Fire University of Warsaw, Poland
Faculty of Security Engineering and Civil Protection
Syllabus 2018 -

# Fire protection of buildings

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| profile | general academics |
| degree | first degree |
| programme | ERASMUS |
| semester | 1 |
| part time / full time | full time |
| ECTS | 5 |
| coordinator | mł. bryg. dr inż. Piotr Tofiło |

## form of the activity: exercise

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| hours | 30 |
| prerequisites | Knowledge gained during previous education in the scope of national and international legal system, principles of administrative procedure, basics of construction, materials science, fire-fighting water supply, computer design and engineering graphics. |
| objectives | The aim of teaching the subject is to familiarize students with the principles of determining the required level of passive fire safety in facilities classified as a threat to people and in production and storage facilities, as well as to develop the skills of assessing fire risk and selecting appropriate protections in buildings. Students are also familiarized in practice with the principles of preparing appropriate technical documentation for fire protection. |
| methods | Lectures illustrated with computer presentations. Design exercises consisting of individual or team development of a project, solution to a specified problem, related to an existing building. |
| own work | Studying and analyzing available literature sources. Development of a project (variant) solution to the indicated problem with its justification for design exercises, exam preparation. |
| basic literature | Approved Document B |
| supplementary literature | |

| contents | hours |
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| Fire protection design based on a selected example of a public utility building or a production and storage building: fire classification of the building; fire resistance class of the building and fire resistance of the building elements; determining fire resistance and increasing it for wooden, steel and reinforced concrete structural elements depending on the function performed in a fire, fire zones, distances between buildings; designing evacuation conditions based on technical and construction requirements and their verification using analytical methods; fire-fighting installations and devices; handheld fire-fighting equipment; fire-fighting water supply and fire routes; application of replacement solutions. Using engineering methods and computer programs to develop elements of the building fire safety concept, as a supplement to and extend the scope of knowledge and principles contained in regulations and standards. | 30 |
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| own work | Studying and analyzing available literature sources. Development of a project (variant) solution to the indicated problem with its justification for design exercises, exam preparation. |
| basic literature | Approved Document B NFPA 101 NFPA 5000 Meacham - Egress Design |
| supplementary literature | |

| contents | hours |
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| Legal aspects of protecting buildings from fires, requirements for buildings in technical and construction and fire protection regulations. Procedures for deviations from regulations and alternative solutions. Principles for enforcing fire protection requirements in the process of designing buildings and putting them into use. Threats to people caused by fires. | 16 |
| Elements of the building and their functions in protection against threats. Requirements for buildings and installations. Fire resistance classes of buildings, fire resistance of building elements, fire zones, fire separations, required distances, between buildings. Evacuation routes in buildings. Requirements concerning building preparation for operational activities. Investment process and fire protection requirements. Appointment, supervision and responsibility of an expert for fire protection, role, scope and principles of construction design agreement by experts. Procedure for making construction design agreements. | 14 |