

Study Programme: Food Engineering		
Course Unit Title: Technology of chocolate and cocoa products		
Course Unit Code: O6IUHO2		
Name of Lecturer(s): Full Professor Biljana Pajin, Assistant Professor Ivana Lončarević		
Type and Level of Studies: Bachelor Academic Degree		
Course Status (compulsory/elective): Compulsory		
Semester (winter/summer): Summer		
Language of instruction: English		
Mode of course unit delivery (face-to-face/distance learning): Face-to-face		
Number of ECTS Allocated: 6		
Prerequisites: None		
<p>Course Aims:</p> <p>The objectives of this course are to enable students to:</p> <ul style="list-style-type: none"> - gain knowledge about chemical and physical properties of raw materials (edible fats, cocoa bean, sugar, emulsifiers, etc.) which are relevant for the process of processing these raw materials into different cocoa products, - study physical, chemical and biochemical processes that accompany the processing of cocoa beans, - analyze technological processes of production of chocolate and various cocoa products (cocoa bean roasting, milling, fat crystallization, etc.), <p>allow students to work creatively in the process of processing cocoa beans to the final confectionery product.</p>		
<p>Learning Outcomes:</p> <p>Applying practical knowledge gained in this course, students will be able to:</p> <ul style="list-style-type: none"> - lead production of chocolate and cocoa products in industrial conditions, - overcome problems in industrial production, - create new confectionary products based on cocoa, improve functional properties of cocoa products. 		
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Physical and chemical properties of cocoa butter and edible fats. Raw materials and additives in confectionery products. Biological and technological characteristics of cocoa beans. Processes of cocoa beans to cocoa mass. Milling, alkalizing and properties of cocoa mass. Production of cocoa butter. Preservation, crushing, grinding and properties of cocoa powder. Production and properties of chocolate. Manufacture and properties of cocoa and cream products. Legislation.</p> <p><i>Practice</i></p> <p>Students will work on determining the physical and chemical properties of raw materials for the production of chocolate and cocoa products, and will also produce chocolate and cocoa products in laboratory conditions.</p>		
<p>Required Reading:</p> <p>Beckett, S.T. (Ed.) (2009). Industrial chocolate manufacture and use, Blackwell Publishing Ltd., York, UK.</p>		
Weekly Contact Hours:	Lectures:	Practical work:
<p>Teaching Methods:</p> <p>Lectures and students group work</p>		
Knowledge Assessment (maximum of 100 points):		

Pre-exam obligations	points	Final exam	points
Active class participation	5	Practical work	25
Test I and Test II	50	Oral exam	20