



# ANALIZA TEKMOVALNIH NASTOPOV V ŠPORTU

## UČNI NAČRT PREDMETA/COURSE SYLLABUS

**Predmet:** Analiza tekmovalnih nastopov v športu  
**Course title:** Performance analysis of sport  
**Članica nosilka/UL Member:** UL FŠ

| Študijski programi in stopnja                   | Študijska smer                  | Letnik | Semestri    | Izbirnost |
|-------------------------------------------------|---------------------------------|--------|-------------|-----------|
| Kineziologija, prva stopnja, univerzitetni      | Ni členitve (študijski program) |        | 1. semester | izbirni   |
| Športna vzgoja, prva stopnja, univerzitetni     | Ni členitve (študijski program) |        | 1. semester | izbirni   |
| Športno treniranje, prva stopnja, univerzitetni | Ni členitve (študijski program) |        | 1. semester | izbirni   |

**Univerzitetna koda predmeta/University course code:** 0077340

**Koda učne enote na članici/UL Member course code:** 1130

| Predavanja<br>/Lectures | Seminar<br>/Seminar | Vaje<br>/Tutorials | Klinične vaje<br>/Clinical<br>tutorials | Druge oblike<br>študija<br>/Other forms<br>of study | Samostojno<br>delo<br>/Individual<br>student work | ECTS |
|-------------------------|---------------------|--------------------|-----------------------------------------|-----------------------------------------------------|---------------------------------------------------|------|
| 15                      |                     | 45                 |                                         |                                                     | 60                                                | 4    |

**Nosilec predmeta/Lecturer:** prof. dr. Goran Vučković

**Vrsta predmeta/Course type:** splošni izbirni/general selective

**Jeziki/Languages:**

Predavanja/Lectures: Slovenščina  
Vaje/Tutorial: Slovenščina

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

Ni posebnih pogojev

**Prerequisites:**

No special requirements.

**Vsebina:**

Analize tekmovalnih nastopov v športu (Performančne analize v športu) predstavljajo mlado raziskovalno disciplino, ki vsebuje biomehanske in anotacijske analize s pomočjo videa in informacijske tehnologije. Eno od ključnih opravil v trenerskem delu je objektivno analiziranje in diagnosticiranje športnikovega in/ali ekipnega nastopa bodisi na treningu ali tekmovalju ter z ustrezno povratno informacijo vplivati na izboljšanje športnega nastopa. Skladno s tem se analize tekmovalnih nastopov uporabljajo za analiziranje tehnike, taktike in ostalih gibalnih nalog, ki narekujejo uspešnost znotraj posameznega športa.

**Content (Syllabus outline):**

Performance analysis of sport is relatively young scientific discipline which combine biomechanics and notational analysis by using video and information technology. The need to produce an accurate recording of an event and then to analyse and diagnose it, and provide feedback to an athlete/coach to improve performance is one of the most important task in a applied sport. Therefore performance analyst should be familiar with the practice of recording, processing, and interpreting events that take place in training and/or competition in sport. As such, it can include evaluating the technical, tactical, and

Osnovni cilj programa je študente spoznati s temeljnimi principi performančnih analiz in jih naučiti kako performančne analize uporabiti v smeri izboljšanja športnikove in/ali ekipne učinkovitosti v različnih športnih panogah in igrah.

#### **Teoretični del:**

- Razvoj analiz tekmovalnega nastopanja kot raziskovalne discipline.
- Kvantitativna in kvalitativna analiza tekmovalnega nastopa.
- Zakaj izvajamo analizo tekmovalnih nastopov?
- Kdo izvaja analizo tekmovalnega nastopa?
- Kje izvajamo analizo tekmovalnega nastopanja?
- Kdaj izvajamo analizo tekmovalnega nastopa?
- Kako izvajamo analizo tekmovalnega nastopa?

#### **Praktični del:**

- Predstavitev različnih računalniških programov za kvantitativno in kvalitativno analiziranje športnikovega ali ekipnega nastopa.
- Razlike med različnimi načini predstavitve rezultatov.

Seminarsko delo, ki bo temeljilo na analiziranju športa po izbiri študentov in bo temeljilo na ustreznem metodološkem pristopu, vključno s predstavitvijo seminarjev.

behavioural activities of individuals, teams, and/or specific units within teams.

The main goal of the program is for students to learn and understand the general principal of the performance analysis and to be able to provide concrete feed back to athletes and coaches to improve their performance in different sports.

#### **Theoretical part:**

- Development of performance analysis of sport as a research discipline.
- Quantitative and qualitative performance analysis of sport.
- Why do we do performance analysis of sport?
- Who does performance analysis of sport?
- Where is the performance analysis of sport done?
- When is the performance analysis of sport done?
- How is the performance analysis of sport done?

#### **Practice:**

- Introduction of different softwares for quantitative and qualitative performance analysis in sport.
- Differences in presenting the data.
- Seminar work based on analysing their own sport which will include an appropriate methodological approach and presentation of the seminars.

