
The new subject matter “Physics and Natural Sciences” for Bachelor’s Program in the area of «Innovatica» at a technical university

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The article considers the purpose and content of the subject matter «Physics and natural sciences». It is based on fundamental physical concepts, principles and laws. The discipline has universal and integrated character that allows considering any phenomena and objects the most diverse in its nature and complexity and making conclusions about their dynamics and evolution. It is supposed that mastering the discipline by students will allow them to increase their general cultural status and to acquire a wide range of universal competences which be requested from the future bachelors in the course of their professional work.

Keywords: *subject matter, competence, bachelor, innovative process.*

REFERENCES

- [1] Selivanov S.G., Guzairov M.B., Kutin A.A. *Innovatika* [Innovatics]. Moscow, Mashinostroenie Publ., 2007, 721 p.
- [2] *Federalnyy gosudarstvennyy obrazovatelnyy standart vysshego professionalnogo obrazovaniya po napravleniyu podgotovki (bakalavr) 222000 “Innovatica”* [Federal State Educational Standard of Higher Professional Education. The Bachelor’s Degree Program 222000 “Innovatics”]. Available at: http://www.moeobrazovanie.ru/data/dir_specs_files/1989/dir_specs_1989.pdf
- [3] Shukshunov V.E. *Izvestiya Mezhdunarodnoy akademii nauk vysshey shkoly — Proceedings of the International Higher Education Academy of Sciences*, 2001, no. 1 (16), pp. 9–21.
- [4] Shukshunov V.E., Lozovskiy V.N., Bulanova-Toporkova V.N., Suchkov G.V. *Vysshee obrazovanie v Rossii — Higher Education in Russia*, 2004, no. 10, pp. 19–30.
- [5] Aleshkevich V.A., Belkin P.N. *Fizicheskoe obrazovanie v vuzakh — Physics in Higher Education*, 2013, vol. 19, no. 4, pp. 3–15.

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