

Course title: Mathematic modelling in applied sciences

ECTS credit allocation (and other scores): 4

Semester: spring

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

Branch of science: Natural sciences

Language: English/Polish

Number of hours per semester: 30 lectures + 30 classes = 60 hours (using distance learning methods and techniques)

Course coordinator/ Department and e-mail: Mariusz Bodzioch / WMil, mariusz.bodzioch@matman.uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: Content concerning non-elementary theoretical or practical problems relating to selected branches of mathematics and information technology, as well as mathematical modelling in selected scientific fields and their applications.

LECTURES: Content concerning non-elementary theoretical or practical problems relating to selected branches of mathematics and information technology, as well as mathematical modelling in selected scientific fields and their applications.

Learning purpose: To present selected methods from various branches of mathematics and information technology, mathematical models and IT tools used in applied sciences.

On completion of the study programme the graduate will gain:

Knowledge: The student knows and understands the principle of conducting non-elementary mathematical reasoning; specialised mathematical and information technology concepts for describing and modelling phenomena; the application of mathematical models and methods in other fields of science.

Skills: The student can combine knowledge from different branches of mathematics; use mathematical knowledge to describe, analyse and infer in the area of specialised problems; apply mathematical and information technology methods in applied sciences; acquire information independently from available sources, including scientific ones.

Social Competencies: The student is prepared to continuously broaden his/her knowledge; think critically; demonstrate the importance of exact sciences in the development of other scientific fields and disciplines.

Basic literature:

Supplementary literature:

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 2.48 ECTS points.

Student's independent work: 1.56 ECTS points.