



Activities Report

OUTPUT 01

ANALYSIS OF EXISTING CURRICULA FOR EMERGENCY MANAGER PROFILE AND IDENTIFICATION OF KNOWLEDGE GAPS AND SKILLS MISMATCH

DECEMBER, 30 - 2021



LEGEND

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Premise

B-READI Project

“In the last years the society all over the world has been exposed to a number of different forms of disasters, going from earthquakes to terrorist attacks, to severe changes in weather pattern, to financial crisis due to disruptive challenges, to infectious epidemics, as the present COVID-19 outbreak, that have demonstrated that no one is exempt from a disaster situation and people everywhere need to be prepared. National and Local Governments, Communities as well as public and private Companies, need to create an in-depth emergency plan not only for the managing of the immediate consequences of a disaster but also and mainly to ensure recovers and thrives to a community. This requires the establishment of a network of entities with interconnected and interdisciplinary capacities and skills prior to a disaster, that ensures the quick response to the event and manages the recovery process. The reliability and effectiveness of such network depends on a sound and aware coordination. In the last years, due to the increasing crisis situations, the profile of the Emergency Manager has been developed and some kinds of certifications are proposed at national and international levels, but not connected with a university curriculum. Often holders of such Certifications get their start by working as police officers, detectives, firefighters, safety technicians, police dispatchers, paramedics, and others who gained strong experience in emergency situations. While an extensive work experience is a fundamental requirement for an Emergency Manager, the actual economic, social and environmental scenario demands for a strong mix of deep knowledge and skills as strong communication, critical thinking, decision-making, interpersonal, and leadership that can be developed only within post lauream diplomas related to law enforcement, public administration, business administration, Engineering and Medicine. Furthermore, since disasters can take a number of different forms, national and local governments and organizations must be ready for tackling any kind of emergency that may incur, they must be aware of all possible risks, be able to imagine the worst case scenario and have the capacity to work out a plan to deal with it. This means that it is necessary to develop further competencies and skills in order to provide the existing EM profiles with enhanced and additional knowledge, capacities and skills. In these tragic days when Coronavirus started spreading around the world and timely actions were fundamental, two main points have been very clear:

- in each country the government adopts its own policy without a coordination with the others, and,*
- each National Service for Civil Protection uses different approaches, methods and tools preventing*



a common strategy, even when the national boundaries are not an obstacle for the danger's spreading. For these reasons many experts have claimed the need to create the profile of a European Professional for the crisis management. Furthermore, the volunteers, from any field, have been proved to be the backbone of the concrete assistance to the population. The project intends to contribute to tackle the above mentioned problems by achieving two main objectives: - designing multi-disciplinary curricula for the establishment of two professional profiles with European value: 1) European Crisis Emergency Manager (ECEM) and 2) European Prevention Manager (EPM), and (second objective) - providing teachers with competencies and skills for designing and implementing a multidisciplinary modular curriculum offering a high degree of flexibility in the study plan establishment. The main activities will be: - identifying the existing profiles and programmes for the preparation of emergency manager and analysing the knowledge gaps and skills mismatches; - designing multidisciplinary curricula to the creation of the two ECEM and EPM Professionals; - updating the existing degrees by introducing new modules; - creating new degrees or new tracks in the programmes that best fit with the envisaged ECEM and EPM profiles; - designing the modules to be integrated in the curricula of Health/Engineering/Management sectors for providing the students of such degrees with the knowledge and skills needed to implement a community service in a proper and competent way, also as volunteers, and enhance their active citizenship and civic engagement; - enhancing teachers' competences and knowledge in such fields and in designing multidisciplinary curricula/modules; - implementing the new modules/tracks providing such knowledge and skills and organize work experiences; - finalising the process for the professional certification of such competences. Through Intellectual Outputs focused on identification of skills gaps of students and teachers and development of innovative Learning Outcomes, the organization of 5 Multiplier Events and a teacher-training week, the project directly answers to the innovation aspect of Strategy".

Within the organization of the structure of the partners involved in the project and on the basis of the agreements made, E.Di.Ma.S. has the assignment to realize the first step to know the existing through the acquisition of the characterizing objective data.

The goal of this intellectual production by E.Di.Ma.S. is to provide a clear picture of the state of the art regarding the knowledge gaps found in high-level educational pathways and the mismatch between the skills of the existing curricula on the basis of which specific academic degrees are awarded for professionals in the Emergency Management (complexities experts related to crises and emergencies) and Prevention Management (experts in integrated strategic planning) and those



that emerge are necessary, in particular for the correlated cultural levels provided by the specialization courses.

With this in mind, it was noted that all university partners before September 2020 had designed and developed training programs in disaster management within the curricula of some academic study paths, in a wide range of sectors, already showing the contextual need for a multidisciplinary approach for the development of new curricula / tracks.

Furthermore, having taken note of what has been briefly illustrated regarding the general contents of the B-READI project, it was taken into account that the countries represented in the partnership have their own efficient Civil Protection organizations and that, following the Sars-Cov19 emergency, have been even more focused not only on natural and anthropogenic disasters, but also on other types of crises such as health, economic and social ones, in a very broad context, even at EU and UN level.

The objective of the work, which appeared to be a priority and strategic, but also more demanding, turned out to be that of defining and "conventionally establishing" a suitable glossary aimed at standardizing (agreeing them in advance) the terms and definitions concerning the concepts, elements and any other particularity relating to the topics under discussion.

In other words, the aim of having a common language was privileged, capable of making their understanding certain, despite the enormous cultural, social, organizational, legislative, legal, bureaucratic and administrative differences existing between each country represented in the partnership, in relation to the organizational peculiarities and singularities, and the levels of responsibility within each single country, without imposing any reduction in the autonomy, sovereignty and legal structures of the state, and in particular the ones of universities.

Another extremely demanding job was to choose the useful format and methods to investigate essential activities to achieve the project objectives, summarized in this document at the basis of the subsequent steps of the program.

The complexity and severity of the risk scenarios and / or adverse events of particular intensity, in which the Emergency Management and Prevention Management professionals will work, has led the partner universities to produce the Outputs aimed to achieve the didactic uniformity and homogeneity, considered absolutely indispensable to create the basis of mirror criteria and flexible and common models, only from that moment on was it possible to create the conditions for a



feasible design within each single university, which envisaged shared didactic paths aimed at the theoretical-practical training of the subjects to be qualified at European level: the ECEM and EPM. It is reasonable to believe that the content of this Report will have a "significant impact" on the quality of the Outputs and, specifically, on the design of the aforementioned profiles of the European Crisis Emergency Manager (ECEM) and of the European Prevention Manager (EPM) (O2), on the development of the new modules (O3) and on the training of teachers (O4), as well as on the implementation of the subsequent pilot project (O5).

The information collected constitutes, as established in the aforementioned European project (partly reported here as a reminder), the basis for its entire development, in which new educational paths will be envisaged to be conceived in line with the needs and professional aspirations of individual learners, for theoretical teaching-practical, for the evaluation methods, for the practical training activities essential to achieve the skill levels required by the market for public and private professions, as well as those of promotion and dissemination.

Already in the analysis carried out before the drafting of B-READI, in all the countries involved in the project, the curricula of existing crisis and emergency managers were found to be closely linked to specialist vertical studies that have not shown that they can offer the necessary interdisciplinary vision of civil protection scenarios (in the planning and / or emergency phases) consistent and compares with the quality and degree of effectiveness in managerial activities aimed at solving the related problems (analysis and assessment of risks, forecasting and prevention of risks, effective contrast to extreme adverse events, resilience of the territory). Consequently, such an approach has meant that they are not focused on transversal skills, increasingly in demand today and, even less, on the real needs of the markets and therefore of the different types of training courses and relative educational qualifications and certifications of students.

In this regard, the following are cited:

- "A New Agenda for HE COM (2018-247)";
- The "Council conclusions on moving towards a vision of a European education area (2018 / C 195/04)", for which not only teaching methods but also the evaluation process must be revised:
- The Call 2020 Round 1 KA2 - Cooperation for innovation and the exchange of good practices KA203 - Strategic Partnerships for Higher Education Module ID: KA203-5F232091 Deadline (Brussels time) 23-04-2020 12:00:00 EN 136/247.



- This State-of-the-Art Report provides new information on different fields and fields of study as the methods and tools developed are not linked to a single specific sector.

It should be specified for all purposes that, for its future development, the output data concerning the methodology used for the collection and analysis of data as a basis, are made public and will benefit both the interested parties involved in the project, or any other person who wants to implement modules (curricula) with similar focus.

As the B-READI project focuses on and emphasizes the development and implementation of new curricula / educational pathways with a specific focus on interdisciplinary knowledge and transversal skills, the project will contribute to significantly innovate and adapt higher education and open the way to the new “European Education Area”.

Such an initiative will also have repercussions on the quality of the teachers, who should equally the learners, check their skills and access any / necessary refresher and retraining courses.



1. CHAPTER I

Organization of the E.Di.Ma.S. and activities for Output O1

To respond promptly to the needs of Output 01, E.Di.Ma.S. has created a dedicated working group made up of professionals of a high cultural level representing the various areas concerned. The working group is represented and coordinated by Eng. Fabrizio Colcerasa, former Deputy Head of the Presidency of the Council of Ministers - Italian National Civil Protection - General Director of the National Fire Brigade and authoritative member of the European working groups who over the last 30 years have worked to mitigate the problems present within the Member States on activities related to the multiple types of risk and the necessary prevention planning activities.

Educational qualification	First name	Surname	Profession	Reference area
Engineer	Fabrizio	Colcerasa	Former Deputy Head of the Department of the Presidency of the Council of Ministers - Italian National Civil Protection - General Director of the National Fire Brigade and authoritative member of the European working groups	Civil protection
Graduated in management and socio-economic development	Giuseppe	Coduto	Expert Officer of the Presidency Department of the Council of Ministers - Italian National Civil Protection - co-founder of E.Di.Ma.S., president of the European Federation of Emergency Managers IAEM Europe	Socio-economy
Engineer	Enrico	Colaiacono	Director of the State Printing Office and Mint - Member of European bodies on anti-counterfeiting and digital identity issues - Vice President of the European Federation of Emergency Managers IAEM Europe	Management and technological innovations
Engineer	Paolo	Pulicani	CEO Sicheo - member of the European Federation of Emergency Managers IAEM Europe	Management - ICT
Geologist	Alessia	Filippone	Expert official of the Ministry of Ecological Transition	Environment
Geologist	Ernesto	Consiglio	CEO Overit (Engineering Group)	Management – ICT
Engineer	Giulio	Marcucci	Commander of the Montalcino Municipal Police - President of E.Di.Ma.S. - Emergency Manager	Social Security



Geologist	Giorgio	Coppola	Expert Officer Special Office for the Re-construction of the Central Italy Earthquake - expert consultant of Civil Protection	Civil protection
Architect	Marco	Colcerasa	Fire prevention and urban planning consultant	Safety and urban planning
Dott.	Massimo	Stroppa	Expert Officer of the Prefecture of Milan, Civil Protection Sector - IAEM Italia Vice President	Civil protection
Engineer	Matteo	Medori	ICT specialist technician - vice president E.Di.Ma.S. - vice president of IAEM Italy	ICT
Geologist	Mauro	Palombella	Georeferenced Information Systems Consultant (GIS)	Civil protection
Medical Director	Manuela	Minaudo	Medical Director of the Emergency Department of Asl of Torino TO4 - Emergency Manager	Public health
Graduated in Legal Sciences	Patrizia	Cologgi	Former Director General Presidency of the Council of Ministers - National Department of Civil Protection (coordinator of the National Volunteer) - National Commission for intercountry adoptions - co-founder of E.Di.Ma.S.	Social policies
Lawyer	Sergio	Contessa	Presidency of the Council of Ministers - DAGLE Department (Planning and coordination of economic policy)	Legal
Graduated in Economic Sciences	Patrizia	Ferrazzo	Secretariat of the E.Di.Ma.S. - tutor of university programs in Prevention Management and Emergency Management - Project manager B-READi	Civil society



1.2 Meeting e Call

Date	Performed activity	E.Di.Ma.S.	University of L'Aquila	Technische Universität Berlin	Universidade dos Acores	Middlesex University Higher Education	Universitat de Girona
16/11/2020	Editing slides for kick of meeting	✓	✓	✓	✓	✓	✓
18/11/2020	Kick of meeting	✓	✓	✓	✓	✓	✓
27/11/2020	Planning for questionnaire design	✓					
06/12/2020	Elaboration of questionnaire	✓					
10/12/2020	Elaboration of questionnaire	✓					
18/01/2021	Elaboration of questionnaire	✓					
25/01/2021	Elaboration of questionnaire	✓					
10/02/2021	Elaboration of questionnaire	✓					
11/02/2021	Elaboration of questionnaire	✓					
12/02/2021	Elaboration of questionnaire	✓					
25/02/2021	Elaboration of questionnaire	✓					
26/02/2021	Meeting with B-READi partners	✓	✓	✓	✓	✓	✓
12/03/2020	Meeting B-READI	Proposta del format definitivo dei due questionari	✓	✓	✓	✓	✓
26/03/2021	Reworking of questionnaire	✓					



30/03/2021	Reworking of questionnaire	✓					
31/03/2021	Meeting with project partners	✓					
15/04/2021	Reworking of questionnaire	✓					
23/04/2021	Reworking of questionnaire	✓					
27/04/2021	Reworking of questionnaire	✓					
10/05/2021	Reworking of questionnaire	✓					
12/05/2021	Reworking of questionnaire	✓					
13/05/2021	first sending of questionnaires (Google form – online) to partners	✓	✓	✓	✓	✓	✓
24/05/2021	second sending of questionnaires (word format) to partners	✓	✓	✓	✓	✓	✓
28/06/2021	Mail	✓	✓	✓	✓	✓	✓
07/07/2021	Mail	✓			✓		✓
09/07/2021	Mail	✓			✓		
14/07/2021	Mail	✓			✓		
15/09/2021	Mail	✓				✓	
13/10/2021	Meeting with partners B-READi	✓					
22/11/2021	Mail	✓		✓	✓	✓	✓
24/11/2021	Mail	✓		✓	✓	✓	✓
25/11/2021	Mail	✓			✓		
26/11/2021	Mail + meeting	✓		meeting		mail	



29/11/2021	Meeting	✓			meeting	meeting	
05/12/2021	Data analysis questionnaires	✓					
07/12/2021	Data analysis questionnaires	✓					
08/12/2021	Data analysis questionnaires	✓					
09/12/2021	production report O1	✓					
27/12/2021	production report O1	✓					
28/12/2021	production report O1	✓					
29/12/2021	production report O1	✓					
15/01/2021	Sending report O1	✓					

The activities carried out in the months M1-M5 and also subsequently until today, have always followed the achievement of the following two macro-objectives with project consistency:

1. Interviews using an on-line questionnaire, addressed to representatives of the agencies / companies / Risk Management units (i.e. the members of the Advisory Board) selected on the basis of their knowledge, skills and competences in the needs of the sector and their role in institutions. This heterogeneous group of professionals was involved together with the alumni category, precisely to go beyond the understanding of academic knowledge and skills, in order to be able to provide the new profiles of the professionals involved in the project (prevention manager and emergency manager) with the necessary cultural improvement to ensure the effectiveness and efficiency of the services to be provided in their respective markets and in their specific professional activities. This activity will guarantee the curricula that will be developed in the B-READI project their relevance with the set objectives, as well as the reduction of the gaps in knowledge and the misalignment of skills between the various specialist fields.

To this end, in addition to alumni, each partner also interviewed representatives from the following sectors:



1. environmental protection;
2. socio-economic development;
3. public health;
4. social security (defense and civil protection).

2. The involvement of teachers within the partner universities through an online questionnaire (Academies), to more accurately define the didactic profiles of the modules (or micromodules) to be planned and implemented.

Particular note should be addressed to the drafting of the questionnaire initially proposed to the HE alumni category only, which during the project sharing, was strategically proposed together with the "expert professionals" category, in order to have an overall point of view from the drafting of the first output, capable of making the study and scientific study phase more punctual.

In any case, we intend to insert the analogous questionnaire on the official website of the B-READI project in order to have all the further possible contributions during the entire design process, so that the very important "dissemination" phase is also better supported.

In this first phase, despite the management criticalities connected to the emergency in progress by Sars Cov 19 and the difficulties arisen due to needing to create the minimum conditions for interpreting each single technical-scientific definition, write the format of the questionnaires useful for the investigation several times. addressed inside and outside the individual Academies, etc., the data collected show that the expected result was in any case more than achieved.

In fact, it should be noted that in the face of the minimum number of graduates to be interviewed, five for each academy and for a total of 25 alumni (basic sample of questionnaires), in line with the project, with the integration carried out with professionals in the sector, to date 37 questionnaires have already been received and we have been able to evaluate. Furthermore, as anticipated, the in-depth investigation may continue for all the other project phases (monitoring of the Outputs) and proceed with subsequent interviews and with the acquisition of updated data provided by each individual country, which will certainly be useful for optimizing further the results of the other project outputs.



2. CHAPTER II

The two questionnaires

Objectives of Questionnaire no. 1 reserved for Academies, governance structures and local, regional and national authorities of the Member States involved.

a) Verifying the existence or not of curricula / emergency management courses held by the partner institutions of the B-READI project and / or by other actors from their respective countries.

b) Identifying the competences and knowledge provided and / or requests from the target sectors:

- environment;
- socio-economy;
- social security (civil defense, public health and civil protection).

In particular:

c) identification of skills and knowledge for the professional profile of qualifications and persons in charge of management activities in complex situations related to crises and emergencies;

d) identification of the skills and knowledge for the professional profile of qualified persons in charge of integrated territorial strategic planning activities;

e) identification of the most relevant current curricula in the various countries and their level (1st cycle, 2nd cycle).

The purpose of this report was to acquire the summary statistical data for the characterization of the state of the art to define the basis on which to describe the training projects in the community academic field for two new Professional Profiles:

o ECEM (European Crisis Emergency Manager);

o EPM (European Prevention Manager),

both needing for interdisciplinary skills, suitable for the new scenarios and challenges that society will have to face and capable of contributing to the necessary renewal of the integrated strategic planning activities of territorial prevention, aimed at implementing and increasing local resilience in the following macro- areas:

- Environmental protection and adaptation to climate change;
- Socio-economic development;
- Social security (civil defense - public health - civil protection).



Such highly qualified professional profiles require high managerial skills through adequate academic training focused on the interdisciplinary nature of the three areas mentioned above and based on their specific skills. For the training of these professional profiles, the B-READI project proposes to "build" new Curricula and new Modules to offer to the students of the Degree Courses selected by the Partners, with academic certifications on the skills acquired, after identifying the skills gaps that currently exist.

Some criteria and methods taken into consideration for the compilation of the format are summarized below, in line with the contents and aims of the Project:

The system to answer in the questionnaire is organized with the simple and clear scheme of "yes" or "no", which is considered more appropriate than an "open" type questionnaire.

However, taking into account the observations made by some partners, following the answer "yes" or "no", a space was provided for explanations relating to the reasons that determined the choice made by the interviewees.

The two profiles ECEM and EPM are interdisciplinary as they require the skills and abilities necessary to carry out public and private functions which, by their nature, are transversal and integrated.

The curricula design and construction process and the definition of the "teaching units" follows the standard procedures deriving from the "Bologna process", with the EHEA quality assurance and the flexibility provided by the new Higher Education Agenda.

The survey on the state of the art is the basis for the first step of the project, that is the definition of the new ECEM and EPM profiles (distinct, even if referring to the single approach philosophy of risk analysis and of the assessment for its mitigation). The questionnaire is the fundamental tool to be used for this survey.

Given the complexity and breadth of the issues to be investigated and the multiplicity of subjects (public and private) with whom it is necessary to interact and collaborate, taking into account the different rules and organization of each country in this sector, each Partner has independently identified the recipients of the interviews and questionnaires.

In this regard, it is considered useful to underline that the criteria for choosing the profiles and the number of interviewers that interviewees have been left in the full competence and responsibility of each Partner.

This was also considered useful in order not to "weigh down" and / or make too much the operating



procedures were "rigid".

The diversification of the answers to the Questionnaire and to the Interviews, as well as the typology of the interviewees, provided the foreseeable differences and showed how differently the existing problems, even if common, are characterized and declined in the social and cultural contexts of the States represented by the partners of B-READI.

It is therefore essential, after the phase of administering the questionnaires / interviews, to collect detailed information on public and private organizations, on the competences, roles and responsibilities of the individual Authorities, on the legal-regulatory framework of reference (taking into account the various and relevant Directives and existing regulatory standards in EU countries, to be involved in the construction of new Professional Profile.

Consequently, it appears indispensable and extremely useful that, in the subsequent phases of the project, in addition to the Academic World, there is the participation of all the subjects considered of significant importance for the management of risk and emergencies, such as public and private companies, network infrastructures, economic-financial and insurance companies, as well as professional orders and categories, non-profit organizations, not excluding the world of politics, such as Mayors (essential reference in the local Civil Protection system) and Trade Union Representations .

A series of face-to-face and / or videoconference meetings between the interested parties in each country, with those responsible for the activities and the drafting of the statistical survey reports would be highly desirable.

2.1. Glossary of B-READI

List of the term for B-READI project:

- **CRISIS:** disturbance or sudden change in the life of an individual or a community, with more or less serious and lasting effects: a c. spiritual, religious; c. of conscience; the c. of society.
- **EMERGENCY:** situation of crisis or danger to be dealt with promptly and resolutely of particular gravity for the institutions or for the country, in which public authorities usually assume special powers. Conceptually, the emergency cannot be defined as a disaster.
- **DISASTER:** irreparable damage - alteration of the environmental balance or localized disaster that causes serious loss of material assets or human life.



- **MANAGEMENT:** set of administrative, directional and managerial functions of a company or firm; the manager's job.
- **PLANNING (Territory / Town):** planning, programming - detailed planning of the urbanized territory (low, medium, high urbanization density).
- **RISK:** possibility of suffering damage - which involves the possibility of suffering or causing the extreme consequences of negative or disastrous phenomena or facts - In various determinations of economic, commercial, accounting language, the possibility of a loss.
- **RESILIENCE:** ability to face and overcome a traumatic event or a difficult period.
- **PREVENTION:** action aimed at preventing the occurrence or spread of unwanted or harmful facts.
- **CIVIL PROTECTION:** all that is aimed at "protecting the integrity of life, assets, settlements and the environment from damage or the danger of damage resulting from catastrophes and other calamitous events - up to the overcoming of the emergency and the return to new normal conditions.
- **CIVIL DEFENSE:** everything that is aimed at the "defense of the state from voluntary aggression"
- **EMERGENCY MANAGEMENT:** multidisciplinary science aimed at training Emergency Managers in interdisciplinary sectors (environment - socioeconomics - social security "civil protection and civil defense") in order to support actions related to the complexities of crises and emergencies with managerial skills.
- **PREVENTION MANAGEMENT:** multidisciplinary science aimed at training Prevention Managers in interdisciplinary sectors (environment - socioeconomics - social security "civil protection and civil defense") in order to support with managerial skills the actions connected to the complexities of integrated territorial strategic planning.
- In particular, it is necessary to define and share with the partners the term indicated below:
- **INTEGRATED TERRITORIAL STRATEGIC PLANNING:** interdisciplinary science that regulates the use of the territory and organizes the development of human activities carried out on it. This discipline involves geological, architectural, engineering, social, health and production aspects of an area, with the aim of producing a safe territorial development and an economically sustainable development, increasing the resilience of the system.



Questionnaire for academies						
	E.Di.Ma.S.	University of L'Aquila	Technische Universität Berlin	Universidade dos Acores	Middlesex University Higher Education	Universitat de Girona
THE QUESTIONNAIRE - Building Reliable Effective and Aware Disaster emergency and prevention managing skills	✓	✓	✓	✓		✓
The information provider	✓	✓	✓	✓		✓
For academies	✓	✓	✓	✓		✓
degrees/courses/learning units	✓	✓	✓	✓		✓
1. Identification of Academic competencies provided in the existing degrees/courses/learning units	✓	✓	✓	✓		✓
1.1 – Your University offers, in the field of emergency (Disaster-Crisis) management and/or (risk) prevention:	✓	✓	✓	✓		✓
1.2 – If your university does not offer specific full Bachelor or Master degrees curricula	✓	✓	✓	✓		✓
1.3 - Explain in which curricula (name and level) the competencies, skills and LOs developed by the B-READI project will be included, for one or both profiles	✓	✓	✓	✓		✓
2. Identification of professional areas (public and private) and stakeholders in your country	✓	✓	✓	✓		✓
2.1 – Which public bodies are involved in emergency management?	✓	✓	✓	✓		✓
2.2 – Which private organisations and companies are involved in emergency management?	✓	✓	✓	✓		✓
2.3 – In addition to the European Economic and Social Committee (EESC) and the European Centre of Employers and Enterprises (CEEP), which public and private bodies and European and international organisations are involved in the coordination of	✓	✓	✓	✓		✓



strategic spatial planning activities and the management of crises, disasters and emergencies:						
2.4 – Are the public and private bodies involved in coordinating emergencies, disasters and crises, and in strategic spatial planning for disaster risk prevention, the same bodies responsible for sustainable development policies and objectives to raise the value of system resilience?	✓	✓	✓	✓		✓
2.5 – In view of the increase of crisis-disaster-emergency situations and their variety, would you consider the current laws, norms, directives effective?	✓	✓	✓	✓		✓
2.5.1 - Do you think that citizens and institutions, due to the current COVID-19 emergency, have understood, the limits of vertical planning and management?	✓	✓	✓	✓		✓
2.6 - If new laws and directives are promulgated, after the current SARS Covid-19 emergency, do you think that new professional fields need to be identified with the consequent increase in jobs for professionals and new graduates?	✓	✓	✓	✓		✓
2.7 – In addition to the structures/organisations of the European Economic and Social Committee EESC, the European Centre of Employers and Enterprises CEEP are there other bodies and organisations that can guide labour and training policies in the post-SARS Covid-19?	✓	✓	✓	✓		✓

Below are the summary graphs of the survey carried out:



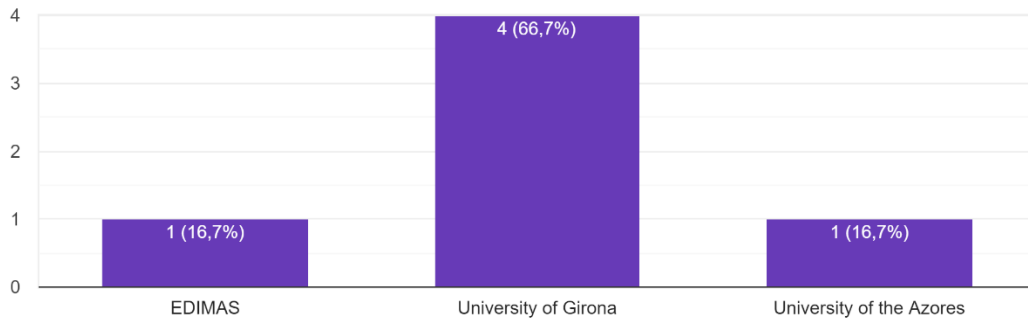
B-READI

The_questionnaire_Academies_7_05_2021

Graph of Modules responses. Question title: Institution:. Number of responses: 6 responses.

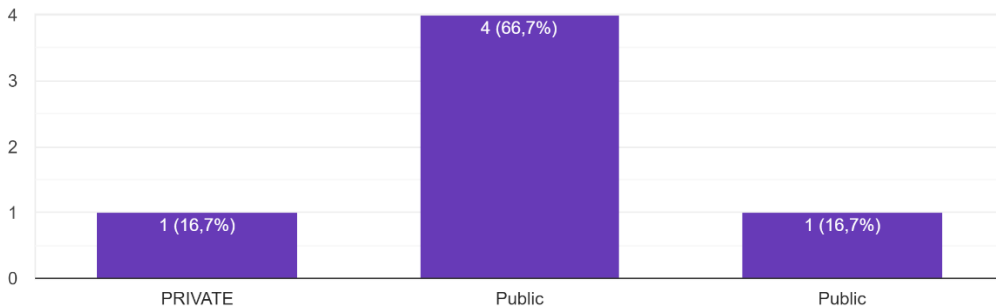
Institution:

6 risposte



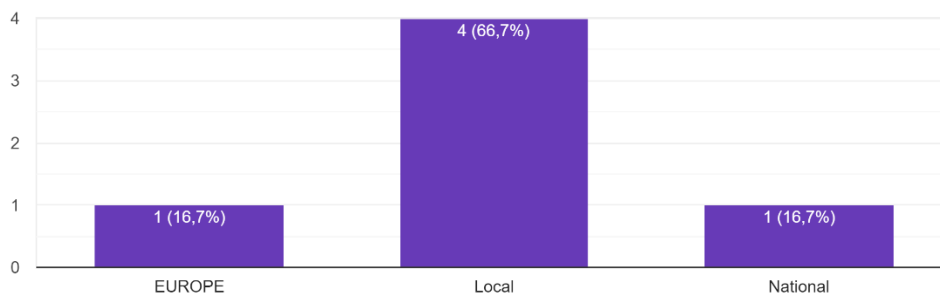
Public/Private:

6 risposte



National/Local:

6 risposte





ROLE IN THE INSTITUTION OF THE PERSON THAT IS FILLING THE FORM:	
Professor	Fátima Viveiros
President of Study Center – Professor of Emergency Management	Giulio Marcucci
Associate professor of the Masters’ degree on Technology and Science of the water resources.	Quim Comas
Associated professor at the dept. of Organization, Enterprises and product design.	Núria Mancebo
Associate Professor - Computer Science Degree	Pere Vilà and Eusebi Calle
Associate Professor – Coordinator of the Masters’ degree on Data Science	Mateu Villaret



1. Identification of Academic competencies provided in the existing degrees/courses/learning units

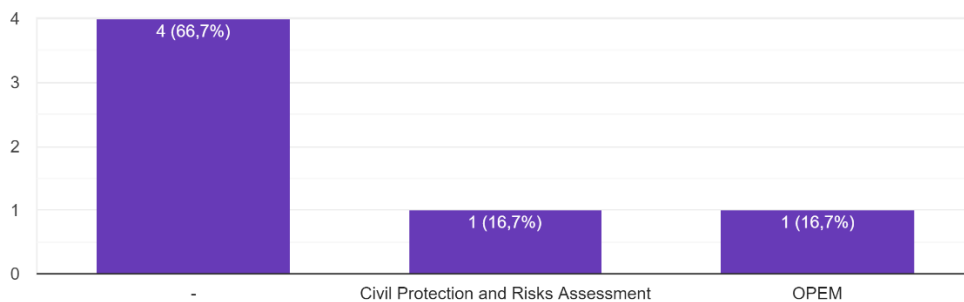
1.1 – Your University offers, in the field of emergency (Disaster-Crisis) management and/or (risk) prevention

Emergency (Disaster-Crisis) Management:

Bachelor

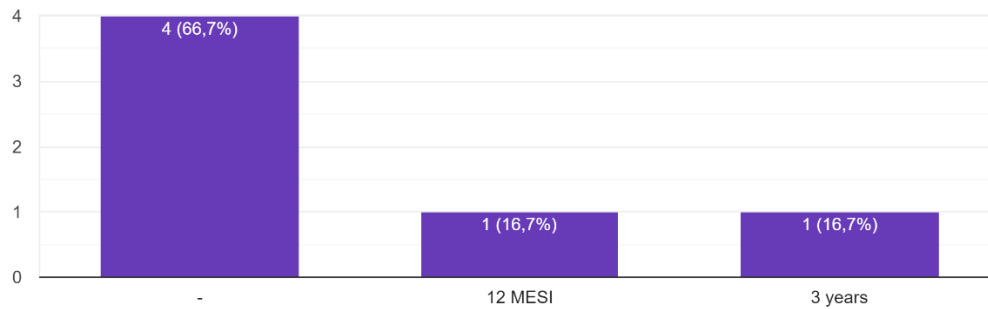
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6 risposte



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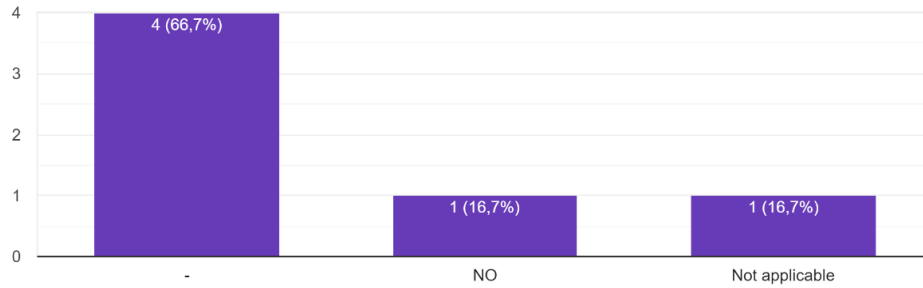




Master

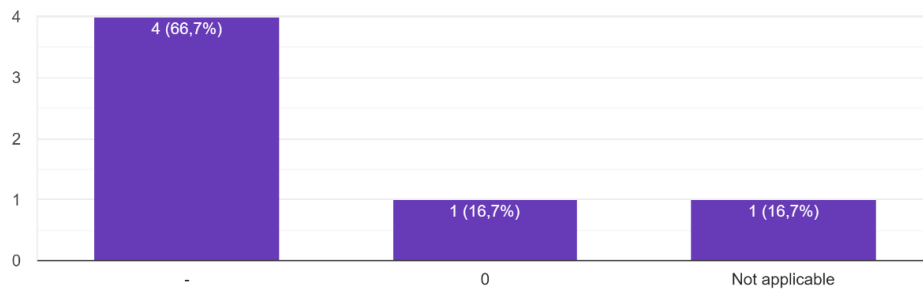
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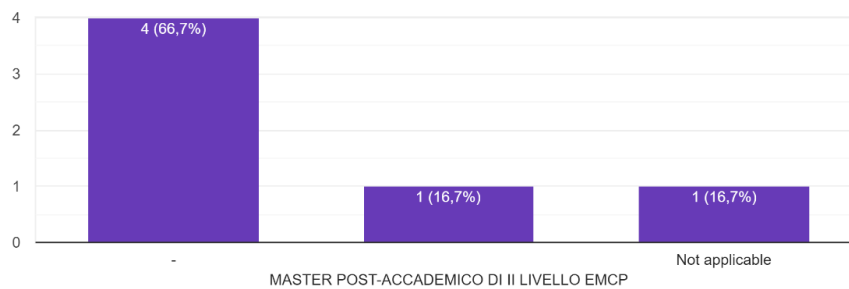
6 risposte



Other tertiary

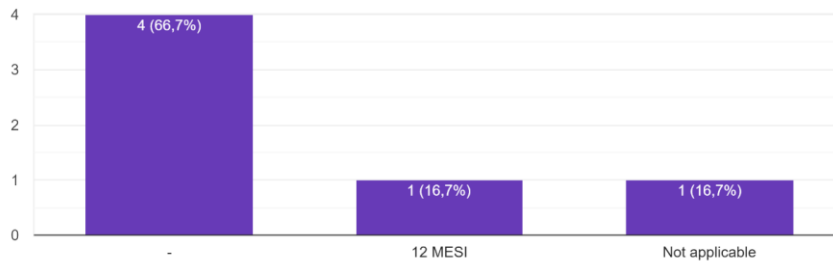
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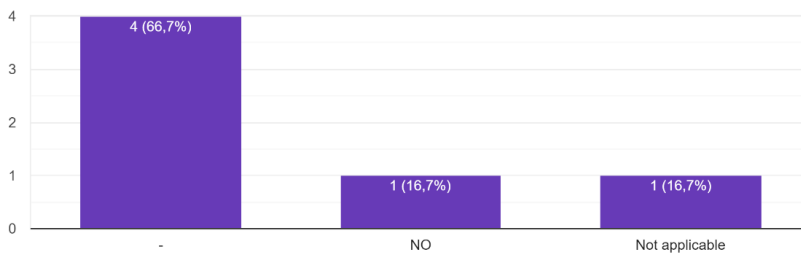
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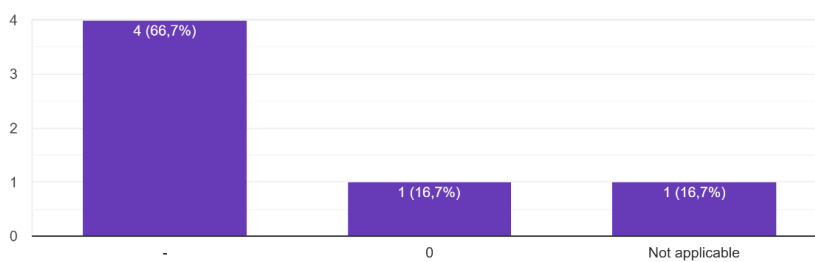
PREVENTION MANAGEMENT

Bachelor

Name:
6 risposte



Length:
6 risposte

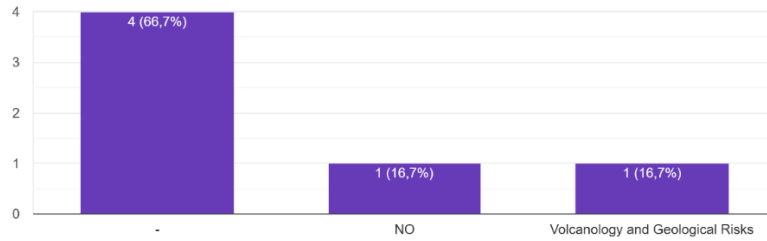




Master

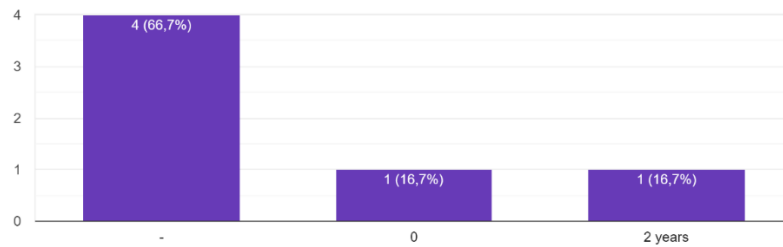
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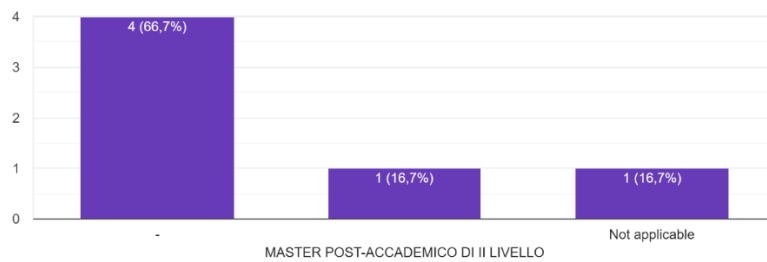
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Other tertiary

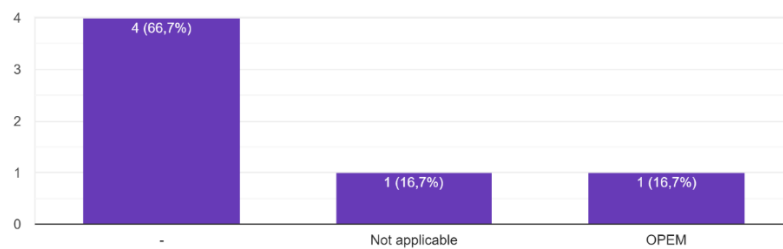
Name:

6 risposte



Length:

6 risposte



If yes, explain the main competencies provided and the professional profile



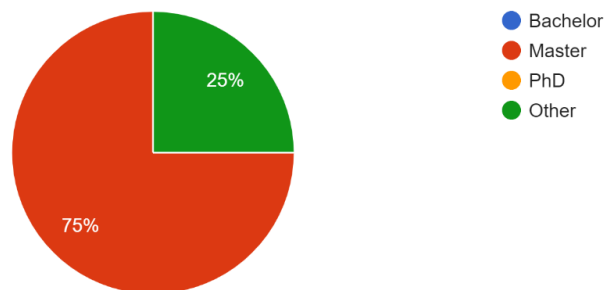
1.3 - Explain in which curricula (name and level) the competencies, skills and LOs developed by the B-READI project will be included, for one or both profiles

a) Emergency Management (disaster/crisis/risk)

Name of the degree curriculum:

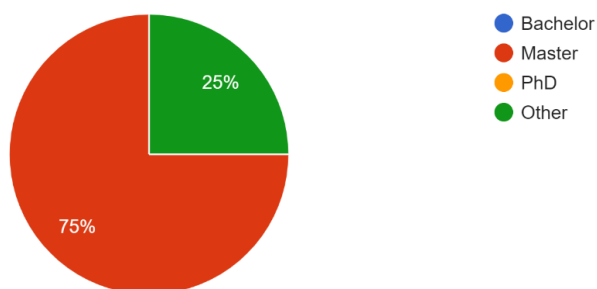
EMERGENCY MANAGEMENT

Level:
4 risposte



PREVENTION MANAGEMENT

Level:
4 risposte

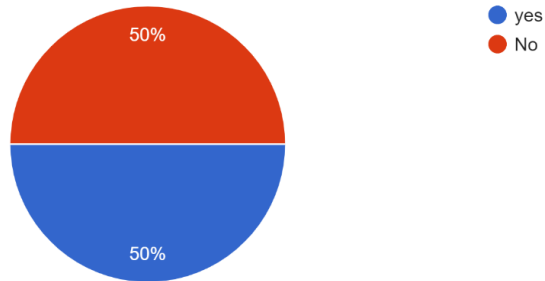


2. Identification of professional areas (public and private) and stakeholders in your country

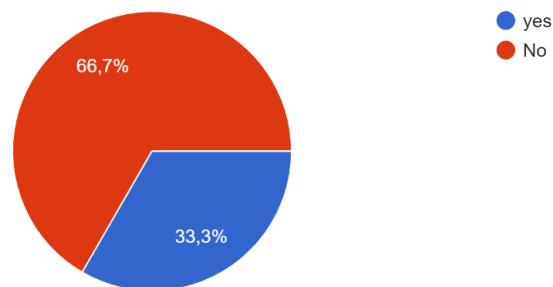
2.4 – Are the public and private bodies involved in coordinating emergencies, disasters and crises, and in strategic spatial planning for disaster risk prevention, the same bodies responsible for sustainable development policies and objectives to raise the value of system resilience?



Public:
6 risposte



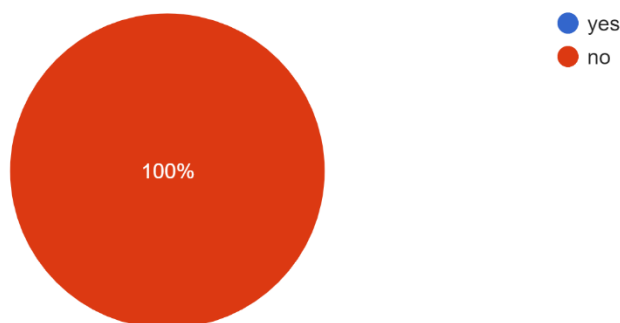
Private:
6 risposte



2.5 – In view of the increase of crisis-disaster-emergency situations and their variety, would you consider the current laws, norms, directives effective?

2.5 – In view of the increase of crisis-disaster-emergency situations and their variety, would you consider the current laws, norms, directives effective?

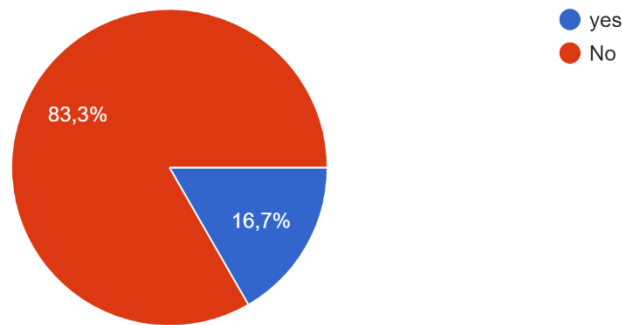
6 risposte





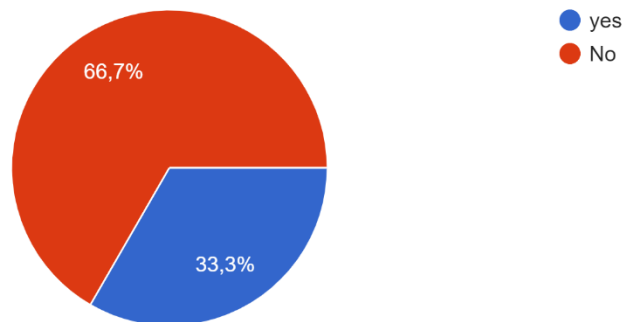
2.5.1 - Do you think that citizens and institutions, due to the current COVID-19 emergency, have understood, the limits of vertical planning and management?

6 risposte



2.6 - If new laws and directives are promulgated, after the current SARS Covid-19 emergency, do you think that new professional fields need to be increase in jobs for professionals and new graduates?

6 risposte



a) if YES, what kind and in what local, regional and national context?

- Communication of risks; Crisis management; Social psychology in emergency scenarios
- Emergency and Prevention Management

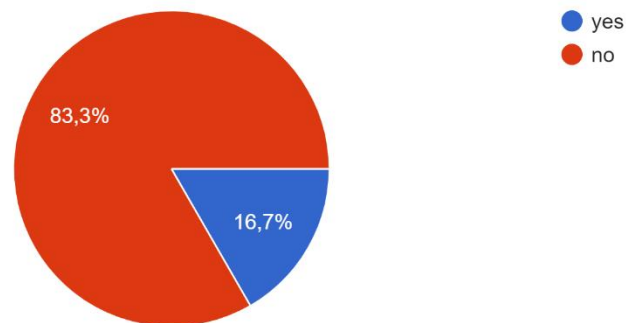
Level (local, regional, national):

- All levels



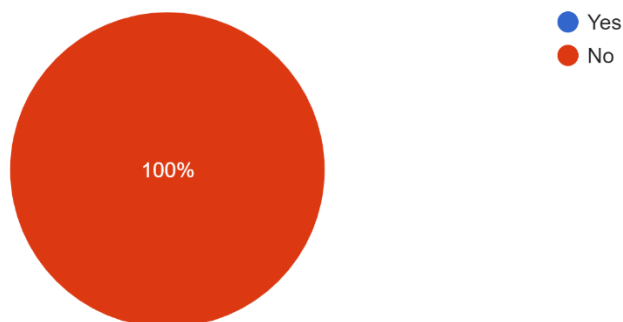
i. Are there labour policies to retrain the employed?

6 risposte



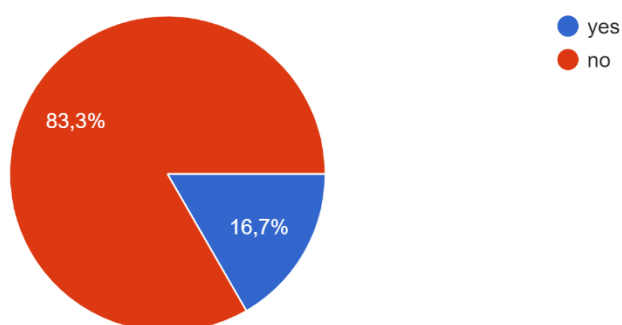
ii. are there training policies to guide new recruitment in the public and private sector?

6 risposte



2.7 – In addition to the structures/organisations of the European Economic and Social Committee EESC, the European Centre of Employers and Enterp...and training policies in the post-SARS Covid-19?

6 risposte





B-READI

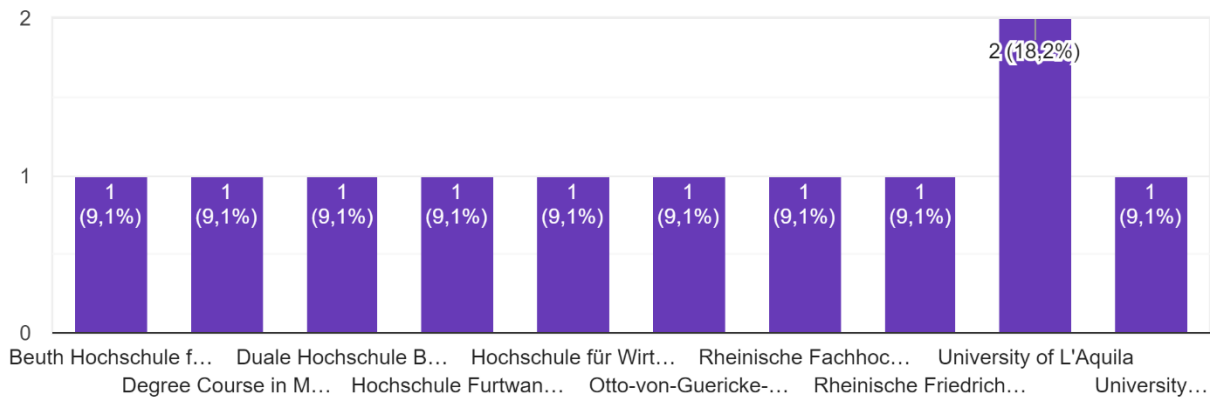
The_questionnaire_Academies_11_06_2021

No. 11 responses

The information provider

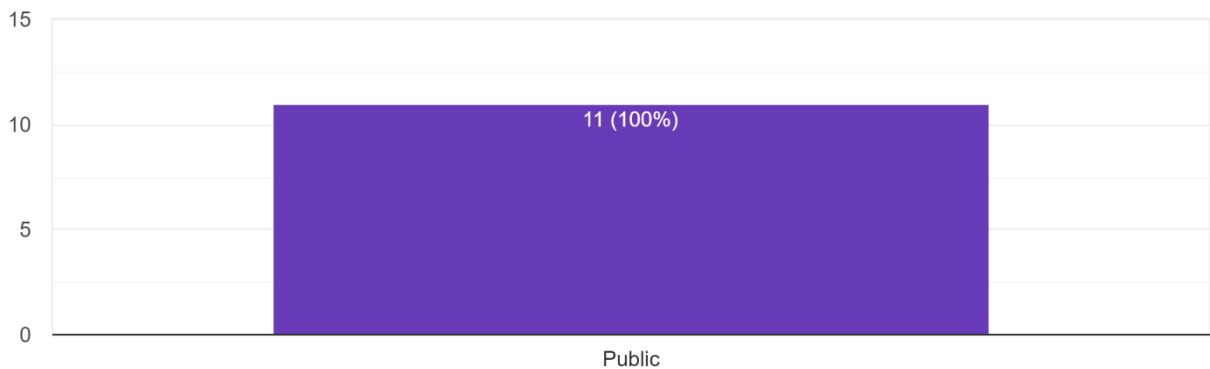
Institution:

11 risposte



Public/Private:

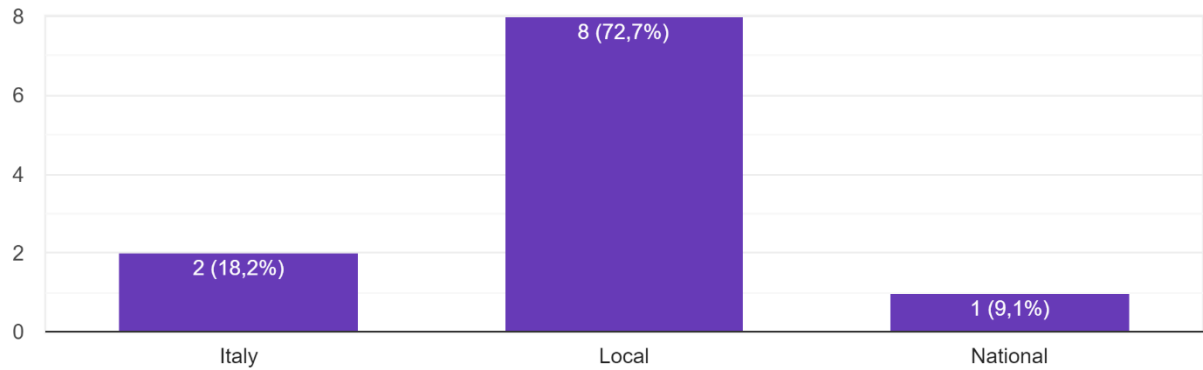
11 risposte





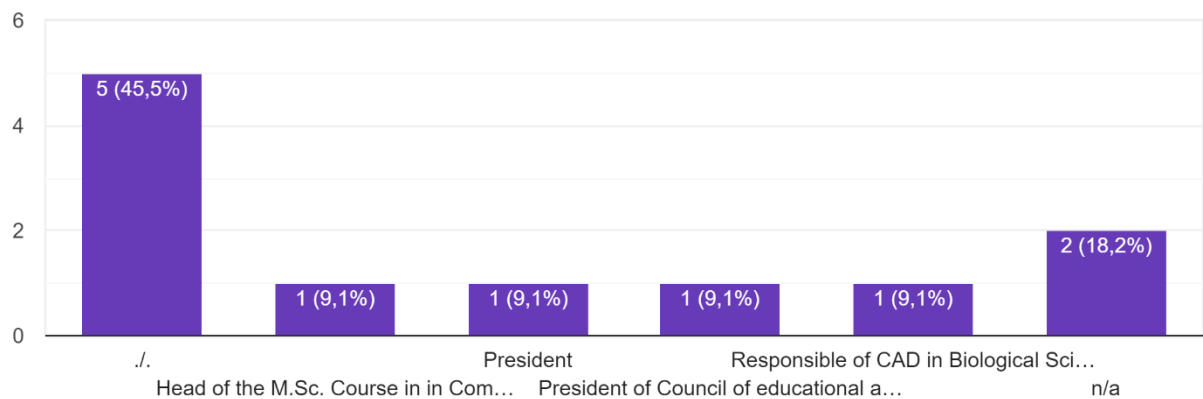
National/Local:

11 risposte



Role in the institution of the person that is filling the form:

11 risposte



Name of the person that is filling the form (not mandatory):

- Cinque Benedetta
- Silvio Romano
- Stefano Di Gennaro
- n/a
- Francesco Giansanti



For academies

1. Identification of Academic competencies provided in the existing degrees/courses/learning units

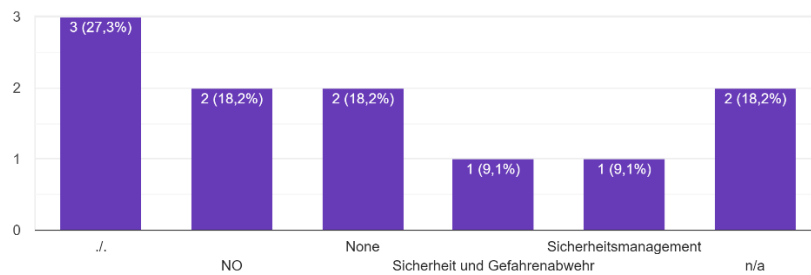
1.1 – Your University offers, in the field of emergency (Disaster-Crisis) management and/or (risk) prevention:

Emergency (Disaster-Crisis) Management:

Bachelor

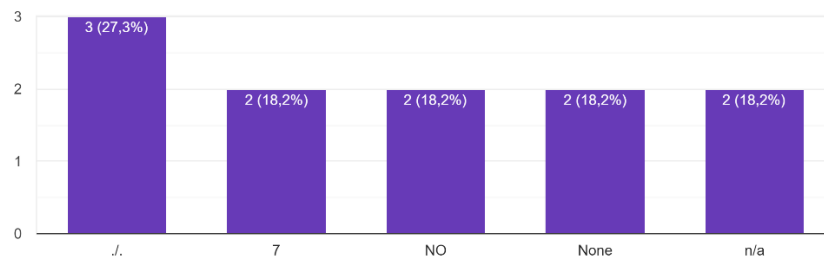
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11 risposte



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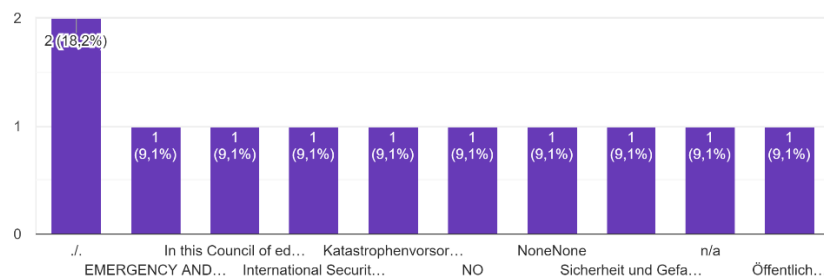
11 risposte



Master

Name:

11 risposte

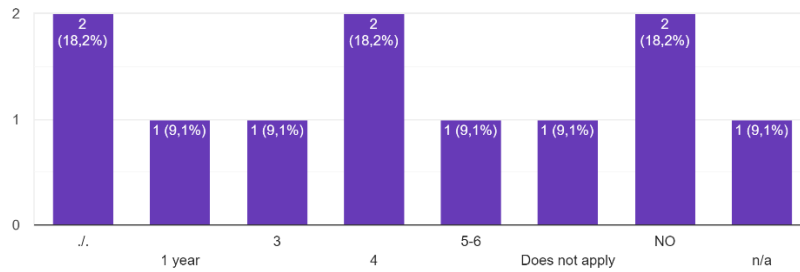




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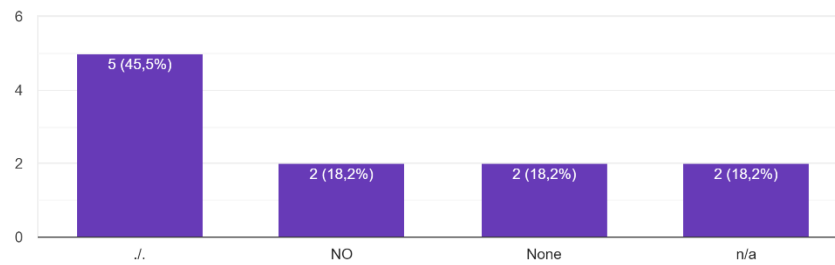
11 response



Other tertiary (Post-secondary Education)

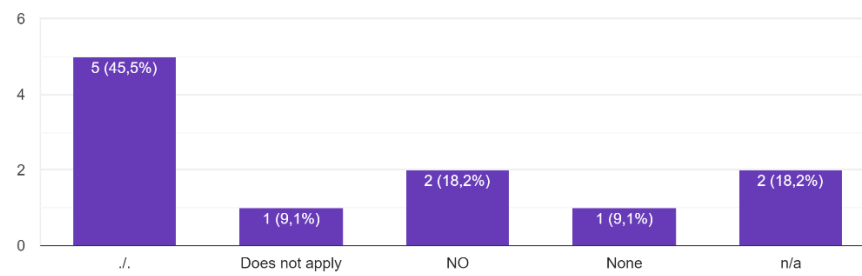
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11 response



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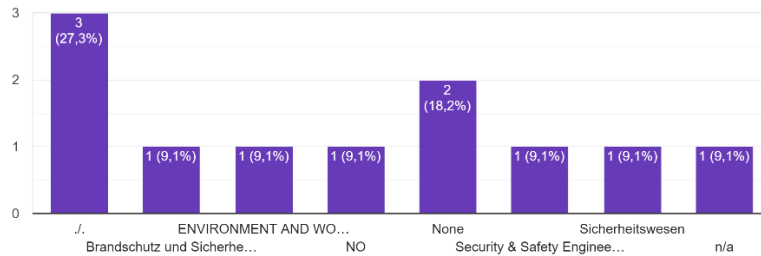
11 response



Bachelor

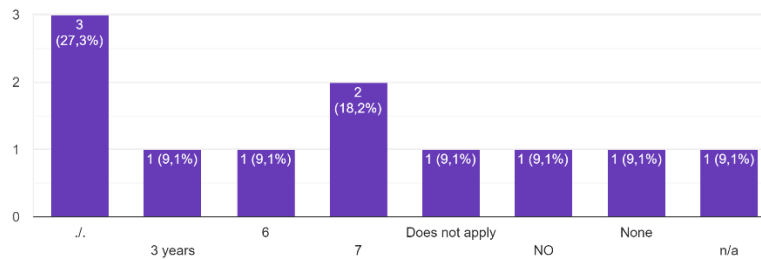
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11 risposte



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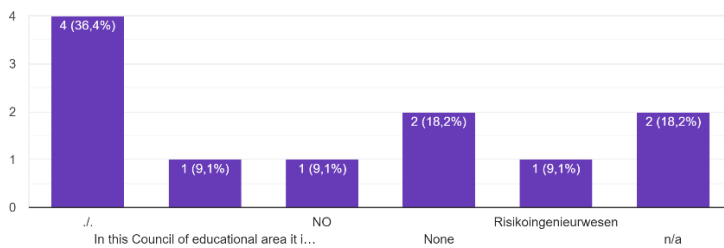
11 risposte



Master

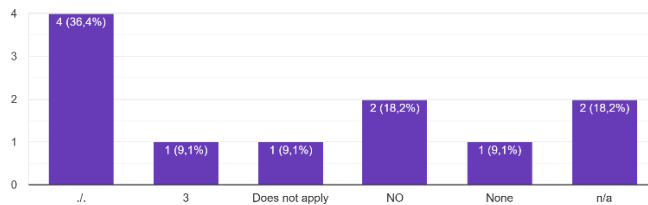
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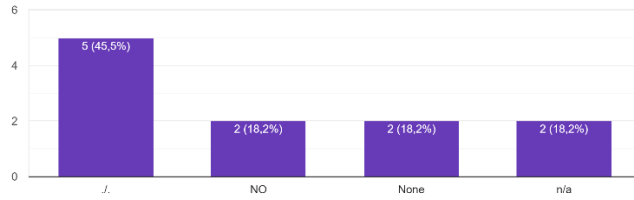
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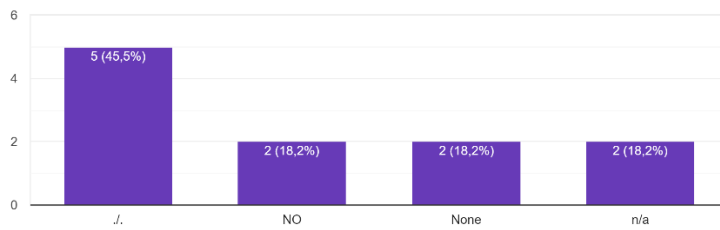


Other tertiary (Post-secondary Education)

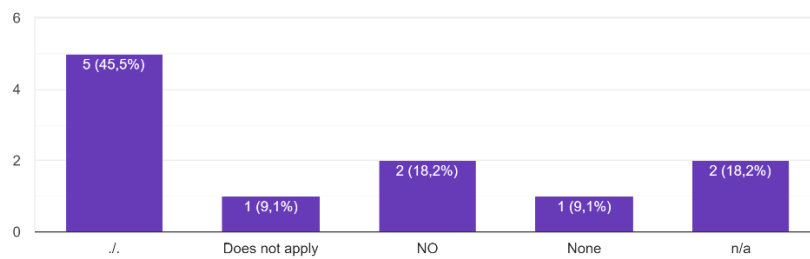
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11 response



Name:
11 response



Length:
11 response





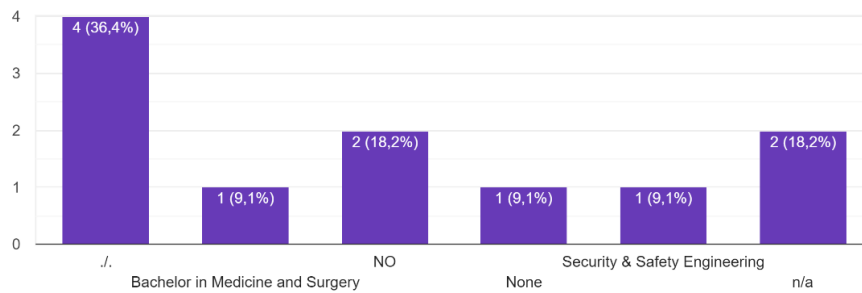
1.2 – If your university does not offer specific full Bachelor or Master degrees curricula

a) Competencies on the field of Emergency (Disaster-Crisis) Management are provided in the degree curricula

Bachelor

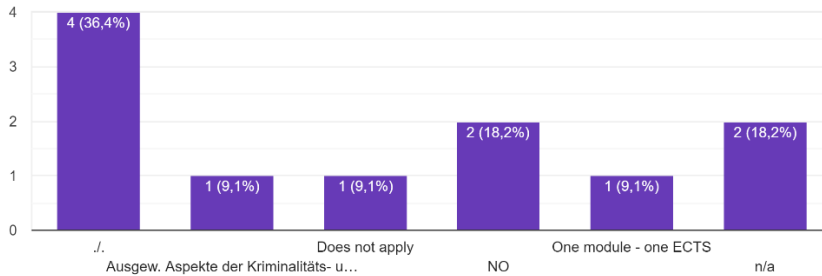
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N. modules and total ECTS:

11 risposte

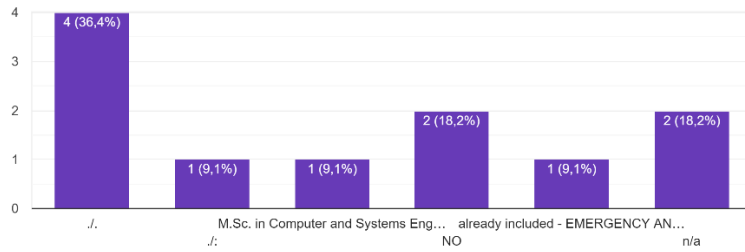




Master

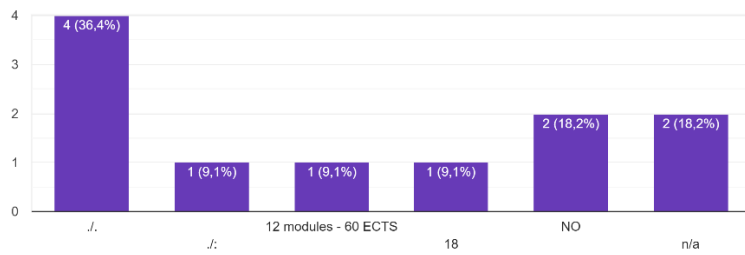
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N. modules and total ECTS:

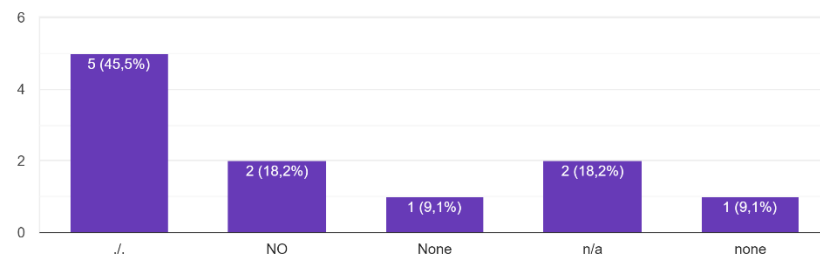
11 risposte



PhD

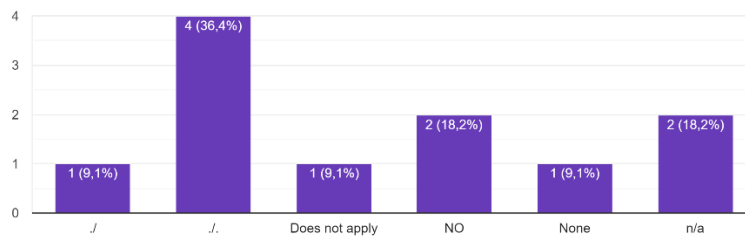
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11 risposte



N. modules and total ECTS:

11 risposte

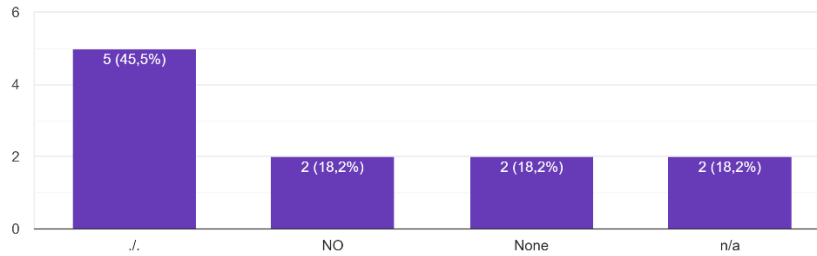




Other tertiary (Post-secondary Education)

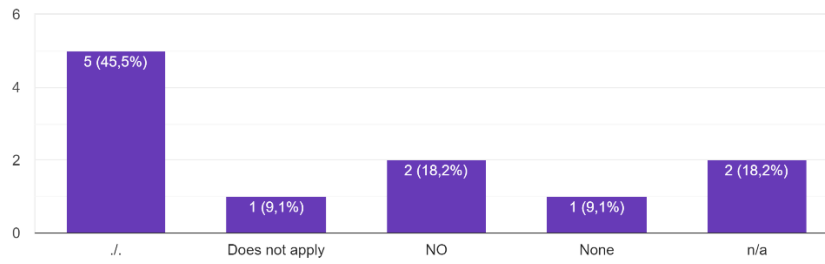
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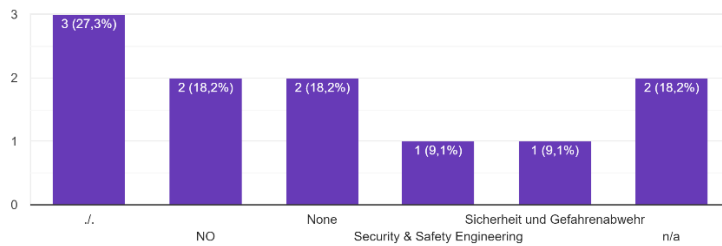
11 risposte



b) Competencies on the field of Risk Prevention are provided in the degree curricula Bachelor

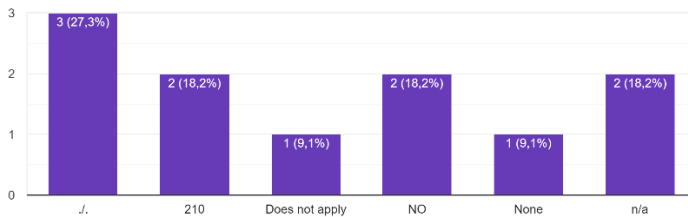
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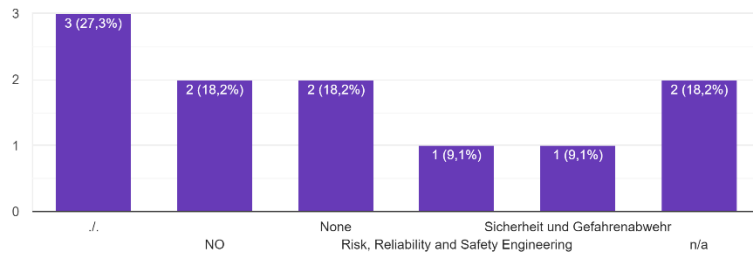
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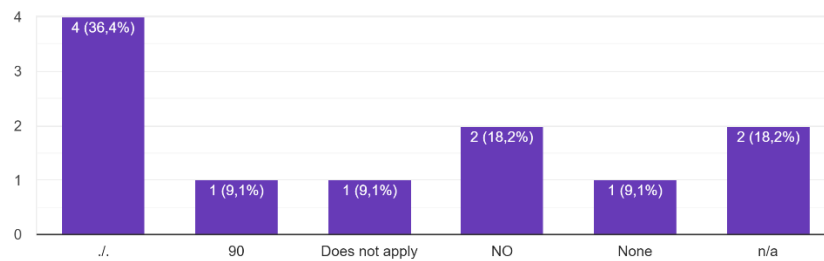


Master

Name:
11 risposte

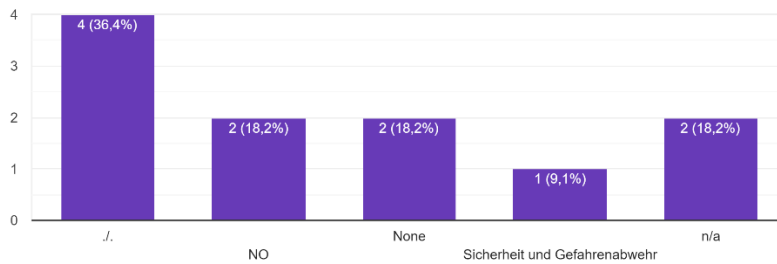


N. modules and total ECTS:
11 risposte

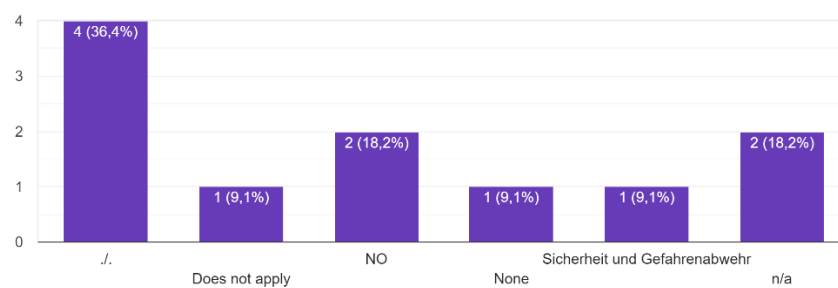


PhD

Name:
11 risposte



N. modules and total ECTS:
11 risposte

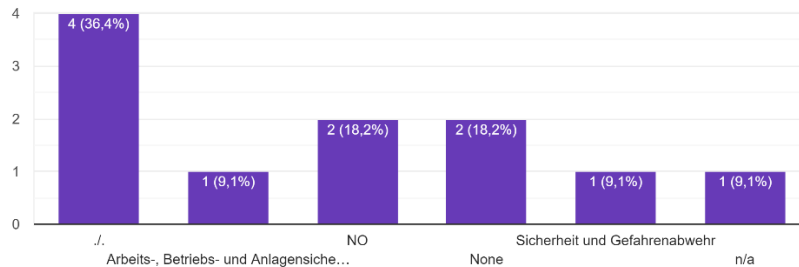




Other tertiary (Post-secondary Education)

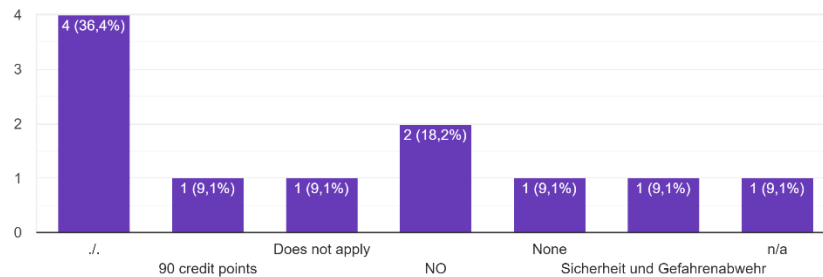
Name:

11 risposte



N. modules and total ECTS:

11 risposte



Here are some of the complementary responses that have been deliberately left open:

If yes, explain the main competencies provided and the professional profile

The specific learning objectives of the Course give students the necessary competencies to carry out the professional activity at the end of the bachelor's degree programme.