#### **Temeljna literatura in viri/Readings:**

- O'Donoghue, P. (2010). Research Methods for Sports Performance Analysis. New York: Routledge.
- Hughes, M. in Franks, I.M. (1997). Notational Analysis of Sport. London: E and FN Spon.
- Hughes, M. in Franks, I.M. (2008). Essentials of Performance Analysis: an introduction. London: Routledge.

#### **Cilji in kompetence:**

Osnovni cilj programa je usposobiti študente, da bodo znali in razumeli kako analizirati tekmovalni nastop z namenom pomagati športnikom in trenerjem izboljšati njihovo delo oziroma športni nastop.

#### **Objectives and competences:**

The basic objective of the program is for students to learn and understand how to use the performance analysis to help athletes and coaches to improve their performance.

#### **Predvideni študijski rezultati:**

Znanje in razumevanje:

- Študenti so sposobni podajati temeljna znanja o analizi tekmovalnega nastopa.
- Sposobni so analizirati tekmovalni nastop v različnih športnih panogah ali igrah.
- Sposobni so prilagoditi predstavitev rezultatov in lastnih ugotovitev tekmovalni ravni športnikov ali ekip s katerimi sodelujejo.
- Sposobni so ustvariti različne predstavitve v odvisnosti od trenutnih potreb (motivacijski video, tehnične analize, taktične analize, igralne značilnosti idr.).

#### **Intended learning outcomes:**

Knowledge and understanding:

- Students are able to convey basic knowledge about performance analysis of sport.
- They are able to implement performance analysis in different sports.
- They are able to present different data regarding the sports' level of the athletes or teams.
- They are able to produce different presentational outcomes regarding the needs (motivational video, technical data, tactical data, playing patterns etc.).

#### **Metode poučevanja in učenja:**

Predavanja, seminarji, seminarska naloga.

#### **Learning and teaching methods:**

Lectures, seminars, coursework.

**Načini ocenjevanja:**

ustno izpraševanje  
praktični prikaz

**Delež/Weight**

50,00 %  
50,00 %

**Assessment:**

oral examination  
practical demonstration

**Ocenjevalna lestvica:****Grading system:****Reference nosilca/Lecturer's references:**

Goran Vučković je diplomiral na Fakulteti za šport leta 1999, magistriral leta 2002 in doktoriral leta 2005. Njegovo znanstveno-raziskovalno delo je v zadnjih letih usmerjeno v preučevanje igralnih značilnosti in gibanja (tekmovalnega nastopanja) posameznih športnikov in ekip v različnih športnih igrah oziroma športnih panogah. V tej smeri temelji njegovo raziskovalno delo na uporabi različnih računalniških programov, ki so namenjeni analitični obravnavi športnikovega ali ekipnega nastopa bodisi na treningu ali tekmovanju. Je član uredniških odborov in recenzent v različnih znanstvenih revijah.

VUČKOVIĆ, Goran, JAMES, Nic, HUGHES, Michael David, MURRAY, Stafford, MILANOVIĆ, Zoran, PERŠ, Janez, SPORIŠ, Goran. A new method for assessing squash tactics using 15 court areas for ball locations. *Human movement science*, Apr. 2014, vol. 34, str. 81-90, [COBISS.SI-ID [4504497](#)]

PROSEN, Jerneja, JAMES, Nic, DIMITRIOV, Lygeri, PERŠ, Janez, VUČKOVIĆ, Goran. A time-motion analysis of turns performed by highly ranked Viennese waltz dancers. *J. Human Kinet.*, 2013, vol. 37, str. 55-62, [COBISS.SI-ID [4383921](#)]

VUČKOVIĆ, Goran, JAMES, Nic, HUGHES, Michael David, MURRAY, Stafford, SPORIŠ, Goran, PERŠ, Janez. The effect of court location and available time on the tactical shot selection of elite squash players. *JSSM (Online)*. [Online ed.], march 2013, vol. 12, issue 1, str. 66-73, [COBISS.SI-ID [4338609](#)]

MARTÍNEZ-GALLEGO, Rafael, GUZMÁN, Jose F., JAMES, Nic, PERŠ, Janez, RAMÓN-LLIN, Jesus, VUČKOVIĆ, Goran. Movement characteristics of elite tennis players on hard courts with respect to the direction of ground strokes. *JSSM (Online)*. [Online ed.], 2013, iss. 2, str. 275-281, [COBISS.SI-ID [4355505](#)]

CVETKOVIĆ, Vlado, VUČKOVIĆ, Goran. Razlike v opravljeni poti gibanja v napadu med različnimi tipi igralcev na košarkarski tekmi - študija primera. *Šport (Ljublj.)*, 2013, letn. 61, št. 1/2, str. 67-73, ilustr. [COBISS.SI-ID [4358833](#)]

HUGHES, Michael David, FULLER, Ozzie, MURRAY, Stafford, JAMES, Nic, VUČKOVIĆ, Goran. The efficiency and ergonomics of selected different data entry systems in real-time and lapsed-time computer notation systems. *Int. j. comput. sci. sport*, 2012, vol. 11, no. 3, str. 23-36, [COBISS.SI-ID [4326065](#)]

