

COURSE OFFERED

Name of the course	Polish	Fizyka statystyczna
	English	Statistical Physcs

1. LOCATION OF THE COURSE OF STUDY WITHIN THE EDUCATION SYSTEM

1.1. Section¹	Section of Exact and Natural Sciences
1.2. Discipline²	Physical Sciences
1.3. Type of education	Stationary
1.4. Level of education	PhD School/ 3 year
1.5. Person preparing the course description	Francesco Giacosa
1.6. Contact	fgiacosa@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Type of course³	specialized subjects in the discipline
2.2. Language of the course	English

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Type of classes⁴		Lecture
3.2. The number of hours⁵		15
3.3. Location of classes		UJK, WNSiP
3.4. Type of assessment		pass with grade
3.5. Didactic methods		Oral lectures, problem solving
3.6. Literature	basic	K. Huang, statistical mechanics.
	supplementary	E. Fermi, Thermodynamics

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDEND LEARNING OUTCOMES

4.1. Course objectives (including the form of classes) Description of the basic features and formalism of classical and quantum gases. Understanding the tools related to statistical physics. Developing skills to solve exercises
Syllabus content 1. Recall of thermodynamics of a classical gas from a statistical point of view: binomial distribution, entropy, velocity distribution. 2. Ensembles. Microcanonical, Canonical, grand canonical. 3. Time arrow. What does Entropy tells us? 4. Indistinguishable particles: gas of bosons. 5. Condensation of a Bose gas at low temperature.

¹ Section of Humanities:, Social Sciences, Section of Exact and Natural Sciences, Section of Medical and Health Sciences, Section of Arts.

² History,Linguistics, Literary Studies, Medical Sciences, Health Sciences, Political and Administrative Sciences, Legal Sciences, Security Sciences, Pedagogy, Communication and Media Studies, Management and Quality Studies, Biological Sciences, Chemical Sciences, Physical Sciences, Earth and related Environmental Sciences, Visual Arts and Artwork Conservation, Musical Arts.

³ General courses, domain specific subjects in the section, disciplinary subjects in the sections, specialized subjects in the discipline.

⁴ Classes, lecture, seminar.

⁵ Consistent with the education program at the Doctoral School
Jan Kochanowski University in Kielce.

7. CRITERIA OF ASSESSMENT OF THE INTENDED LEARNING OUTCOMES

Form of classes	Grade	Criterion of assessment
Lecture (L) ⁶	3,0	51-60% correct exercises with test
	3,5	61-70% correct exercises with test
	4,0	71-80% correct exercises with test
	4,5	81-90% correct exercises with test
	5,0	91-100% correct exercises with test

Accepted for execution

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⁶ Niepotrzebne usunąć.