee for the Defense of the Doctoral Dissertation

Following the acceptance of a positive evaluation of the doctoral dissertation, the Faculty Council shall, as a rule at the same session, appoint the Committee for the Defense of the Doctoral Dissertation. The Committee for the Defense of the Doctoral Dissertation shall have the same number of members and the same requirements as the Committee for the Evaluation of the Doctoral Dissertation. Members of the Committee for the Defense of the Doctoral Dissertation may also be the same persons who served on the Committee for the Evaluation of the Doctoral Dissertation.

The preparation of the doctoral dissertation, as well as the submission, evaluation and defense procedure, are prescribed by the Regulations on the Doctoral Study Programme in Kinesiology.

3.8. List of Elective (Extracurricular) Courses

Course	ECTS
Methodology of Scientific Research in Kinesiology	6
Applied Medicine in Kinesiology and Sport	3
Systems of Scientific Research in Applied Kinesiology	7
Medical Diagnostic Methods in Kinesiology and Sport	

3.9. Course description

1. METHODOLOGY OF SCIENTIFIC RESEARCH WORK IN KINESIOLOGY

Course title	METHODOLOGY OF SCIENTIFIC RESEARCH WORK IN KINESIOLOGY
Code	MZIK
Year of study	1
Course coordinator(s)	Assoc. Prof. Mirjana Milić, PhD; Prof. Dražen Čular, PhD
ECTS credits	6
Associates	
Teaching mode (hours per semester)	Lectures: 25; Seminars: 0; Exercises: 0
Course status	Extracurricular
Share of e-learning	20%
Course objectives	Acquisition of competences necessary for designing and presenting a research design in the field of kinesiology.
Prerequisites and entry competences	Defined by the Regulations on the Postgraduate Doctoral Study Programme of the Faculty of Kinesiology, University of Split.

Expected learning outcomes at course level

- Critically evaluate the possibility of applying contemporary diagnostic devices and apparatus in research in the field of kinesiology.
- Critically read, evaluate and organise existing literature.

- Compare different types of research in the field of kinesiology.
- Create a research design in the field of kinesiology.
- Understand ethical standards in scientific research work.
- Present a research design before a committee within the assigned time.

Course content by teaching hours

No.	Content	Hours
1	Introduction; course requirements; post-positivist, constructivist, transformative and pragmatic assumptions; tradition of scientific research; nature of research; scientific and non-scientific methods of solving problems	3
2	Types of scientific research; introduction to the scientific research process	2
3	Literature search strategies; defining the scientific research problem and hypotheses	2
4	Methodology: participants, instruments, procedures, design and analysis	2
5	Functional diagnostics in kinesiology	4
6	Neuromuscular diagnostics in kinesiology	4
7	Review (evaluation) of scientific articles	2
8	Ethical issues in scientific research work	2
9	Proposed topics of scientific research work; proposal of doctoral topic and dissertation	2
10	Writing and preparing a scientific paper; presentation of results	2
	Lecture hours - TOTAL	25

Types of teaching delivery

Lectures; seminars and workshops; blended e-learning; independent assignments; laboratory work; mentoring work. Exercises, fully online teaching and field teaching are not indicated as standard teaching forms.

Student obligations

The student is required to attend classes in accordance with the Regulations on Studies and the Study System, thereby acquiring the right to the course signature. As part of the examination, the student is required to write and present a seminar paper on an assigned topic and pass the final oral examination.

Monitoring of student work

Activity	ECTS
Class attendance	1
Research	1

Experimental work	1
Seminar paper	2
Oral examination	1

Assessment and evaluation

The assessment procedure includes student activities during and outside classes, preparation and writing of the seminar paper, presentation of the seminar paper and the final oral examination. The final grade consists of: preparation and writing of the seminar paper - 30%; presentation of the seminar paper - 30%; oral examination - 40%.

Required literature

- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2022). Research methods in physical activity (8th ed.). Human Kinetics. Five copies; available through moodle.kifst.hr.
- Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications. Two copies; available through moodle.kifst.hr.

Supplementary literature

- Hoffman, S. J. (Ed.). (2018). Introduction to kinesiology: Studying physical activity (5th ed.). Human Kinetics.
- Morrow, J. R., Jr., Jackson, A. W., Disch, J. G., & Mood, D. P. (2015). Measurement and evaluation in human performance (5th ed.). Human Kinetics.
- Weinberg, R. S., & Gould, D. (2018). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.

Quality monitoring methods ensuring the acquisition of defined learning outcomes	Survey of the Quality Enhancement Committee of the Faculty of Kinesiology, University of Split.
Other	The course may be followed in Croatian and English.

2. APPLIED MEDICINE IN KINESIOLOGY AND SPORT

Course title	APPLIED MEDICINE IN KINESIOLOGY AND SPORT
Code	PMKS
Year of study	1
Course coordinator(s)	Assoc. Prof. Vladimir Ivančev, PhD
ECTS credits	3
Associates	
Teaching mode (hours per semester)	Lectures: 10; Seminars: 0; Exercises: 0
Course status	Extracurricular
Share of e-learning	20%
Course objectives	Acquisition of competences necessary for understanding and functioning within a scientific-professional

	multidisciplinary team involving the health service, coach and sports community.
Prerequisites and entry competences	Defined by the Regulations on the Postgraduate Doctoral Study Programme of the Faculty of Kinesiology, University of Split.

Expected learning outcomes at course level

- Critically evaluate work within a multidisciplinary team based on the latest scientific and professional knowledge.
- Critically read, evaluate and use existing literature.
- Create a research project with multidisciplinary medical/kinesiological participation.
- Understand the basic ethical standards of research work centred on humans.
- Recognise the specific features of working with participants, laboratory and other biological samples, and the need to maintain the confidentiality of medical and kinesiological information.

Course content by teaching hours

No.	Content	Hours
1	Current areas of medical interest in contemporary sport - overtraining syndrome	2
2	Mental health of athletes	2
3	Current areas of medical interest in contemporary sport - early specialisation of children in sport	2
4	Current areas of medical interest in contemporary sport - body mass manipulation	2
5	Student presentation of selected topics based on contemporary scientific literature	2
	Lecture hours - TOTAL	10

Types of teaching delivery

Lectures; seminars and workshops; blended e-learning; independent assignments; laboratory work; mentoring work. Exercises, fully online teaching and field teaching are not indicated as standard teaching forms.

Student obligations

The student is required to attend classes in accordance with the Regulations on Studies and the Study System, thereby acquiring the right to the course signature. As part of the examination, the student is required to write and present a seminar paper on an assigned topic and pass the final oral examination.

Monitoring of student work

Activity	ECTS
Class attendance	1

Research	0.5
Seminar paper	0.5
Oral examination	0.5
Project	0.5

Assessment and evaluation

The assessment procedure includes student activities during and outside classes, preparation and writing of the seminar paper, presentation of the seminar paper and the final oral examination. The final grade consists of: preparation and writing of the seminar paper - 35%; presentation of the seminar paper - 35%; oral examination - 30%.

Required literature

- Heimer, S., Čajavec, R., et al. (2006). Sports medicine. Zagreb: Faculty of Kinesiology, University of Zagreb.
- Wilmore, Costill, Kenney (2008). Physiology of Sport and Exercise (4th ed.). Human Kinetics.

Supplementary literature

- Pećina, M., Bojanić, I., Dubravčić Šimunjak, S., Janković, S., & Ribarić, G. (1992). Overuse syndromes of the locomotor system. Zagreb: Globus.
- Mueller-Wohlfahrt, H. W., Haensel, L., Mithoefer, K., Ekstrand, J., English, B., McNally, S., ... & Blottner, D. (2012). Terminology and classification of muscle injuries in sport: a consensus statement. British Journal of Sports Medicine.
- Brenner, J. S. (2007). Overuse injuries, overtraining, and burnout in child and adolescent athletes. Pediatrics, 119(6), 1242-1245.
- Reardon, C. L., & Factor, R. M. (2010). Sport psychiatry. Sports Medicine, 40(11), 961-980.
- Medical Code of the Olympic Movement, Lausanne, 2009.
- Other scientific papers from relevant databases in the area of kinesiology and sports medicine.

