

|  |                  |                    |        |
|--|------------------|--------------------|--------|
| <b>Study programme:</b> Undergraduate Academic Studies / Bachelor with Honours in Sport and Physical Education   |                  |                    |        |
| <b>Subject name:</b> SPORT BIOCHEMISTRY / OAI21  |                  |                    |        |
| <b>Teacher/Teachers:</b> Tatjana Trivić, PhD   |                  |                    |        |
| <b>Subject status:</b> Elective  |                  |                    |        |
| <b>ECTS credits:</b> 6   |                  |                    |        |
| <b>Requirements:</b> None  |                  |                    |        |
| <b>Subject aim</b><br>The course of Sport Biochemistry aims to introduce biochemistry, especially metabolic pathways and their interaction in different tissues with the focus on physical exercise. Understanding biochemical processes involved in the functioning of a human organism. Acquisition of necessary fundamental and professional knowledge in the field of sport biochemistry and mastering the complex terms and principles.   |                  |                    |        |
| <b>Subject outcome</b><br>By renewing elementary knowledge and acquiring new knowledge in the field of sport biochemistry, students will gradually enter the world of biochemical processes of essential importance for their future profession. They will understand the fundamentals of biochemical processes as well as those induced by physical exercises. They will be trained for further professional development with the application of scientific and professional literature in the field of sport biochemistry. They will master most of theoretical principles in this field with the possibility of independent recording and interpreting of relevant information. |                  |                    |        |
| <b>Subject content</b><br><i>Theory</i><br>Fundamentals of biochemistry, Cell structure, Function and metabolism of water, Disorders of water metabolism, Acid and base balance, Molecular aspects of muscular contractions, Adaptive changes of metabolism in the skeletal muscles, Metabolism of carbohydrates, Importance of enzymes, Proteins, Biochemistry of hormones, Adaptive response of the endocrine system to physical activity, Types of human biological material, Current research.   |                  |                    |        |
| <b>Literature</b><br>1) Mougios, V. (2006). Exercise biochemistry. Human Kinetics.   |                  |                    |        |
| <b>Number of active teaching classes</b>   | <b>Theory:</b> 2 | <b>Practice:</b> 0 |        |
| <b>Teaching methods</b><br>Lectures, exercises, mid-term tests, consultations  |                  |                    |        |
| <b>Knowledge assessment (maximum number of points is 100)</b>  |                  |                    |        |
| <b>Pre-exam requirements</b>   | points           | <b>Final exam</b>  | points |
| engagement in class activities   | 10               | written exam       | 25     |
| Practice   |                  | oral exam          | 25     |
| term test(s)   | 30               |                    |        |
| seminar(s)   | 10               |                    |        |