

SOME METHODOLOGICAL FEATURES OF THE TRAINING OF GEODETIC ENGINEERS

Veliyeva U.¹, Saparov A.², Nurberdiyeva Z.³, Khidyrov M.⁴

¹Veliyeva Uzukzhemal - student,

²Saparov Agazhan - student,

³Nurberdiyeva Ziyada - student,

⁴Khidyrov Mukhammed – lecturer,

TURKMEN STATE ARCHITECTURE AND CONSTRUCTION INSTITUTE
ASHGABAT, TURKMENISTAN

Abstract: *the features of some pedagogical methods that are most effective in the training of future geodetic engineers are shown. The expediency of using the latest geodetic instruments in laboratory classes is substantiated.*

Keywords: *geodesy, teaching methods, practical exercises, skills of working with digital devices.*

When training future geodetic engineers, first of all, it is necessary to form clear concepts among students about measurements on the earth's surface and the features of its image on a plane, teach the basics of scientific analysis of cartographic material, methods of making topographic maps, and also give skills in the use of modern geodetic instruments.

The teaching methodology of this discipline requires a mandatory relationship between the content and teaching methods. Teaching methods include organizing lectures, independent work of students, and conducting educational field practice. The organization of lecture classes mainly includes an explanatory and illustrative teaching method. With this method, students are given extensive information on the subject being studied, general concepts and patterns are revealed, using maps, posters and devices. Lectures on the subject are interconnected with each other.

When conducting laboratory classes, a reproductive method is used, which includes the application of theoretical knowledge in the performance of the proposed practical tasks. In the modern period, the most relevant is the research method, which involves introducing students to creative scientific activities. And special training tools help to master the basics of scientific research.

It should be noted that learning tools are created taking into account the learning objectives and the content of the curriculum, taking into account modern requirements for teaching methods. The achievements of scientific and technological progress are realized in the creation of learning tools, which finds its manifestation in the use of modern technology and the latest materials. Therefore, such types of new manuals are being created, such as maps with the inclusion of aerospace photo information materials, computer programs that help process field measurements. The training tools used in the training of future geodetic engineers have their own characteristics. Thus, objects for the reproduction and analysis of natural phenomena include, first of all, modern geodetic instruments and instruments designed to carry out measuring work on the ground.

In laboratory classes, teaching tools are used comprehensively, here methodological manuals are used in conjunction with geodetic instruments. Laboratory work involves the preparation of students both theoretically, practically and organizationally. The theoretical preparation of students consists in repeating the theoretical foundations of the topic under study, without knowledge of which it is impossible to complete the proposed task. Practical training consists in teaching students the ability to use and work with geodetic instruments. Organizational training consists in the fact that students are given a specific task, their attention is drawn to visual material, methodological literature that contributes to the fulfillment of the task, it is proposed to compile a report on the work done.

The organization of a field summer practice in geodesy depends on the compiled program of practice and on the place where it is held. When organizing a field summer internship, it is necessary to pay attention to the organization of the implementation of the internship curriculum and the organization of the practice conditions. When organizing the implementation of the internship curriculum, an organizational meeting of students is held before the start of the internship, at which the following is brought to the students: the goals and objectives of the practice, the place of practice, the content of the practice, assignments and guidelines for completing practice assignments, requirements for the report on geodetic practice, methods of monitoring completed assignments, recommended literature. Safety instructions are mandatory when performing field work.

Thus, it is necessary to organize the educational process in such a way that lectures, laboratory, self-study and summer practice take place at a high level and meet the set goals and objectives of student education, which will improve the quality of training of future geodetic engineers.

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