Faculty of Mathematics and Computer Science

Course title: **SOFTWARE ENGINEERING**

ECTS credit allocation (and other scores): **5**

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Natural sciences

Language: English/Polish

Number of hours per semester: 30 lectures + 30 classes = 60 hours

Course coordinator/ Department and e-mail: Erasmus coordinator Anna Szczepkowska/ WMiI, erasmuswmii.uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES:

Programming laboratory. The student is expected to develop a small software system and technical documentation for the developed software.

LECTURES:

The lecture will cover the following topics: software specification, design and implementation, validation, evolution, agile software development and critical systems.

Learning purpose:

The aim of the course is to provide students with the basics of the methodology of creating and operating large information systems.

On completion of the study programme the graduate will gain:

Knowledge:

The student has knowledge related to software engineering processes.

The student knows the methodology of building large IT systems.

The student knows about managing the software development process.

Skills:

The student can work in a team.

The student can develop documentation related to the development project.

The student can formulate the specification of requirements for a simple IT system.

The student can, following the specification, design the implementation process of a simple IT system.

Social Competencies:

The student understands that creating large IT systems is teamwork, often requiring the management of large groups of people and the necessity of continuous training.

Basic literature:

1. Ian Sommerville, *Inżynieria oprogramowania*, Wyd. PWN, R. 2020

Supplementary literature:

1. Frederick Brooks, *The Mythical Man-Month: Essays on Software Engineering*, Wyd. Addison-Wesley Professional, R. 1995
2. Tom DeMarco, *Deadline Zdążyć przed terminem*, Wyd. Studio Emka, R. 2017

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 2.46 ECTS points

Student's independent work: 2.54 ECTS points