SYLLABUS

1. Course title:

TECHNOLOGY OF PLASTICITY II

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

Plastic deformation of metals

7. Class restrictions:

(max. 150 characters)

8. Duration / semester:

1 6

9. Weekly contact hours:

9.1. Lectures: 3

9.2. Seminars: 1

9.3. Laboratory/Practice classes: 1

10. Faculty:

Mechanical Faculty

11. Department/study program:

Production Mechanical Engineerin

12. Lecturer:

dr.sc. Emir Šarić, associate prof.

13. Lecturer's e-mail:

emir.saric@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

It is to understand various manufacturing techniques, the underlying principles and be capable to design technology and tools for blanking, fine blanking, extrusion, drawing, deep drawing, bending processes

16. Learning outcomes:

After learning course the students should be able to:
- Classify the metal working processes
- Explain principle of flat rolling, determination of rolling load and parameters effects on sheet properties
- Describe the extrusion, drawing and forging operation and analyze related deformations, stresses, forces and work
- Describe the blanking, fine blanking, bending deep drawing and press forming operation and analyze related deformations, stresses, forces and work

17. Course content:

Introduction, Comparative technologies, Flat Rolling, Extrusion, Drawing, Forging, Blanking, Fine Blanking, Bending, Roll-bending, Deep Drawing, Forming presses, Finite element method in metal forming

18. Learning methods:

Lecture and Discussions: voice and Power point lecture notes
Practice: Numerical examples and homework handout problems
Seminar paper - summarized in report

19. Assessment methods:

Midterms exams during scheduled exam weeks
Final exam
Seminar paper
Activity during lectures

20. Assessment components:

2 tests (Computational tasks)	30 %
Seminar paper	20 %
Final exam (Theory)	45 %
Attendance and activity	5 %

21. Required reading list:

1. B.Musafija: Obrada metala plastičnom deformacjom, MF Sarajevo
2. Metal Forming: Fundamentals and Applications by Taylan Altan (ASM Series in Metal Processing)
3. H.Đukić, P.Popović: Obrada Deformisanjem, MF Mostar
4. H.Đukić, M.Nožić: Obrada Deformisanjem, MF Mostar, 2013

22. Web sources:

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

01.06.2015