



# UNICUSANO

Università degli Studi Niccolò Cusano - Telematica Roma

<b>Course</b>	<b>Strength and Conditioning</b>
<b>Level and Course of Study</b>	Master's degree in Science and Technique in Sport (LM-68)
<b>Italian Academic Field (SSD)</b>	MEDF-01/B - Sport Sciences and Methodology
<b>Course Year</b>	1
<b>Academic Year</b>	2024-2025
<b>Credits</b>	12
<b>Professors</b>	<p>Davide Curzi NICKNAME: Davide Curzi EMAIL: <a href="mailto:davide.curzi@unicusano.it">davide.curzi@unicusano.it</a></p> <p>Paolo Troiani NICKNAME: Stefano Amatori EMAIL: <a href="mailto:paolo.troiani@unicusano.it">paolo.troiani@unicusano.it</a></p> <p>Lorenzo Marcelli NICKNAME: Lorenzo Marcelli EMAIL: <a href="mailto:lorenzo.marcelli@unicusano.it">lorenzo.marcelli@unicusano.it</a></p>
<b>Course Presentation</b>	<b>Strength and Conditioning</b> Course provides a comprehensive overview of sports conditioning principles as applied to both individual and team sports. It explores the role of the Sports Science graduate in optimizing athletic performance. Key topics include the foundational principles of training, application to specific sports, and strategies for developing strength, speed, endurance, and coordination. The course will delve into case studies of various sports to illustrate practical applications.
<b>Objectives</b>	<p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Define and explain the goals and applications of sports conditioning.</li> <li>• Design, implement, and evaluate training programs for the development of strength, speed, endurance, and coordination.</li> <li>• Monitor training loads and athlete well-being.</li> <li>• Adapt training programs to specific populations and sports.</li> <li>• Implement injury prevention and rehabilitation strategies.</li> </ul>
<b>Prerequisites</b>	Understanding of fundamental movement concepts and training methodologies. In particular: motor patterns, coordination and conditioning capacities, classification of sports activities, supercompensation process, characteristics of training load, and functional assessment.
<b>Expected Learning Outcomes</b>	<p>In summary, the expected learning outcomes are as follows:</p> <p><b>KNOWLEDGE AND UNDERSTANDING:</b> Students will acquire knowledge and understanding of the fundamental principles of physical preparation and the role of a Sports Science graduate in this field.</p> <p><b>APPLYING KNOWLEDGE AND UNDERSTANDING:</b> Students will be able to plan, program, and implement physical training plans designed to achieve specific sporting goals.</p> <p><b>MAKING JUDGEMENTS:</b> Students will be able to assess situations and design appropriate physical training plans based on predetermined objectives.</p> <p><b>COMMUNICATION SKILLS:</b> Students will acquire the specific language and communication skills necessary to interact with athletes.</p>

