

DISASTER MANAGEMENT HIGHER EDUCATION IN HUNGARY

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Abstract

The creation and development of disaster management higher education went on in parallel with the creation of the unified disaster management system. The Institute of Disaster Management, which has been operating based on predecessor organizations since 2012, provides higher education training for professionals in organizations involved in disaster management, in line with university strategies and beneficiary needs. The training portfolio developed within the framework of law enforcement higher education provides an opportunity to modernize the basic's and master's degree education in disaster management and its professional training courses in accordance with the legal, professional, technical, and scientific development of disaster management itself. The aim of the study is to evaluate the main results and experiences of the establishment and development of higher education in disaster management, on the basis of which to determine the aim and content of future educational development measures.

Key words

Higher education, disaster management, education development, law enforcement.

Introduction

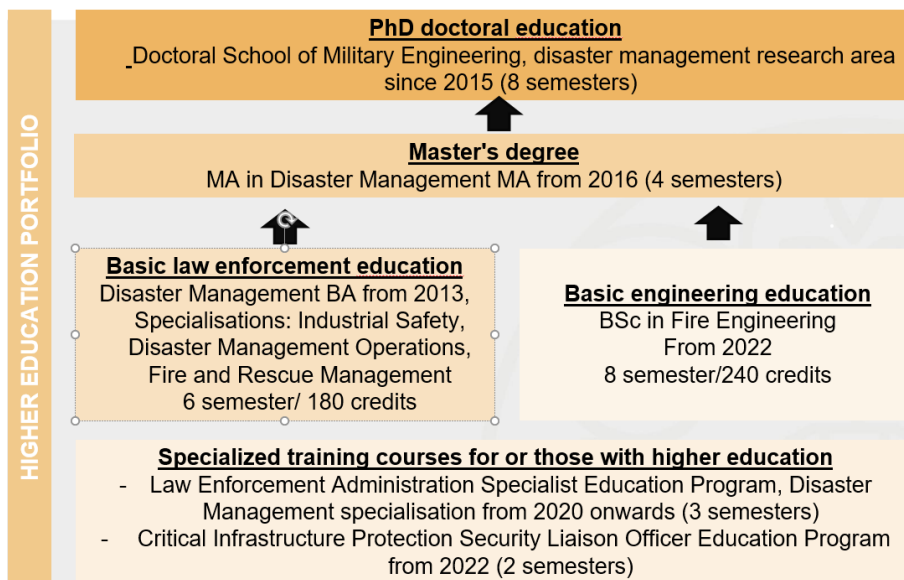
In the field of the development of disaster management higher education in Hungary, the decisive role of state has been continuously demonstrated. This effect can be traced, in the definition of the state education requirements, as well as in the elaboration and development of the higher education organizational and institutional system. As a result of the above, the existing disaster management higher education system at the National University of Public Service (hereinafter: UPC) is organically connected to the institutional system of law enforcement higher education [1].

The Institute of Disaster Management (hereinafter: IDM) is one of the educational unit of the university's Faculty of Law Enforcement The institute's educational portfolio includes the bachelor and master courses in Disaster Management.

During the bachelor courses in disaster management, students are prepared for the professional activities to be held in the first officer positions in professional disaster management organizations. While the master's training provides appropriate specialized education for disaster management professionals to become law enforcement managers. The priority task of higher education in disaster management - in addition to the training of disaster management officers - is also to provide economic organizations, municipalities and social organizations that are subject to the specialized disaster management regulations with experts holding higher educational degrees dealing with fire protection, civil protection and industrial safety. [2]

The courses take place in bachelor's and master's programs, as well as specialized training courses. In the bachelor's degree program, you can obtain a disaster management organization's qualification that provides special expertise in the field of disaster management operations, fire protection and rescue management and industrial safety. Those with a master's degree can also apply for the university's PhD doctoral program. [3]

In this study, the authors present the main characteristics of the development history of disaster management higher education, the content of the training courses in the IDM, as well as possible directions for future developments.



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Figure 1
IDM higher education system in 2023

An overview of the development history of disaster management higher education

Among the historical antecedents of disaster management higher education training, the prehistory of fire protection officer training should be taken into account.

