Discipline Description

1	Discipline	Introduction to specialization. (Part 2. Basics of Thermal Physics)
2	Year of Study, Speciality	3 Physics (Production activity)
3	Term of Study	5
4	Number of Credits	1,3
5	Lecturer	Associate Professor Ph.D. Karbalevich N.A.
6	Study Objectives	Acquaintance with theoretical and experimental fundamentals of heat transfer processes, methods of their diagnostics and determination of heat and mass transfer parameters; as well as the formation of ideas on the use of various sensors and experimental installations in scientific research and technology.
7	Prerequisites	Molecular physics, optics
8	Course Content	Transport phenomena in solids, liquids and gases. Methods for measuring temperature. Physical principles of operation of primary temperature transducers. Elements of the theory of heat conduction. Nonstationary and stationary differential heat equation. Stationary and nonstationary heat conduction problems for bodies of various geometries with different boundary conditions. Experimental methods for determining the coefficients of thermal conductivity and thermal diffusivity of various media.
9	Literature Recommended	1.Gas and hydrodynamics — Riga: Riga Technical University, 2017, 323 p. 2. И.Н.Евдокимов. Методы и средства исследований, ч. 1. Температура. — М.: РГУНиГ, 2004, 106 с. 3. Лыков А.В. Теория теплопроводности. —М.: Наука, 1968, 596 с.
10	Methods of Teaching	Lecture and laboratory studies using comparative and research methods of teaching
11	Language of Teaching	Russian
12	Requirements, Current Assessment	Test works, test tasks
13	Form of Current Assessment	Offset