

## Structure of the subject competence in chemistry

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The introduction of a competence-based approach in the educational process contributes to improving the quality of training of future specialists. In this regard, considerable attention is paid to the issues of the content of competencies, their development, and the search for means of measurement and evaluation of their formation in students. We have proposed the structure and content of the subject competence in chemistry for the students of the specialty “Biology and Chemistry” as future teachers of chemistry. There are different approaches to determine the structure of subject competencies. We adhere to the approach according to which the chemical competence model has three components: content, process, and control and evaluation [1]. We consider this approach appropriate, since the most important didactic questions are: “What to teach?” (the content component), “How to teach?” (the process component), “Have the learning objectives been achieved?” (the control and evaluation component). In the content component of the chemistry subject competence, we have identified the following modules: “Chemical element”, “Simple substance”, “Complex substance”, “Chemical experiment”, “Mathematical calculations” [2]. In the process component, it is expedient to distinguish the modules “Forms of training”, “Types of training”, “Training Methods”, “Training Tools”, in the control and evaluation component – the modules “Pedagogical control” and “Self-assessment” (Scheme).

Chemistry subject competence		
Content component	Process component	Control and evaluation component
Chemical element	Forms of training	Pedagogical control
Simple substance	Types of training	Self-assessment
Complex substance	Training methods	
Chemical experiment	Training tools	
Mathematical calculations		

Scheme. Structure and content of the subject competence in chemistry

### References

- [1] V. Usmanova. Education and self-development (2007) 3:48 (in Rus.).
- [2] V.V.Kavalenka et al. Pedagogical Sci. Education. (2019) 1:58 (in Rus.).