To this end, the training pathway must provide for a good knowledge of the preparatory disciplines.

The aspect of environmental risk factors will be developed during the hygiene, epidemiology and occupational medicine courses; the impacts on health will be dealt with medicine disciplines: internal medicine, respiratory diseases and skin diseases. The prevention methods, especially addressed to environment, will be dealt with hygiene, internal medicine, radiation protection, environmental physics and environmental and health engineering. A particular attention will be given to food constituents, food processing methods and health surveillance. The training pathway provides for, moreover, knowledge about liquid and solid waste treatment plants and water treatment plants; the sampling procedures for plant control will be dealt with during the internship



activities. Graduates will have to know the moral and ethical principles and the legal responsibilities linked to the professional profile of prevention and protection technician.

The Master course aims to train medical doctors to deal with medical-assistance issues relating to health emergencies in the intra and extra-hospital environment.

This full-time English-language programme provides an interdisciplinary survey of security-related topics with a special focus on political science / international relations, criminology, law, psychology, risk and crisis management, policing studies, IT security, and economics. It combines theoretical aspects of international security studies with practical applications, such as risk, crisis, and disaster management; the protection of critical infrastructure; and quality assurance in the security sector.

Fires, accidents, sabotage, burglaries or natural disasters: where are dangers lurking and how can people, the environment and companies be protected from them? This is the question which security and safety experts in companies, government authorities and organizations (fire service, technical services, etc.) have to answer.

The "Security & Safety Engineering bachelor's programme is an engineering degree which enables the graduated to work in various security and safety sectors. The curriculum includes fire protection, explosion protection, surveillance technology, IT security, data protection, hazard protection, occupational safety, safety psychology and risk and disaster management. over a period of 3 semesters the Risk, Reliability and Safety Engineering master's programme provides a deeper understanding of engineering in the areas of risk analysis and evaluation. Doing so it will be dealing with the areas of property security, information security, system security, fire prevention, occupational safety, environmental safety, hazard prevention and disaster control.

The specialist modules in engineering and natural sciences give students in one step practical engineering and subject-specific know-how.

An understanding of management systems and legal issues rounds off the programme. Graduate will also be able to work later as appraisers.

With a Master of Science (MSc) degree you are qualified for further academic study such as a PhD at a university.

This course is a joint programme offered by Otto von Guericke University Magdeburg and Magdeburg-Stendal University of Applied Sciences. The programme conveys the necessary procedural and scientific expertise for effectively dealing with disaster situations. To this end, on the one hand the students come to grips with, among other things, basic aspects of mathematics,



physics, fluid mechanics, process engineering and the dispersal of pollutants. On the other hand, they acquire skills in the fields of fire safety, disaster management and civil defence, environmental protection, emission control, water pollution control, safety management, occupational and workplace safety, psychosocial aspects of hazard prevention, preventative structural fire safety, electrical safety, determining the cause of fires and risk analysis. Particular emphasis is placed on leadership, management, emergency planning, psychology and law.

The focus of the study programme is on the topic of security as an interdisciplinary task of industry as well as the "authorities and organisations with security tasks (BOS)". The programme lasts seven semesters and you will graduate with a Bachelor of Engineering degree.

In the fire protection specialisation, you acquire the career qualification for the higher fire service. In cooperation with the Berlin Fire Brigade, this path leads you directly there. The safety engineering specialisation prepares you for a wide range of tasks in business and administration through its individual design.

The motto of the postgraduate master's program KaVoMa is: "networked think - act networked". The teaching modules cover aspects from the social, natural, engineering, and health sciences as well as operational fields. The spectrum ranges from methods of hazard, vulnerability and risk analysis to the assessment of risks and the possible methods of sustainable precautions and preparation for emergencies.

Fundamental importance is attached to risk communication. National and international examples from practice illustrate the contents and the application relevance of the study contents. Finally, KaVoMa imparts knowledge and skills that help graduates to cope with an acute crisis situation as a manager. In particular, the fundamentals of staff work, including the management of employees in difficult situations, come to the fore.

The Master's degree programme "Public Safety" aims to link industry, commerce and public administration in terms of content and organisation. These relationships are manifold, for example in licensing procedures for incident facilities, the preparation of hazard prevention plans, informing the public in crisis situations or preventive or retrospective impact assessment. In addition, planning for large events, events with crowds and natural events require highly professional managers in hazard prevention. The programme requires the successful completion of a Bachelor's or Diploma degree in engineering, natural sciences or administration.

The Safety Studies programme deals with problem solving in the areas of:



- occupational safety
- radiation protection
- environmental engineering

The task of engineers in these areas is to prevent hazards to people and the environment. Of course, assuming responsibility in these areas in particular requires special qualifications in dealing with applicable law as well as with business and organisational conditions.

Bachelor of Science (BSc), Safety Studies, major in Occupational Safety

With the BSc in Occupational Safety, graduates can take on tasks as occupational safety specialists ("SiFa", often also called "safety engineer") in almost all companies and industries.

Bachelor of Science (BSc), degree programme in Safety Engineering, specialisation in Radiation Protection

The subject of the field of study Radiation Protection is the handling of open and sealed radiation sources (Radiation Protection Act, Radiation Protection Ordinance). Accelerators and radioactive substances in the sense of medical treatment of humans (Guideline Radiation Protection in Medicine), nuclear fuels (§ 7 Atomic Energy Act), X-ray diagnostics, radiation therapy with X-rays, quality assurance, material testing and analytics .

Bachelor of Science (BSc), degree programmed in Safety Engineering Major in Environmental Engineering

In the field of study Environmental Engineering, engineers with a scientific background are trained to deal with technical environmental problems.

List the learning units/modules and the LOs provided in the above mentioned curricula

Hybrid Systems (12);Discrete event systems (6).

PM 1	Wissenschaftlich arbeiten im Studium	01
	Working scientifically in your studies	
PM 2	Sicherheit und Risiko im politischen und gesellschaftlichen Kontext - die staatliche Ebene	03
	Security and risk in the political and social context - the state level	
PM 3	Rechtliche Grundlagen	06
	Legal basis	
PM 4	Kommunikative Kompetenz in Studium und Beruf	08
	Communicative competence in study and work	
PM 5	Wirtschaftswissenschaftliche Grundlagen des Sicherheitsmanagements	10



	Economic fundamentals of safety management	
PM 6	Sicherheit und Risiko im politischen und gesellschaftlichen Kontext - die private Ebene	13
	Security and risk in the political and social context - the private level	
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	Legal powers	
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	Psychology for security management	
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	Personalmanagement	
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	Civil law	
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PM 13	Strategic and Organizational Aspects of Security Management	33
	Strategic and Organizational Aspects of Security Management	
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	Crime control as a task of security management	
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	Labour law	
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WPM 2	Vertiefung in ausgewählten Rechtsgebieten II	63
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WPM 7	Fokusseminar III	72
WPM 8	Fokusseminar IV	73



Module 1	Research and Methodology (Semesters 1 to 3 or 4)	
Module 2	Globalisation, Security Challenges & Governance (Semester 1)	
Module 3	International Management of Risks and Crises (Semester 1)	
Module 4	Organisation, Leadership and Economics of Security Management I (Semester 1)	
Module 5	Normative Theories, Ethics and Accountability in International Security Management I (Semester 1)	
Module 6	Crime Control in a Global Environment (Semester 1)	
Module 7	Organisation, Leadership and Economics of Security Management II (Semester 2)	
Module 8	Information, Knowledge Protection and Cybersecurity (Semester 2)	
Module 9	Normative Theories, Ethics and Accountability in International Security Management II (Semester 2)	
Module 10	Current Issues of International Security Management (Semester 2)	
Module 11	Elective A: Mobility and Transport (Semester 2)	
Module 11	Elective B: Event Security (Semester 2)	
	Ausgew. Aspekte der Kriminalitäts- und Bedrohungslage	2/3
	Ausgew. Aspekte des vorbeugenden Brandschutzes	
	Ausgew. Projekte aus dem Bereich Informationssicherheit	
	Betrieblicher Brandschutz	
	Brandschutz in Sonderbauten	2/3
	Experimentalvorlesung am Reaktor	2/3
	Explosionsschutz	2/3
	Fachkundeerwerb und Sachkundeprüfung gem. § 34a GewO	2/3
	Gestaltung von Arbeitsstätten	2/3
	Hazardous work and fall protection	2/3
	IT-Governance / IT-Compliance	2/3
	Kriminologie / Kriminalistik	2/3
	Die kritische Infrastruktur Energieversorgung	2/3
	Planung und Realisierung in der Objektsicherung	2/3
	Projekte in Security & Safety	2/3
Bachelor		
B1	Einführung SGA 5 Einführung in die Sicherheitswissenschaften 1 Matlab 2 Schutz-/Gefahrenabwehr- u. Sicherheitskonzepte	2
B2	Ingenieurgrundlagen 5 Grundlagen der Konstruktion 3 CAD	2
B3	Mathematik für Ingenieure 10 Mathematik I 5 Mathematik II	5
B4	Mathematik für Ingenieure 5 Mathematik III	5
B5	Stochastik 5 Stochastik	5
B6	Informatik 5 Algorithmen und Programmierung 5	



B7	Physik 10 Physik I 5 Physik II 5	
B8	Chemie 8 Chemie I 4 Chemie II 4	
B9	Baulicher Brandschutz 5 Vorbeugend baulicher Brandschutz 5	
B10	Werkstoff- und Baustoffkunde 5 Werkstoff- u. Baustoffkunde 5	
B11	Ingenieurgrundlagen II 10 Tragwerkslehre 5 Tragwerkslehre II 5	
B12	Elektrotechnische Grundlagen 10 Elektrotechnik/-sicherheit 5 Sensorik u. Steuerungen 5	
B13	Strömungsmechanik 5 Strömungsmechanik 5	
B14	Thermodynamik 5 Thermodynamik I 5	
B15	Grundlagen Anlagensicherheit 5 Chemische Prozesse und Anlagen 3 Brand- und Explosionsschutz 2	
B16	Psychologie 5 Krisenpsychologische Grundlagen 2 Stressprävention -/management 3	
B17	Baulicher Brandschutz 5 Brandverhalten Baustoffe u. Bauteile 5	
B18	Grundlagen Brandschutz 5 Chemie d. Brände und Löschmittel 3 Sicherheitstechnische Kenngrößen 2	
B19	Technische Risiken/Schadstoffausbreitung 8 Technische Risiken 4 Schadstoffausbreitung 4	
B20	Recht und Gefahrenabwehr** 5 Recht im Brand- und Katastrophenschutz 1 Einsatzmanagement Gefahrenabwehr 2 Technik im Brand- und Katastrophenschutz 1 Grundlagen Katastrophenschutz 1	
B21	Verbrennungstechnik 6 Verbrennungstechnik 4 Sicherheitstechnische Kenngrößen II 2	
B22	Wissenschaftliche Arbeit 5 Einführung Projektarbeit 1 Projektarbeit 3 Proseminar 1	
B23	Sonderbau und Recht 5 Brandschutzkonzepte Sonderbau 3 Grundlagen Recht 2	
B24	Englisch 6 Englisch I 3 Englisch II 3	
B25	Wahlpflicht*** 20 Wahlpflichtfächer 20	
B26	Praktikum 28 Praktikum 27 Praktikumskolloquien 1	
B27	Bachelorarbeit 14 Bearbeitung Bachelorthema 12 Kolloquium 2	
B01	Technische Mathematik	5
B02	Grundlagen der Chemie	5
B03	Arbeitsschutz und Psychosoziale Gesundheit	5
B04	Grundlagen der Biologie und Ökotoxikologie	5
B05	Betriebswirtschaftslehre und Haushaltswesen	5
B06	Grundlagen Rettungswesen und Rettungsmedizin	5
B07	Grundlagen der Statistik	5
B08	Rechtliche Grundlagen	5
B08.1	Einführung in das Privatrecht	
B08.2	Einführung in das Öffentliche Recht	5
B09	Grundlagen der Technischen Mechanik	
B10	Wissenschaftliches Arbeiten	5
B11	Grundlagen der Kommunikationstechnik	5
B12	Grundlagen der Physik	5
B13	Hydraulik und Pneumatik	5



B14	Grundlagen der Elektrotechnik	5
B15	Gefährliche Stoffe und Güter/Strahlenschutz	5
B16	Recht im Brandschutz- und Sicherheitswesen	5
B17	Thermodynamik und Strömungslehre	5
B18	Studienschwerpunktmodul I (siehe SP1-01 und SP2-01)	5
B19	Verfahrens- und Anlagentechnik	5
B20	Baulicher Brandschutz	5
B21	Anlagentechnischer Brandschutz	5
B22	Organisatorischer Brandschutz	5
B23	Wahlpflichtmodul I	5
Studienschwerpunkt 1: Brandschutz		
SP1-01	Theoretische Feuerwehrtechnische Grundlagen	5
Studienschwerpunkt 2: Sicherheitstechnik		
SP2-01	Methodik der Sicherheitstechnik	5
B24	Studienschwerpunktmodul II (siehe SP1-02 und SP2-02)	
B25	Studienschwerpunktmodul III (siehe SP1-03 und SP2-03)	
B26	Studienschwerpunktmodul IV (siehe SP1-04 und SP2-04)	
B27	Studienschwerpunktmodul V (siehe SP1-05 und SP2-05)	
B28	Studienschwerpunktmodul VI (siehe SP1-06 und SP2-06)	
B29	Studienschwerpunktmodul VII (siehe SP2-07)	
B30	Studienschwerpunktmodul VIII (siehe SP2-08)	
Studienschwerpunkt 1: Brandschutz		
SP1-02	Umgang mit belastenden Einsätzen	5
SP1-03	Kommunikationssysteme in der Gefahrenabwehr	5
SP1-04	Personalführung Feuerwehr	5
SP1-04.1	Leiten und Führen in der Gefahrenabwehr	
SP1-04.2	Beurteilungswesen Feuerwehr	
B31	Personalführung	5
B32	Organisation im Notfallrettungsdienst	5
B33	Strategisches Ressourcen- und Qualitätsmanagement	5
B34	Grundlagen Katastrophenschutz in Deutschland	5
B35	Wahlpflichtmodul II	5
B36	Studienschwerpunktmodul IX (siehe SP1-07 und SP2-09)	
Studienschwerpunkt 1: Brandschutz		



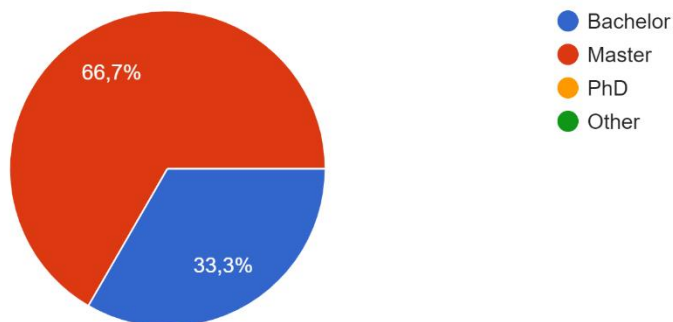
SP1-07	Projekt- und Öffentlichkeitsarbeit	5
SP1-07.1	Projektorganisation	
SP1-07.2	Presse- und Medienarbeit in der Gefahrenabwehr	
Studienschwerpunkt 2: Sicherheitstechnik		
SP2-09	Funktionale Sicherheit	5
B37	Praxisphase	15
B38	Abschlussprüfung	
B38.1	Bachelorarbeit	12
B38.2	Mündliche Abschlussprüfung	3
WP01	Technisches Englisch	5
WP02	Anlagensicherheit	5
WP03 IT-	Sicherheit	5
WP04	Zuverlässigkeitsplanung	5
WP05	Industrielle Anwendungen der Sicherheitstechnik	5
WP06	Gefahrstoffmanagement	5
WP07	Human Factors and Responsibility	5
WP08	Geoinformationssysteme	5
WP09	Schadensfälle Geotechnik	5
Module Arbeits-, Betriebs- und Anlagensicherheit (M.Eng.), Rheinische Fachhochschule Bonn		



1.3 - Explain in which curricula (name and level) the competencies, skills and LOs developed by the B-READI project will be included, for one or both profiles

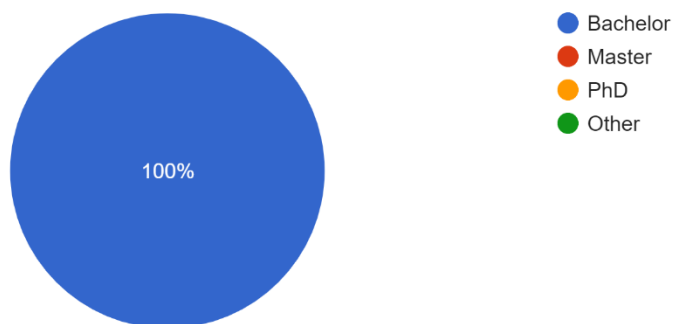
Emergency Management (disaster/crisis/risk)

Level:
3 risposte



Prevention Management

Level:
1 risposta



1.2 – If your university does not offer specific full Bachelor or Master degrees curricula :

a) Competencies on the field of Emergency (Disaster-Crisis) Management are provided in the degree curricula.

