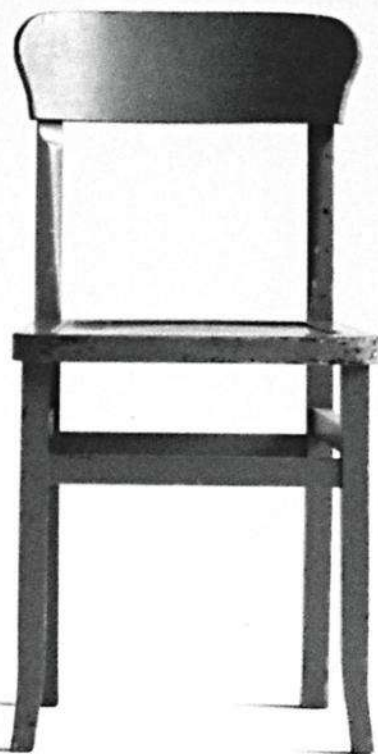




## D 4.2 Dealing with Brain Drain

Career paths catalogue and Database of positions at partners for knowledge exchange



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**LIST OF ACRONYMS**

PUT	-	<i>Poznan University of Technology</i>
BTU C-S	-	<i>Brandenburg University of Technology Cottbus-Senftenberg</i>
UC	-	<i>University of Cantabria</i>
UMONS	-	<i>University of Mons</i>
UNICT	-	<i>University of Catania</i>
UPHF	-	<i>Université Polytechnique Hauts-de-France</i>
UVA	-	<i>University of Vaasa</i>
EUNICE	-	<i>European University for Customised Education</i>
MSCA	-	<i>Marie Skłodowska-Curie Actions</i>
WP	-	<i>Work Package</i>

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## 1. INTRODUCTION

The REUNICE project of the EUNICE Alliance aims at aligning education, research and innovation strategies. Work Package (WP) 4, “Promoting excellence in research and innovation, fostering diversity, inclusiveness and gender equality” is cross-cutting and its objective deliver services and tools to other WPs. Human resources management and the support for staff, researchers and young talents are of particular interest in all related tasks. The task 4.2. – Dealing with brain drain focuses on a long-term challenge related to the movement of highly skilled labor between different regions. This challenge, in particular related to regions in transition, and the current status quo are described in more detail in Chapter 2 of this report. As part of this task, a catalogue and illustration of career paths at EUNICE universities is presented in Chapter 3. In addition, a brief description of the key competences required for each pathway is given.

The EUNICE universities already offer a wide range of training opportunities for their academic and administrative staff. These offers are summarized in Chapter 4, which sets out the conditions for stimulating further exchange and transfer of knowledge between the staff of EUNICE universities e.g. through personal and virtual mobility. In Chapter 5, the report will take the opportunity to make recommendations for further educational opportunities, activities and actions to facilitate a balanced circulation of knowledge within the EUNICE Alliance. A list of resources and links to available educational offers are provided in Chapter 6.

## 2. CURRENT SITUATION AND CHALLENGES

Brain drain is a long-term challenge and is not specific to European universities. However, for a European university alliance with members located in transition regions, this challenge is even more important and complex. Brain drain is generally defined as “emigration of qualified people whose skills are scarce in their place of origin.”<sup>1</sup> Brain drain refers to a permanent movement of highly qualified personnel and associated human capital (ETTE & WITTE, 2021).

The emigration can lead to serious national and, in particular, regional problems in terms of population decline and shortage of highly qualified labor. This leads to other negative effects in many areas such as the economy, education, and health. A better standard of living, a higher quality of life, higher salaries or access to advanced technologies attract skilled people and draw them away from other regions. The general flow of migration from a less developed region to a more developed one exacerbates existing inequalities (ETTE & WITTE, 2021).

It is therefore in a university's own interest to retain qualified young people and to keep them in its location and region. In the European Union and worldwide, we are currently witnessing a concentration and centralization of growth potential, especially in metropolitan regions and some conurbations. It is particularly important for regions undergoing structural change outside metropolitan areas to face up to the challenge of brain drain and to respond appropriately.

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### Current situation at the EUNICE level

EUNICE universities are particularly closely linked to the regional economy and other sectors of society. Universities are primarily training institutions, also for the regional economy. In general, universities train academics in the various subjects they offer, from the humanities, to law, economics, medicine or natural sciences. After graduation, students receive their bachelor's or master's degree and most of them leave the university. Despite being available to the labor market as qualified academics, many graduates remain in the higher education system after completing their studies. They begin their careers as research assistants or start a doctoral thesis. The focus of their activities is in the scientific field, with a corresponding expansion of competences and research skills.

<sup>1</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13394-Brain-drain-mitigating-challenges-associated-with-population-decline-communication- en>

However, numerous studies show that a large number of these employees leave the higher education system at some point and continue their careers in other sectors and fields, e.g. in the private sector or with social actors. This development can be justified, for example, by the high proportion of temporary contracts for these young academics and the current high absorptive capacity of the labor market for academics and the correspondingly low unemployment rate in most European countries.

Especially in Germany, the precarious employment of qualified specialists in the so-called mid-level employment is a frequently discussed topic. The Federal Report on Young Academics 2021 shows that in Germany as many as 92% of all young academics (under 45 of age without a professorship) have a fixed contract with an average duration of two years (KONSORTIUM BUNDESBERICHT WISSENSCHAFTLICHER NACHWUCHS, 2021).

However, the availability of jobs at the postdoc level and for professors is very limited. In this respect, it is not surprising that many postdocs leave the higher education sector and continue their careers in other sectors. In Germany, two years before the doctorate, 61% of doctorate candidates are employed by a university. Ten years after the doctorate, only 20% are working in a university or non-university research institution (KONSORTIUM BUNDESBERICHT WISSENSCHAFTLICHER NACHWUCHS, 2021). The further qualification and use of these professionals within the EUNICE network requires special attention here.

## Objectives of EUNICE universities

The EUNICE alliance aims not only to reduce brain drain but also to promote brain circulation. The concept of brain circulation can be described as a positive scenario of staff mobility, where stays abroad or outside the home region enhance the human capital with associated benefits for the home institution of the returnee. Accordingly, brain circulation only results in a temporary loss of human capital, not in a permanent one (ETTE & WITTE, 2021).

For EUNICE, as a network of European universities, associated higher education institutions and cooperation partners, brain circulation offers great opportunities to improve the knowledge of key personnel, but also to retain highly qualified staff by offering appropriate continuing educational events for their personal and professional career development.

Due to the limitation of resources in terms of training provision, but high demand and a wide range of potential offerings, EUNICE universities cannot meet all needs on a regular basis. As a result, university staff and researchers feel disappointed by the lack of personal or professional development opportunities. In addition, some show large deficits with regard to necessary competencies and skills. Accordingly, they are



inadequately or not at all prepared for alternative career paths outside the higher education system.

On the one hand, this results in the release of academic specialists who do not adequately meet the needs of the regional economy and other stakeholders. On the other hand, it increases the risk that academics will move to other universities or institutions where they will be better supported in acquiring new key competences and future skills.

In the future, however, the framework of the European university alliance EUNICE allows the development of a network of continuing education programs. This will enable institutions to better meet the needs of employees and researchers and to a wide range of key competences. In order to achieve this goal, this report first outlines the possible career paths and lists the existing continuing education offerings at each EUNICE university. Based on the results of this survey and the networking of stakeholders at the EUNICE universities, it will be possible to identify individual gaps in provision and, where necessary, to co-coordinate course offerings.

It should be emphasized here that the terms courses, training and services refer to a very wide range of continuing education offers. The educational provisions available at universities includes lectures and seminars as well as workshops, coaching and mentoring programs. However, the different pedagogical approaches and terminology should not be the focus here.

## Methodology

The data, assessments and information presented here are based on internet and literature research, as well as some expert interviews and input from the REUNICE team at the various universities.

The overview of sectors and different career paths is based on a draft that was continuously expanded and supplemented by the project team members during the course of the project and in various face-to-face and digital meetings until it reached its current form.

The overview of the training formats and courses on offer came from internet research and from the research work of the colleagues in the REUNICE project. With the help of a Miro board for collaborative work and planned as a co-creation, all participants entered the individual offers in their respective form (e.g. language, certificate, topic). A period of about four weeks was guaranteed for the collection of information in the respective universities. The results obtained in this way were partly slightly modified in



terms of language and rearranged in the respective subject areas. Additions and changes made during the review phase of this report have been incorporated.

## Limitations

Due to the different terminology used, there is some vagueness in the overviews produced. Some of the course offerings listed are very small-scale, while others represent overarching programs with a variety of integrated course offerings. Therefore, the number of courses offered per university can be considered as a very weak indicator, if at all. Additionally, courses with potentially similar content are arranged in different categories. This is based on the assignments made by stakeholders at each university, not the author of the report.

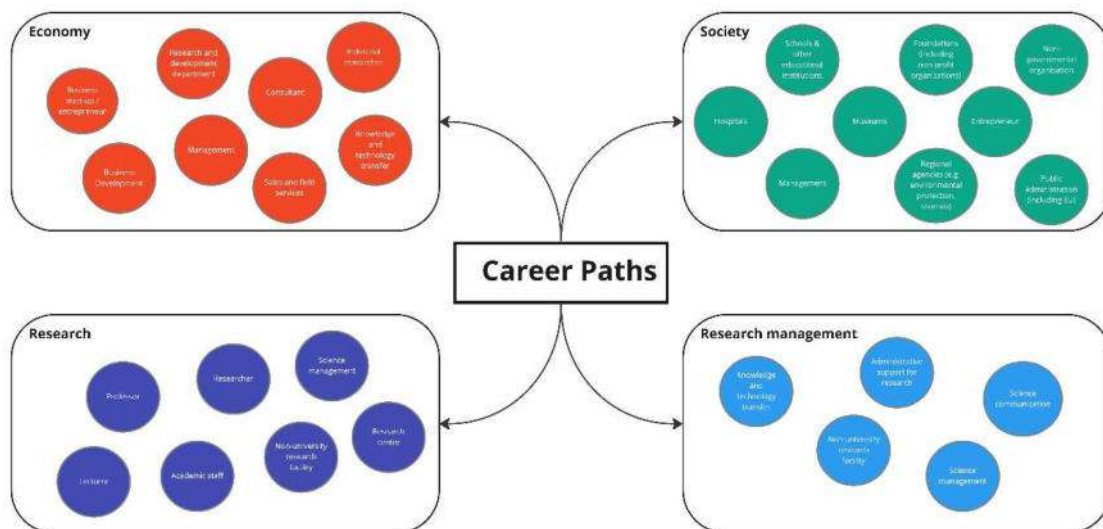
Furthermore, some courses and programs offered in the various national languages might be not centrally recorded or are only available on certain sub-pages of the universities' websites. Other courses, e.g. in the area of postgraduate studies, are probably not included in the overviews and would change the here indicated key figures.

### 3. ILLUSTRATION OF CAREER PATHS AND SECTORS

As a higher education institution, it is important to understand that graduates and employees can follow different career paths. Most of them will leave the higher education sector at a certain point of the career development. These paths require varying competences and skills.

Members of the REUNICE team identified career paths in four sectors: research, research management, economy, and society. Within these sectors, there is a wide variety of career paths and often a smooth transition between these paths.

Figure 1 - Overview of identified career paths



A number of specific pathways have been identified in the different sectors. These sectors and career paths are not unique to the EUNICE university alliance. Such paths could also be identified in other alliances and individual universities. The number of pathways is not limited and the overview is not meant to be exhaustive. A changing labor market is capable of developing additional career paths in the future. However, not all changes or additions will lead to a need for adaptation.

It is worth noting that there is no unique career path without overlaps with other career paths, even in other sectors. A researcher who follows the paths to become a senior researcher in a university may be a senior researcher in a non-university research institution or in a company.

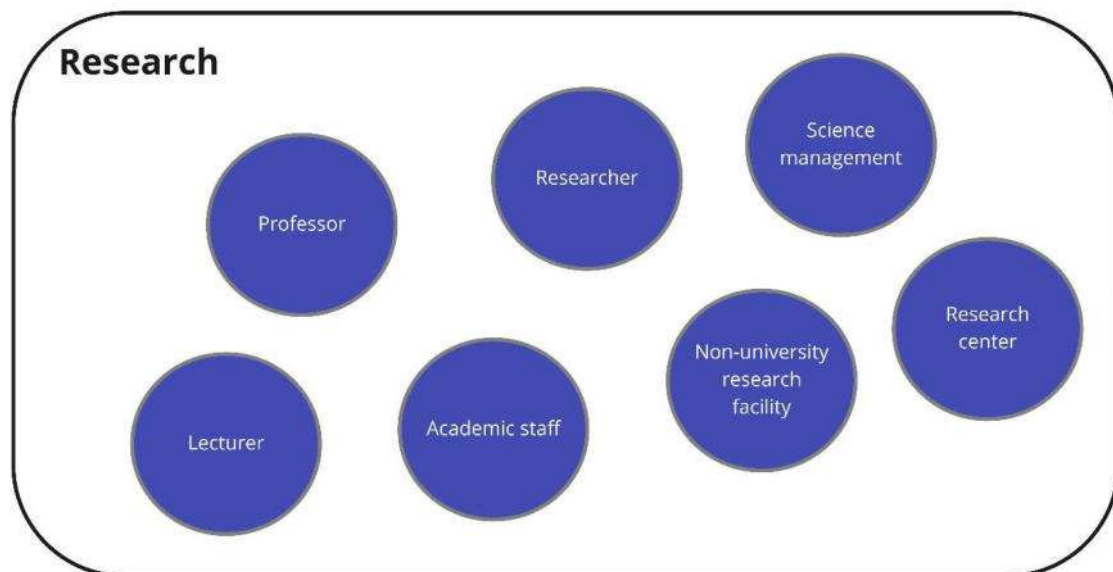
This vagueness is unsatisfactory for describing career paths, but it is particularly important for graduates and employees. They have the possibility to switch between different paths, be it between changes of contract or between participation in further qualification offers. However, this movement between career paths is not always

arbitrary and is very complex in many areas. The job requirements for being a researcher, managing a non-profit organization, or working in the public relations department are fundamentally different. Graduates and employees should therefore be aware of the direction in which they want to develop. This is also an important recommendation for action for universities and continuing education centers.

## Research sector

The research sector is, of course, very familiar to graduates and university staff. Not a few graduates express a strong desire to work in this sector after graduation, or cannot even imagine working in any other sector. It is not surprising, therefore, that many of the training and qualification programs offered by universities also tend in this direction.

Figure 2 - Overview of identified career paths in research



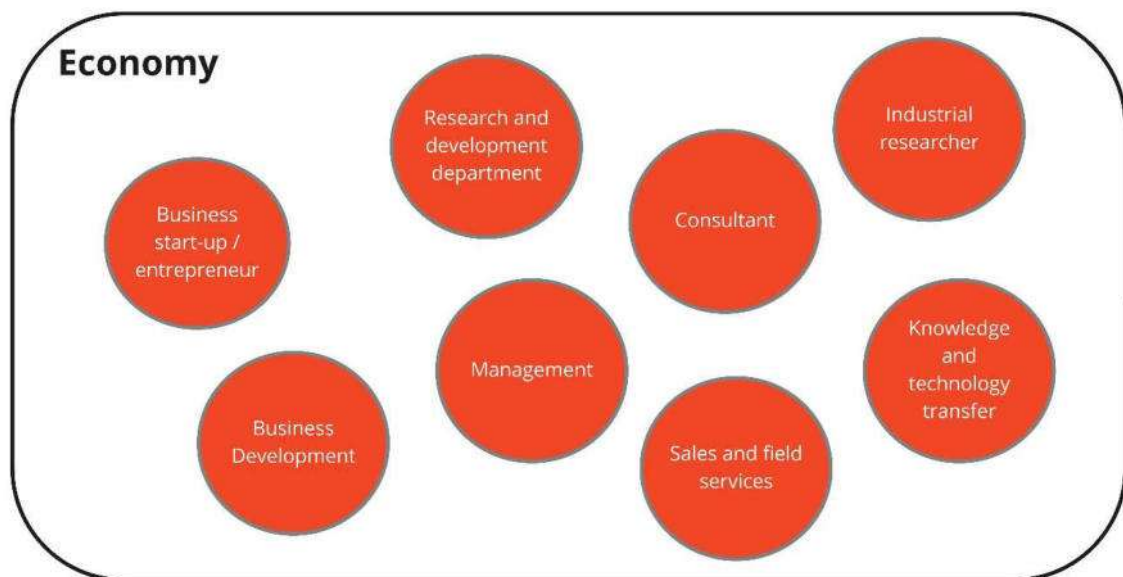
In terms of possible careers, researchers and professors are obviously the most prominent and probably the two best-known careers. However, depending on the university and the country, many employees are employed as lecturers or as academic staff and take on teaching or various cross-cutting roles in academia.