HUGHES, Michael, HUGHES, Michael David, WILLIAMS, Jason, JAMES, Nic, VUČKOVIĆ, Goran, LOCKE, Duncan. Performance indicators in rugby union. *J. hum. sport. exerc.*, 2012, vol. 7, no. 2 (special issue), str. 383-401, ilustr., tabele. [COBISS.SI-ID [4269489](#)]

JAMES, Nic, REES, Gethin, GRIFFIN, Elliot, BARTER, Phil, TAYLOR, Joe, HEATH, Luke, VUČKOVIĆ, Goran. Analysing soccer using perturbation attempts. *J. hum. sport. exerc.*, 2012, vol. 7, no. 2 (special issue), str. 413-420, ilustr., tabele. [COBISS.SI-ID [4269745](#)]

JONES, Rhys M., COOK, Christian C., KILDUFF, Liam P., MILANOVIĆ, Zoran, JAMES, Nic, SPORIŠ, Goran, FIORENTINI, Bruno, FIORENTINI, Fredi, TURNER, Anthony, VUČKOVIĆ, Goran. Relationship between repeated sprint ability and aerobic capacity in professional soccer players. *TheScientificWorldjournal*, july 2013, vol. 2013, str. 1-5, tabeli, graf, prikaza. [COBISS.SI-ID [4401841](#)]

HUGHES, Michael, HUGHES, Michael David, WILLIAMS, Jason, JAMES, Nic, VUČKOVIĆ, Goran, LOCKE, Duncan. Performance indicators in rugby union. *J. hum. sport. exerc.*, 2012, vol. 7, no. 2 (special issue), str. 383-401, ilustr., tabele. [COBISS.SI-ID [4269489](#)]

VUČKOVIĆ, Goran, PERŠ, Janez, JAMES, Nic, HUGHES, Michael David. Measurement error associated with the SAGIT/Squash computer tracking software. *European journal of sport science*, mar. 2010, vol. 10, issue 2, str. 129-140, ilustr., graf. prikazi [COBISS.SI-ID [3769777](#)]

VUČKOVIĆ, Goran, JAMES, Nic. The distance covered by winning and losing players in elite squash matches. *Kinesiol. Slov. (Print)*. [Print ed.], 2010, vol. 16, no. 1/2, str. 44-50, ilustr., tabela. [COBISS.SI-ID [3956657](#)]

ZALETET, Petra, VUČKOVIĆ, Goran, JAMES, Nic, REBULA, Andrej, ZAGORC, Meta. A time-motion analysis of ballroom dancers using an automatic tracking system. *Kinesiol. Slov. (Print)*. [Print ed.], 2010, vol. 16, no. 3, str. 46-56, ilustr., tabela. [COBISS.SI-ID [4046001](#)]

- VUČKOVIĆ, Goran, DEŽMAN, Brane, JAMES, Nic, ERČULJ, Frane. Analysis of the movement intensity of national level basketball guards and centers in defence and offence - a case study. *Kinesiol. Slov. (Print)*. [Print ed.], 2010, vol. 16, no. 3, str. 66-76, ilustr., tabeli. [COBISS.SI-ID [4046513](#)]
- PERŠE, Matej, KRISTAN, Matej, PERŠ, Janez, MUŠIČ, Gašper, VUČKOVIĆ, Goran, KOVAČIČ, Stanislav. Analysis of multi-agent activity using Petri nets. *Pattern recogn.* [Print ed.], Apr. 2010, vol. 43, no. 4, str. 1491-1501 [COBISS.SI-ID [7389780](#)]
- PERŠE, Matej, KRISTAN, Matej, KOVAČIČ, Stanislav, VUČKOVIĆ, Goran, PERŠ, Janez. A trajectory-based analysis of coordinated team activity in a basketball game. *Comput. vis. image underst. (Print)*. [Print ed.], May 2009, vol. 113, no. 5, str. 612-621, ilustr. [COBISS.SI-ID [6401364](#)]
- VUČKOVIĆ, Goran, PERŠ, Janez, JAMES, Nic, HUGHES, Michael David. Tactical use of the T area in squash by players of differing standard. *J. sports sci.* [Print ed.], 2009, vol. 27, no. 8, str. 863-871, ilustr. [COBISS.SI-ID [3637937](#)]
- ERČULJ, Frane, DEŽMAN, Brane, VUČKOVIĆ, Goran, PERŠ, Janez, PERŠE, Matej, KRISTAN, Matej. An analysis of basketball players' movements in the Slovenian basketball league play-offs using the SAGIT tracking system = Analiza pokreta košarkaša u plej ofu slovenačke košarkaške lige korišćenjem SAGIT sistema praćenja. *Facta Universitatis. Series, Physical education and sport*, 2008, vol. 6, no. 1, str. 75-84, ilustr., tabele. [COBISS.SI-ID [3456689](#)]
- ERČULJ, Frane, DEŽMAN, Brane, VUČKOVIĆ, Goran, PERŠ, Janez, PERŠE, Matej, KRISTAN, Matej. Establishing basketball players's velocity and distance covered during a basketball match with the sagit computer tracking system. *Journal of Coimbra network on exercise sciences*, 2008, vol. 4, str. 50-59, ilustr., tabele. [COBISS.SI-ID [3509937](#)]