

## Tárgytematika / Course Description Basic Informatics

GKNB\_MSTA052

Tárgyfelelős neve /

Teacher's name: dr. Kallós Gábor

Félév / Semester: 2023/24/1

Beszámolási forma /

Assesment: Folyamatos számonkérés

Tárgy heti óraszám /

Teaching hours(week): 1/1/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

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### OKTATÁS CÉLJA / AIM OF THE COURSE

The goal of the course is to introduce a modern, dynamically typed programming language (Python), and to teach the programming approach and techniques needed to use the language efficiently.

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### TANTÁRGY TARTALMA / DESCRIPTION

The basic concept of programming: algorithms, data structures, programming languages, Integrated Development Environments. Simple data types and their basic operators. Expressions and their evaluation. Variables. The assignment statement. The print function. Standard streams: input, output, error. The input function. The import statement. Output formatting. Control structures. The range object. Data conversion between simple data types. The math and the random modul. String handling. Calling functions and methods. The tuple and the list. The in operator. The len function. Indexing. Operators and basic methods. The set and the dict. operators and basic methods. Data conversion between structured data types. Comprehensions. Statistical functions. Sorting. Unpacking. Slicing. Advanced iteration techniques.

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### SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

The course ends with a test, where the students solve simple programming problems in Python. The available time is 90 minutes. Scoring: 0-7:1 (fail), 8-10:2 (pass), 11-13:3 (satisfactory), 14-16:4 (good), 17-20:5 (excellent).

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### KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

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### AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL

Mark Pilgrim: Dive into Python 3 (<http://www.diveintopython3.net/>).

Mark Summerfield: Python 3 programozás - Átfogó bevezetés a Python nyelvbe, Kiskapu Kiadó, 2009, ISBN: 9789639637641.

Zed A. Shaw: Learn Python 3 the Hard Way, Addison-Wesley, ISBN: 9780321884916.