Much less well known is the career path within the research management. There is a wide range of job opportunities within universities, from third-party funding management and administration to project coordination and internal process support. Furthermore, the employment potential in the research sector in non-university research institutions and science centers should not be underestimated, especially for Germany. The Max Planck Society and the Fraunhofer Institutes, for example, are potential employers for people interested in working in research.

## Economic sector

In addition to the research sector, the business sector is often described as the other side of the coin. However, many researchers or graduates are employed in companies, working in different fields and contributing with their specific competences. Within the business sector, the EUNICE alliance has identified eight distinct career paths.

Figure 3 - Overview of identified career paths in business



The best-known jobs are probably as a researcher in a company’s development department or as an industrial researcher. In addition, many researchers are part of the management team or promote knowledge and technology transfer in a company. Because of their expertise and skills, university graduates often work in business development or as salespeople for specific products and services. Other graduates work as consultants, relying on their acquired knowledge and skills.

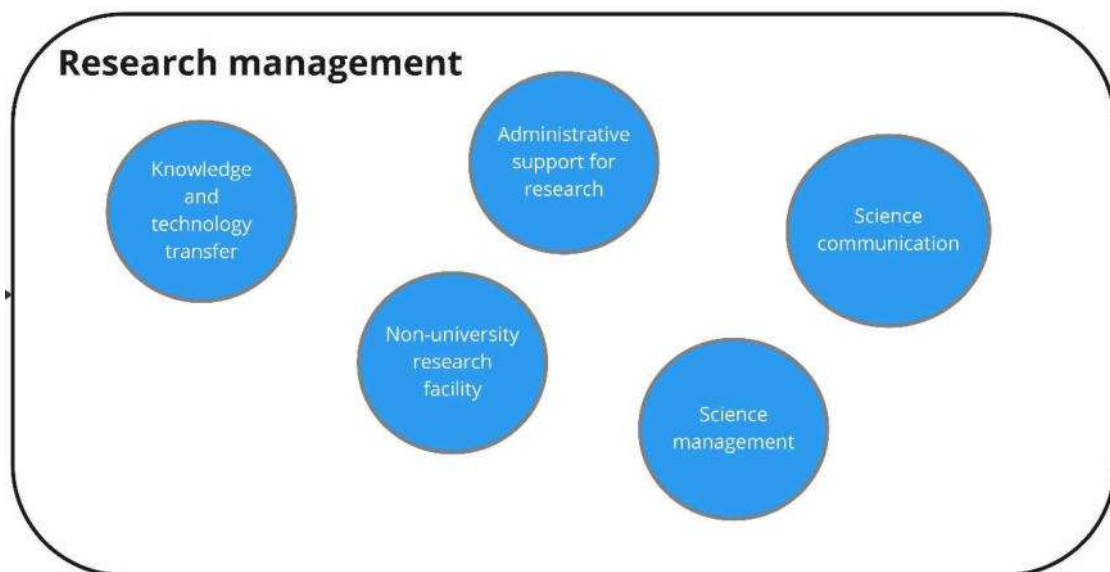
Finally, the importance of entrepreneurship and business start-ups has grown considerably in recent years. Setting up one’s own for-profit business is a highly relevant career path, and various educational opportunities have been created around this possibility. Due to the great importance of the business sector for universities and employees as potential employers, a wide range of further educational offerings have been established in EUNICE universities and are described in Chapter 4.

## Research management sector

There is a great deal of overlap between research and research management. It is not surprising that many research staff, PhD students and postdocs follow at a certain time this career path and find their way into the research management sector. In this section,

the expert group of the REUNICE project identified five different career paths: knowledge and technology transfer, administrative support of research, working in the administration or management of a non-university research institutions as well as science management and science communication. Due to the large overlapping areas and skills required, graduates and employees with knowledge and technology transfer skills can work in both the research management sector and the business sector. Again, the job requirements are very similar, although not identical. Nevertheless, the demand for staff in these areas is met by a more or less uniform portfolio of human resources.

Figure 4 - Overview of identified career paths in research management

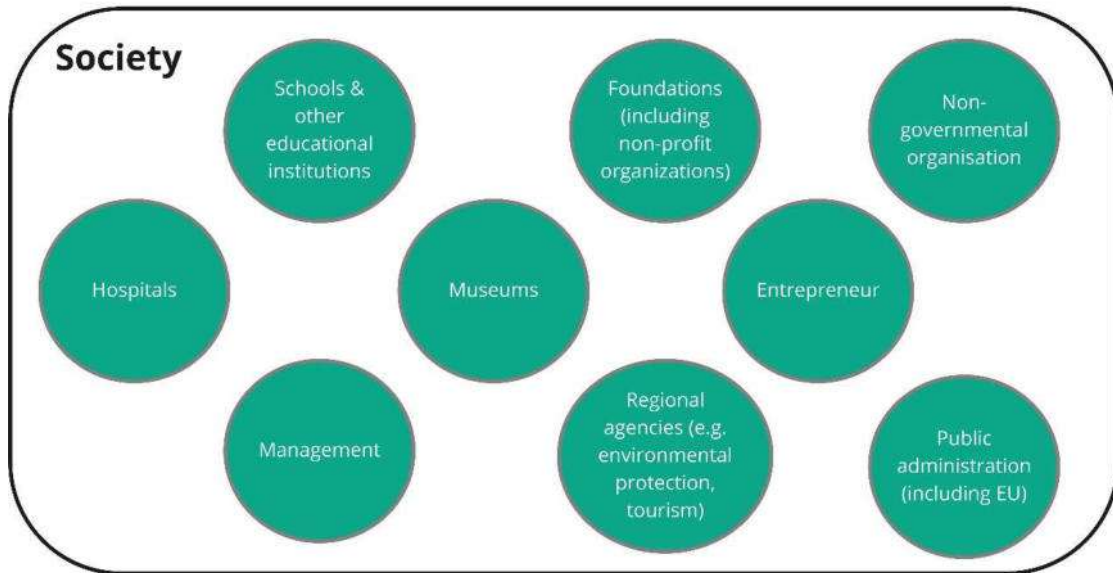


In general, research management is an often-underestimated sector with a wide variety of job and opportunities for researchers. In addition, the career paths in the sector overlap considerably with other sectors such as research and business. Employees have some flexibility in moving between the different sectors.

## Society sector

Stakeholders in society are important partners for universities and their staff. Our global and societal challenges are often the starting point for research projects and other initiatives. In addition, as collaborators in knowledge and technology transfer, societal actors are both providers of ideas and addressees of project results and educational activities.

Figure 5 - Overview of identified career paths in society



In addition to its important role as a stimulus and partner for research, the societal sector is also a major employer for graduates and researchers, with a correspondingly long list of different career paths. We have identified different paths, including management positions in social institutions such as local, regional, and national agencies (e.g. in environmental protection institutions or tourism agencies), public administration or associations are potential career opportunities. At present, setting up a non-profit enterprise as an entrepreneur and start-up enthusiast with a greater focus on societal needs is a frequently mentioned option. In addition, many graduates and researchers find their desired career paths in education (schools and other educational institutions), arts and culture. Non-governmental organizations offer a wide range of activities and, at the same time, a variety of opportunities for researchers. Finally, the health sector, including hospitals, nursing homes and other health care institutions, offers interesting career paths, especially for graduates with a medical background. In addition, a variety of career paths have also developed in recent years in the management and IT sectors.

## Required skills and competences

Taking into account the different requirements, skills and competences needed, it is clear that no single university can provide a full range of training options for all possible career paths. In addition, the labor market and the associated opportunities for graduates and researchers are constantly changing. While in the IT sector these changes are expected and not surprising, the entrepreneurship and start-up sector has developed at an enormous speed in recent years. European funding frameworks, as well as national funding programs and prioritization, have brought increased attention to these areas and related career paths.

