Title of Course	Computer Methods in Civil Engineering – project		
Semester	Autumn/Spring		
Teaching Hours per Course:	Total	- Lectures:	- Tutorials:
	45	0	45
ECTS Credits	2		
The content of education			
Aims of Course	The aim of the course is to learn about computational methods used in engineering calculations (including finite differences method and finite element method), including their algorithms and limitations, as well as practical skills in modelling engineering issues and solving them using computer programs. In addition, during the lectures, students will learn about basic issues and techniques related to BIM modelling technology.		
Program	P1 - Project no. 1 (e.g. calculation of a 2D frame using three different calculation programs, including at least one based on MES). P2 - Project No. 2 (e.g. calculation of a rectangular plate by two or three different methods, including MES). P3 - Project No. 3 (e.g. calculation of a 3D frame using two or three different calculation programs, including at least one based on MES). P4 - Calculation of one of the P1 - P3 projects with additional assumptions.		
Conditions of completion	The condition for passing the course is participation in classes (no more than two absences are allowed) and the completion and submission of two project exercises according to the topics issued by the teacher. Independent execution of the indicated project exercises by the student is treated as achieving the required educational results at the minimum level and results in the student obtaining a sufficient grade (3.0) from the classes. Students who wish to receive a higher grade from the classes perform one or two additional project exercises according to the topics given by the teacher, where the completion of one of the exercises results in an increase by at least half of the grade and a maximum of one grade.		
Teacher	Grzegorz Sadowski, MSc		