

THE APPLICATION OF DESIGN AND ENGINEERING SOFTWARE PROGRAMS IN THE STUDY OF ENGINEERING DISCIPLINES IN THE CONTEXT OF ONLINE LEARNING ENVIRONMENT

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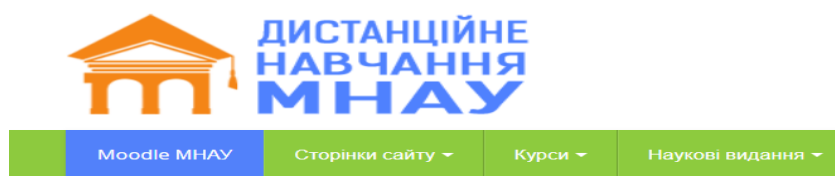
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The article is devoted to the application of design and construction tools in learning in an educational environment. The implementation of the presented methodology involves acquaintance with theoretical material, task performance and its evaluation.

Стаття присвячена застосуванню засобів проектування та конструювання в навчанні в освітньому середовищі. Реалізація представленої методики передбачає ознайомлення з теоретичним матеріалом, виконання завдання та його оцінювання.

A future engineer, during their education, encounters the application of design and drafting tools when it's necessary to design mechanisms, create drawings of components, and so on. Graphic methods are visual and often straightforward. In the context of the educational environment, students are encouraged to complete tasks using design and drafting tools. Creating drawings using tools like AutoCAD and KOMPAS 3D in an informational and educational setting involves the following steps. The higher education learner familiarizes themselves with theoretical material in the informational and educational environment, which can be in the form of a lecture with audiovisual support, videos, and more [2] (see Figure 1).



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Складальне креслення

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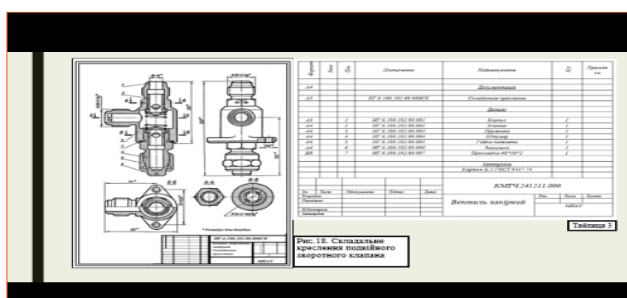


Figure 1. Theoretical Material in an Informational and Educational Environment
Having mastered the theory, the higher education student completes the task and submits the response in the form of a file (Figure 2).

Відповіді для роботи "Складальне креслення"

Зберігаємо зображення на гугл диск. Створюємо код впровадження. Натискаємо кнопку "Впровадження" (значок, схожий на ланцюжок), зберігаємо відповідь.

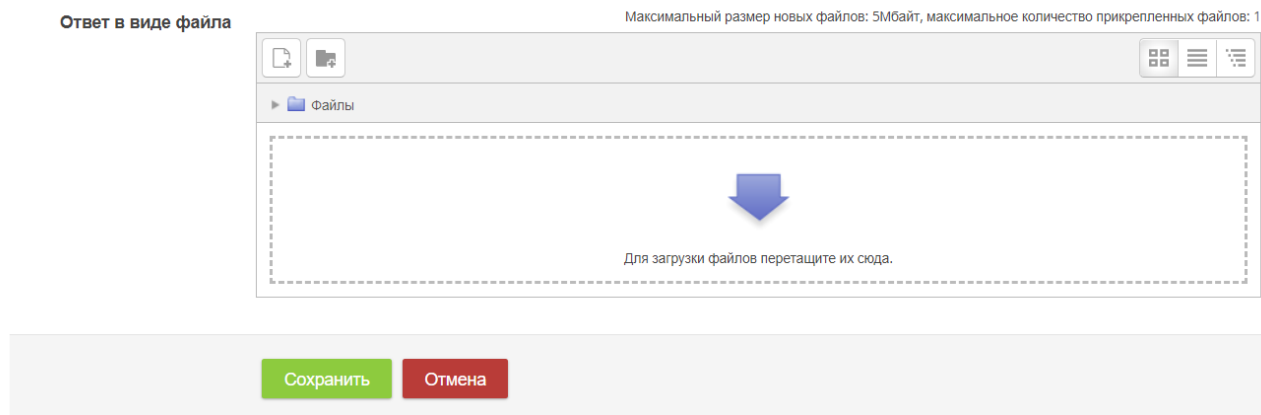


Figure 2. Response to the task in the context of an information-educational environment.

The instructor reviews the graphical file and assigns a grade (Figure 3).

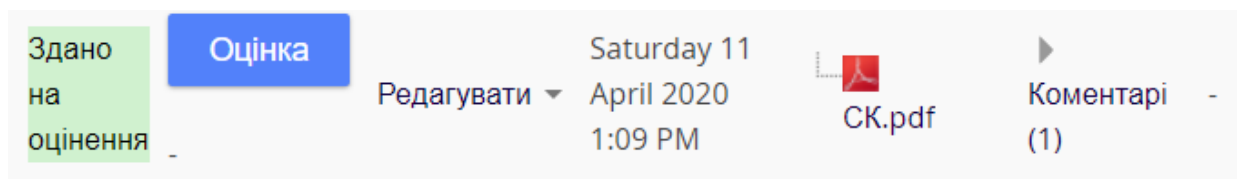


Figure 3. Assessment Stage of a Task Completed Using Design and Drafting Software

For the convenience of utilizing information, it is advisable to use practical manuals for learning within the context of an informational and educational environment, as they allow for the structuring of educational information [3].

Following this methodology, tasks completed using design and drafting software are carried out in the educational profile of higher education learners in an informational and educational environment.

References:

1. Afthanaziv I. S., Voloshkevych P. P., Boyko O. O. Practical Work in Engineering Graphics for the course "Descriptive Geometry, Engineering, and Computer Graphics." Part II, Educational and Methodical Guide. Lviv: Lviv Polytechnic Publishing House, 2015. 236 p.
2. Lazaryev O. V. Professional Training of Future Agricultural Specialists Based on Competency Approach. Pedagogical Sciences: Theory, History, Innovative Technologies. No. 1 (35). 2014. 209-218.
3. Mechanics of Materials and Structures: A Practical Guide for Learning in an Informational and Educational Environment. Babenko D. V., Gorbenko O. A., Dotsenko N. A. Mykolaiv: MNAU, 2018. 384 p.