Name of the course: BIOMEDICAL RESEARCH IN SPORT AND RECREATION

Teacher(s): Vladimir Z. Ilic, Branka M. Markovic

Course status: Elective

Number of ECTS points: 10

Requirement: None

Course objective is to obtain complementary knowledge in the field of biomedical sciences in sports and recreation, through the application of theoretical knowledge and analytical techniques for a variety of practical and clinical conditions, as well as to integrate biomedical and exercise science into a new attractive field of exercise, sports and health research which are covering the fields of anatomy, physiology, pathological physiology, biochemistry, sports medicine and nutrition.

Outcome of the course is to enable a student who has successfully finished the program to understand and predict how the body adapts and responds to exercise and to properly consider strategies that can be applied to improve morpho-functional and motor skills, as well as general health. Then, acquiring knowledge and professional skills to improve the health, condition and performance of people who have health problems, and for whom exercise is recommended as a treatment method. They will also gain experience and develop a solid foundation in designing research methodologies and conducting analytical research by active participating in researches as a team member.

Content of the course will include theoretical and practical classes that will cover areas related to the field of biomedical sciences in sports through the analysis and synthesis of information obtained from specialized literature and scientific research papers.

Recommended literature

1. Powers, S. (2014). Exercise physiology: Theory and application to fitness and performance. McGraw-Hill Higher Education.
2. McArdle, W. D. (2018). Sports and exercise nutrition. Lippincott Williams & Wilkins.
3. Mougios, V. (2019). Exercise biochemistry. Human Kinetics Publishers.
4. Sietsema, K. E., Stringer, W. W., Sue, D. Y., & Ward, S. (2020). Wasserman & Whipp's: Principles of Exercise Testing and Interpretation: Including Pathophysiology and Clinical Applications. Lippincott Williams & Wilkins.
5. Finnoff, J. T., & Harrast, M. A. (Eds.). (2016). Sports Medicine: Study Guide and Review for Boards. Springer Publishing Company.

Number active classes	Theory: 4	Practice:

Course delivery methods

Lectures, individual work and work in small groups, seminar papers, written exam.

Knowledge assessment (maximum number of points 100)

Activity during the lecture - 30
Seminar paper - 30
Final exam - 40

Testing ways may vary: written exams, project presentation, seminars

*maximum length 1 A4 page