

Title:	Software Laboratory (Sage)
Lecture hours:	15
Study period: (summer/winter)	winter or summer
Number of credits:	2
Assessment methods:	problem solving (classroom assessment)
Language of instruction:	English
Prerequisites:	basic programming
Course content:	Environment of Sage – introduction; calculations: variables, constants, numbers, mathematical operations and functions; strings; vectors; lists; numerical and symbolic operations; programming in Sage; graphic in Sage, 2D and 3D graphs.
Learning outcomes:	Student should be able to solve some math problems using Sage.
Name of lecturer:	Dr Marcin Kowalewski
Contact (email address):	marcinko@ukw.edu.pl
Literature:	<ol style="list-style-type: none"> 1. William A. Stein et al.: Sage Mathematics Software (Version 5.2), The Sage Development Team, 2012, http://www.sagemath.org. 2. William Stein, Sage for Power Users, 2012. 3. Sage Tutorial, The Sage Development Team, 2017.