Course ID: HNMI04	**Course name: HISTORICAL DEVELOPMENT OF CHEMISTRY THROUGH CENTURIES**		
Cycle: SECOND	**Year: FIRST**	**Semester: I**	**ECTS credits: 2**
Course status: ELECTIVE		**Total course hours: 30** Lectures: 30 Laboratory: -	
Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs**		
Prerequisite for enrollment:	-		
Course aims:	Understanding the historical development of chemistry, with emphasis on the development of chemistry in India, China, Arabia and EuropE		
Thematic course units:	1. Periods of history of chemistry 2. Indian alchemy 3. Chinese alchemy 4. Arabian alchemy 5. European alchemy 6. Alchemy in technology, medicine, and pharmacy		
Learning outcomes:	Knowledge: • Compare contribution of ancient peoples to the development of modern chemistry • Explain the role of ancient philosophers and compare their beliefs to modern science Skills: Competences: • Evaluate the contribution of the discoveries in the era of alchemy to modern scientific knowledge		
Teaching methodology:	Oral presentation Discussion Research		
Assessment methods and grading system[1]:	Grading criteria		

	Criteria	Maximal score	Required score
1.	Class attendance	5	3

[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

	2.	Class activities	5	3
	3.	Midterm	20	11
	4.	Seminar	30	16
	5.	Final exam	40	22
		Total	100	55
		Scores and grading		
		Score	Grade (B&H)	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. Grdenić, D. (2001). *Povijest kemije*. Zagreb: Novi Liber & Školska knjiga.
2. Gutman, I., Zejnilagić-Hajrić, M., Nuić, I. (2012). *Historijski razvoj hemije.* Sarajevo: Prirodno-matematički fakultet.

Supplementary literature:

1. Ben-Menahem A. (2009). *Historical Encyclopedia of Natural and Mathematical Sciences, Vol. 1*. Berlin: Springer-Verlag.
2. Gutman, I., Zejnilagić-Hajrić, M., Nuić, I. (2010). *Izabrana poglavlja iz istorije hemije*. Kragujevac: Prirodno-matematički fakultet.
3. Partington, J.R. (1960). *A Short History of Chemistry*. London: MacMillan & Co.

[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