The first voluntarily established fire brigades (1835, Arad) and fire guards (1855, Óbuda Shipyard) saw extinguishing fires as their basic task. The threefold division of the fire police license (fire prevention, fire fighting, fire investigation) provided the basic professional division of the current firefighter education. When the Hungarian National Firefighters Association was founded in 1870, one of its main tasks was to organize a uniform national firefighter education system.

Between the two world wars, the professional training of the fire brigade was supplemented by civil protection (air defence) training. After the Second World War, the country-wide state fire department was established, when the Fire Officer Training Department was established. Firefighter training took place between 1963-1971. years at the Fire Department of the BM Academy, where two-year full-time and three-year correspondence courses were organized. In 1981 the fire protection plant engineer education began at Ybl Miklós Technical College. The BM Fire Protection Training Center also started operating this year [4].

After the establishment of the Hungarian disaster management organization, a decision was made to establish college-level disaster prevention education at the Police Officers College [4].

The Department of Disaster Management was established in 2000. In 2004 a full-time officer training could begin. After the transition to the Bologna training system, the education continued in the disaster management specialty of the police administration basic (Bsc.) level education degree program. From the 2009/2010 academic year, the training in the correspondence department was expanded to include the fire protection specification [4].

At the Zrínyi Miklós University of National Defense, the defense administration basic's and master' level (Bsc.) education programmes started in 2006, where studies could be conducted in disaster management, fire protection and fire fighting specializations [5].

The development of disaster management higher education programmes

The establishment and development of higher education training system in disaster management took place in parallel with the formation of the unified disaster management system in 2012. The responsibility of the Disaster Management Institute established in In 2012 within the organization of UPC is to prepare for disaster management public service professionals, to support disaster management public services operating in the law enforcement forces system and to increase the efficiency of organizations involved in the implementation of disaster management activities. The creation of the organization of the IDM - initially consisting of three specialized departments - took place in parallel with the institutional development efforts of the UPC.

The Cooperation Agreement between the university and the National Directorate General for Disaster Management (hereinafter: NDGDM) currently regulates the provision of the personnel and technical conditions necessary to fulfill the customer's needs [2].

The IDM continuously followed the organizational and quality changes that took place at NDGDM from 2012 with the establishment of the unified disaster protection system. The institute launched a disaster management bachelor's degree programme in 2013 and a disaster management master's degree programme in 2016. Since 2020 it is possible for employees of disaster management organisationa - for those who do not have a higher education in disaster management - to continue their three-semester studies at the disaster management specialisation of the law enforcement organization's specialized continuing education program in order to obtain a higher professional qualification.

The training structure established at IDM, forms a well-developed and organizationally functioning system, from the higher level bachelor's through master's education to doctoral studies, the creation of which is the result of the past more than ten years work. Figure 2 illustrates the main content elements of the disaster management basic training education.

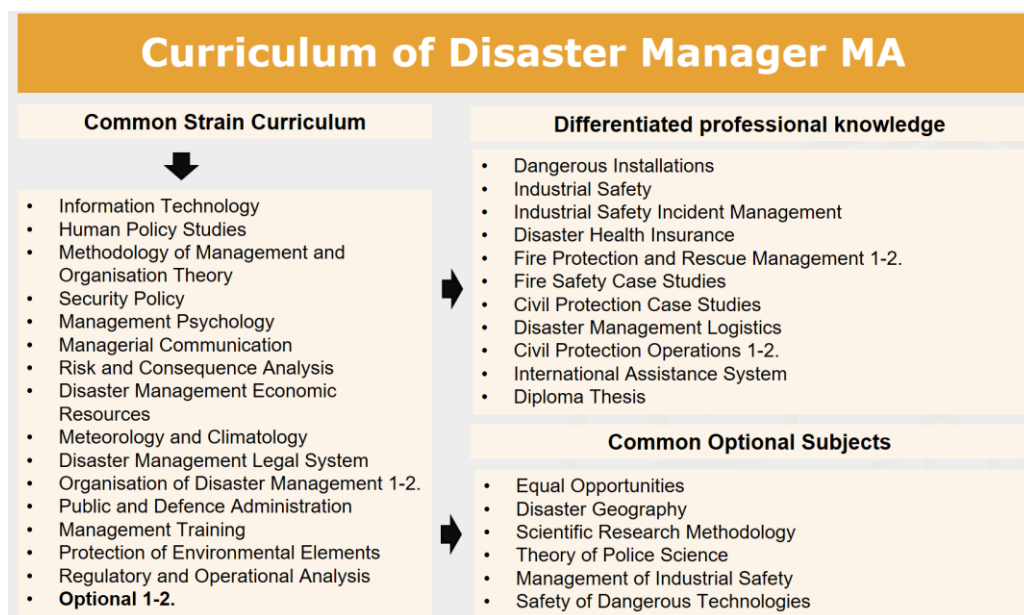
In addition to the professional disaster prevention agency, volunteer and facility fire departments, public administration bodies and economic organizations also provide employment opportunities for disaster management graduates.