Below is the detailed work of the University of Berlin which lists the subjects and the relative "academic weights" that make up the scenario of vertical academic proposals, the backbone of specialized academic planning in the many professions that contribute to the planning of actions of the Prevention and Safety in their country:



CHEMISTRY AND ENVIRONMENTAL TOXICOLOGY (9CFU); HYGIENE OF FOOD AND WATER (9 CFU);
INDUSTRIAL CHEMISTRY AND TECHNICAL ARCHITECTURE (5 CFU); HEALTH IN THE WORKPLACE AND
LIFE (12 CFU)

Module 1 - Research and Methodology (Semesters 1 to 3 or 4)
Module 2 - Globalisation, Security Challenges & Governance (Semester 1)
Module 3 - International Management of Risks and Crises (Semester 1) 8
Module 4 - Organisation, Leadership and Economics of Security Management I (Semester 1)
Module 5 - Normative Theories, Ethics and Accountability in International Security Management I (Semester 1)
Module 6 - Crime Control in a Global Environment (Semester 1)
Module 7- Organisation, Leadership and Economics of Security Management II (Semester 2)
Module 8 - Information, Knowledge Protection and Cybersecurity (Semester 2)
Module 9- Normative Theories, Ethics and Accountability in International Security Management II (Semester 2)
Module 10 - Current Issues of International Security Management (Semester 2)
Module 11- Elective A: Mobility and Transport (Semester 2)
Module 11 - Elective B: Event Security (Semester 2)

PM 1: Wissenschaftlich arbeiten im Studium 01
PM 2: Sicherheit und Risiko im politischen und gesellschaftlichen Kontext - die staatliche Ebene 03
PM 3: Rechtliche Grundlagen 06
PM 4: Kommunikative Kompetenz in Studium und Beruf 08
PM 5: Wirtschaftswissenschaftliche Grundlagen des Sicherheitsmanagements 10
PM 6: Sicherheit und Risiko im politischen und gesellschaftlichen Kontext - die private Ebene 13
PM 7: Rechtliche Befugnisse 16
PM 8: Psychologie für das Sicherheitsmanagement 19
PM 9: Marketing und Management im Sicherheitsunternehmen 21
PM 10: Personalmanagement 24
PM 11: Zivilrecht 26
PM 12: Risiko- und Krisenmanagement, Sicherheitstechnik 29
PM 13: Strategic and Organizational Aspects of Security Management 33
PM 14: English in the Professional Environment 36
PM 15: Kriminalitätskontrolle als Aufgabe des Sicherheitsmanagements 38
PM 16: Arbeitsrecht 42
PM 17: Technische, rechtliche und organisatorische Grundlagen des Informationsschutzes und der Informationssicherheit 45
PM 18: Safety im Unternehmenskontext 48
PM 19: Praktikum 50
PM 20: Kernelemente des Rechnungswesens im Sicherheitsmanagement 54
PM 21: Individuelles wissenschaftliches Arbeiten 57
WPM 1: Vertiefung in ausgewählten Rechtsgebieten I 59
WPM 2: Vertiefung in ausgewählten Rechtsgebieten II 63
WPM 3: Projektmanagement im Vertiefungsgebiet I 66
WPM 4: Projektmanagement im Vertiefungsgebiet II 68
WPM 5: Fokusseminar I 69
WPM 6: Fokusseminar II 71
WPM 7: Fokusseminar III 72
WPM 8: Fokusseminar IV 73
Ausgewählte Projekte aus dem Bereich Informationssicherheit 3
Business Continuity Management 3
Wahlpflichtvorlesung Grundkenntnisse in der Reaktorsicherheit, Reaktorphysik, Anfahrprozedur. 3
Wahlpflichtvorlesung Fortgeschrittene Kenntnisse in der Reaktorsicherheit, Reaktorphysik, Anfahrprozedur. 3



Interkulturelle Kompetenz für Ingenieure im Auslandseinsatz 3
IT-Governance / IT-Compliance 3
Messtechnische und abgeschätzte Beurteilung von Gefahrstoffen am Arbeitsplatz 3
Projekte Gefahrstoffe 3
Reaktorsicherheit 3
Risikoanalyse in der Praxis 3

Bachelor

B1 Einführung SGA 5
Einführung in die Sicherheitswissenschaften 1
Matlab 2
Schutz-/Gefahrenabwehr- u. Sicherheitskonzepte 2
B2 Ingenieurgrundlagen 5
Grundlagen der Konstruktion 3
CAD 2
B3 Mathematik für Ingenieure 10
Mathematik I 5
Mathematik II 5
B4 Mathematik für Ingenieure 5
Mathematik III 5
B5 Stochastik 5
Stochastik 5
B6 Informatik 5
Algorithmen und Programmierung 5
B7 Physik 10
Physik I 5
Physik II 5
B8 Chemie 8
Chemie I 4
Chemie II 4
B9 Baulicher Brandschutz 5
Vorbeugend baulicher Brandschutz 5
B10 Werkstoff- und Baustoffkunde 5
Werkstoff- u. Baustoffkunde 5
B11 Ingenieurgrundlagen II 10
Tragwerkslehre 5
Tragwerkslehre II 5
B12 Elektrotechnische Grundlagen 10
Elektrotechnik/-sicherheit 5
Sensorik u. Steuerungen 5
B13 Strömungsmechanik 5
Strömungsmechanik 5
B14 Thermodynamik 5
Thermodynamik I 5
B15 Grundlagen Anlagensicherheit 5
Chemische Prozesse und Anlagen 3
Brand- und Explosionsschutz 2
B16 Psychologie 5
Krisenpsychologische Grundlagen 2
Stressprävention -/management 3
B17 Baulicher Brandschutz 5
Brandverhalten Baustoffe u. Bauteile 5
B18 Grundlagen Brandschutz 5
Chemie d. Brände und Löschmittel 3
Sicherheitstechnische Kenngrößen 2



B19 Technische Risiken/Schadstoffausbreitung 8
Technische Risiken 4
Schadstoffausbreitung 4
B20 Recht und Gefahrenabwehr** 5
Recht im Brand- und Katastrophenschutz 1
Einsatzmanagement Gefahrenabwehr 2
Technik im Brand- und Katastrophenschutz 1
Grundlagen Katastrophenschutz 1
B21 Verbrennungstechnik 6
Verbrennungstechnik 4
Sicherheitstechnische Kenngrößen II 2
B22 Wissenschaftliche Arbeit 5
Einführung Projektarbeit 1
Projektarbeit 3
Proseminar 1
B23 Sonderbau und Recht 5
Brandschutzkonzepte Sonderbau 3
Grundlagen Recht 2
B24 Englisch 6
Englisch I 3
Englisch II 3
B25 Wahlpflicht*** 20
Wahlpflichtfächer 20
B26 Praktikum 28
Praktikum 27
Praktikumskolloquien 1
B27 Bachelorarbeit 14
Bearbeitung Bachelorthema 12
Kolloquium 2

Master

M1 Gefahren- und Risikoanalyse 5
Methoden der Risikoanalyse 4
Natürliche Risiken 1
M2 Sicherheitsforschung u. -praktikum 5
Spez. Kapitel Sicherheitsforschung 2
Forschungspraktikum 3
M3 Strömungs- und Wärmetechnik 10
Advanced heat and mass transfer 5
Dynamik komplexer Strömungen 5
M4a Wahlpflicht I 10
M4b Wahlpflicht II 10
M5 Gefahrenabwehrmanagement und Notfallversorgung 5
Koordinierung psychosoziale Notfallversorgung 2
Vertiefung Gefahrenabwehrmanagement 3
M6 Brandschutz in Industrieanlagen 5
Fire protection in industrial facilities 5
M7 Leistungsorientierte Brandschutznachweise 5
Ingenieurmethoden im Brandschutz 3
Brandschutz im Sonderbau 2
M8 Katastrophenschutz 5
Organisation und Maßnahmen des Katastrophenschutzes 3
Internationaler Katastrophenschutz 2
M9 Masterarbeit 30
B01 Technische Mathematik 5



B02 Grundlagen der Chemie 5
B03 Arbeitsschutz und Psychosoziale Gesundheit 5
B04 Grundlagen der Biologie und Ökotoxikologie 5
B05 Betriebswirtschaftslehre und Haushaltswesen 5
B06 Grundlagen Rettungswesen und Rettungsmedizin 5
B07 Grundlagen der Statistik 5
B08 Rechtliche Grundlagen 5
B08.1 Einführung in das Privatrecht
B08.2 Einführung in das Öffentliche Recht
B09 Grundlagen der Technischen Mechanik 5
B10 Wissenschaftliches Arbeiten 5
B11 Grundlagen der Kommunikationstechnik 5
B12 Grundlagen der Physik 5
B13 Hydraulik und Pneumatik 5
B14 Grundlagen der Elektrotechnik 5
B15 Gefährliche Stoffe und Güter/Strahlenschutz 5
B16 Recht im Brandschutz- und Sicherheitswesen 5
B17 Thermodynamik und Strömungslehre 5
B18 Studienschwerpunktmodul I (siehe SP1-01 und SP2-01) 5
B19 Verfahrens- und Anlagentechnik 5
B20 Baulicher Brandschutz 5
B21 Anlagentechnischer Brandschutz 5
B22 Organisatorischer Brandschutz 5
B23 Wahlpflichtmodul I 5

Studienschwerpunkt 1: Brandschutz

SP1-01 Theoretische Feuerwehrtechnische Grundlagen 5

Studienschwerpunkt 2: Sicherheitstechnik

SP2-01 Methodik der Sicherheitstechnik 5
B24 Studienschwerpunktmodul II (siehe SP1-02 und SP2-02)
B25 Studienschwerpunktmodul III (siehe SP1-03 und SP2-03)
B26 Studienschwerpunktmodul IV (siehe SP1-04 und SP2-04)
B27 Studienschwerpunktmodul V (siehe SP1-05 und SP2-05)
B28 Studienschwerpunktmodul VI (siehe SP1-06 und SP2-06)
B29 Studienschwerpunktmodul VII (siehe SP2-07)
B30 Studienschwerpunktmodul VIII (siehe SP2-08)

Studienschwerpunkt 1: Brandschutz

SP1-02 Umgang mit belastenden Einsätzen 5
SP1-03 Kommunikationssysteme in der Gefahrenabwehr 5
SP1-04 Personalführung Feuerwehr 5
SP1-04.1 Leiten und Führen in der Gefahrenabwehr
SP1-04.2 Beurteilungswesen Feuerwehr
B31 Personalführung 5
B32 Organisation im Notfallrettungsdienst 5
B33 Strategisches Ressourcen- und Qualitätsmanagement 5
B34 Grundlagen Katastrophenschutz in Deutschland 5
B35 Wahlpflichtmodul II 5
B36 Studienschwerpunktmodul IX (siehe SP1-07 und SP2-09)

Studienschwerpunkt 1: Brandschutz

SP1-07 Projekt- und Öffentlichkeitsarbeit 5
SP1-07.1 Projektorganisation
SP1-07.2 Presse- und Medienarbeit in der Gefahrenabwehr



Studienschwerpunkt 2: Sicherheitstechnik

SP2-09 Funktionale Sicherheit 5
B37 Praxisphase 15
B38 Abschlussprüfung
B38.1 Bachelorarbeit 12
B38.2 Mündliche Abschlussprüfung 3
WP01 Technisches Englisch 5
WP02 Anlagensicherheit 5
WP03 IT-Sicherheit 5
WP04 Zuverlässigkeitsplanung 5
WP05 Industrielle Anwendungen der Sicherheitstechnik 5
WP06 Gefahrstoffmanagement 5
WP07 Human Factors and Responsibility 5
WP08 Geoinformationssysteme 5
WP09 Schadensfälle Geotechnik 5
Grundlagen und Begriffe der Katastrophenvorsorge und des Katastrophenmanagements – 5 LP
Gesellschaftswissenschaftliche Grundlagen und Methoden – 5
Natur- und Ingenieurwissenschaftliche Grundlagen und Methoden – 5
Risikoanalyse und Risikokommunikation – 5
Ausgewählte Konzepte und Maßnahmen der Katastrophenvorsorge – 5
Public Health, medizinische und psychosoziale Vorsorge und Notfallhilfe – 5
Risiko- und Krisenkommunikation – 5
Umgang mit speziellen Risiken (Wahlpflichtbereich) – 5
Die Führungskraft im Katastrophenmanagement - 5
Krisen- und Sicherheitsmanagement mit Stabsübung - 10
Masterarbeit – 30

Öffentliche Sicherheit

Grundlagen der Sicherheitstechnik
Methodologie und Methoden der Sicherheitstechnik – 6
Technische Zuverlässigkeit - 6
Brand und Explosionsschutz - 6
Kritische Infrastrukturen
IT-Sicherheit und Datenschutz- 6
Öffentliche Vulnerabilitäts- und Resilienzanalyse - 6
Veranstaltungssicherheit und öffentliche Sicherheit
Räumung, Evakuierung und Crowd Simulation
Öffentliche Notfallplanung und Krisenkommunikation
Sicherheitsbezogenes Qualitäts- und Excellencemanagement - 6
Mathematische und rechtliche Grundlagen
Probabilistische Gefahrenanalyse - 6
Gefahrenabwehr--, Ordnungs- und Katastrophenschutzrecht- 6
Wissenschaftliches Arbeiten
Forschungsprojektarbeit - 6
Abschlussprüfung
Master Thesis – 24
Kernmodule 5
Mathematik 5
Mathematik II 5
Technische Physik 5
Technische Physik II 5
Anorganische Chemie 5
Organische Chemie 5
Grundlagen Sicherheitswesens 5



Sicherheitsmanagement 5
Grundlagen Umwelt- und Strahlenschutz 5
Mathematik III 5
Mathematik IV 5
Technische Physik III 5
Technische Physik IV 5
Biochemie 5
Verfahrenstechnik 5
Projektmanagement und Betriebswirtschaft 5
Messen, Steuern, Regeln 5
Ausbreitung von Schadstoffen 5
Bauwesen 5
Sicherheitsmanagement II 5
Studienarbeit 5
Studienarbeit II 5
Praxisprojekt I 5
Praxisprojekt II 5
Mündliche Prüfung 5
Praxisprojekt III 5
Bachelorarbeit 5
Arbeitssicherheit
Belastungen und Arbeitsmedizin 5
Arbeitsschutzrecht 5
Branchenspezifischer Arbeitsschutz 5
Planen, Messen, Bewerten im Arbeitsschutz 5
Energietechnik und Energiegewinnung 5
Klausur oder Kombinierte Prüfung 5
Arbeitssicherheit 5
Betriebssicherheit 5
Arbeitssicherheit II 5
Strahlenschutz 5
Strahlenschutz
Strahlenschutz II 5
Radiologie 5
Radiologie II 5
Energie- und Kerntechnik 5
Strahlenschutz III 5
Radiologie III 5
Umwelttechnik
Umwelttechnik und Geowissenschaften
Umweltrecht
Ressourcen
Umweltmesstechnik
Energietechnik und Energiegewinnung
Ressourcen III
Luftreinhaltung

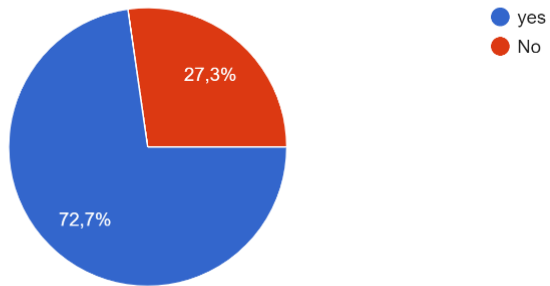
2. Identification of professional areas (public and private) and stakeholders in your country

- All levels

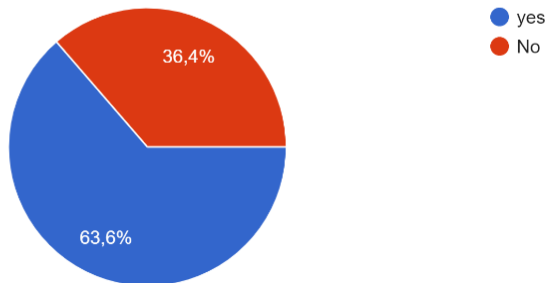


2.4 – Are the public and private bodies involved in coordinating emergencies, disasters and crises, and in strategic spatial planning for disaster risk prevention, the same bodies responsible for sustainable development policies and objectives to raise the value of system resilience?

Public:
11 risposte



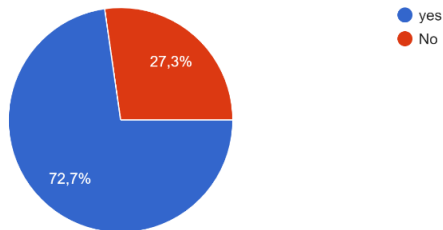
Private:
11 risposte





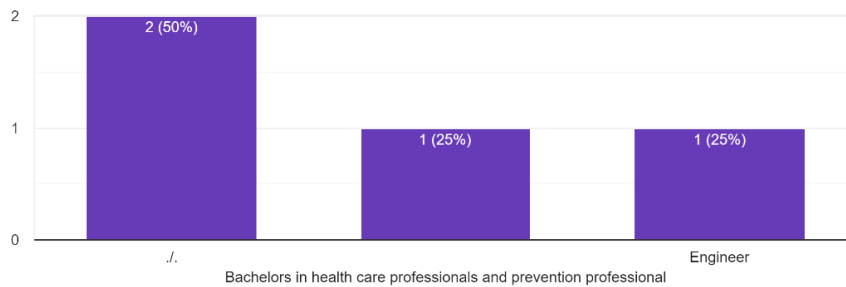
2.6 - If new laws and directives are promulgated, after the current SARS Covid-19 emergency, do you think that new professional fields need to be identified with the consequent increase in jobs for professionals and new graduates?

