

Sports Performance Analysis

(1) GENERAL

SCHOOL	SCHOOL OF INFORMATION SCIENCES & TECHNOLOGY		
ACADEMIC UNIT	DEPARTMENT OF STATISTICS		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE		TRIMESTER	1 OR 4
COURSE TITLE	Sports Performance Analysis		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
		3	5
		30	5
COURSE TYPE	Specialization Elective		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	ENGLISH		
COURSE DELIVERY METHOD	Distance		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)	https://cloud.aueb.gr/index.php/s/39zMXffir9JFdH7		

(2) LEARNING OUTCOMES

Learning outcomes
• Understand the principles of Performance Analysis in applied sports science. • Perform tactical and behavioral evaluations of athletes in real-world conditions. • Measure technical effectiveness using modern analytical methods. • Analyze specific skills and technical elements in performance. • Utilize athlete monitoring technologies and tools. • Assess coach and athlete behavior during training and competition. • Integrate theoretical concepts from coaching, pedagogy, and exercise science with practical analysis. • Develop applied skills to improve athletic performance using evidence-based methods.
General Competences
• Analysis and synthesis of data and information, including the use of relevant data technologies. • Decision-making skills. • Ability to work in an interdisciplinary environment.

(3) SYLLABUS

The Sport Performance Analysis course is an applied sports science program focused on understanding, improving, and analyzing performance in sports. The curriculum gradually develops students' knowledge in tactical analysis, measurement of technical effectiveness, and analysis of specific technical skills within actual athletic performance, using a range of modern techniques and technologies. Additionally, the course includes familiarity with coach and athlete behavior analysis and the application of athlete monitoring techniques. Core topics in Sport Performance Analysis are complemented by content from related fields such as coaching, pedagogy, and exercise science. These elements give the course a unique perspective, allowing students to understand both the theoretical principles and the applied skills that underpin effective performance analysis.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Distance	
METHOD AND FREQUENCY OF COMMUNICATING WITH THE STUDENTS	Remotely via email and through weekly office hours (and whenever necessary) via teleconferencing or in-person office visits.	
ENSURING COMMUNICATION AMONG STUDENTS	Teleconference, Chat via eclass and/ or TEAMS, and QA sessions	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	MS Teams, e-class, MS Outlook, R, Python, WayGround or Kahoot educational games and quizzes	
REQUIRED EQUIPMENT AND TECHNOLOGY KNOWLEDGE	Camera, mic, PC, MS Office, and TEAMS	
COURSE POLICY ON PLAGIARISM AND PLAGIARISM DETECTION TOOLS	Turnitin	
COURSE POLICY ON USE OF AI TOOLS	The use of Artificial Intelligence is permitted with explicit reference to the bibliography (2) for the verbal correction of assignments and as long as students have understood the basic principles and methods of the course.	
TEACHING METHODS	Activity	Semester workload
	Lectures	30
	Assignment writing	40
	Lab Exercise	20
	Self-Study hours	40
	Course total	130
STUDENT PERFORMANCE EVALUATION	Evaluation language is English. Evaluation methods include lab exercises, written assignments, and/or written examinations. Oral examinations of the assignments may be conducted if clarifications are needed or if there are suspicions of plagiarism or unauthorized use of Artificial Intelligence tools. Assessment criteria	

	are provided on the course eClass platform and in the course materials.
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(5) RECOMMENDED BIBLIOGRAPHY

• O'Donoghue, P. (2014). An introduction to performance analysis of sport. Routledge. • Memmert, D. (Ed.). (2021). Match analysis: how to use data in professional sport. Routledge. • Cullinane, A., Davies, G and O'Donoghue.P. (2024). An Introduction to Performance Analysis of Sport, Routledge.
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