Quality monitoring methods ensuring the acquisition of defined learning outcomes	Survey of the Quality Enhancement Committee of the Faculty of Kinesiology, University of Split.
Other	The course may be followed in Croatian and English.

3. SYSTEMS OF SCIENTIFIC RESEARCH WORK IN APPLIED KINESIOLOGY

Course title	SYSTEMS OF SCIENTIFIC RESEARCH WORK IN APPLIED KINESIOLOGY
Code	SZPK
Year of study	1
Course coordinator(s)	Prof. Zoran Grgantov, PhD; Prof. Tonči Bavčević, PhD; Assoc. Prof. Mirjana Milić, PhD; Assist. Prof. Boris Milavić, PhD
ECTS credits	7
Associates	
Teaching mode (hours per semester)	Lectures: 30; Seminars: 0; Exercises: 0

Course status	Extracurricular
Share of e-learning	20%
Course objectives	Acquisition of competences necessary for planning and conducting scientific research in the areas of applied kinesiology, and for preparing a scientific paper and presenting research results.
Prerequisites and entry competences	Defined by the Regulations on the Postgraduate Doctoral Study Programme of the Faculty of Kinesiology, University of Split.

Expected learning outcomes at course level

- Critically analyse the possibility of research in the areas of applied kinesiology.
- Evaluate different types of research in the areas of applied kinesiology.
- Independently create a research plan in the areas of applied kinesiology.
- Organise and conduct the research procedure.
- Apply ethical standards in different types of scientific research work.
- Prepare a scientific paper in the field of kinesiology.
- Present the results of scientific research before a committee within the assigned time.

Course content by teaching hours

No.	Content	Hours
1	Socio-historical processes in sports studies	1
2	Philosophical research of physical activities	1
3	Research synthesis (meta-analysis)	3
4	Data collection: questionnaires, electronic questionnaires, Delphi method, personal interview, normative methods	4
5	Other descriptive research methods: developmental research, case analysis, job analysis, observation method, unobtrusive research techniques, correlational research	4
6	Epidemiological studies of physical activity	4
7	Experimental and quasi-experimental research	4
8	Qualitative research	6
9	Mixed-methods research	3
	Lecture hours - TOTAL	30

Types of teaching delivery

Lectures; seminars and workshops; blended e-learning; independent assignments; laboratory work; mentoring work. Exercises, fully online teaching and field teaching are not indicated as standard teaching forms.

Student obligations

The student is required to attend classes in accordance with the Regulations on Studies and the Study System, thereby acquiring the right to the course signature. As part of the examination, the student is required to write and present a seminar paper on an assigned topic and pass the final oral examination.

Monitoring of student work

Activity	ECTS
Class attendance	1
Research	1
Experimental work	2
Seminar paper	2
Oral examination	1

Assessment and evaluation

The assessment procedure includes student activities during and outside classes, preparation and writing of the seminar paper, presentation of the seminar paper and the final oral examination. The final grade consists of: preparation and writing of the seminar paper - 40%; presentation of the seminar paper - 30%; oral examination - 30%.

Required literature

- Thomas, J. R., Silverman, S., & Nelson, J. (2015). Research Methods in Physical Activity (7th ed.). Human Kinetics. Five copies; available through moodle.kifst.hr.

Supplementary literature

- Babin, J., Bavčević, T., & Prskalo, I. (2010). Comparative analysis of the specially programmed kinesiological activity on motor area structural changes of male pupils aged 6 to 8. Odgojne znanosti, 12(1), 79-96.
- Bavčević, T. (2016). Interpersonal Communication in Education - Analysis and Systematisation of Research Directions. Croatian Journal of Education, 18(4), 1201-1233.
- Bishop, D. (2008). An Applied Research Model for the Sport Sciences. Sports Medicine, 38(3), 253-263.
- Woods, D. M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: a review of possible methods. Journal of Health Services Research & Policy, 10(1), 45-53.
- Kolar, P. (2014). Clinical rehabilitation. Alena Kobesová.
- Tenenbaum, G., Eklund, R. C., & Kamata, A. (2012). Measurement in Sport and Exercise Psychology. Champaign, USA: Human Kinetics.

Quality monitoring methods ensuring the acquisition of defined learning outcomes	Survey of the Quality Enhancement Committee of the Faculty of Kinesiology, University of Split.
Other	The course may be followed in Croatian and English.

4. MEDICAL DIAGNOSTIC METHODS IN KINESIOLOGY AND SPORT

Course title	MEDICAL DIAGNOSTIC METHODS IN KINESIOLOGY AND SPORT
Code	MDMK
Year of study	1
Course coordinator(s)	Prof. Marko Erceg, PhD; Assoc. Prof. Vladimir Ivančev, PhD
ECTS credits	4
Associates	
Teaching mode (hours per semester)	Lectures: 10; Seminars: 0; Exercises: 0
Course status	Extracurricular
Share of e-learning	20%
Course objectives	Acquisition of competences at defined levels related to the selection, implementation and interpretation of medical diagnostic methods in kinesiology and sport.
Prerequisites and entry competences	Defined by the Regulations on the Postgraduate Doctoral Study Programme of the Faculty of Kinesiology, University of Split.

Expected learning outcomes at course level

- Critically evaluate the possibilities of use and the valid benefits of medical diagnostic methods in continuous, dynamic monitoring of the training process, and in creating and adapting training to current functional abilities.
- Critically read, evaluate and use existing literature in the targeted area.
- Create a research project based on diagnostic methods and measurement of medical parameters.
- Understand the basic ethical standards of research work centred on humans.
- Recognise the specific features of working with participants, laboratory and other biological samples, and the need to maintain the confidentiality of medical and kinesiological information.

Course content by teaching hours

No.	Content	Hours
1	Overview of methods indicated for diagnosing the functional and health status of athletes	2
2	Diagnostics of the cardiovascular and respiratory systems: spiroergometry, ergometry, spirometry	2
3	Diagnostics of metabolic and energy processes	2
4	Diagnostics of laboratory metabolic parameters: blood lactate measurement	2
5	Student presentation of selected topics	2

	based on contemporary scientific literature	
	Lecture hours - TOTAL	10

Types of teaching delivery

Lectures; seminars and workshops; blended e-learning; independent assignments; laboratory work; mentoring work. Exercises, fully online teaching and field teaching are not indicated as standard teaching forms.

Student obligations

The student is required to attend classes in accordance with the Regulations on Studies and the Study System, thereby acquiring the right to the course signature. As part of the examination, the student is required to write and present a seminar paper on an assigned topic and pass the final oral examination.

Monitoring of student work

Activity	**ECTS**
Class attendance	1
Research	0.5
Experimental work	0.5
Seminar paper	1
Oral examination	0.5
Project	0.5

Assessment and evaluation

The assessment procedure includes student activities during and outside classes, preparation and writing of the seminar paper, presentation of the seminar paper and the final oral examination. The final grade consists of: preparation and writing of the seminar paper - 40%; presentation of the seminar paper - 30%; oral examination - 30%.

Required literature

- Wasserman, K., Hansen, J. E., Sue, D. Y., Stringer, W. W., & Whipp, B. J. (2005). Principles of exercise testing and interpretation: including pathophysiology and clinical applications (4th ed.). Philadelphia, USA: Lippincott Williams & Wilkins.
- Kenney, W. L., Wilmore, J., & Costill, D. (2015). Physiology of Sport and Exercise (6th ed.). Human Kinetics.

Supplementary literature

- Clinical Exercise Testing - European Respiratory Society Monograph 40 (2007).
- Other scientific papers from relevant databases in the area of kinesiology and sports medicine.

Quality monitoring methods ensuring the acquisition of defined learning outcomes	Survey of the Quality Enhancement Committee of the Faculty of Kinesiology, University of Split.
Other	The course may be followed in Croatian and English.

4. Conditions for the Implementation of the Study Programme

4.1. Locations for the Implementation of the Study Programme; Premises and Equipment

Lectures in extracurricular courses will be delivered in the lecture rooms of the Faculty of Kinesiology in Split (Teslina 10). If necessary, teaching may also be delivered at other locations, including the Pulmonary Laboratory of University Hospital Split, Toplice Split, the Centre for Medical Expertise Split, the School of Medicine, FESB Split, fitness and recreation centres, and the Faculty's teaching bases. Decisions on such arrangements are made by the course coordinators, depending on the number and interests of students.

Kinesiology: Equipment for conducting field measurements in kinesiology, including video equipment, photocells, and kinesiology measuring instruments.

Computer classrooms: One classroom equipped with 20 PCs, with permanent access to the internet and databases such as Web of Science, Scopus, Medline, Wiley & Sons, and others.

Laboratory for Kinanthropology: The laboratory is equipped with modern equipment for anthropometric measurements and body-composition assessment, including a complete set of anthropometric instruments, a TANITA BC-418 body-composition analyser, and a BAUSport – SonicBone ultrasound device for bone-age assessment.

Laboratory for Kinesiological Biochemistry: The laboratory is equipped for biochemical analyses and research procedures in kinesiology and sports medicine. Available equipment includes an INFINITE M NANO spectrophotometer – TECAN, Centrifuge 5804 R – Eppendorf, Milli-Q water purification system – Millipore, Stuart and IKA agitators, and an ATAGO refractometer.

Laboratory for Kinesiological Physiology: The laboratory is equipped for functional and physiological testing of athletes, including ergospirometric testing using a treadmill, bicycle ergometers, and a rowing ergometer. Its equipment includes a Quark – COSMED stationary ergospirometer, K5 – COSMED portable ergospirometer, SpiroLab spirometer, EKG SE301 device, Biodex Balance System for balance assessment, TMG S1 tensiomyography device, and biochemical devices for lactate testing and basic biochemical diagnostics.

Library: The Faculty Library covers 100 square metres and provides access to a continuously developing collection of printed and electronic resources. The printed collection includes more than 950 titles in approximately 1,700 library units/items, with particular emphasis on recent and scientifically relevant literature in kinesiology, sport sciences, biomedicine, sport psychology, pedagogy, and training methodology. The Library is intended for students, teachers, and professional associates of the Faculty and supports educational, scientific-research, and professional activities. In addition to its printed holdings, the Faculty provides access to electronic journals, online databases, and e-books through the integrated library system of the University of Split and national subscription arrangements. The Library also supports doctoral students by

providing access to relevant literature and by procuring additional materials required for their research where necessary.

4.2. Institutional Management of the Doctoral Programme

The Committee for the Doctoral Study is a working body of the Department of Doctoral Studies, established by the Faculty Council, and consists of a chairperson and four members. The chairperson of the Committee is the Vice Dean for Science.

The term of office of the Committee members lasts three years and follows the term of office of the Dean. Members of the Committee may be proposed by any member of the Faculty Council, with the consent of the proposed candidate, while the final decision on their appointment is made by the Faculty Council.

Regular meetings of the Committee are generally held once a month, and more frequently if necessary. Decisions are adopted by an absolute majority of all Committee members, that is, by three members.

4.3. Contractual Relations between Students and the Doctoral Study Provider

Scientific research work is evaluated through ECTS credits awarded for activities that include experimental work in laboratories and other teaching bases, writing scientific papers, and participating in symposia, workshops, round tables, and professional consultations.

The requirements that a student must fulfil in order to complete the doctoral study programme are prescribed by the Regulations on the Doctoral Study in Kinesiology, this Study Programme Elaborate, and the study contract.