2.6 - If new laws and directives are promulgated, after the current SARS Covid-19 emergency, do you think that new professional fields need to be i...rease in jobs for professionals and new graduates?
11 risposte

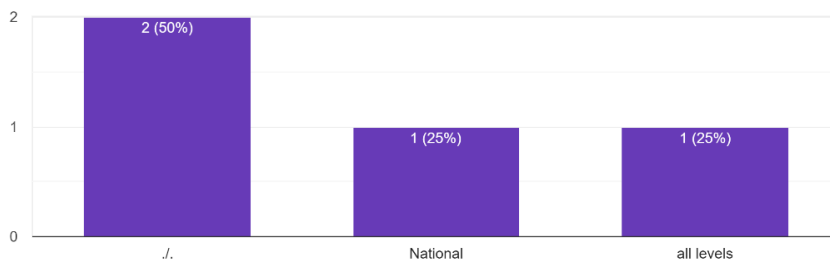


a) if YES, what kind and in what local, regional and national context?

Professional field(s):
4 risposte



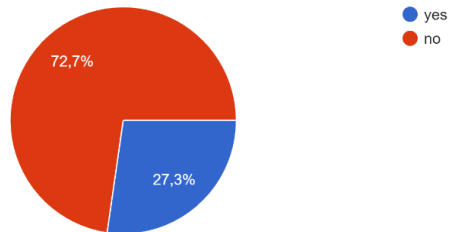
Level (local, regional, national):
4 risposte





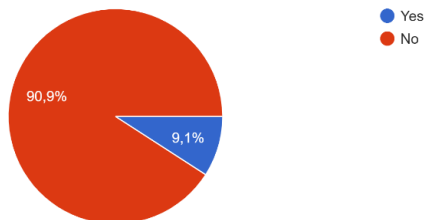
i. Are there labour policies to retrain the employed?

11 risposte



ii. are there training policies to guide new recruitment in the public and private sector?

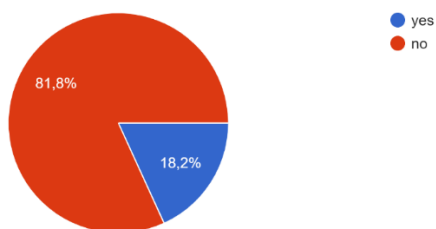
11 risposte



2.7 – In addition to the structures/organisations of the European Economic and Social Committee EESC, the European Centre of Employers and Enterprises CEEP are there other bodies and organisations that can guide labour and training policies in the post-SARS Covid-19?

2.7 – In addition to the structures/organisations of the European Economic and Social Committee EESC, the European Centre of Employers and Enterprises...and training policies in the post-SARS Covid-19?

11 risposte



If yes, explain the main competencies provided and the professional profile:

1) EMERGENCY MANAGER

2) PREVENTION MANAGER

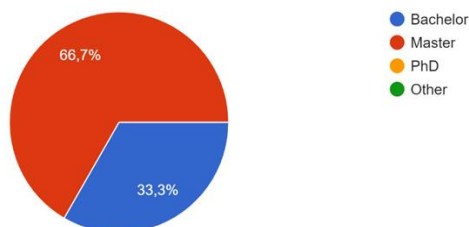


The graduation on Civil Protection and Risks Assessment focuses on providing competencies on the civil protection domain with particular efforts on technological and natural risks assessment. During the graduation, students also have formation on crises management, emergency planning, risk perception, communication, decision support systems and journalism. The graduation is transversal to several areas of knowledge accomplishing with the complexity of emergency management. Graduated students may work on civil protection structures, insurance companies, land-use planning, and research, to give some examples. Master on Volcanology and Geological Risks focuses on the study and assessment of geological risks, but with special focus on the volcanism. The main studied topics comprise geological mapping, land-use planning, stratigraphy, monitoring techniques, risks and crises management. The students with this degree may work on civil protection structures, government offices (environment, land-use, energy,...), volcanological observatories, education and research, for instance.

Below are the two graphic representations that are the final synthesis of the work done:

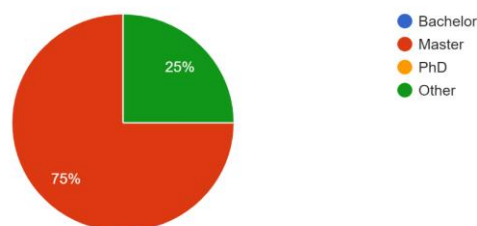
EMERGENCY MANAGEMENT

Level:
3 risposte



PREVENTION MANAGEMENT

Level:
4 risposte



in both pies, it is highlighted that for both academic profiles a specialized level II course of study (Master) has been identified,



B-READI

The_questionnaire_Stakeholders _11_06_202

STAKEHOLDERS / ALUMNI		
	PROFESSION / INSTITUTION	STATE
1	Freelance	
2	Esercito	Italy
3	University / LUMSA	Italy
4	Polícia de Segurança Pública	Portugal
5	Corpo Nazionale dei Vigili del Fuoco	Italy
6	Special Office for Crater 2009 Reconstruction	Italy
7	Ministero Interno - Protezione civile	Italy
8	Presidenza della Regione Siciliana Dipartimento degli Affari Extraregionali	Italy
9	Asl1 Abruzzo	Italy
10	Freie Universität Berlin	Germany
11	A	
12	Civil Protection public officer - Italia	Italia
13	Polícia Judiciária	Portugal
14	Università della Calabria - Italia	Italy
15	Berliner Feuerwehr	Germany
16	Advisor	
17	University of Girona	Spain
18	B.T. Enginyeria (BT Enginyeria (btprojectes.com))	
19	Corpo Nazionale Vigili del Fuoco - National Fire brigade	Italy
20	E.DI.MAS	Italy
21	Gruppo Ferrovie dello Stato Italiane - Italia	Italy
22	Aasass	
23	Fondazione Policlinico universitario A Gemelli IRCCS - Italia	Italy
24	E.Di.Ma.S.	Italy
25	AVDC (Test)	
26	Serviço Regional de Proteção Civil e Bombeiros dos Açores	Portugal

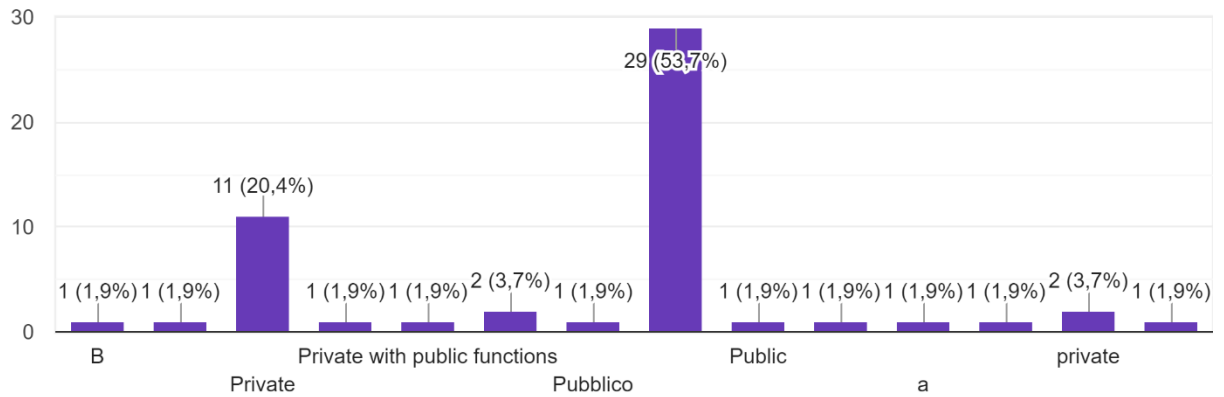


27	Regione Autonoma Friuli Venezia Giulia - Italia	Italy
28	Studiare Sviluppo _ Minister of economy and finance Italia	Italy
29	National Social Safety	
30	Santa Casa da Misericórdia de Ponta Delgada	Portugal
31	Câmara Municipal do Nordeste (ilha de São Miguel, Açores)	Portugal
32	EDIMAS	Italy
33	Câmara Municipal da Povoação	Portugal
34	Associação Humanitária dos Bombeiros Voluntários Vila Franca do Campo	Portugal
35	Fire fighters	Italy
36	Collegi d'Enginyers Graduats i Enginyers Tècnics Industrials de Girona	Spain
37	USRC office for reconstruction L'Aquila 2009 earthquake	Italy
38	G	
39	Marche Region Italia	Italy
40	Ds	
41	Fondazione Manlio Resta Onlus Italia	Italy
42	EDiMaS	Italy
43	H. Horta, EPER	
44	Complexity Education Project	Italy
45	Asl to4 - emergency department Italia	Italy
46	ARKAT umbrella organisation of district-run response units in Germany	Germany
47	Freelance	
48	Municipality of Castel di Sangro Italia	Italy
49	Local Delegation São Miguel – Cruz Vermelha Portuguesa	Portugal
50	Ufficio Speciale per la Ricostruzione dell'Aquila Italia	Italy
51	VVF Italia	Italy
52	Freelance	
53	Esercito Italia	Italy
54	Università LUMSA Italia	Italy



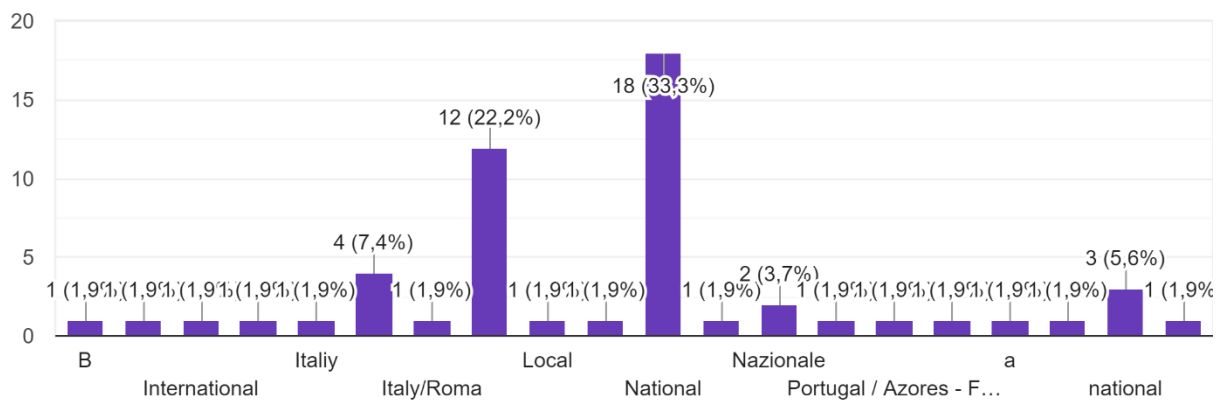
Public/Private:

54 risposte



National/Local:

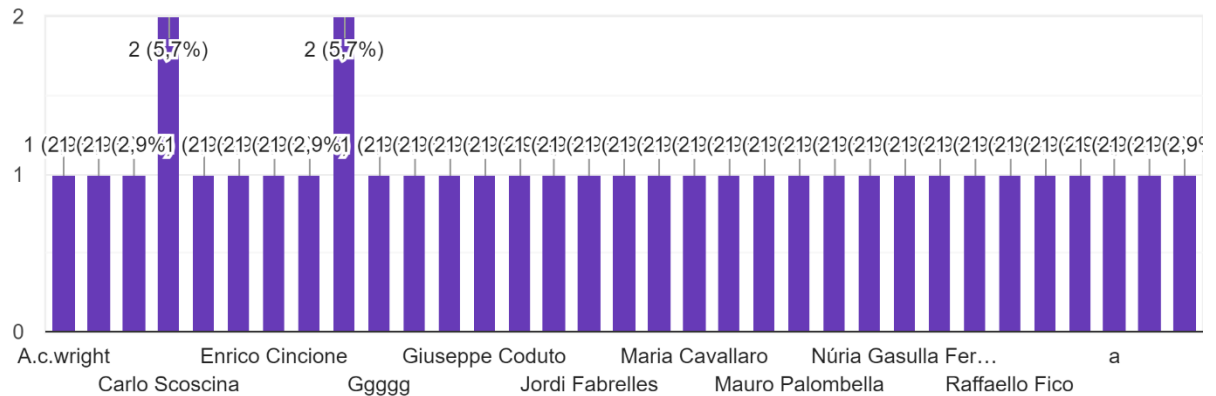
54 risposte





Name of the person that is filling the form (not mandatory):

35 risposte

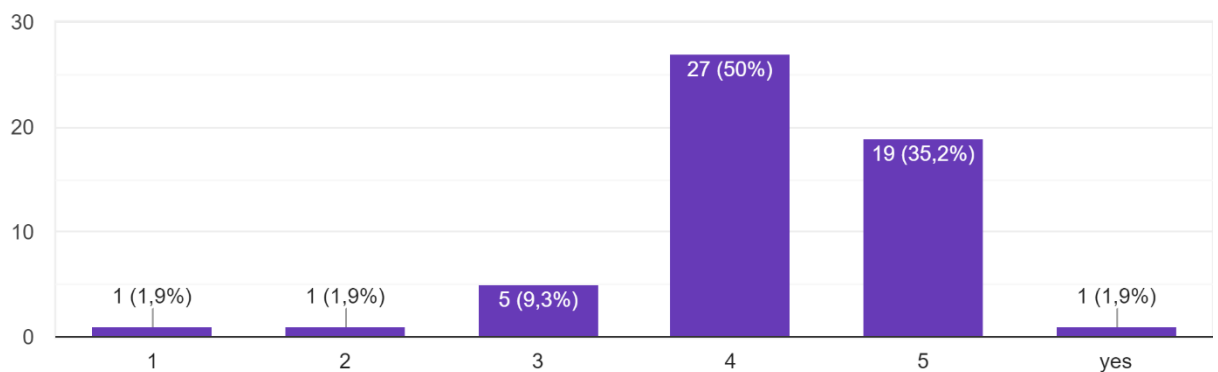


1. Identification of new academic competencies to be achieved and/or implemented in the degrees/courses/learning units in your country

1.1 In your country, is there a need for interdisciplinary training for integrated strategic planning of the territory and for the management of the complexities linked to crises and emergencies in the following macro-areas?

environment

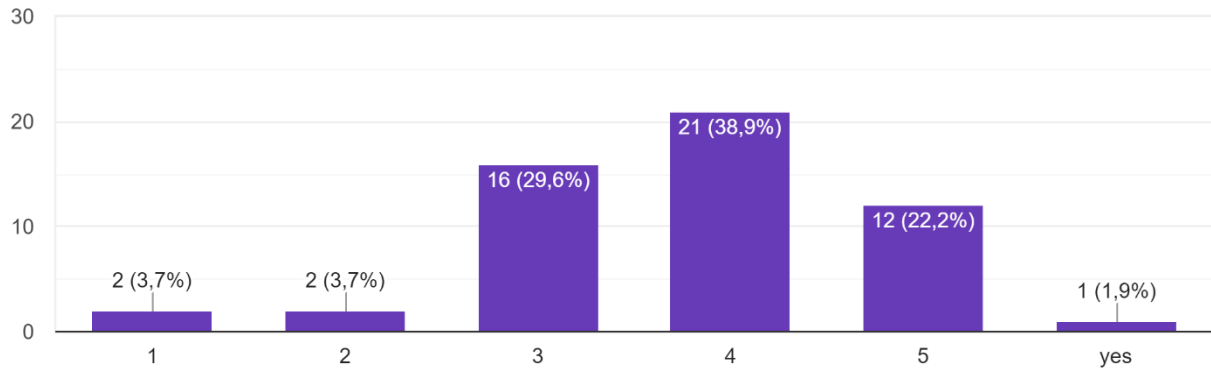
54 risposte





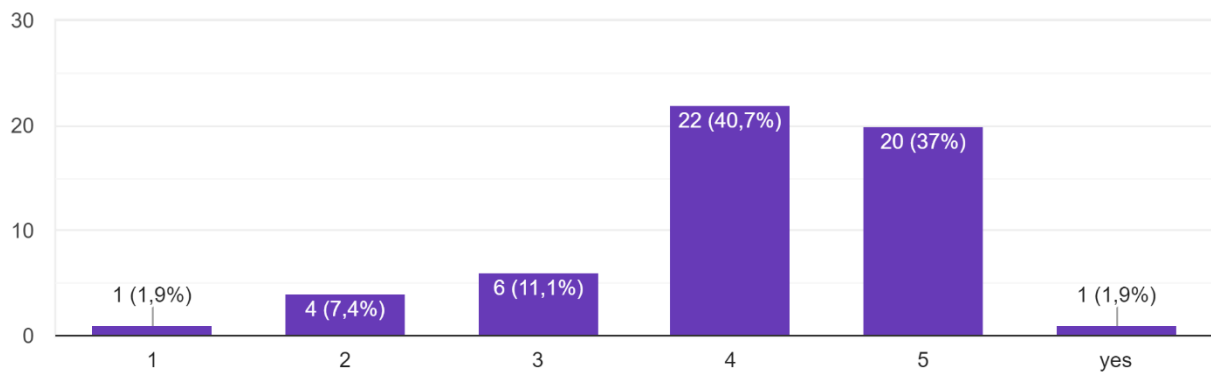
socio-economy

54 risposte



social security (civil defence, civil protection, public health)

54 risposte





Please explain each individual answer:

54 answers

More awareness needed

Environment: The Azores being a Region that has Nature Tourism as one of its ex-libris, multidisciplinary training in the field of the environment is of great importance, with the objective of pursuing the public interest in the defence of the environment and conservation of nature, as well as to coordinate the interaction of the various bodies with legal powers to intervene in this sector, especially in crisis or emergency situations.

Socio-economics: Interdisciplinary training in socio-economic development is a resource for the correct analysis of the variables influencing the social and economic development of the society in which they work.

Social security: Interdisciplinary training in the area of security is very important, as was evident during the pandemic period. It is essential to emphasise that the development of common forms of action, by the various bodies with legal powers to intervene in this area, requires precision and the definition of common strategies for the pursuit of their objectives.

