Course title:	FIRE PROTECTION IN PUBLIC SAFETY
Course title in Polish:	OCHRONA PRZECIWPOŻAROWA W BEZPIECZEŃSTWIE PUBLICZNYM
Course for discipline:	Civil Engineering, Geodesy and Transportation

Semester:	4	**Status of course:**	faculty	**Language:**	english
Academic year:		**Catalog number:**			

Coordinator of course:	dr hab. inż. Paweł Ogrodnik, prof.SGGW
Lecturer od course:	dr hab. inż. Paweł Ogrodnik, prof.SGGW
Executing unit:	Institute of Civil Engineering, Department of Mechanics
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	The subject is intended to prepare for the assessment of the technical method of securing facilities, the selection of the most optimal method of securing and the implementation of a security project for a selected infrastructure facility. In addition, get acquainted with the technical solutions of selected security systems and present the social aspects of fire occurrence. The scope of the subject includes: Non-linear phenomena of internal fire - flashover and backdraft. Symptoms, mechanisms and hazards of flashover and backdraft. Examples of real fires with these effects - course analysis. The impact of changes in ventilation and extinguishing on the power of poorly ventilated fires. Ways to prevent flashover and backdraft of flames and to avoid the effects of these effects. Similarities and differences between both effects. The impact of fire protection on the technical conditions of facilities. Organization of alarming. Classification and general rules for selecting security systems. Monitoring and technical security systems for critical infrastructure. The impact of the presence of security systems on rescue operations in facilities.
Didactic form, number of hours:	Lecture 5h and project 5h
Teaching methods:	Multimedia lecture, calculation exercises,
Limit of people in the group:	30

Learning outcomes

KNOWLEDGE - the graduate knows and understands:	**SKILLS - the graduate is able to:**	**COMPETENCES - the graduate is ready to:**
To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	Critically evaluate the achievments in the field/discipline represented
Major general development trends in the field/discipline		Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect
		Support the ethos of scientific circles and conduct independent research

The method of verification of learning outcomes:	A credit colloquium on the lecture part and passing on time the project done in the project class.
Form of documentation of achieved learning outcomes:	Writen colloquium, and project done in the project class.
Elements and weights of the final grade:	Colloquium - 50%, Project - 50%
Place of the course:	

Basic and supplementary literature

Abramowicz M., Adamski R. G. "Fire safety of buildings. Vol. AND." Main School of Fire Service.1.Warsaw 2002
Collective work edited by M. Dreger "Fire safety. Amended technical conditions Buildings",2. Publisher: POLCEN Sp. z o. o. 2018
Kubicki G., Mizieliński B., "Fire ventilation". Smoke removal, WNT, 2013.
Helmerking D., "Basics Fire Safety", Birkhauser 2020.
Furness A., "Introduction to Fire Safety Management", 2007.
OJ 2022 item 1225 Regulation of the Minister of Infrastructure on the technical conditions to be met by buildings and their location.

Comments:	non

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	30h

Leraning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences:

Symbol:	**Learning outcomes:**	**8 level NQF**
SD1_KW01	To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	P8S_WG
SD1_KW02	Major general development trends in the field/discipline	P8S_WG
SD1_KU05	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	P8S_UW
SD1_KK01	Critically evaluate the achievments in the field/discipline represented	P8S_KK
SD1_KK03	Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect	P8S_KK
SD1_KK08	Support the ethos of scientific circles and conduct independent research	P8S_KR