SYLLABUS

1. Course title:

Computers and Programming

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:

2 2

9. Weekly contact hours:

9.1. Lectures:	2
9.2. Seminars:	0
9.3. Laboratory/Practice classes:	1

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Energy Department, Production Department, Mechatronic Department

12. Lecturer:

dr.sc. Salko Cosic

13. Lecturer's e-mail:

salko.cosic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

The primary goal is to give students an understanding of the essential programming principles as well as usage of software necessary to develop simple computational applications.

16. Learning outcomes:

After successful completion of the course, student will be able to analyze and by programming language implement the software solution of different computational problems in mechanical engineering.

17. Course content:

Introduction, contents and objectives of course,
Informatics and information technology basics, development of software solutions
assembler, compiler, interpreter, IDE, operating systems
higher programming languages, programming paradigms, programming basics
Fortran 90, development and properties, programming basics
Object Oriented Programming basics, abstract data structures
introduction to C#
CAS packages as development tools, Matlab, Maple, MathCad

18. Learning methods:

Lectures, software exercises, seminar presentations, consultations

19. Assessment methods:

Test of theory and test in programming problems. Seminar presentation can replace test of theory. The final mark is average between both tests.

20. Assessment components:

Test of theory: 2x25 points (50 %)
Practical computational test: 2x25 points (50 %)
Seminar presentation: max 2x25 points (50 %)
Final exam: 100 points (100 %)

21. Required reading list:

1. Avdić S. Mevludin " Fortran programiranje za Windowse " Tuzla, 2005
2. V. Manojlović: Osnovi računarske tehnike, Akademska misao Beograd, 2003
3. S. Matković: Uvod u C# u okruženju grafičkih OS, Akademska misao, Beograd

22. Web sources:

www.mf.untz.ba

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

(max. 10 char.)