In Italy there are excellences in the individual sectors that are unable to achieve interdisciplinary integration for planning and combating emergencies.

Italy has a continuous need to plan for environmental emergencies, so it would be very necessary to start an integrated strategic planning in this field.

While for the social economy the continuous changes due to critical and sudden world problems (financial, pandemic, etc.) give the impression that also in the social economy Italy has to prepare for future challenges.

Finally, we are more used to and prepared for social security issues.

The value 3 given for the socio-economic field is indicative as it is not my particular area of expertise. With regard to the topics mentioned in the points concerning the environment and safety, the data on accidents occurring, the management of the Covid 19 pandemic, forest fires, existing levels of pollution, the difficulties of post-earthquake reconstruction in Central Italy and other places, etc. are in themselves the reason for the value 5.

expertise in the sector

Central Italy with a complex territory in a grade 1 seismic zone

Her role in the field of training programmes in the area of civil protection gives her a wide vision of the needs of the area. She worked at the Public Security Institute of Catalonia (<http://ispc.gencat.cat/en/inici/index.html>) in the training of new agents. They offer specific short courses (60 to 150 hours) mainly oriented to police and fire personnel. They also offer a level 4 degree.

As regards the environment, the focus is on climate change. As the temperature rises, it is expected that there will be more forest fires and more flooding with violent storms (hurricane type) in our area. There is a need for scenario simulation, data collection and analysis to predict the affected areas, the behaviour of the elements (fire/water), the behaviour of people in different areas (countryside, urban, coast, ...), public transport and telecommunications, etc. This will be necessary to make good plans for the future. This will be necessary to make good emergency plans in case of disasters.

He also addresses the lack of information and resources at local level. For good civil protection, it is essential to have good local knowledge and to know the environment first-hand. Gathering



information at local level and analysing it in depth is fundamental to developing good civil protection plans.

Environment: I believe that in the field of crisis management and response to emerging situations in the environment, there is a great lack of interdisciplinary training to allow better coordination and, above all, for each entity to have a systemic view of their specific competences and the contributions they can make to the common project.

Socio-economics: The respondent could not choose any option. Bearing in mind that this questionnaire binds the Criminal Investigation Department of the Judicial Police and since the answer to this part is not supported by our activity, I have nothing to report.

Social security: As far as security is concerned, it seems to me that there is a certain lack of coordination between the various organisations, although there have been significant improvements in recent years, with emphasis on the civil protection aspect, through specific regulations and regular exercises, integrating all stakeholders. The same does not apply to public health aspects, where the need for interdisciplinary training seems more pressing.

In my region, there is a need for interdisciplinary training in these factors because there is a lack of expertise within the public administration to carry them out.

As far as the environment is concerned, there is more interdisciplinary strategic planning.

The high level of complexity of environmental regulations in various sectors (soil, water, air) and in various areas (integrated water cycle management, waste management, atmospheric emissions, reclamation of contaminated sites, management of excavated earth and rocks produced in large-scale works, especially road and rail works, major risk sites, EIA and AIA authorisations, climate change, circular economy) requires an integrated approach with coordination units equipped with all the skills required to solve complex technical problems, not conditioned by political opinions and choices.

Civil protection, defence of citizens and health also involve multiple factors whose interdependence does not always appear consolidated.

It informs us about the skills needed for the Civil Protection officers. On one hand there is a need for trained personnel, basically from consultant companies (private sector) that perform autoprotection plans for other companies. It is mandatory as a function of the type of the industry or the size in number of employees. They need to have the valid accreditation (through carrying out a course). There are also other required plans like evacuation plans and fire prevention plans, where the supervision of fire brigade specialists is mandatory.

Regarding the public sector, all the cities above 20,000 inhabitants must have a civil protection specialist supervising the local emergency plans.

It describes 3 roles:

Emergency Manager - should focus on skills like communication (to media and to society), sociology, safety, management, strategy and leadership.

Prevention analyst - studying and designing protection plans trying to foresee to some degree the possible disasters and the possible actuations to minimize the risks.

Operatives - People in direct charge of the response in the event of a disaster, not responsible for the emergency plans but the need to be aware of them and apply them.

In Spain it is mandatory for a large type of companies and public bodies to elaborate 'Auto-protection Plans' (real decreto 30/2015). In order to develop these documents you must be accredited. Protecció civil (a public body) is in charge of the definition of this accreditation. Moreover, it would be interesting to include every thing related to fire incidents (evaluation of the fire load, risk analysis, background to identify possible risks in engineering facilities and industrial processes).



There is a low attention from the political

the academic response is insufficient to cover this role

My country, which has the best professionals in every field, has indeed the need for an integrated strategic planning for every macro-area above mentioned

training diversified upon the different context

- the environment policy also recalled by the United Nations 2030 agenda obliges states around the world to affirm the principles of strategic planning through 17 goals.

- socio-economy: there can be no socio-economic development if there is no social security

- social security: civil defense, civil protection and public health planning must necessarily be integrated both to optimize the costs of public spending and to optimize the performance of services provided to the community

answers are case dependent

Because it is necessary to proceed with an integrated training

Environment: Development of skills for the interconnection of different areas that influence the response and management of crises and emergencies.

Socio-economy: Development of skills for the interconnection of different areas that influence the response and management of crises and emergencies.

Social security: Development of skills for the interconnection of different areas that influence the response and management of crises and emergencies and promoting a culture of safety.

The question is not clear. What means interdisciplinary? Which disciplines are you in mind?

In the country there's lack of awareness about the proceedings in all type of crisis

Environment: Due to our enormous diversity and environmental richness both in flora and fauna.

Socio-economy: The option is based on the small size and correlative great external dependence of our economy, which is a necessary emanation of a specific socio-economic context. This dependency advises the related study of different disciplines, with relevance to logistical aspects, in the context of global relations.

Social security: Our characteristics and natural constraints so dictate. The response of health systems to the developments arising from possible "new world orders" that could emerge from climate and/or pandemic disasters is a challenge for all.

Environment: The answer will be given at the municipal level. Professional enrichment is always needed in the areas and procedures that are in place.

Socio-economy: The answer will be given at the municipal level. Professional enrichment is always needed in the areas and procedures that are in place.

Social security: The answer will be given at the municipal level. In the SMPC, according to the size of the municipality, someone with training in the indicated area is needed.

Economic systems as a case index of positive growth, while the environment requires balance and stability

Environment: Environmental issues are increasingly on the agenda. Currently, and mainly as a result of climate change, territorial management is based on issues related to these changes, as well as other environmental concerns, and defines objectives and strategic options for territorial development for each region. For this reason, training in these areas is increasingly important for those who have to manage the territory.

Socio-economy: As in the previous situation, and at a time when our country, in general, and our region, in particular, are facing an adverse and complex economic and social situation, as a result of the pandemic and the problems that already existed before, such as depopulation and In the economic crisis, investing in training in these areas is an added value for us as technicians and even



for political decision makers, as these are areas that directly affect the integrated strategic planning of the territory.

Social security: Considering that the municipality of Povoação is constituted as a hazardous municipality, with cyclical events, whether associated with landslides, floods or earthquakes, “interdisciplinary training for integrated strategic planning of the territory and crisis and emergency management in the following areas” is of paramount importance, whether for the effective knowledge of our reality, or to assist in decision-making and improve the response capacity of the different civil protection agents to the aforementioned events.

Interdisciplinary training permit to share technical and social skills, improving the approach of an Emergency

Environment: The respondent was not able to chose any option. I don't answer because it's not my job to assess this need.

Socio-economy: The respondent was not able to chose any option. I don't answer because it's not my job to assess this need.

Social security: The respondent was not able to chose any option. I don't answer because it's not my job to assess this need.

I believe that in our country, in all three macro-areas, there is a need for total interdisciplinary training in order to plan

In all cases we see a shift in awareness, but I believe more can be done

Jordi Fabrelles is the current dean of the college of industrial engineers in Girona. This institution is, beside other functions, responsible in the identification of the possible training courses and post-graduate education of the industrial engineers in the Girona region. He is also CEO of the Jordi Fabrelles company (www.jordifabrellas.com), with a very large experience in the ‘occupational hazards’ plans. His opinion is not to prepare a whole Master in the fields on the B-Readi project, due to (in his opinion) a limited number student to be candidates of this master. In his opinion there is a limited number of companies (especially medium size companies) and public institutions that require these profiles. Moreover, there are some specific tasks that requires to have an accreditation (official title), such as the elaboration of auto protection plans, that use to be externalized to consulting firms. He thinks, that an on-line master, with a maximum of 60 ECTS (1 year), or the definition of specific courses, could be the suitable format to implement the modules of this project.

There is for sure a need to interdisciplinary training due to the intrinsic nature of the subject you are asking about. The differents areas need itself different kind of skills that is not possible to find in just one type of professionist. Plus it is necessary for everyone to be able to comunicate and operates in teams with different expert from different study areas.

There is always a need for interdisciplinary training for integrated strategic planning of the territory and for the management of t crises and emergencies. It is never enough.

Lack of a holistic view of security. Lack of full awareness. Need for more operational resiliency.

Environment: Multidisciplinary team for environmental disasters already exists, but in need of continuous specific training and better articulation with other institutions on the island, given the fact that it is a territory of high risk for the occurrence of environmental accidents (volcano, earthquakes, hurricanes).

Socio-economy: Given the geographical/isolation of remoteness, dependence on sea and air routes for economic stability, greater difficulty in accessing education (lack of teaching staff, difficulty in participating in continuous training, etc.) and the high rate of unemployment and dependence on social subsidies, this point should be the target of training in different professional contexts.



Social security: For the reasons mentioned above, especially with regard to geographic isolation, difficulty in quick access and lack of health professionals and other areas necessary for an eventual catastrophe scenario (military, biological, etc.).

Recurrent crises (environment, socio-economy, security) make necessary the development of specialised professionals who act as a link for the interventions among the various actors involved. These professionals need to be able to recognize the complexity of the systems and choose how and when they need to plan and act the prevention plans

There is a real need to integrate the skills for a better management of the risks and and the planning of the territory

I believe it is important for all these sectors to receive integrated training

there is a lack of specific skills with interdisciplinary training for integrated strategic planning of the territory and for the management of complexities related to crises and emergencies

Environment: At the moment there is no organization of services or procedures in relation to this topic. The Delegation's management team awaits to be appointed.

Socio-economy: At the moment there is no organization of services or procedures in relation to this topic. The Delegation's management team awaits to be appointed.

Social security: At the moment there is no organization of services or procedures in relation to this topic. The Delegation's management team awaits to be appointed.

environment: emergency management must be the first phase of future planning

socio-economic: all emergency crises have a strong effect on social and economic aspects

civil protection: represents the first response to the crisis

Interdisciplinary training for the management of complex situations that arise



3. Chapter III

Analyses

for the purposes of the project, the proposal is that the analysis of the design output processes be defined in some macro areas of integrated specialist sciences:

- A. jurisprudence - economics - politics - public and private administration;
- B. engineering - architecture / urban planning - geology - multi-risk science;
- C. medicine - veterinary - natural sciences – biology.
- D. management of complexities - social psychology - sociology – anthropology - pedagogy - communication science.

A	B	C	D
A1 jurisprudence	B1 engineering	C1 medicine	D1 management of complexities
A2 economics	B2 architecture / urban planning	C2 veterinary	D2 social psychology
A3 politics	B3 geology	C3 natural sciences	D3 sociology – anthropology - pedagogy
A4 public and private administration	B4 multi-risk science	C4 biology	D4 communication science

In each of the macro areas, the objective of providing each graduate student with the set of knowledge and skills peculiar to the chosen profile, respectively of ECM and EPM, should be achieved.

From the data acquired through the work carried out, the opportunity and consequent need emerged to proceed with the reshaping of vertical academic courses by targeting the definition of about 100 micro-modules of 0.60 CFU (for a total of 60 University Credits and 1500 hours) capable of balancing each single specialist orientation, in a way such as to allow each graduate student to build their own university curriculum, without prejudice to the guarantee of being able to observe the basic teachings of the reference discipline.

The prevailing fundamental character of the type of training program is that of a two-year (specialist or post-graduate) interdisciplinary course, capable of deepening the following indications of a technical-scientific, legal nature through a targeted "holistic" educational project , administrative, psychological and pedagogical ..., with managerial value:



- knowing in depth the different types of risk of the territories and the mitigation methods (analysis, forecast and methods of active and passive prevention, protection);
- knowing the many local, regional and national regulations that characterize the vertical planning carried out by the different levels of the public authorities;
- knowing the civil and criminal liability of the missed or inappropriate planning activities;
- knowing the methods of integrated territorial strategic planning (and the possible forms of integration of existing vertical planning);
- knowing the organizations that contribute to guaranteeing social security (civil defense - public health - civil protection) and the procedures for managing emergencies and for returning to the conditions of the new norms.
- knowing the different methods of management and financial management of financing projects (regional, national and community);
- knowing the governance dynamics of projects, human and instrumental resources (change management - public management - business continuity - risk management - crisis management - project management ...);
- knowing the bases of European planning (direct and indirect financing).

To enter the work system conducted by E.Di.Ma.S. that already in 2014 (following a profound university reform) had reworked its two post-university multidisciplinary training courses (now in their seventh edition), a table containing some of the interdisciplinary micro modules (Fundamentals and Basic Complementaries) with the relative Italian University Credits and the relative number of study hours.

N°	GROUP	DEFINITION OF THE TRAINING MICRO-MODULE (FROM 0.60 CFU)	CFU	HOURS OF STUDY
1	A	A1 - case law	1	25
2		A2 - economy	1	25
3		A3 - policy	1	25
4		A4 - public and private administration	1	25
5	B	B1 - engineering	1	25
6		B2 - architecture and urban planning	1	25
7		B3 - geology	1	25
8		B4 - multi-risk science	1	25
9	C	C1 - medicine	1	25
10		C2 - veterinary	1	25



11		C3 - natural science	1	25
12		C4 - biology	1	25
13	D	D1 - complexity management	1	25
14		D2 - social psychology	1	25
15		D3 - sociology / anthropology / pedagogy	1	25
16		D4 - communication science	1	25
17	E	legislation, organization and civil protection procedures	1	25
18		legislation, organization and public health procedures	1	25
19		legislation, organization and civil defense procedures	1	25
20		European Union: legislation, regulations, Commission and DG	1	25
21		PM1 - environmental and urban planning legislation EM1 - cohesion policies (local, regional, national and community)	1	25
22		PM2 - cohesion policies (local, regional, national and community) EM2 - different management styles	1	25
23		PM3 - integrated strategic planning EM3 - Emergency Management process cycle	1	25
24		PM4 - energy and socio-economic development policies EM4 - social security operational structures (civil defense and civil protection)	1	25
25		PM5 – public – private network EM5 – health and veterinary facilities	1	25
26	F	prevention and natural hazards	0,5	12,5
27		prevention and anthropogenic risks	0,5	12,5
28		prevention and modern and technological risks	0,5	12,5
29		prevention and cyber crime	0,5	12,5
30		prevention and social risks	0,5	12,5
31		environmental prevention	0,5	12,5
32		fire prevention	0,5	12,5
33		prevention and terrorism	0,5	12,5
34		prevention and educational poverty	0,5	12,5
35		workplace safety policies, regulations and procedures	0,5	12,5
36		personal protective equipment	0,5	12,5
37		multi-risk prevention	0,5	12,5
38		business accounting	0,5	12,5
39		public administration accounting	0,5	12,5
40		basic elements of Europlanning (direct and indirect financing)	0,5	12,5
41			0,5	12,5
42			0,5	12,5
43			0,5	12,5
44			0,5	12,5



45			0,5	12,5
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88			0,5	12,5
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92			0,5	12,5
93			0,5	12,5
94			0,5	12,5
95			0,5	12,5
96			0,5	12,5
97			0,5	12,5
98			0,5	12,5
99			0,5	12,5
100			0,5	12,5



Conclusions

The parameterization of training mini-modules linked to an interdisciplinary process that wants to aim at a post-academic specialist training in the subjects of "integrated strategic planning" and in that of "multi-sectoral crisis and emergency management", implies basic in-depth studies that can be defined as FUNDAMENTAL and others that do not have the same importance but that are however functional to the creation of the complex training project that can therefore be defined as BASIC COMPLEMENTARY and that have been described for each of the "integrated multidisciplinary sciences".

Consequently, in both EMERGENCY MANAGEMENT and PREVENTION MANAGEMENT profiling, there will be some fundamental teachings that must necessarily be present in the construction of the basic matrix, in order to give rise to the paradigm shift compared to overseas Emergency Management, which (in Anglo-Saxon style) bases its origins on "disaster management" and not on "prevention management".

The evolution of the concept is therefore to be considered as a basic principle in the definition of all that is necessary to avoid what happened, for example, in the management of the very serious Hurricane Katrina (in the USA in 2005) and in the management of the seismic emergency in Italy in 2009 that hit the city of L'Aquila.

In this second specific circumstance, those who worked during and after the emergency, although motivated by feelings and professional logic of high value, moved by ethical and moral principles, had to operate in the context of managing complexity and had, with their choices and logic of action typical of normality and ordinariness, determined the depopulation of the City - even in the reconstructed part - and the impoverishment of that territory, precisely because he lacked the indispensable basic knowledge necessary to operate with sufficient and suitable knowledge of the case, both in the management of the emergency and in the integrated strategic planning of the global context of reference: all this was essentially due to the lack of suitable parameters and technical data relating to planning for environmental protection (an area close to a National Park considered to be the largest in Europe), socio-economic development (an area that has always been devoted to world-class engineering and communication sciences and nuclear physics) and social security (civil defence, public health and civil protection).

And here, on this fundamental point, other types of skill come into play, that interconnectedness to ethics and inclination proper to the individual who, as emerges from the profiles and scenarios



concerning the management of emergencies and strategic and integrated territorial planning, is called upon to play a role that is certainly important for the security and development of the territory, both within private companies and within public administrations.

In this perspective, when defining the training programme and the contents to be assigned to the single 1 CFU and 0.5 CFU mini modules, B-READI Partners should take into account that not everyone could be able to perform such a role and that the same assessment should be made also in function of the social value that these professional figures are called to play in the civil society.

In addition to what has already been defined, in order to characterise the two academic profiles of the Prevention Manager and the Emergency Manager, it was indispensable to name, with a simple codification, some FUNDAMENTAL skills differentiated between the two different, though complementary, specialisation paths.