

Study programme: Food Technology			
Type and level of study: Master Academic Studies (60 ESPB) - second cycle			
Course title: <i>Technological processes in bakery and pasta making</i>			Code: MIT27
Lecturer: Associate Prof. Marko Petković, Ph. D.			
Language of instruction: English			
ECTS credits: 5			
Prerequisite: /			
Semester: autumn			
Course objective Knowledge in wheat processing encompasses the entire chain from storage to milling. Understanding the production techniques for flour obtained from both hard and soft wheat varieties, with particular attention to new technological advancements aimed at manufacturing specialty flours. Quality control measures at multiple stages: raw material assessment, processing methods, warehouse handling, production monitoring, and evaluation of finished products. This comprehensive approach ensures mastery of the wheat-to-flour transformation while emphasizing modern innovations and rigorous quality assurance protocols pertinent to the flour milling industry.			
Learning outcomes The familiarity with cutting-edge technological advancements in the processing and production of specialty flours, enabling them to effectively address practical challenges in the field. Equipping the students with the skills necessary to organize and oversee production processes, ensuring quality control and operational efficiency. Theoretical knowledge with practical problem-solving capabilities within flour production, fostering competence in managing innovative milling technologies and optimizing outcomes in specialized flour manufacturing.			
Course contents <i>Theoretical instruction</i> Theoretical instruction should include comprehensive knowledge of the quality attributes of both soft and hard wheat types. It involves defining necessary additives to ensure the desired quality of raw materials to produce a high-quality final product. Technological methods employed for milling flour from both wheat varieties are examined, along with strategies for the incorporation of quality-enhancing additives during processing. Preparation and formulation calculations for specialty flours are also addressed. Additionally, best practices in packaging and storage conditions that maintain flour integrity are emphasized. Lastly, students are introduced to the preparation of the requisite documentation accompanying the final product to ensure regulatory compliance and traceability. This integrated approach ensures proficiency in quality management, process optimization, and product documentation within flour production contexts. <i>Practical instruction</i> The production of various types of flour and finished products entails systematic analysis at multiple stages, including intermediate and final product evaluations. This process involves thorough quality assessment of intermediate materials to ensure compliance with process requirements and to anticipate the quality of the final product.			
Literature 1. Pyler E. J., Gorton L. A. (2009). Baking science and technology, 4thEd., Sosland Pub CoPublication, USA. 2. Cauvain, S. P., & Clark, R. H. (2019). Baking technology and nutrition: Towards a healthier world. John Wiley & Sons. 3. Simpson B. K. (2012): Food Biochemistry and Food Processing, Second Edition, Wiley-Blackwell, John Wiley & Sons, Inc.			
Hours of active teaching: 2+0+2	Theoretical: 2×15=45	Practical: 2×15=30	
Teaching methods • Interactive teaching, using video presentations. • Individual consultations related to problems arising in theoretical and practical classes, and laboratory exercises.			
Assessment (maximum points 100)			
Examination requirements	points	Final exam	points
Class participation	5	Written exam	
Practical participation sessions/tests	10	Oral exam	55
Class tests	30		
Practical tests			
Other			
Grading system			
Grade	ECTS	Description	

10	91-100	Excellent
9	81-90	Exceptionally good
8	71-80	Very good
7	61-70	Good
6	51-60	Passing