COURSE DESCRIPTION CARD - SYLLABUS

Course name

Monitoring and protection of critical infrastructure

Course

Field of study

Safety Engineering

Year/Semester

2/3

Area of study (specialization)

Security and Crisis Management

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

Polish

Form of study

part-time

Requirements

elective

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

10

Projects/seminars

10

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

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Responsible for the course/lecturer:

Prerequisites

A student beginning his or her education should be familiar with the basic terminology of crisis management and classification of critical infrastructure.

Course objective

The aim of the course is to transfer knowledge in the field of methods, techniques and conditions for the protection of critical infrastructure (European, national, provincial, county, commune and significant at the level of enterprises) and to identify and assess the levels of threats that may affect its functioning.

Course-related learning outcomes

Knowledge

1. knows the methods, tools and criteria for identifying critical infrastructure [P7S_WK_02];

2. knows methods of identifying and analysing the level of threat to critical infrastructure [P7S_WG_07];

3. has expertise in critical infrastructure failure modelling [P7S_WK_02];

4. has knowledge of the selection and design of protection measures for critical infrastructure [P7S_WG_02];

Skills

1. is able to identify critical infrastructure at the level of the state, province, county, commune and enterprise [P7S_UW_01];

2. is able to select and evaluate and design selected methods of critical infrastructure protection [P7S_UW_01];

3. be able to develop a hierarchy of importance for critical infrastructure [P7S_UW_04];

4. is able to lead discussions in specialist critical infrastructure design teams [P7S_UW_02];

5. is able to assess the effectiveness of selected forms of critical infrastructure protection [P7S_UW_06];

6. is able to obtain data necessary for formal analyses in the field of critical infrastructure protection [P7S_UO_01];

Social competences

1. Is aware of the cause-and-effect relationships in critical infrastructure protection design [P7S_KK_01];

2. Is aware of the need to continuously develop and learn new methods and tools for studying and protecting critical infrastructure [P7S_KK_02];

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formal evaluation:

a) in terms of project activities: based on the implementation of projects carried out by subgroups;

b) within the scope of exercises: on the basis of the colloquium realized during the last classes and evaluation of sentence realization during the exercises.

Summary evaluation:

a) in the scope of project activities: on the basis of the arithmetic mean of partial marks for tasks/subjects of the project;

b) in the scope of classes: on the basis of the arithmetic mean of the grades from the colloquium and the realization of tasks during the classes (grade on the scale from 0 to 5).

Programme content

Identifying threats to critical infrastructure. Analysis of levels of protection effectiveness (physical, technical, personal, ICT and legal) of critical infrastructure. Methods for assessing the risk, protection and restoration of critical infrastructure. Critical Infrastructure Protection Level Measures. Modelling of critical infrastructure failure.

Teaching methods

Exercises supported by a multimedia presentation with task solving. Project activities carried out in a computer lab with the use of specialist programs.

Bibliography

Basic

Dahlke G., Modelowanie ochrony infrastruktury krytycznej (niepublikowane materiały dydaktyczne)

Krajowy Plan Zarządzania Kryzysowego RP

Narodowy Program Ochrony Infrastruktury Krytycznej RP

Strategia Rozwoju Systemu Bezpieczeństwa Narodowego RP

Strategia Bezpieczeństwa Narodowego RP

Additional

Bagińska J.M, 2017, Ochrona baz paliw płynnych jako elementu infrastruktury krytycznej w aspekcie wybranych aktów normatywnych, Wydawnictwo SAN, Przedsiębiorczość i Zarządzania, Tom XVIII, Zeszyt 5, Część I, ss. 103–117

Jakubiak E., Ochrona infrastruktury krytycznej w Polsce, Zeszyty Naukowe SGSP, Szkoła Główna Służby Pożarniczej, Nr 66, 165-175

Kaak W., Faza odbudowy w wojewódzkich planach zarządzania kryzysowego. Studia Administracji i Bezpieczeństwa 3/2017, ss. 219-229

Radziejewski R., 2014, Ochrona infrastruktury krytycznej. Teoria i praktyka, Wydawnictwo Naukowe PWN, Warszawa

Sadowski J., Ochrona infrastruktury krytycznej : geneza problemu, Instytut Naukowo-Wydawniczy "SPATIUM". sp. z o.o., Autobusy : technika, eksploatacja, systemy transportowe, R. 19, nr 6, ss. 1237-1241

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	20	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests, project preparation) [1]	30	1,0

[1] delete or add other activities as appropriate