In 2019, the European Commission published a report on “Key competences for lifelong learning”, focusing on eight key competences that can be developed through all types of learning, including formal, non-formal, and informal learning. These key competences are: (1) literacy competence; (2) multilingual competence; (3) mathematical competence and competence in science, technology and engineering; (4) digital competence; (5) personal, social and learning to learn competence; (6) citizenship competence; (7) entrepreneurship competence; and (8) cultural awareness and expression competence (EUROPEAN UNION, 2019).

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These key competences are not linked to individual sectors or career paths. However, some competences are more important for certain pathways than others. This is the case for entrepreneurship and the business start-ups, but also for cultural awareness and expression for careers in education, arts, and culture. Many competences are already integrated in the respective study programs, including bachelor, master or other programs. As stated by the European Commission, all competences have the same importance and can be acquired through different learning environments. However, EUNICE universities already offer a wide range of further education resources and courses to acquire these key competences and also additional skills. Chapter 4 presents the results of a survey of these continuing education offerings.



## 4. OVERVIEW OF FURTHER EDUCATION OFFERINGS OF EUNICE UNIVERSITIES

As shown in Chapter 3, there is a wide range of career paths. They require skills and competences that are not always provided by regular study programs (e. g. in bachelor and master programs) or that can be learnt in the course of regular daily work.

In response to this and to the need of lifelong learning, EUNICE universities offer various educational courses and programs in different fields to promote useful skills and competences. The numbers in table 1 and the overview in figure 14 are based on a specific request and do not claim to be exhaustive. A total of 80 different courses/services were identified (see table 2). Almost half of the courses are available in English. However, some services reflect individual courses (Career Paths Support: “Writing strategies for academics”), while others reflect whole university master programs (Others: “University Masters”).

The overview shows that most universities are very active and offer training in various disciplines. However, it also indicates that some universities do not offer training in all fields and subjects or are less active than others.

There may be a number of reasons for this. For example, not every university has a center or department for (academic) continuing education. Furthermore, the range of courses offered may be severely limited for reasons of cost. Some of the courses offered take place several times a year and are subject to a certain degree of fluctuation. If there are too few participants for individual courses, they are often cancelled at very short notice without replacement and are then no longer offered. On the other hand, if there is a high demand for courses, they are sometimes made available to researchers and staff very quickly and extensively. The overview presented here can therefore only give a limited or provisional picture of the continuing education courses offered by the EUNICE universities.

At the same time, the list and overview can be a useful indicator to identify potential gaps, active or inactive universities and some lessons learned. With only four educational offerings identified, the Poznan University of Technology (4) offers the lowest number of options for their researchers and staff. A few more courses are available at the Université Polytechnique Hauts-De-France (6), the University of Catania (7) and the University of Vaasa (9). The highest number of courses is found at the Brandenburg University of Technology Cottbus-Senftenberg (15) and especially at the University of Mons (27).

Based on the list of courses offered and the research paths identified, eight different categories were selected. All courses were assigned to these categories. This allocation was sometimes easy and sometimes not possible (see examples from the University of Vaasa). In addition, all courses were given the colors of their home universities (according to the EUNICE color chart), so that an easy assignment is possible. Courses in English have a red border.

The courses offered have again been also divided into three different categories: 1) certificate programs; 2) micro-certificates and other qualification offers; 3) extra-occupational post-study programs. However, this separation is in some cases not very sharp, so that further information on the details of the courses and services is needed.

Table 1 - Overview of collected courses and services

Research & Innovation	Leadership & Management	Teaching	Entrepreneurial Support	Communication & Social Media
11	9	8	12	8
Soft Skills & Social Competences	Career Paths Support	Others	Total	Offers in English
12	11	9	80	36 (45%)



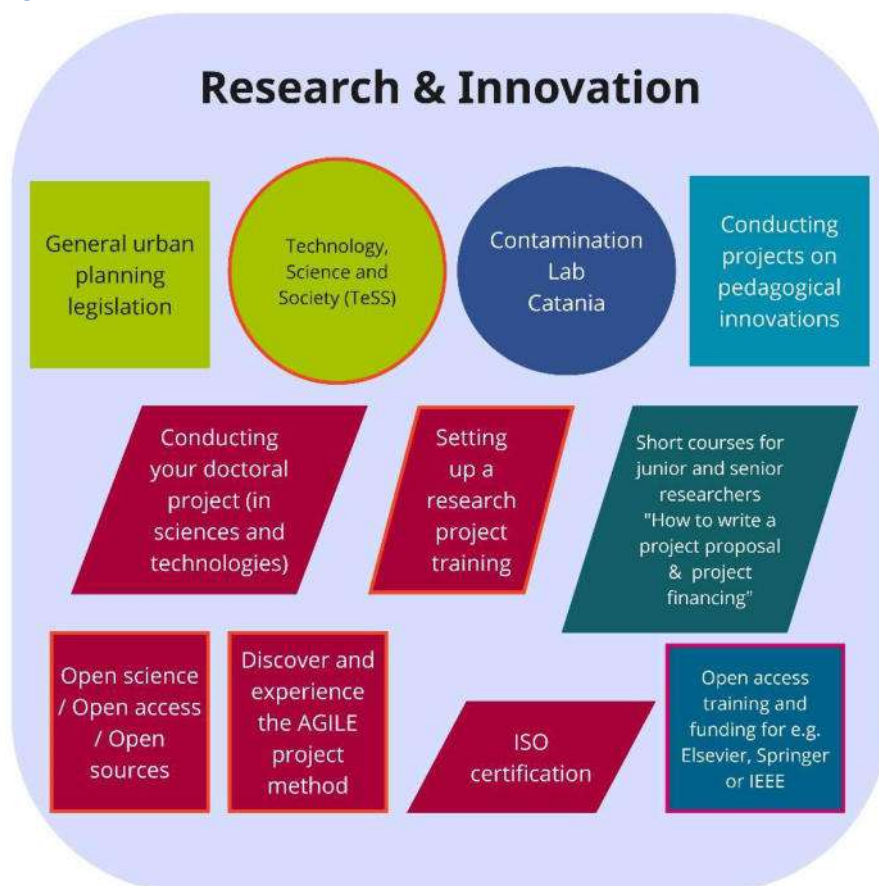
## Research & Innovation

In the field of research and innovation, eleven offerings have been identified. Five are already available in English:

- 1) Technology, Science and Society - TeSS (BTU);
- 2) Setting up a research project training (UMONS);
- 3) Open science / Open access / Open sources (UMONS);
- 4) Discover and experience the AGILE project method (UMONS);
- 5) Open access training and funding for e.g. Elsevier, Springer or IEEE (PUT).

The list includes offerings that are relevant for scientific careers as well as for the innovation and research sector. The target group for these courses are graduates and early-stage researchers who want to improve their skills in data management, project management, proposal writing and certification. Other identified courses include scientific aspects with related competences that can be additionally acquired, for example, as a certified program. These certified programs are often fee-based and are designed to generate a certain amount of revenue for the universities. The revenue is mostly used to cover the costs of the individual course offerings and the associated costs of planning, implementation and delivery.

Figure 6 - Courses and services for research & innovation



## Leadership & Management

Leadership and management qualifications are required for a variety of positions within and outside academia. Heading a research department or being a senior manager in a company requires skills and competences that are often not easily transferable through regular scientific studies or work experience and on-the-job training.

Six EUNICE universities offer training for leadership and management positions. While some courses focus on general management aspects, others are more specialized and provide skills in human resource management and business administration. As a certificate is often useful to provide evidence of the relevant qualifications, courses are often designed as certified programs or micro-certificates. However, additional, more comprehensive postgraduate master programs may include training in specific leadership and management skills that are not shown in figure 7 or offered as a separate course in table 2.

It is interesting to note that extensive provision is only available in national languages. Only the University of Vaasa offers its continuing education programs specifically designed for leadership and management skills in English.