	<p>LEARNING SKILLS: Students will be able to effectively apply their acquired knowledge to plan and execute physical training programs that align with set objectives.</p>
<b>Course Organization</b>	<p>The <b>Strength and Conditioning</b> course is worth 12 ECTS credits, equivalent to at least 300 hours of student study. It is delivered through pre-recorded audio-visual lectures, slides, handouts, in-person activities, and other supporting learning resources. All the study materials, available on the platform, provide everything needed to study the subject in preparation for the exam. For a more in-depth preparation, students are advised to consult the textbooks listed at the end of each module in the handout.</p> <p>The study load includes at least the following components:</p> <ul style="list-style-type: none"> <li>• 252 hours of delivered teaching for viewing and studying the pre-recorded lectures (7 hours of study for 1 hour of video-recorded lecture, including 2 hours for listening to the lecture and 5 hours of self-study to assimilate the content of the lecture, for a total of 36 hours of video-recorded lectures);</li> <li>• 48 hours of interactive teaching on the forum (virtual classroom) dedicated to carrying out exercises and tasks proposed by the teachers, called e-tivities.</li> </ul> <p>Finally, the teaching makes use of synchronous tools such as web-conference appointments and chats available on the platform to allow real-time interaction with enrolled students. Students are advised to distribute the study of the subject evenly over a period of 12 weeks, dedicating at least 20 hours per week to study.</p>
<b>Course Contents</b>	<ul style="list-style-type: none"> <li>• <b>Module I: Key principles and programming (Prof. Curzi)</b></li> <li>• <b>Module II: Fields of application and objectives (Prof. Curzi)</b></li> <li>• <b>Module III and IV: Physical preparation and strength development (Prof. Curzi)</b></li> <li>• <b>Module V: Physical preparation and speed development (Prof. Curzi)</b></li> <li>• <b>Module VI: Physical preparation and endurance development (Prof. Curzi)</b></li> <li>• <b>Module VII: Physical preparation, joint mobility, and coordination abilities (Prof. Curzi)</b></li> <li>• <b>Module VIII: Monitoring training load (Prof. Troiani)</b></li> <li>• <b>Module IX: Monitoring the athlete's psychophysical status (Prof. Troiani)</b></li> <li>• <b>Module X: Managing training in specific populations (Prof. Troiani)</b></li> <li>• <b>Module XI: Injury prevention (Prof. Marcelli)</b></li> <li>• <b>Module XII: Rehabilitation (Prof. Marcelli)</b></li> </ul>
<b>Study Resources</b>	<ul style="list-style-type: none"> <li>• Pre-recorded video lectures: the course is delivered through pre-recorded video lectures by the course instructor.</li> <li>• Supporting materials: additional learning materials such as handouts and slides will be provided.</li> <li>• Recommended textbooks for further reading: a brief excerpt of the recommended texts is provided below, but for a complete list of texts and scientific articles, please refer to the bibliography at the end of each module.</li> </ul> <ol style="list-style-type: none"> <li>1. Weineck J. L'allenamento ottimale. Calzetti &amp; Mariucci Editori, 2009.</li> <li>2. Zatsiorsky VM, Kraemer WJ, Fry AC. Science and Practice of Strength Training. Human Kinetics Publishers, 2020.</li> <li>3. Bompa T. e Buzzichelli C. Periodizzazione dell'allenamento sportivo. Calzetti &amp; Mariucci Editori, 2015.</li> <li>4. Platonov V. L'organizzazione dell'allenamento e dell'attività di gara. Calzetti Mariucci editori, 2004.</li> <li>5. Carrio C. La preparazione fisica per gli sport di combattimento. Calzetti &amp; Mariucci Editori, 2008.</li> <li>6. Urso A. Le basi dell'allenamento sportivo. Calzetti &amp; Mariucci Editori, 2014.</li> <li>7. Janse van Rensburg DC, Jansen van Rensburg A, Fowler PM, et al. Managing Travel Fatigue and Jet Lag in Athletes: A Review and Consensus Statement. Sports Med., 2021.</li> <li>8. McNulty KL, Elliott-Sale KJ, Dolan E, et al. The Effects of Menstrual Cycle Phase on Exercise Performance in Eumenorrheic Women: A Systematic Review and Meta-Analysis. Sports Med., 2020.</li> <li>9. Meignié A, Duclos M, Carling C, et al. The Effects of Menstrual Cycle Phase on Elite Athlete Performance: A Critical and Systematic Review. Front Physiol. 2021.</li> <li>10. Vanlandewijck Y &amp; Thompson WR / International Olympic Committee. Medical and Scientific Commission. Training and Coaching the Paralympic athlete. Handbook of Sports Medicine and Science, 2017.</li> </ol>
<b>Evaluation System and Criteria</b>	<p>The assessment will consist of a written examination or an oral examination (which may be held at the Rome headquarters), aimed at assessing the students' ability to analyze, use appropriate language, and apply the acquired concepts.</p> <p>The written examination will include 3 multiple-choice questions and 3 open-ended questions (theoretical and/or practical) covering the entire course program. The 3 multiple-choice questions will be worth 2 points each for the correct answer, while the 3 open-ended questions will be assigned a maximum score of 8 points based on the assessment of the expected learning outcomes by the lecturers. Alternatively, there may be 30 multiple-choice questions, each worth 1 point.</p> <p>The oral examination consists of an interview designed to assess the student's level of preparation. This typically involves 3 broad questions (theoretical and/or practical) covering the entire course program, each question being equally weighted with a maximum score of 10.</p>

	<p>In both examination formats, particular attention will be paid to the student's ability to rephrase, apply, and present the material from the platform using appropriate language.</p> <p>The final assessment will also take into account active participation in the forums (virtual classrooms) and the correct completion of the proposed e-tivities.</p> <p>Students who hold an official recognition of prior learning credits for the Physical Preparation course from the Secretariat of the Motor Sciences Area must contact the course tutor. After consulting with the relevant lecturer(s), the tutor will inform the student about the modules they need to complete to pass the final exam.</p>
<b>Bachelor's thesis</b>	<p>The final project will be assigned based on an interview with the professor during which the student will express their specific interests in a particular topic. There are no restrictions on the topics that can be chosen for the thesis, and no minimum GPA is required to apply.</p>