SYLLABUS

1. Course title:

FUNDAMENTALS OF MANUFACTURING TECHNOLOGIES

2. Code:

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 5

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Mechanical Engineering Tuzla

11. Department/study program:

Power Mechanical Engineering

12. Lecturer:

Dr.sc. Samir Butković, associate professor

13. Lecturer's e-mail:

samir.butkovic@untz.ba

14. Web site:

http://mf.untz.ba/

15. Course aims:

Acquiring basic knowledge in manufacturing technologies, fundamental principles, as well as better understanding of interaction between material and manufacturing technology.

16. Learning outcomes:

After completing this course students are able to participate in solving practical problems in following fields: welding, casting, machining, forming, powder metallurgy. Also, students are able to select optimal manufacturing technology for required product properties.

17. Course content:

Introduction, Classification of manufacturing technologies , fundamentals of metallurgy and heat transfer in welding, welding processes, Machining technologies, Machining processes for rotation shapes, Machining processes for complex shapes, abrasive processing and finishing operations, high speed machining of hardened materials, casting technologies, rapid-prototyping technology, forming processes, rolling, forging, extruding, drowning, sheet forming processes, powder metallurgy technologies.

18. Learning methods:

Lectures with active participation of students,
Exercises,
Preparation and presentation of seminar papers,

19. Assessment methods:

Activity during lectures,
2 tests (solving of tasks),
2 test (understanding of theory)
Seminar/homework papers,
Final exam,

Knowledge tests results are recognized as cumulative result if achieved results are positive after each individual exam and gives at least 50% of the planned and/or the necessary knowledge and skills. In order to pass the subject the student must achieve a minimum of 54 cumulative points.

20. Assessment components:

Attendance and activity during lectures, 5 points
2 tests (solving of tasks), 2 tests x 15 points=30 points
2 test (understanding of theory), 2 tests x 10 points=20 points
Seminar/homework papers, 10 points
Final exam, 35 points

21. Required reading list:

1. Ekinović S. : „Obrada rezanjem“, Mašinski fakultet u Zenici, 2001. godina.
2. Omer Pašić:”Zavarivanje”, Sarajevo, 1998.godine.
3. K. G. Swift; J. D. Booker: „Process Selection From design to manufacture“, Second edition, 2003. godina.

22. Web sources:

23. Applicable starting from the academic year:

24. Adopted in the Faculty/Academy session: