

1. Name of discipline: “*Details of instruments and design principles*”

2. Direction: 12.03.01 “*Instrument making*”

3. Profile: -//-

4. Degree: *Bachelor*

5. Teacher: Simankin Fedor Arkadevich, Ph.D., Associate Professor, tel. 83822701777-1517,
E-mail: simankinfa@tpu.ru

6. Goals of the discipline:

- achievement of the objectives of the primary educational program “*Instrument-making*”
- preparation of a graduate-developer of measurement, control and diagnostics tools
- capable of working in the field of development, production, debugging, tuning and certification Instrumentation, using existing and new information technologies taking into account in their activities economic and environmental aspects.

The graduate students ready to search and obtain new information necessary to solve engineering problems in the field of knowledge integration in relation to working field; to have participation in the innovative activity of the enterprise. They acquire self-study skills and constant professional self-improvement.

7. Results of training (knowledge, skills, experience, competence)

R1 To develop functional and structure-related diagram of the devices and systems with the identification of physical principles of devices

R2 Participate in technology to enhance the production of devices for various purposes and principle of operation

R3 To use computer software packages for simulation of electronic circuits devices and systems and modeling of virtual instruments

8. The program of this discipline is compiled in accordance with the requirements of *Federal Education Standards*, criteria of the *Association for Engineering Education of Russia* coordinated with the requirements of the National standards *EURACE* and *FEANI*