Course ID: HFH405	**Course name: STATISTICAL THERMODYNAMICS**		
Cycle: SECOND	**Year: FIRST**	**Semester: I**	**ECTS credits: 4**
Course status: ELECTIVE		**Total course hours: 45** Lectures: 30 Auditory: 15	

Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs**
Prerequisite for enrollment:	-
Course aims:	The objectives of the course are to acquaint students with the statistical approach to thermodynamics.
Thematic course units:	1. Introduction to statistical thermodynamics. 2. Laws of distribution. 3. Boltzmann distribution. 4. Bose-Einstein and Fermi-Dirac distribution. 5. Partition functions. 6. Thermodynamic functions expressed through partition functions. 7. Molecular interpretation of basic laws of thermodynamics. 8. Translational partition function. 9. Rotational partition function. 10. Oscillatory partition function. 11. Electronic and nuclear partition function. 12. Application of statistical thermodynamics to states of matter. 13. Statistical interpretation of chemical equilibrium constant. 14. Statistical excerpt
Learning outcomes:	Knowledge: Acquired knowledge of statistical interpretation of thermodynamics. Skills: Students will be able to use the theoretical foundations for a statistical approach to solving thermodynamic processes. Competences: Application of statistical thermodynamics in other branches of chemistry.
Teaching methodology:	Lectures (oral presentation and interactive classes) Auditory exercises
Assessment methods and grading system[1]:	Grading criteria

	Criteria	Maximal score	Required score
1.	Class attendance	5	3
2.	Class activities	15	8
3.	Midterms	2 × 20	2× 11

[1]The grading structure for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught as per Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

	4. Final exam	40	22
	Total	100	55
	Scores and grading		
	Score	Grade (BiH)	Grade (ECTS)
	< 55	5	F, FX
	55–64	6	E
	65–74	7	D
	75–84	8	C
	85–94	9	B
	95–100	10	A
Literature[2]:	Mandatory literature: 1. Simeon V., Termodinamika, Školska knjiga, Zagreb,1980. Supplementary literature: 1. Lj. Kolar-Anić, Osnove statističke termodinamike, Fakultet za fizičku hemiju, Univerzitetska štampa, Beograd, 2000.		

[2]The Senate of the higher education institution, as an institution, or the Council of the organizational unit of the higher education institution, as a public institution, determines by a special decision, which is published on its website before the beginning of the academic year obligatory, mandatory and recommended textbooks and manuals, as well as other recommended literature based on which exams are prepared and taken as per Article 56, paragraph 3 of the Law on Higher Education of the Sarajevo Canton