

ABSTRACT OF THE MODULE (COURSE)

1. **The module name (course name)** – Technical diagnostic and quality control
2. **Identification code in syllabus** – «Б3.Б3»
3. **Educational program track** – 15.03.01. “Mechanical engineering”
4. **Educational program specialization** – “Technology, equipment and automation of machinery production”
5. **Course degree** – Bachelor
6. **Research unit** – Mechanical engineering department
7. **Lecturer** – V. S. Lyukshin, e-mail lwsfoa@rambler.ru
8. **Outcomes of module (course) studying**

As a result of completing a course of “Technical diagnostic and quality control” students should:

Be aware of:

- Methods, principals and means of product quality control.

Know how:

- To monitor the compliance of process discipline in mechanical engineering items production including mining engineering, metalwork constructions and branch connections for oil and gas extraction industries, fuel-power complex and dangerous technical objects.

Be knowledgeable about:

- Methods of monitoring the compliance of process discipline in mechanical engineering items production including mining engineering, metalwork constructions and branch connections for oil and gas extraction industries, fuel-power complex and dangerous technical objects.

9. Curriculum content:

- Basic concepts and definitions of measurement;
- Mechanical engineering items production monitoring;
- Linear and flat angle measurements;
- Lever-mechanical devices for linear and diametrical size;
- Optomechanical devices;
- Measurement of angles and cones;
- Methods and means of surface form and layout deviation measurements;
- Methods and means of surface undulation measurement;
- Methods and means of thread characteristics measurement;
- Spur wheels parameters control;
- Means of motion parameters measurement;
- Measuring of electrical quantity;
- Means of mass, force and moment measurement;
- Pressure and flow measuring equipment;
- Temperature measuring;

- Methods and means of hardness measurement;
- Internal and external flaws control;
- Measurement and control automation means.

10. Course 4 semester 8 number of credits 2

11. Prerequisite:

“Mathematics”

“Physics”

“Theoretical mechanics”

12. Corequisite:

“Mechanical engineering technology”.

13. Type of assessment (examination, credit) – examination

By V. S. Lyukshin