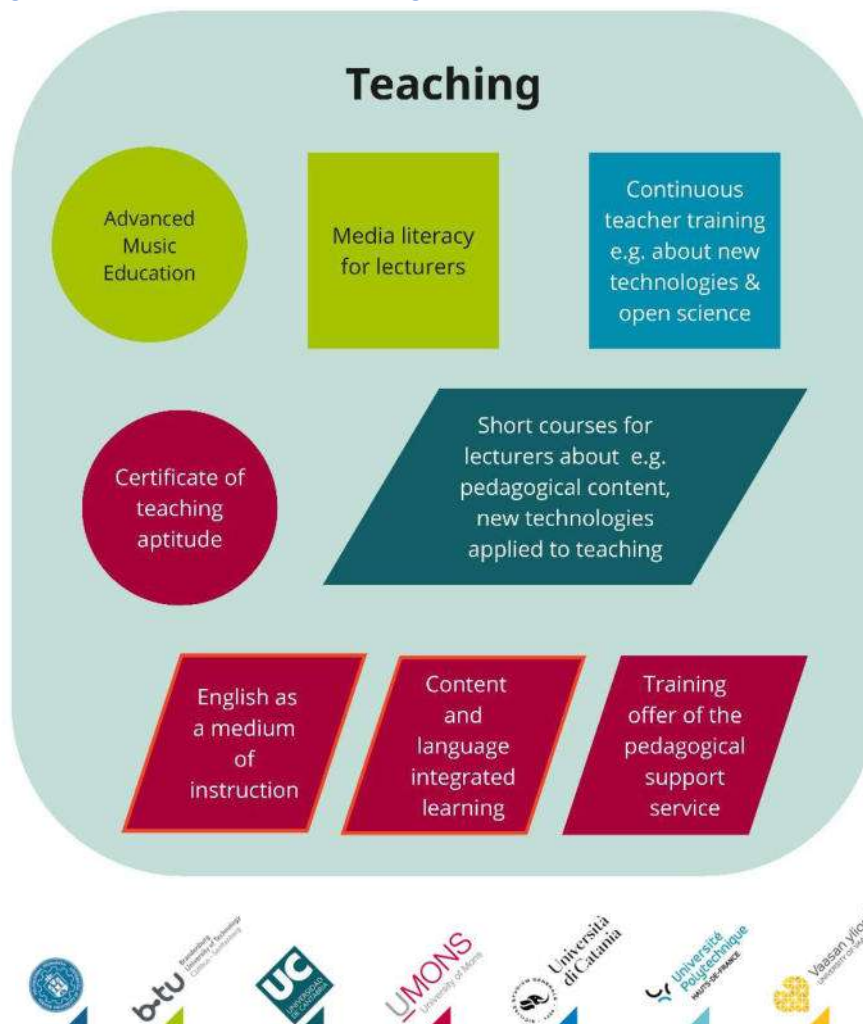
Figure 7 - Courses and services for leadership & management



## Teaching

As research and teaching are the main tasks of higher education institutions, a wide range of competences is distributed among the EUNICE universities. Four out of seven EUNICE universities offer training in teaching to their researchers and staff. In particular, this training covers topics related to language (i. e. English as medium of instruction), the use of new technologies or pedagogical methods. The University of Mons offers half of its teaching courses in English. However, due to the lack of an explicit separation between the categories and in some cases the packaging of individual courses into broader certificates or degrees, there may be additional courses available for teaching.

Figure 8 - Courses and services for teaching



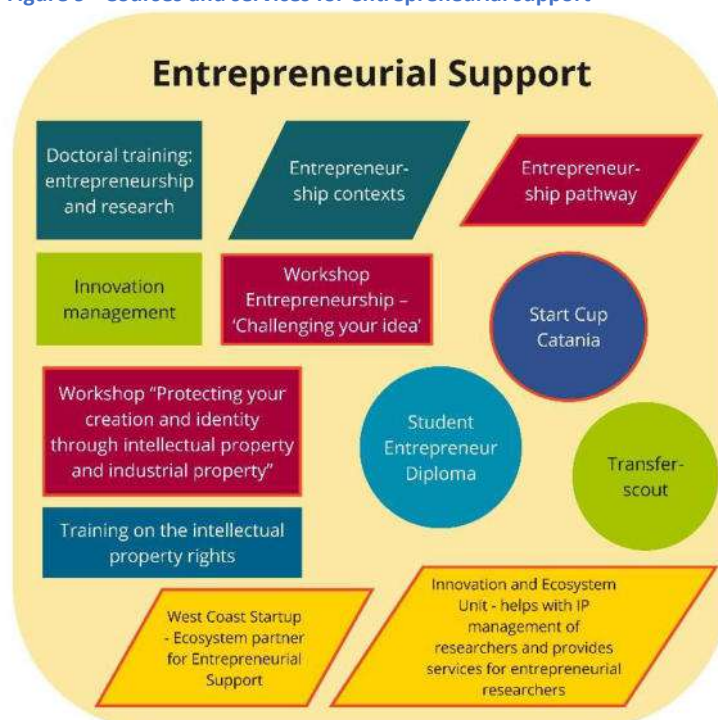
## Entrepreneurial Support

Entrepreneurship has been an important topic for universities and higher education institutions for decades. In recent years, however, the issue has gained in importance. Many national programs, as well as the European Commission, aim to strengthen the entrepreneurship sector and to promote spin-offs and start-ups based on the scientific know-how of higher education institutions. A whole industry has grown up around these initiatives or has been strengthened by them. As a result, numerous educational offers have been developed in recent years.

All EUNICE universities are active in this sector, three of them with English-language offers. However, it has also become very clear that individual courses and specific training offers are not sufficient to equip researchers or employees with the necessary skills or to motivate them for the long road to a spin-off or start-up.

In some cases, the qualifications required for entrepreneurship are also far removed from regular qualifications in study, teaching and research. For this reason, EUNICE universities also focus on training interested entrepreneurs at an early stage, often combining this with study programs and seminars. Almost all universities offer more comprehensive programs, including specific certifications or extra-occupational post-study programs. Quite often, educational opportunities are designed as competitions, including certain prize money and awards. Because of the strong international links, many programs are offered in English or in both the national language and English.

Figure 9 - Courses and services for entrepreneurial support

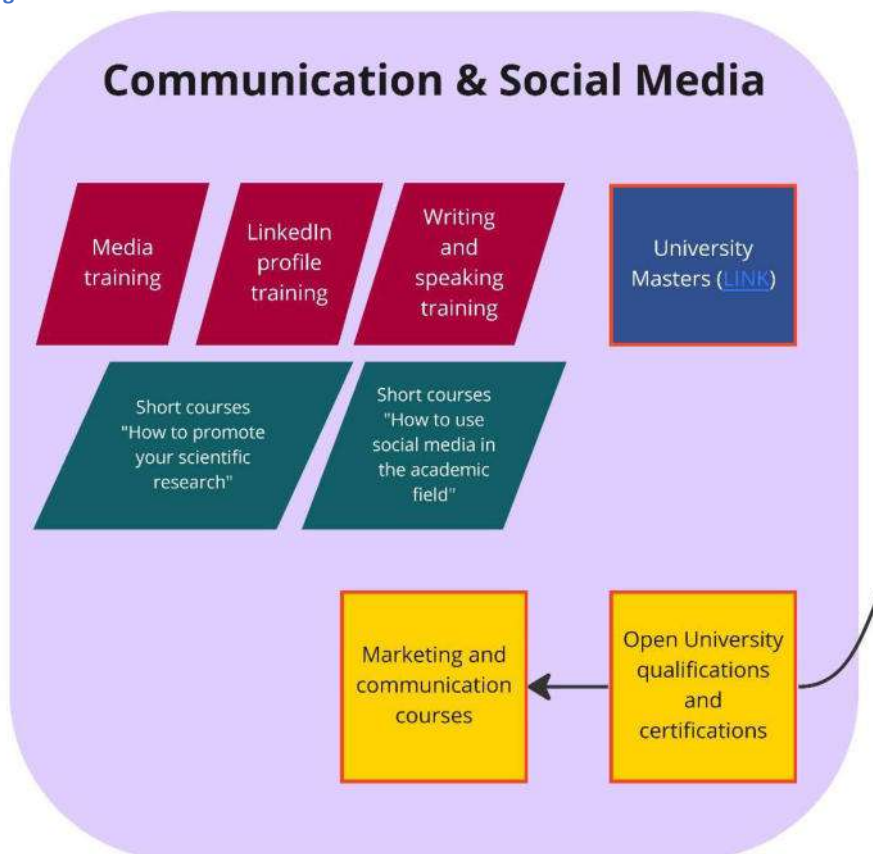


## Communication & Social Media

Science communication has emerged as an important cornerstone of higher education in recent years. Hardly any institution is still able to teach and conduct research without active communication with society and its stakeholders. Active and equal communication between stakeholders requires a wide range of skills and training. Accordingly, EUNICE universities offer numerous courses, often as extra-occupational offers on specific topics and subjects.

