

## DESCRIPTION AND SYLLABUS

Name of the subject in Hungarian:	Business Informatics
Name of the subject in English:	Business Informatics
Credit value of the subject:	3
The code of the subject in the electronic study system:	BN-BUSINF-03-GY
Classification of the subject:	Obligatory
Language of instruction (in case of non-Hungarian courses):	English, Hungarian
Institute or department responsible for the subject:	Institute of Methodology
Course type and number of contact hours:	Practical, class per week: 2, class per semester: 0
Mode of study: (Full-time / Part-time):	Full-time training
The semester in which the subject is open for registration:	2022/2023 1st semester
Prerequisite(s):	[Informatics II. (fulfillment)]

### THE PURPOSE OF THE SUBJECT, LEARNING OUTCOMES:

Business Informatics targets to refresh the IT skills of students focusing on the business kind of numerical calculations and to develop the comprehension of financial, linear programming and statistical problems. Financial planning and looking for optimal solutions, examining thoroughly and completely huge sets of data requires diverse methods and reliable computational background.

After completing this course, students will be able to identify personal needs and directions for individual and autonomous study and to perform it in self-directed and autonomous manner in the common business and informatics areas.

Fulfilment of the test and the project will show the ability of students to take their place at real challenges as writing thesis, doing their work.

### SUMMARY OF THE CONTENT OF THE SUBJECT

The first part includes financial calculations. Principal, interest rate, future value, present value, number of time periods, annuities about savings and loans must be calculated using various excel functions. The optimal portfolio and the financial planning will require the help of solver which offer some post-optimal reports also.

The second part is about large database examinations. Database functions, charts of different kind, learnt descriptive statistical functions, new statistical methods, pivot table, playable pivot chart, dashboard creation gives multiple possibilities for professional results.

### STUDENT'S TASKS AND PLANNED LEARNING ACTIVITIES:

From the first three seminars material students will write a test about variate financial problems using Excel implemented functions and the solver. The test will consist of simple questions about savings and loans under different circumstances and will include also complex investment problems with optimal portfolios and financial planning questions require the help of solver.

On seminar #7 students should form 2-member groups for the project task. Each group will obtain a separate large database which should be examined by all the methods presented on seminars, and to make in team a final presentation of their results.

### EVALUATION OF THE SUBJECT:

On seminar #6 students will have to write a test of 50 points in 75 minutes using Excel functions and solver. To pass the test task the minimum score is 25 points (50%).

On the last seminar will be possible the supplementation (for those who missed the official date) or the correction (who got less than 25 points or are not satisfied with their result) of the test.

On seminars #10 and #11 the project groups will have 5-7 minutes each to make their short presentation. During the semester groups receive weekly feedback and help with the current partial results.

The score for the project will be at most 50 points. The members of a group should indicate their share in project development. They will obtain individual scores depending on their contribution, level of presentation and answer for question which will be previously formulated by teacher.

The practical mark will be calculated from the sum of the test and project scores of an individual according to the following scale:

- 0-49 points (1) fail
- 50-62 points (2) passed
- 63-75 points (3) satisfactory
- 76-88 points (4) good
- 89-100 points (5) excellent.

Students who successfully complete the Coursera Operations Research (1): Models and Applications course are exempt from writing the test. The score will be calculated according to the grade percent obtained on the Coursera certificate.

**OBLIGATORY READING LIST:**

- D. S. Fairhurst: Using Excel for Business and Financial Analysis, Wiley & Sons Ltd., 2019
- W. Winston: Microsoft Excel 2019 Data Analysis and Business Modeling, Microsoft Press, U.S, 2019