SYLLABUS

1. Course title:

METAL FORMING TOOLS

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

Plastic deformation of metals, Technology of plasticity

7. Class restrictions:

(max. 150 characters)

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:

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 and apply the results of metal forming process analyze to the dimensioning tool components and be capable to design press tools for blanking, fine blanking, extrusion, drawing, deep drawing and bending

16. Learning outcomes:

After learning course the students should be able to:
- classify the metal forming tools
- design and dimensioning forming tool components for various processes
- design the forming tool for given technical documentation and technological phases
- make technical documentation and select materials for tool components

17. Course content:

Classfication of press tools, Types and Role of tooling in the deformation system, Forming tool components (plates, pillars, stripers, holders, pins ...), Blanking tools design (strip layout, economic layout, bridge size, press center calculation, clearance between punch and die...), Bending tools, Compound tools, Progressive tools, combination blanking/forming tools, transfer tools, Deep drawing tools, Tools for extrusion, FE in the tool design

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. Handbook of Die Design, McGraw-Hill, Ivana Suchy, 1998
2. M. Jovičić; LJ. Marković, Priručnik za konstruisanje alata za obradu deformacijom I, MF Beograd 1984
4. M. Šljivić, Alati U obradi deformisanjem, MF Banja Luka, 1990

22. Web sources:

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

01.06.2015