## МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ ФАКУЛЬТЕТ ІНОЗЕМНОЇ ФІЛОЛОГІЇ ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ



## СОЦІАЛЬНО-ГУМАНІТАРНІ АСПЕКТИ РОЗВИТКУ СУЧАСНОГО СУСПІЛЬСТВА

МАТЕРІАЛИ ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ ВИКЛАДАЧІВ, АСПІРАНТІВ, СПІВРОБІТНИКІВ ТА СТУДЕНТІВ

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## COACH-ATHLETES COMMUNICATION AT HIGHER EDUCATIONAL ESTABLISHMENT

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The current level of world achievements in sport is immeasurably increased because of the great importance to train highly qualified trainers who are capable to improve the system of training of athletes with high skills, to introduce new tools and techniques in the training process and to use special equipment and devices for the control of training of athletes. It is extremely important for a coach to apply his physical development and possibilities for the improvement of functional capacity and predict athletic performance of a sportsman. Speaking of a teacher-trainer it must be emphasized that his work consists of two main areas which are inextricably linked. The first is educational work with young people, and the second is the process of formation of skills of students. The successful solution of the main goal of training of high skilled athletes can only be done in close conjunction of these two areas. Therefore, the activity of the teacher-coach is not confined within the training occupation, and is carried out in the educational activities of studying engineering characteristics of his students, development of certain methods and means of training and fitness devices. All this presupposes that the coach has great professional knowledge, high general erudition and intuition. Trainer's intuition involves, on the one hand, the accumulation of experience, understanding of a large number of facts, on the other hand it involves the implementation of decisions intuitively which is based on his own personal experience of the teaching and training of high class athletes.

The coach today is a direct creator of the training process, and his work needs the implementation of theory and methodology in training of sportsmen, the improvement of his own education, the participation in scientific conferences, discussions, coaching councils, the engagement in social work and so on. But the main thing is that the coach must be in constant creative search of the most effective tools and methods for long-term training. After all, athlete training qualifications last more than one-year and this continuous process requires proper planning of all components of sports training and also it needs theoretical, physical, tactical, technical and psychological compliance with specific principles of sports training.

At the same time the coach is a person with strong will and rigidity of mind. The teacher-trainer must lead his team or athlete through all the obstacles, difficulties and failures during a lot of years to achieve the goal. A true athlete will continue his training after the defeat in some competitions with redoubled energy under the guidance of the coach, striving to achieve good results, where the highest manifestation of such liability is successful performance in international competitions and Olympic Games. During the years of training the coach has to be a sensitive partner to his pupils and he should know their needs and aspirations. Very important characteristic of the coach is his ability to forecast the process of training, to identify ways of development of any sport and to regulate long training process appropriately. Having all these skills the coach has the possibility to increase the success of each athlete, and he can say what changes should be done in terms of the preparation of every sportsman. To solve this problem the coach needs to determine precise quantitative assessment of the main parameters of the strongest athletes. The establishment of model characteristics is very responsible and difficult task, but it is used as a reference model of training of an athlete. This model characteristics can be targeted to manage the process of training.

The coach must constantly improve his professional knowledge, explore domestic and foreign literature and summarize the experience of training of leading coaches and athletes for successful educational activities with high skilled sportsmen. He must use the best selection of talented athletes who will undoubtedly become a reliable guarantee of the successful performance at important international competitions.

## DESIGN OF RECTANGULAR TO CIRCULAR WAVEGUIDE TRANSITION FOR MULTIBAND DNP SYSTEM

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The wide availability of microwave devices and rapid increase in computational power for the calculation of complex electromagnetic systems has allowed the creation of numerous solutions for the transportation of microwave energy from the microwave source to the sample in the nuclear magnetic resonance (NMR) probe [1]. In the dynamic nuclear polarization (DNP) application the circular waveguide is the most common type of waveguide for the transmission of the electromagnetic wave. The dominant mode in the circular waveguide is TE<sub>11</sub> [2,3]. The