The use of social media is not only trained on a meta-level, but also focuses on the researchers and staff as part of the social media. Four out of seven universities offer courses in the area of communication and social media, with the University of Vaasa offering its courses in English.

Figure 10 - Courses and services for communication and social media



## Soft Skills & Social Competences

The category of soft and social skills is closely related to the category of communication and social media described above. However, despite some overlap, soft skills and social competences can be defined more broadly and include other skills outside the field of communication.

Due to the importance of this category, all seven universities offer courses in it. These include digital skills, language skills, and competences for personal development. Again, many more courses can be found in other programs already listed and added to the overview. In addition, language courses offered by universities and language centers are also available to researchers and staff.

Figure 11 - Courses and services for soft skills and social competences





## Career Paths Support

Another important aspect for researchers and staff is a long-term career planning. This is particularly relevant for doctoral students and post-docs, who often have temporary and short-term contracts due to third-party funding. Giving researchers and staff a perspective and planning their career jointly offers several advantages for universities. Currently, only four out of seven EUNICE universities offer specific career support services. The BTU C-S provides two out of three services in English, including writing and application training. Most offers are provided by the University of Mons. Researchers and staff can choose from six types of training, including visits to individual companies, analysis of the labor market or support in writing a proper CV.

Figure 12 - Courses and services for career paths support



## Others

The aim of the seven categories described above was to categorize all available services into separate areas. However, some offers cannot be easily categorized. Accordingly, they appear in the 'Other' category.

These include, in particular, postgraduate training, the search for additional certified programs and postgraduate extra-occupational training. A large number of these courses are offered in English. They are available in five out of seven EUNICE universities.

Figure 13 – Others courses and services

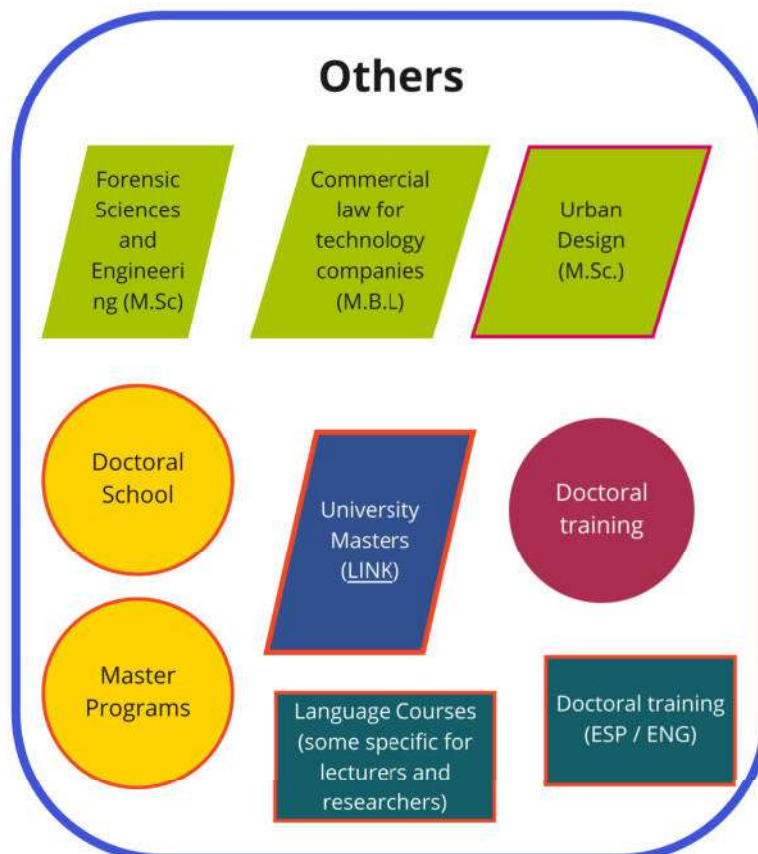


Figure 14 - Available educational opportunities for researchers and staff at EUNICE university (seven universities in total)

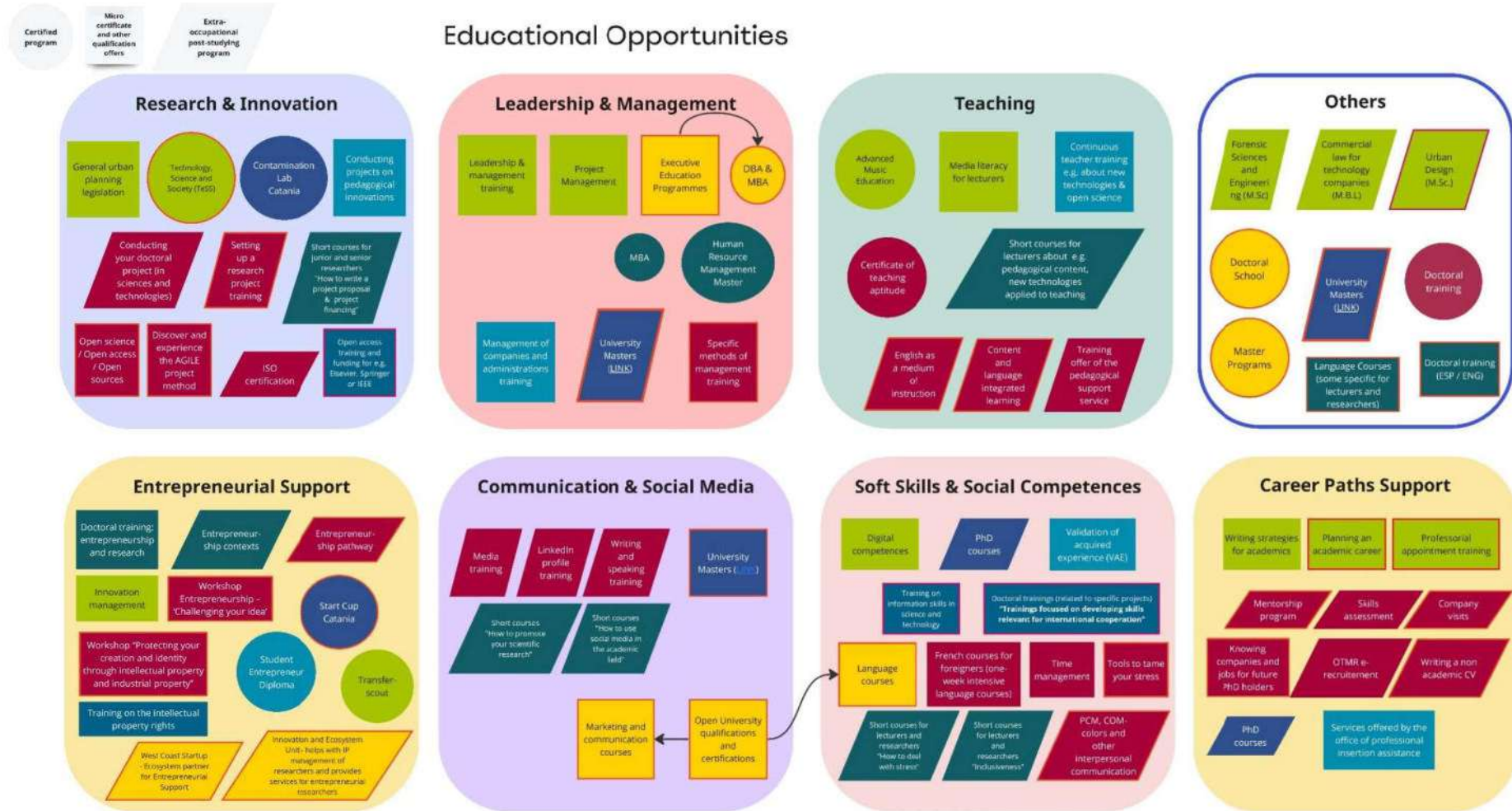


Table 2 - Overview about further educational offers at EUNICE universities

Theme / University	Poznan University of Technology	Brandenburg University of Technology	University of Cantabria	University of Mons	University of Catania	Université Polytechnique Hauts-de-France	University of Vaasa
<b>Research &amp; Innovation</b>	<ul style="list-style-type: none"> <li>• Open Access training and funding for e.g. Elsevier, Springer or IEEE</li> </ul>	<ul style="list-style-type: none"> <li>• General urban planning legislation</li> <li>• Technology, Science and Society (TESS) (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Short courses for junior and senior researchers</li> <li>• “How to write a project proposal &amp; project financing”</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting your doctoral project (in sciences and technologies)</li> <li>• Setting up a research project training (ENG)</li> <li>• Open science / Open access / Open sources (ENG)</li> <li>• Discover and experience the AGILE project method (ENG)</li> <li>• ISO certification</li> </ul>	<ul style="list-style-type: none"> <li>• Contamination Lab</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting projects on pedagogical innovations</li> </ul>	
<b>Leadership &amp; Management</b>		<ul style="list-style-type: none"> <li>• Leadership &amp; management training</li> <li>• Project management</li> </ul>	<ul style="list-style-type: none"> <li>• Human Resource Management Master</li> <li>• MBA</li> </ul>	<ul style="list-style-type: none"> <li>• Specific methods of management training (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Diverse university masters (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Management of companies and administrations training</li> </ul>	<ul style="list-style-type: none"> <li>• Executive Education Programmes (ENG)</li> <li>• DBA &amp; MBA (ENG)</li> </ul>
<b>Teaching</b>		<ul style="list-style-type: none"> <li>• Advanced Music Education</li> <li>• Media literacy for lecturers</li> </ul>	<ul style="list-style-type: none"> <li>• Short courses for lecturers about e.g. pedagogical content, new technologies applied to teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Certificate of teaching aptitude</li> <li>• Training offer of the pedagogical support service</li> <li>• English as a medium of instruction (ENG)</li> <li>• Content and language</li> </ul>		<ul style="list-style-type: none"> <li>• Continuous teacher training e.g. about new technologies &amp; open science</li> </ul>	



				integrated learning (ENG)			
<b>Entrepreneurial Support</b>	<ul style="list-style-type: none"> <li>• Training on the intellectual property rights</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation Management</li> <li>• Transferscout</li> </ul>	<ul style="list-style-type: none"> <li>• Doctoral training: entrepreneurship and research</li> <li>• Entrepreneurship contexts</li> </ul>	<ul style="list-style-type: none"> <li>• Entrepreneurship pathway (ENG)</li> <li>• Workshop “Protecting your creation and identity through intellectual property and industrial property” (ENG)</li> <li>• Workshop Entrepreneurship “Challenging your idea” (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Start Cup Catania (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Student Entrepreneur Diploma</li> </ul>	<ul style="list-style-type: none"> <li>• West Coast Startup – Ecosystem partner for Entrepreneurial Support (ENG)</li> <li>• Innovation and Ecosystem Unit – helps with IP management of researchers and provides services for entrepreneurial researchers (ENG)</li> </ul>
<b>Communication and Social Media</b>			<ul style="list-style-type: none"> <li>• Short courses “How to promote your scientific research”</li> <li>• Short courses “How to use social media in the academic field”</li> </ul>	<ul style="list-style-type: none"> <li>• Media Training</li> <li>• LinkedIn profile training</li> <li>• Writing and speaking training</li> </ul>	<ul style="list-style-type: none"> <li>• Diverse university master (ENG)</li> </ul>		<ul style="list-style-type: none"> <li>Open University qualifications and certifications:</li> <li>• Marketing and communication courses (ENG)</li> </ul>
<b>Soft Skills and Social Competences</b>	<ul style="list-style-type: none"> <li>• Training on information skills in science and technology (ENG)</li> <li>• Doctoral trainings (related to specific projects)</li> </ul>	<ul style="list-style-type: none"> <li>• Digital competences</li> </ul>	<ul style="list-style-type: none"> <li>• Short courses for lecturers and researchers “How to deal with stress”</li> <li>• Short courses for lecturers and</li> </ul>	<ul style="list-style-type: none"> <li>• PCM, Comcolors and other interpersonal communication (ENG)</li> <li>• Time management</li> </ul>	<ul style="list-style-type: none"> <li>• PhD courses</li> </ul>	<ul style="list-style-type: none"> <li>• Validation of acquired experiences (VAE)</li> </ul>	<ul style="list-style-type: none"> <li>Open University qualifications and certifications:</li> <li>• Language courses (ENG)</li> </ul>



	“Trainings focused on developing skills relevant for international cooperation” (ENG)		researchers “Inclusiveness”	<ul style="list-style-type: none"> <li>• Tools to tame your stress (ENG)</li> <li>• French courses for foreigners</li> </ul>			
<b>Others</b>		<ul style="list-style-type: none"> <li>• Forensic Sciences and Engineering (M.Sc.)</li> <li>• Commercial law for technology companies (M.B.L.)</li> <li>• Urban Design (M.Sc.) (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• Doctoral training</li> <li>• Doctoral training (ENG)</li> <li>• Language courses (some specific for lecturers/researchers)</li> </ul>	<ul style="list-style-type: none"> <li>• Doctoral training</li> </ul>	<ul style="list-style-type: none"> <li>• Diverse university masters (ENG)</li> </ul>		<ul style="list-style-type: none"> <li>• Doctoral School (ENG)</li> <li>• Master Programs (ENG)</li> </ul>
<b>Career Paths Support</b>		<ul style="list-style-type: none"> <li>• Writing strategies for academics</li> <li>• Planning an academic career (ENG)</li> <li>• Professorial appointment training (ENG)</li> </ul>		<ul style="list-style-type: none"> <li>• Mentorship program (ENG)</li> <li>• Skills assessment</li> <li>• Company visits (ENG)</li> <li>• Discover the job market for PhD’s (ENG)</li> <li>• OTMR e-recruitment</li> <li>• Writing a non-academic CV (ENG)</li> </ul>	<ul style="list-style-type: none"> <li>• PhD courses</li> </ul>	<ul style="list-style-type: none"> <li>• Services offered by the office of professional insertion assistance</li> </ul>	
<b>In Total</b>	<b>4</b>	<b>15</b>	<b>12</b>	<b>27</b>	<b>7</b>	<b>6</b>	<b>9</b>



## 5. POTENTIALS AND RECOMMENDATION FOR EUNICE PARTNERS

Brain drain is a serious problem for universities, especially in regions in transition with limited resources and opportunities. Not all universities can provide adequate education and training in terms of quantity and quality. Consequently, highly qualified graduates, researchers and staff often leave the university also due to this limitation.

### Challenges for continuing educational offers

With regard to the European university alliance EUNICE, numerous challenges can be found for the continuing education sector. The overview and the list of available courses show great differences between the individual universities. Some universities have very limited numbers of continuing education courses at all, while others offer a wide range of courses for different target groups. The distribution between the individual categories is much more evenly balanced. All target groups and career paths seem to be addressed almost equally.

However, the analysis of services has also shown that there is a wide variety of degrees, titles, certificates and course variants. A uniform structure and terminology may be too ambitious at present. However, this should be included as a long-term objective in a common strategy. This will foster the way that potentially interested graduates, researchers and employees will be able to get an overview and choose the most suitable courses for themselves.

Although almost half of all courses (45%) are currently available in English, there is still room for improvement especially with regard to the exchange of staff and staff mobility from other EUNICE partner universities. In particular, in some categories and fields, the range of opportunities for international colleagues and exchanges is very limited.

## Recommendations for further educational offers for EUNICE universities

The following paragraph consists of recommendations for members of EUNICE universities and their staff.

### Joint exchanges at the working level of directors of continuing education centers

What the language centers have already established within the EUNICE community can also work well for the continuing education centers and stakeholders of the individual universities. What is meant is a joint exchange, initially at the management level of the departments concerned. In addition to getting to know each other and networking on a personal level, current challenges for the continuing education centers and developed approaches to solutions can be shared. The already prepared overview of the 'network of support staff' can be used as an initial tool and the Erasmus+<sup>2</sup> mobility program as driving force. The exchange is likely to lead to further overlaps and possible collaborations.

