DEVELOPMENT OF THE WORKING PROGRAM AND FORMATS OF THE COURSE " THE THEORY OF COMBUSTION AND EXPLOSION "

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The goal of the methodological work carried out over several years was to develop a work program and formats for the course "The theory of combustion and explosion". Classes in this discipline are currently held for third-year students "Technosphere safety", and is a discipline of choice in the profile "Chemobiodynamics and bioinformatics" with the master's degree. Given the characteristics of majors in course with a focus on physical, chemical, biological aspects of combustion processes. Attention is paid to modern notions of nonlinear processes of self-organization (the structure of the flame chain reactions).

The choice of format and tools in teaching is important for the organization of the process of mastering the discipline. In such an interdisciplinary course, there is a need for a synergistic approach that links the ways and mechanisms of combining various training tools. Thus, along with traditional technologies, digital technologies are widely used in higher education. In PNRPU, the BigBlueBtton service was successfully used as part of additional education (UP to-3). In contrast to online lectures and conferences involving a large number of students, the QR code is a convenient, dynamic means of individual work with information (on the training or laboratory table – links, brief information, progress of work, necessary reference data). Complexes consisting of practical exercises, explanations to theoretical material, and control tasks were formed in Google Form. Virtual laboratory and demonstration tests obtained from the code link (with an individual task) were an important part of the course. Thus, the combination of different forms of submission and development of information, control of the acquired knowledge does not destroy the traditional system, but, on the contrary, provides greater diversity and opportunities. Online forms are also quite effective when giving lectures and conducting some types of practical work. Moreover, this format allows for more active participation of students in working together with the lecturer. In the presentation, students can go on the air during the lecture, mark a place in the presentation, and answer, including in writing, the teacher's question. And, on the contrary, practical classes (problem solving) in online mode expand the possibilities (including online whiteboards). in the course of the lesson, both the teacher and the student can follow the necessary links, choosing videos and diagrams as necessary. Dynamically, with little time spent, it is possible to conduct a survey (testing) using Google forms at almost every lesson, or even jokingly solve a question by voting with subsequent analysis.