Code : **BIOHUM 04**	Course title: **CHROMATOGRAPHY AND HYPHENATED TECHNIQUES IN FOOD ANALYSIS**	ECTS: 4
Coordinator: **Henryk Jeleń**	Department: **Food Science and nutrition**	

Course Category

Volume (h) **20**			Personal work (h)	
Lecture: (h) **15**	Practicals /lab (h) **5**	Placement: (h)	Project: (h)	Other Modalities: (h)

Evaluation:	Other modalities:	Lecturer(s)

Evaluation Modalities			
Oral individual report			**Henryk Jeleń**
written individual report			
Final oral exam			
Final written exam	**X**		

Comments of Evaluation:	Teaching methods: **lectures and labs**
Semester**:** **winter or summer**	Language: **english**
Period: **2 weeks**	Year of study: **fourth**

Objectives

- To familiarize students with modern chromatographical techniques used for food analysis
- To prepare students for their m.sc. And ph.d. Lab

Contents

- basics of partition and chromatography,
- extraction (spe, spme, sde, l/l, sfe),
- sample preparation,
- column chromatography (lplc),
- thin layer chromatography,
- separation in liquid chromatography and gas chromatography,
- gas chromatography (injectors, detectors, gcxgc),
- liquid chromatography (rrlc, gpc),
- hyphenation of chromatography with mass spectrometry (gc-ms, lc-ms),
- detection mechanisms,
- qualitative and quantitative analysis,
- method validation,
- emerging technologies,
- applications.

Group size: **15**	Pre-requises: **chemistry**