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From the point of view of the authors, it is not necessary to engage or involve all EUNICE universities at the same time or equally. This principal decision creates the possibility to work with selected or interested actors, e.g. on lighthouse projects or pilot activities. Different cooperation networks may also develop for different activities.

### Differentiated analysis of supply and demand

A joint and differentiated analysis of supply and demand can be part of the solution and appropriate approach by the management level of the continuing education centers. The courses and services listed here are unlikely to cover all available options, but they can certainly be used as a basis for further discussion and approaches. Much more important than a supply analysis, however, is a broad based needs analysis within the European University alliance EUNICE. The aim should be to address the different actors within the university and to map the needs in terms of desired career paths, further training and satisfaction.

The resulting findings will not only provide useful starting points for individual universities, but will also be of great interest to the European Commission and other European higher education alliances. On the basis of this database, a common strategy

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<sup>2</sup> <https://erasmus-plus.ec.europa.eu/opportunities/opportunities-for-organisations/learning-mobility-of-individuals/higher-education-students-and-staff>



and implementation concept should then be developed through further discussions between the stakeholders and centers for continuing (scientific) training.

### **(International) Information day for career paths and continuing education programs**

Researchers and staff are usually unaware or uninformed about the different career paths and training opportunities available to acquire needed skills. Furthermore, in the context of mostly fixed-term contracts or project-based employment, long-term and joint career planning with staff and appropriate training is difficult to implement for individual universities. It therefore seems sensible to establish a joint (international) information day for career paths and scientific continuing education. The resulting increased attention should be used to involve external stakeholders such as non-university research institutions and partners from business, industry and society. An increased European approach and networking with other EUNICE universities will also create new opportunities for the individual centers for scientific education, supported by ERASMUS and staff mobility through the International Cooperation Office.

### **Common terminology**

At present, the compiled overviews contain a large number of different terms, pedagogical concepts, terminologies, certificates and degrees. While this may make sense at national level and has probably been established over the years by various bodies, it makes comparison and exchange at European level more difficult. Graduates, researchers and employees are hindered by the different terminologies and offers, which are at least not comparable. This makes it even more difficult to filter out the right offers for employees and their individual career paths. Here it seems to make sense to seek discourse in exchange with the experts of the continuing education centers and to look for a more uniform terminology and designations.

### **Factsheet of selected courses with common EUNICE style sheet**

Similar to a common terminology, selected continuing education courses should be presented using a common EUNICE style sheet. This will make it easier to find, record, and compare courses for different target groups. In any case, an EUNICE format template should not replace existing corporate identity templates. Rather, it should initially be used as a design tool to promote flagship courses and services of individual universities.



Selected flagship activities and services could be used to highlight outstanding and high quality courses. Researchers and staff would then have only the best to choose from, which would increase both the quality and acceptance of the offers. The fact sheets produced could also be printed and presented to the public at various (international) workshops and events. The high quality flagship courses would thus be presented to an increasing international audience, with a correspondingly high demand.

### **Selection of international flagship activities for continuing education on the EUNICE websites**

Of course, flagship courses should also be promoted on the EUNICE websites. The available regular courses, in particular shared courses, blended-intensive programs or excellence programs, are already available on the websites (<https://eunice-university.eu/courses/>). Selected continuing education offerings should complement the offer and attract the attention of additional target groups such as graduates, researchers, and employees. This should not only increase the demand for continuing education, but also strengthen the networking with other EUNICE activities and the link between staff and the European university alliance EUNICE.

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Brief descriptions and a standardized list of course features (e. g. including subject areas, suitability for certain career paths, language, timetable, duration, cost, possible certification) will also help the target groups to keep track of the courses and to quickly and comprehensively record and compare them. A link to possible mobility offers for employees seems useful.

## 6. RESOURCES

The following chapter presents some resources and useful webpages from EUNICE universities. This includes especially links to the respective university, their centers for continuing scientific education, educational offerings and trainings.

- Job opportunities posted at EURAXESS website (<https://euraxess.ec.europa.eu/jobs/search>)

### Poznan University of Technology (PUT)

- Website of PUT (<https://put.poznan.pl/en>)
- Job opportunities at PUT (<https://www.put.poznan.pl/oferty-pracy>)
- Centre for Internship and Careers/ Job Opportunities (<https://cpk.put.poznan.pl/>)
- Academic Business Incubator (<https://aip.put.poznan.pl/>)
- Postgraduate Studies in Polish language (<https://www.put.poznan.pl/studia-podyplomowe/spis>)

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### Brandenburg University of Technology Cottbus-Senftenberg (BTU C-S)

- Website of BTU C-S (<https://www.b-tu.de/>)
- Website for further education (<https://www.b-tu.de/weiterbildung>)
- Website of the Center for Continuing Scientific Education incl. training offers for professionals, managers, and executives (<https://www.b-tu.de/weiterbildung/fuer-fach-fuehrungskraefte>)
- Job opportunities at BTU C-S (<https://www.b-tu.de/universitaet/karriere/stellenausschreibungen>)

### University of Cantabria (UC)

- Website of UC (<https://web.unican.es/en/Pages/default.aspx>)
- List of doctorate courses (<https://web.unican.es/en/Studying/academic-offer/doctorate-courses>)
- List of short courses for lecturers and researchers: [https://web.unican.es/consejo-direccion/vcprimeroyprofesorado/Documents/PAPP\\_22\\_23/Calendario-cursos-22-23.pdf](https://web.unican.es/consejo-direccion/vcprimeroyprofesorado/Documents/PAPP_22_23/Calendario-cursos-22-23.pdf)
- List of graduate courses, some of them focused on leadership: <https://web.unican.es/en/Studying/academic-offer/graduate-courses>



### University of Mons (UMONS)

- Website of UMONS (<https://web.umons.ac.be/en/>)
- List of study programs and training (<https://web.umons.ac.be/en/training-offer/>)
- List of cross-disciplinary courses (<https://web.umons.ac.be/en/recherche/search-a-cross-disciplinary-courses/>)
- Job opportunities at UMONS (<https://web.umons.ac.be/fr/travailler-a-lumons/>)

### University of Catania (UNICT)

- Website of UNICT (<https://www.unict.it/>)
- Overview of postgraduate courses (<https://www.unict.it/en/education/postgraduates>)
- Overview of university master's courses (<https://www.unict.it/en/education/university-master-courses>)
- List of university master's courses (<https://www.unict.it/it/didattica/master-universitari>)

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### Université Polytechnique Hauts-de-France (UPHF)

- Website of UPHF (<https://www.uphf.fr/>)
- Overview of back to school program (<https://www.uphf.fr/en/training/vocational-training-and-work-study/returning-school>)
- Overview about the platform for languages and certifications (<https://www.uphf.fr/en/training/platform-languages-and-certifications>)
- Training catalogue of UPHF (<https://formations.uphf.fr/fr/formations.html>)
- Job opportunities at UPHF (<https://www.uphf.fr/en/recruitments>)

## University of Vaasa (UVA)

- Website of UVA (<https://www.uvasa.fi/en>)
- Open University – List of courses taught in English ([https://www.uvasa.fi/fi/koulutus/avoin/opiskelu/opintotarjonta?lang=en&city=All&type=All&field=All&subject=All&combine=All&method=All&organiser=All&pricing=All&items\\_per\\_page=25](https://www.uvasa.fi/fi/koulutus/avoin/opiskelu/opintotarjonta?lang=en&city=All&type=All&field=All&subject=All&combine=All&method=All&organiser=All&pricing=All&items_per_page=25))
- Overview of executive education programs (<https://www.uvaasaexed.fi/en/>)
- Overview of international master programs (<https://www.uvasa.fi/en/education/international-masters-programmes>)
- Overview of doctoral education of UVA (<https://www.uvasa.fi/en/education/doctoral-education>)
- Job opportunities at UVA ([https://uva.rekryointi.com/paikat/?o=A\\_LOJ&list=6&lang=en](https://uva.rekryointi.com/paikat/?o=A_LOJ&list=6&lang=en))

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