

## Discipline Description

1	Discipline	Laboratory of specialization "Fundamentals of thermophysical measurements"
2	Year of Study, Speciality	3 Physics (Production activity), Physics of nanomaterials and nanotechnologies
3	Term of Study	6
4	Number of Credits	2
5	Lecturer	Associate Professor Ph.D. Karbalevich N.A.
6	Study Objectives	Familiarization of students with the physical foundations of the theory of heat and mass transfer and modern practical problems solved within the framework of this theory; the formation of ideas about methods for studying the parameters of heat and mass transfer.
7	Prerequisites	Basic knowledge of general physics, higher mathematics.
8	Course Content	Laboratory work on the principles of operation of temperature converters: resistance thermometers, thermoelectric and optical (pyrometric and thermal imaging) temperature sensors; methods of determining the transport coefficients: the coefficient of viscosity of the fluid, the coefficients of thermal conductivity of solid materials, liquids and gases.
9	Literature Recommended	1. Сивухин, Д.В. Общий курс физики. Т. 3. Электричество / Д.В. Сивухин. – М.: Физматлит, Издательство МФТИ, 2004. 2. Сивухин, Д.В. Общий курс физики. Т. 4. Оптика / Д.В. Сивухин. – М.: Физматлит, Издательство МФТИ, 2005. 3. Байков, В.И. Теплофизика. Т. 2. / В.И. Байков, Н.В. Павлюкевич, А.К. Федотов, А.И. Шнип. – Минск: ИТМО им. А.В. Лыкова НАНБ, 2014. 4. Цветков, Ф.Ф. Тепломассообмен / Ф.Ф. Цветков, Б.А. Григорьев. – М.: Издательство МЭИ, 2005.
10	Methods of Teaching	Laboratory exercises using research methods of teaching.
11	Language of Teaching	Russian
12	Requirements, Current Assessment	Oral interrogation.
13	Form of Current Assessment	Offset