Figure 3 illustrates the main content elements of the disaster management master level training education.



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Figure 2
Structure of Disaster Management BA education



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Figure 3
Structure of Disaster Management MA education

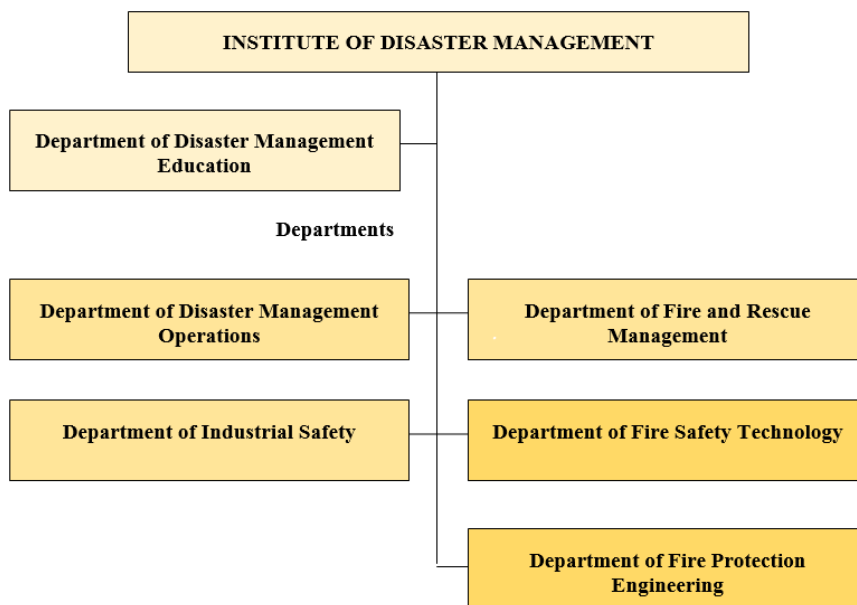
Each year, large the number of applicants for the training courses is several times higher than the number that can be taken on. The majority of the institute's instructors have acquired experience as managers, supervisors and experts at disaster prevention agencies and abroad. First-year students enrolled in the basic course of IDM are granted the legal status of officer candidates. After the intensive phase of basic law enforcement training, the officer candidates would study under the supervision of the Law Enforcement Division. [2]

In addition to the legal and administrative training that underpins the activities of state administrative organizations, there has also been a need for training for economic actors involved in the implementation of disaster prevention and, in particular, fire prevention legal

regulations. Due to the demand of economic organizations, the establishment of fire safety engineering training on the basis of NKE has become a priority development task of the institute. The establishment procedure for the education has been completed, as a result of that the training was begun in September 2022 (Vass, 2019). From February 2022, the special training course for critical infrastructure protection's security liaison person was launched at the institute, the purpose of which was to train specialists with legal and professional knowledge related to the protection of critical infrastructure protection European and Hungarian regulation.

The Ludovika Campus Project will provide the necessary facilities of the special training center for disaster management, which can be realized in 2026. This project will provide the educational conditions of both the existing basic and master's degree in disaster management, as well as the bachelor's degree in fire safety engineering.

The organization of the IDM, adapted to the training development results described in the next figure.



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Figure 4
Organizational structure of IDM in 2023

According to the data of the IDM, the institute has awarded diplomas to 720 people in the first ten years of the disaster management training, which started in 2013, and upto 166 people in the master's training, which has been running since 2016.

