

IMPORTANT ASPECTS OF MODULAR TEACHING TECHNOLOGY IN THE PROCESS OF TEACHING GENERAL ASTRONOMY

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Abstract

The article analyzes the importance and production of organizing general astronomy according to modular teaching methods. The modular educational process, its development processes, and support in the educational process are highlighted. The specific laboratory conditions that should be considered when organizing education based on software are discussed, as well as the role of students' preparatory skills and didactic materials. The article extensively discusses the impact of modular education on the independent acquisition of students' knowledge, the democratization of the educational process, and the improvement of efficiency.

Keywords: Modular education, educational technologies, educational process, independent learning, didactic materials, laboratory equipment, educational and methodological materials.

Introduction

The essence of the modular system of teaching a subject is that students master individual units of education - modules - sequentially. In this case, the student has the opportunity to receive independent education based on the presented curriculum. This curriculum includes:

- a specific goal, expressed in the knowledge and skills acquired by the student;
- an information and technological base;
- a methodological guide (guidelines) for achieving the set educational (didactic) goals.

The module is built on the basis of an algorithm and consists of the following components: a specific goal, theoretical knowledge, practical training, methodological instructions, guidelines, control, assessment of acquired knowledge and skills. The module has characteristics that differ from the sections of the curriculum. This is integrity, relative independence and logical completion of content, flexibility in terms of structure, speed of control and assessment of learning outcomes.

The advantage of the duration of training based on the modular system for the learner is that it focuses more on the learner, his independent work and practice on himself, as well as self-control.

The duration of training based on the modular system depends on the learner's readiness and desire to master the subject. Training can be stopped after any model of training.

The main goals of training based on the modular program are:

- ensuring the continuity of education;
- individualization of education;

- creating conditions for independent mastery of educational materials in an educational institution;
- accelerating education;
- ensuring the effective mastery of each subject;
- democratization of the educational process;
- liberalization of the educational process.

As a result of the organization of training based on a modular program, all conditions are created for the student to obtain theoretical knowledge and master it practically in an educational institution. The task performed by the subject teacher plays a very important role in this.

The effectiveness of organizing general astronomy lessons based on a modular program depends on the following factors:

- the material and technical base of the astronomy laboratory;
- the experience and qualifications of the subject teacher;
- the level of preparation of students;
- the development of didactic materials on general astronomy;
- the perfection of the developed modular program;
- the results and analysis of the modules.

It is worth noting that the effectiveness of training based on a modular program depends, first of all, on the quality of the modules. The module developed by the teacher on the subject of general astronomy should contain the following:

- tests to assess student knowledge;
- additional questions and recommendations for thorough mastery of the topics by the student;
- tasks for independent work;
- educational and methodological handouts;
- general astronomy curriculum;
- list of educational and scientific literature;
- teacher and advisor work schedule;
- abstract topics;
- library work schedule.

A final test must be given at the end of each module. A reference book and handouts must be prepared in advance for each module and given to students before the start of the module on general astronomy. Some gifted students may submit a test paper for the corresponding module ahead of time.

- The teacher should draw up his annual plan by topic, divide it into hours, then divide the chapters into subtopics and formulate questions reinforcing each topic.
- In order for the student to familiarize himself with the content of each taught topic (educational, scientific and methodological literature) in advance, the teacher should provide them with handouts, that is, prepare and distribute special instructions, literature reviews and additional questions on the topic.



- When students get acquainted with the literature on the topic, they should, of course, use the help of library staff and teachers. Also, the student should strictly adhere to the completion of modules based on the established study schedule.

- Working on the module system requires the student to work more independently, properly allocate time and prepare the right answers, as well as correctly solve the given questions. This allows the student to fully master the topic.

After all, the handouts, which are compiled by the teacher in a simple and understandable way, help students easily perceive and analyze the topics being studied, as well as deeply understand their content.

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