4.4. Teachers

A teacher/mentor in the doctoral study programme must meet the requirements for appointment to at least the scientific rank of research associate in the field of Social Sciences, in accordance with the applicable Ordinance on Amendments to the Ordinance on the Requirements for Appointment to Scientific Ranks.
The list of teachers, employees of the Faculty of Kinesiology, who may be engaged in the Doctoral Study in Kinesiology is as follows:

1. Dr Tonči Bavčević
2. Dr Marijana Čavala

3. Dr Dražen Čular
4. Dr Sunčica Delaš Kalinski
5. Dr Jozefina Đuzel
6. Dr Marko Erceg
7. Dr Nikola Foretić
8. Dr Goran Gabrilo
9. Dr Marijana Geets Kesić
10. Dr Barbara Gilić
11. Dr Zoran Grgantov
12. Dr Vladimir Ivančev
13. Dr Igor Jelaska
14. Dr Mario Jeličić
15. Dr Hrvoje Karninčić
16. Dr Ana Kezić
17. Dr Saša Krstulović
18. Dr Goran Kuvačić
19. Dr Boris Milavić
20. Dr Alen Miletić
21. Dr Đurđica Miletić
22. Dr Mirjana Milić
23. Dr Toni Modrić
24. Dr Goran Munivrana
25. Dr Zoran Nikolovski
26. Dr Jelena Paušić
27. Dr Ana Penjak
28. Dr Mia Perić
29. Dr Ante Rađa
30. Dr Jelena Rodek
31. Dr Nenad Rogulj
32. Dr Damir Sekulić
33. Dr Miodrag Spasić
34. Dr Mario Tomljanović
35. Dr Ognjen Uljević
36. Dr Šime Veršić
37. Dr Nataša Zenić Sekulić
38. Dr Frane Žuvela

It is the obligation of the doctoral candidate to engage in continuous professional and scientific development, to acquire knowledge of historical and contemporary scientific achievements in the field being studied, to pass examinations regularly, to demonstrate initiative, and to prove themselves through the quality of their reasoning, work, and cooperation.

4.5. List of Teaching, Research and Professional Bases

The topic of the dissertation itself determines the teaching, research, and professional bases; therefore, it is not possible to list them exhaustively. The primary base is undoubtedly the Faculty of Kinesiology, followed by related faculties such as FESB and the School of Medicine, as well as the University of Split as a whole, with all its available facilities and resources.

Cooperation has also been established with the Faculty of Kinesiology in Zagreb, as well as with other institutes, laboratories, faculties, and universities in Croatia and abroad.

In consultation with the mentor, and depending on the needs of the experimental and professional work required to complete the dissertation topic, the candidate will select the bases that are most appropriate for the topic.

4.6. Optimal Number of Students

According to the available capacities of the Faculty, the enrolment quota for the doctoral study programme is ten students per published call for applications.

4.7. Tuition Fees, Costs and Funding

The doctoral study programme does not include tuition fees, unless the Faculty Council decides otherwise. The student is obliged to pay an enrolment fee, in accordance with the decision of the Faculty Council for each academic year.The doctoral candidate is responsible for covering all other costs that are directly or indirectly related to the study programme, in accordance with the decisions of the Faculty Council. These may include the costs of repeating a semester, costs related to the initiation and delivery of extracurricular courses, and costs incurred in the event of repeating the defence of a scientific paper/examination or the doctoral thesis before a committee.The remuneration, obligations, and responsibilities of mentors, teachers, committee members, and any advisors required during the study programme shall be regulated by separate acts, in accordance with the Collective Agreement and the applicable regulations and legal acts.

4.8. Quality of the Doctoral Programme

The achievement of the objectives of the doctoral programme, in terms of the acquisition of competences, is analysed by the Committee for the Doctoral Study and, ultimately, by the Faculty Council. Mentors play an exceptionally important role in this process, as they are in direct, day-to-day contact with the candidates and are therefore best placed to assess the progress of each candidate in acquiring the required competences.

The Institution’s mechanisms for improving the doctoral programme are based on an evaluation procedure, which includes the analysis of survey results among doctoral students and study-success indicators. These serve as the starting point for improving the quality of the programme.

In addition, the Committee for the Postgraduate Doctoral Study and the Faculty Management are obliged, after each programme cycle, to evaluate the effectiveness of the implementation of the doctoral programme and, where necessary, to revise the programme to the extent deemed necessary, while taking into account all performance indicators obtained through the monitoring of candidates’ progress.