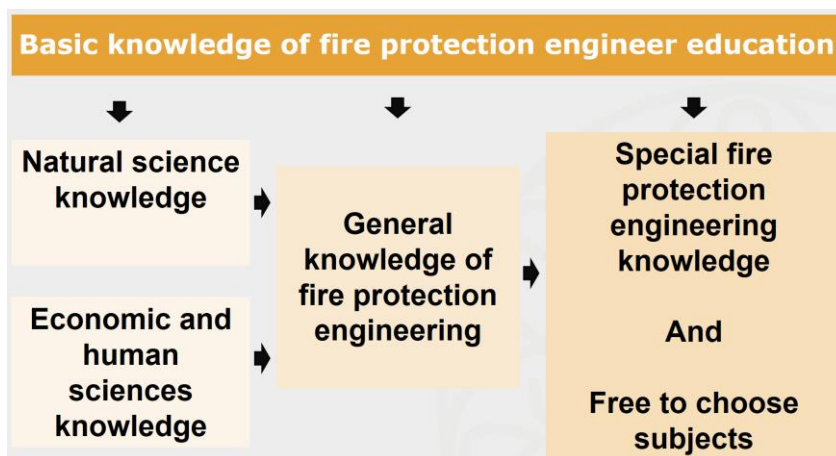
Fire safety engineering higher education in Hungary

The most significant and comprehensive training development measure of the past five years was related to elaboration of the bachelor's degree in fire safety engineering. In the course of their work, the graduates become capable of solving complex technical tasks – considering

both professional, environmental, social and ethical aspects – as well as managing the units of domestic professional organizations. The certified fire safety engineers will be able to perform engineering tasks after gaining sufficient experience, and they will also have such in-depth theoretical knowledge that they will be able to continue the training in master's degree courses.

The purpose of establishing the programme is basically related to the knowledge required to carry out the engineering (technical) activities linked to the following qualifications. Such a knowledge is necessary to carry out fire protection planning activities, to carry out fire safety expert activities, to acquire knowledge about the fire protection of buildings, fire extinguishing technical equipment, industrial fire protection, fire inspection, the design of built-in fire protection equipment, as well as for activities in professional disaster management jobs requiring fire safety engineering knowledge (Vass, Kátai-Urbán & Cséplő, 2018). The qualification can also be used for the execution of technical planning, organization, analysis and evaluation tasks related to disaster prevention, civil protection, industrial safety and fire protection activities.

The degree in fire safety engineering can also be used in the case of qualification requirements related to industrial safety specialties, such as the duties of dangerous good safety advisor, critical infrastructure protection safety liaison officer, dangerous establishment's safety office and radiation protection specialist. The main areas of knowledge the training are presented in detail in figure 5 [6].



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*Figure 5
Basic knowledge of fire safety engineer education*

A master's program will be built for the bachelor's degree in fire safety engineering starting in 2026 when the first year of the bachelor's degree course will be finalised.

PhD studies for the development of disaster prevention scientific research

In the Doctoral School of Military Technology (hereinafter: DSMT) of UPC, an independent research area of Disaster Management has been operating since 2014. In the framework of the activity of the research area, the institute's lecturers and experts with a scientific degree perform the tasks of supervisors and instructors. Compared to the size of the institute there are a significant number of research topics and subjects. A lot of them can be

taken up in English. State and civil needs for solving the technical issues of fire protection, civil protection, industrial safety, water administration and national defense administration will provide a basis for doctoral studies and dissertation activities. The aim of the scientific work of the institute and the research area was primarily to solve professional-scientific problems arising from the activities of the unified disaster protection system. gement (Kátai-Urbán & Vass, 2019). The great opportunity of the future will be the significant professional and scientific potential inherent in fire safety engineering education. [3]

Summary

In the present study, the authors examined the educational and scientific background of the disaster management trainings operating at the UPS and its legal predecessor institutions. The institute and its legal predecessor organizations have been carrying out their higher education activities for more than two decades, the main objective of which was to ensure the supply base of highly qualified officers with the most up-to-date theoretical and practical knowledge necessary for the professional disaster management organizations.

It can be concluded that the institute provides effective and efficient higher education preparation at the UPC through the development of practice-oriented and profession-specific education. In addition to increasing the efficiency of existing courses, the main task is to adapt the institute's educational portfolio to the constantly emerging training needs. The authors came to the conclusion that the establishment of the fire safety engineering basic course ensures the training of specialists with extensive knowledge in the field of fire protection and industrial safety. At the top of the disaster management training portfolio is the PhD doctoral training, where foreign students also participate in the training.

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