Title of Course	Mechanics of particulate materials		
Semester	Autumn/Spring		
Teaching Hours per Course:	Total	- Lectures:	- Tutorials:
	15	15	0
ECTS Credits	1		

The content of education	
Aims of Course	The course is concerned with basic knowledge of the mechanics of particulate (granular) materials and the associated engineering applications. Course contentcreates a basis for understanding fundamental notions, phenomena and relationships pertinent to static states and flows of particulate materials, and for being able to apply the gained knowledge to the design of industrial equipment.
Program	L1-2 – Plane stress state in particulate material; L3-4 – Spatial stress state in particulate material; L5-6 – Bearing capacity. Lateral active pressure and passive resistance. Liquidity index; L7-8 – Dimensional characteristics of particulate materials;L9-10 – Properties of particulate materials; L11-12 – Slope stability. Static pressure acting on the walls and bottom of a slender container. Local stresses; L13-14 – Outflow of granular material from a container according to Kvapil theory; L15 – Mixing of granular bed.
Conditions of completion	Students are encouraged to attend lectures. Examination at lectures – evaluation test during the final lecture. Evaluation principles: (i) the final mark is calculated as weighted mean of partial marks according to the formula = 0,6 x (evaluation test) + 0,4 x (laboratory classes); (ii) all the partial marks should be positive. At the beginning of the course, students are informed on the organization of examination at laboratory classes and on evaluation principles The results of evaluation of the laboratory classes are decided by the responsible teachers and communicated to the coordinating teacher (lecturer). All the organization details and evaluation principles are consistent with, and other relevant issues not mentioned in the present document are regulated by, Regulations of studies at the Warsaw University of Technology.
Teacher	Krzysztof Wołosz, Professor