Table 5.2 Specification of Course

Study Program: **Material and Energy Flows Management**				
Type and level of study: Master Academic Degree				
Name of Course: OPTIMIZATION OF INDUSTRIAL SYSTEMS				
Lecturer: Snežana Sinadinović-Fišer, Milovan Janković				
Status of Course: elective				
Credits (ECTS): 5				
Preconditions: none				
Aims of the Course Acquiring knowledge about the different optimization methods of univariate and multivariate objective functions, characteristic for the certain technological processes.				
Outcomes/Competences of the Course Preparation of students to apply the knowledge about different optimization methods characteristic for complex technological processes into the practical situations.				
Description of the Course Content *Theoretical part:* Optimization problems, term of objective function, optimization techniques, optimization of analytical functions, numerical methods for one-dimensional and multi-dimensional functions, dynamical programming, experiment planning, the examples in chemical engineering. *Practical part:* Computational solving of defined problems connected to the theoretical part.				
Required Readings 1. Bela G. Liptak, Optimization of Industrial Unit Processes, Second Edition, CRC Press, 1999.				
Lessons				Other hours
Theory: 45	Practice:30	Other:	Research work	
Teaching Methods Lectures and students group work				
Grade (maximal number of points: 100)				
Pre-exam duties	**Points**	**Final exam**		**Points**
Activity during the lectures	10	Oral exam		30
Test I and Test II	40			
Seminar paper	20			