

SYLLABUS

1. Course title:

HYDROPOWER MACHINERY

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

8

9. Weekly contact hours:

9.1. Lectures:

3

9.2. Seminars:

1

9.3. Laboratory/Practice classes:

1

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Energy Engineering

12. Lecturer:

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 hydropower machinery.

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 hydropower machinery, and will be able to analyze examine, and evaluate the state of the given systems.

17. Course content:

- The basics for studying the hydropower machinery,
- Unit work of fluid flow ,
- Runner work, speed triangles,
- Flow of incompressible fluids through right and rotary runners, indirect method of determination of the fluid flow through impeller channels of the hydraulic turbines,
- The main characteristics of the unit quantities ,
- The main construction characteristics of action and reaction turbine,
- Modeling of hydraulic turbines,
- Hydraulic stroke, the basis of flow through siphons,
- Equilibrium equation of rotary motion,
- The main characteristics of regulation of hydraulic turbines,
- Types of hydro power plants,
- Selection of hydraulic turbines,
- Hydraulic power transmissions.

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:

1. Krsmanović, Gajić: Turbomašine, Beograd, 1992.
2. Delalić S., Alić I.: Zbirka riješenih zadataka iz pumpi, kompresora i ventilatora sa osnovnim izvodima iz teorije, Univerzitet u Tuzli, 1997.

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