SYLLABUS

1. Course title:

STEAM BOILERS I

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

None

7. Class restrictions:

None

8. Duration / semester:

1 7

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 1

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Energy Engineering

12. Lecturer:

dr.sc.Sead Delalić, Full Professor

13. Lecturer's e-mail:

sead.delalic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

Acquisition of theoretical knowledge and practical skills in the field of steam boilers.

16. Learning outcomes:

At the end of the semester / course successful students, who during the entire period of teaching continuously perform their duties, will have basic knowledge in the field of steam boilers, and will able to analyze examine, and evaluate the state of the given systems.

17. Course content:

- Classification of steam boilers, basic elements, the role of steam boilers in energy and industry,
- Fuel types, deposits and consumption, chemical composition, characteristics of combustion products, heat power of fuel,
- Combustion, stehiometric combustion equations, coefficient of excess air,
- Enthalpy and theoretical combustion temperature, combustion of fuel mixture, recirculation of combustion products,
- Analysis of combustion products, physical analyzers,
- Solid fuel combustion devices in the layer, dimensioning of grids for combustion, construction of grids, determination of basic parameters of the grid,
- Devices for coal combustion in a fluidized bed,
- Furnace for combustion in a fluidized bed,
- Coal combustion in the flight, heat load of the furnace,
- Circulation circuit,
- The basic element of vertical-tube boiler.

18. Learning methods:

Teaching units of this course will be presented to students through :

- classical lectures with video presentations,
- presentation of individual and group semester works.

19. Assessment methods:

Assessment methods include:

- Theoretical and problem solving tests;
- Written/oral Report on performed seminar work.
- Written/oral exam.

20. Assessment components:

• Presence in classes - 5 points,
• Presence in exercises - 3 points,
• Semester work - 7,5-15 points,
• Tests with issues of theory and assignments - 15-30 points,
• Final exam- 24-47 points.

21. Required reading list:

Gulič M., Brkić LJ., Perunović P. : Parni kotlovi, Beograd, 1988.
Brkić Lj., Živanović T.: Termički proračun parnih kotlova, Beograd, 1988.
Stošić N.: Parni kotlovi, Sarajevo, 1987

22. Web sources:

(max. 687 characters)

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

01.06.2015