SYLLABUS

1. Course title:

COOLING SYSTEMS IN FOOD PROCESSES

2. Code:

3. Cycle of study:

1

4. ECTS credits:

3

5. Type of course:

○ Mandatory ◉ Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 VI

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Technology

11. Department/study program:

Food Quality and Safety

12. Lecturer:

assoc. prof. Gordan Avdić, PhD

13. Lecturer's e-mail:

gordan.avdic@untz.ba

14. Web site:

www.tf.untz.ba

15. Course aims:

The course aims, through lectures and exercises, to introduce students with the characteristics and process cooling and refrigeration system in food engineering.

16. Learning outcomes:

Knowledge and understanding of problems, engineering analysis of problems, engineering approach to problem solving, research in the field of chemical engineering in the food industry, engineering practice.

17. Course content:

Presentation of course syllabus. Basic principles of cooling. Cooling cycles. Refrigerants. Compressors. Physical phenomena and basic processes in cooling technology. Cooling of food. Refrigerator construction. Cooling meat and fish. Cooling milk products, beer and soft drinks. Cooling fruit, vegetables and other foods. Industrial use of refrigeration systems. Transport with refrigeration unit.

18. Learning methods:

Lectures using multimedia resources, techniques of active learning with active participation and discussion of students, laboratory exercises on computers.

19. Assessment methods:

After half of the semester, students write a test (first inter-exam) that covers up to date topics from lectures and exercises and can reach up to 20 points. After completing the semester, the students write a test (second inter-exam) which covers the topics covered by the lectures and exercises and can achieve a maximum of 20 points.The final exam is written. On the final exam a student answers 10 questions from the program of the subject treated in lectures and exercises. Each correct answer is scored with 5 points. The final exam can be passed if the student has won 26 points. The maximum number of points a student can achieve at the oral exam is 50.

20. Assessment components:

Rating exam is based on the total number of points a student earned by completing pre-exam requirements and exams, according to the quality of the acquired knowledge and skills, and contains a maximum of 100 points, and is determined according to the following scale (points):

Attendance at lectures 3
Attendance at Exercises 4
Student activity 3
Tests 40
Total prerequisites given 50
Final Exam 26-50

21. Required reading list:

A. R. Trott, T. Welch: Refrigeration and Air-Conditioning, Third edition, Butterworth-Heinemann, 2000
B. Pavković: Tehnika hlađenja, Sveučilište u Rijeci, Tehnički fakultet

22. Web sources:

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session: