SYLLABUS

1. Course title:

ENVIRONMENTAL MANAGEMENT SYSTEMS

2. Code:

3. Cycle of study:

1

4. ECTS credits:

4

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 8

9. Weekly contact hours:

9.1. Lectures: 3

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Technology

11. Department/study program:

Food Technology/Food Quality and Safety

12. Lecturer:

Vahida Selimbašić, full professor

13. Lecturer's e-mail:

vahida.selimbasic@untz.ba

14. Web site:

www.tf.untz.ba

15. Course aims:

The educational aim of the course is to introduce students with an understanding of the laws on environmental protection, environmental systems, and sustainable development. The main aim of the course is to introduce students to the steps and processes during the introduction of the ISO 14001 standard in economic enterprises, possible problems arising from that process and their solution. One of the aims of the course is to introduce students with the emergence, development and future efforts in the development of international norms, and everything that is needed for understanding, and their application.

16. Learning outcomes:

Students are enabled to understand the concept of integral environmental protection, sustainable development, and insight into environmental protection measures and procedures, and will therefore be able to apply the integral environmental planning in accordance with the principles of sustainable development and be able to assess the impact on the environment. By understanding quantitative and qualitative risk presentation, they will be trained for its assessment and management. By getting acquainted with the Rulebook on environmental impact assessment, and the steps in the design of the study, students will acquire the knowledge that is inevitable when making the Assessments and Programs.

17. Course content:

Sustainable development; Concepts, vision, future. Sustainable development and laws of thermodynamics. The path to sustainable development. Types of environmental protection. Integral approach. Measures and procedures for environmental protection. Political and sociological approach, legal measures. Essential environmental protection documents. Environmental Impact Assessment. Risk management. Cost and benefit analysis. Environmental impact study - steps for creating. Methodology of estimating the best available techniques. Systems-definition. Standards and standardization. Authorization and certification. Types of norms. ISO. ISO 14001 Environmental policy. Plan. Implementation and operation phase. Testing and checking. General requirements of quality management system and documentation requirements. Planing of quality management system. Resource management. Control and system upgrades. Self-evaluation. Integration of standards 14001 and 9001 into common system management. Similarities and differences.

18. Learning methods:

Teaching methods are based on multimedia lectures and laboratory exercises. Lectures provide the framework problems and analyze the facts and theoretical approaches to the problem, and at exercises, teaching is done in interactive form and through practical work within laboratory exercises. Teaching methods imply active student participation, laboratory work and visits to manufacturing and service organizations.

19. Assessment methods:

Throughout the course, students are required to regularly attend lectures and exercises. Students' attendance records will be regularly kept. On a special form, the subject teacher will continuously monitor the presence of each student. During the semester, the student can be absent with a maximum of three lectures and three exercises, being obliged to bring proof of justification of absence (medical certificate, etc.). In the case of more unexcused absences, the student loses the right to the signature of the teacher.

• TESTS - Two tests throughout the semester, for the oral part of the exam. Each test for the oral part of the exam, consists of 20 short theoretical questions related to the previously processed material and carries 15 points (for a passing grade, one should achieve a minimum of 8 points). Tests are usually conducted after every six weeks of lectures, whereby the subject teacher will announce them to the students at least two weeks before each test.

• LABORATORY EXERCISES: the student is obliged to do all laboratory exercises, and based on activity in exercises can achieve a maximum of 25 points (for a passing grade should achieve a minimum of 12 points).

• FINAL PART OF THE EXAM - Students who have collected the required number of points by all criteria (54 points), have the option of additional (verbally or in writing exam) for a higher final grade. The maximum number of points that can be obtained on the final exam is 30. The minimum number of points, which must be reached on the final exam is 18.

All the students who did not meet the conditions in one of the tests or who are not satisfied with the grade, but who have completed all other obligations of the course (have the signature of the subject teacher in the index) take the final exam. The student can not get a final grade if he has not passed all the tests.

• SEMINAR WORK OF STUDENTS: student has the opportunity to do one seminar work. Successfully prepared and verbaly performed seminar work is evaluated with a maximum of 10 points (minimum 6 points), which are added to the total number of points achieved on other bases, in the formation of the final grade.

20. Assessment components:

The final grade is based on the total number of points obtained through prerequisites and the final exam, according to the quality of the acquired knowledge and skills. It has a maximum of 100 points, according to the following scale:
Regularity of teaching attendance (lectures + exercises): 5 points
Activity in laboratory exercises: 25 points
Tests (theory): 30 points
Seminar paper: 10 points
Final exam: 30 points

21. Required reading list:

Buzuk M (2013). Sustavi upravljanja okolišem, Kemijsko-tehnološki fakultet, Split,
Sheldon C (1997). ISO 14000 and Beyond, Environmental Management System in the real Word, Greenleaf Publishing.

22. Web sources:

23. Applicable starting from the academic year:

2015/2016

24. Adopted in the Faculty/Academy session: